



**BIBLIOGRAPHY OF PUBLICATIONS OF ¹³⁷CESIUM STUDIES
RELATED TO EROSION AND SEDIMENT DEPOSITION**

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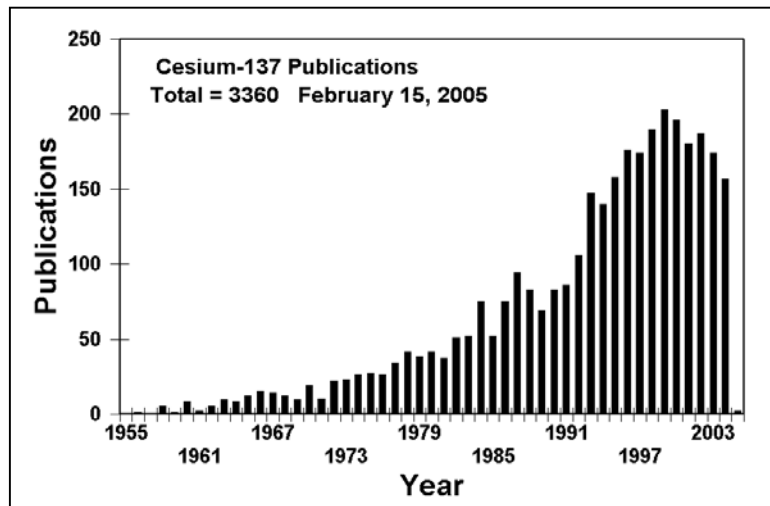
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1. INTRODUCTION

Soil erosion and its subsequent redeposition across the landscape is a major concern around the world. A quarter century of research has shown that measurements of the spatial patterns of radioactive fallout ¹³⁷Cesium can be used to measure soil erosion and sediment deposition on the landscape. The ¹³⁷Cs technique is the only technique that can be used to make actual measurements of soil loss and redeposition quickly and efficiently. By understanding the background for using the ¹³⁷Cs technique to study erosion and sediment deposition on the landscape, scientists can obtain unique information about the landscape that can help them plan techniques to conserve the quality of the landscape. Research should continue on the development of the technique so that it can be used more extensively to understand the changing landscape.

On 16 July 1945 at 1230 Greenwich Civil Time, nuclear weapon tests were begun that have released ¹³⁷Cs and other radioactive nuclides into the environment. Over the 50 years since this first test, much research has been done to understand the movement and fate of ¹³⁷Cs in the environment. Many of these studies are critical for understanding the application of ¹³⁷Cs to the study of soil erosion and the subsequent redeposition of the eroded particles on the landscape. This bibliography presents significant background



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publications that are useful to studies of erosion and sediment deposition using ^{137}Cs . The bibliography also includes citations of reported studies of the use of ^{137}Cs to measure either erosion or sediment deposition. While the bibliography is extensive, there are certainly publications that we have missed. There has been a rapid increase in publication related to the use of ^{137}Cs related to the erosion and sedimentation (Fig. 1). However, we feel that this bibliography does demonstrate the widespread use and acceptance of ^{137}Cs for measuring erosion and sediment deposition. We hope it will also be useful to those using or preparing to use ^{137}Cs and will help promote the use of ^{137}Cs in erosion and sediment deposition research and measurements.

2. BIBLIOGRAPHY

Aarkrog, A. 1988. Radiological impact of Chernobyl debris compared with that from nuclear weapons fallout. **Journal of Environmental Radioactivity** 6(2):151-162.

Aarkrog, A., Q. Chen, H. Dahlgaard, S.P. Nielsen, A. Trapeznikov, and V. Pozolotina. 1997. Evidence of ^{99}Tc in Ural river sediments. **Journal of Environmental Radioactivity** 37(2):201-213.

Aarkrog, A., G. Dahlgaard, L. Hallstadius, H. Hansen, and E. Holm. 1983. Radiocesium from Sellafield effluents in Greenland water. **Nature** 304:49-51.

Aarkrog, A., G. Dahlgaard, E.N. Karavaeva, N.V. Kulikov, K. Mittenar, I.V. Milchanov, S.P. Nielsen, V.N. Pozolotina, and G.G. Polikarpov. 1992. Long-lived radionuclide concentration in the soil and trees in nuclear accident area in the southern Urals. **Ékologiya** 4:50-55. (Russian)

Aarkrog, A., H. Dahlgaard, S.P. Nielsen, V.N. Pozolotina, I.V. Molchanova, E.N. Karavaeva, P.Y. Yushkov, and A.V. Trapeznikov. 1998. Study on the contribution of major nuclear incidents to radioactive contamination of the Ural region. **Russian Journal of Ecology** 29(1):31-37. translated from **Ékologiya** (1998) 1:36-42 (Russian)

Aarkrog, A., H. Dahlgaard, S.P. Nielsen, A.V. Trapeznikov, I.V. Molchanova, V.N. Pozolotina, E.N. Karavaeva, P.I. Yushkov, and G.G. Polikarpov. 1997. Radioactive inventories from the Kyshtym and Karachay accidents: estimates based on soil samples collected in the South Urals (1990-1995). **Science of the Total Environment** 201(2):137-154.

Aalto, R., and W. Dietrich. 2005. Sediment accumulation determined with ^{210}Pb geochronology for Strickland River flood plains, Papua New Guinea, p. 303-309. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.

Ab-Razak, I. A., A. Li, and E.R. Christensen. 1996. Association of PAHs, PCBs, ^{137}Cs , and ^{210}Pb with clay, silt, and organic carbon in sediments. **Water Science Technology** 34(7/8):29-35.

- Absalom, J. P., N.M.J. Crout, and S.D. Young. 1996. Modeling radiocesium fixation in upland organic soils of northwest England. **Environmental Science and Technology** 30(9):2735-2741.
- Absalom, J.P., S.D. Young and N.M.J. Crout. 1995. Radio-caesium fixation dynamics: Measurement in six Cumbrian soils. **European Journal of Soil Science** 46:461-469.
- Absalom, J.P., S.D. Young, N.M.J. Crout, A.F. Nisbet, R.F.M. Woodman, E. Smolders, and A.G. Gillett. 1999. Predicting soil to plant transfer of radiocesium using soil characteristics. **Environmental Science and Technology** 33(8):1218-1223.
- Absalom, J.P., S.D. Young, N.M.J. Crout, A. Sanchez, S.M. Wright, E. Smolders, A.F. Nisbet, and A.G. Gillett. 2001. Predicting the transfer of radiocaesium from organic soils to plants using soil characteristics. **Journal of Environmental Radioactivity** 52(1):31-43.
- Abril, J.M. 2004. Constraints on the use of Cs-137 as a time-marker to support CRS and SIT chronologies. **Environmental Pollution** 129(1):31-37.
- Abril, J.M. 2003. Difficulties in interpreting fast mixing in the radiometric dating of sediments using Pb-210 and Cs-137. **Journal of Paleolimnology** 30(4):407-414.
- Abril, J.M. and E. Fraga. 1996. Some physical and chemical features of the variability of Kd distribution coefficients for radionuclides. **Journal of Environmental Radioactivity** 30(3):253-270.
- Abril, J.M., and M. García-Leon. 1994. The integrated atmospheric flux effect in a radiogeochronological model. **Journal of Environmental Radioactivity** 24:65-79.
- Abril, J.M., and M. García-Leon. 1992. Modelos matemáticos en radiogeocronología. **Anales de Física A** 87:82-91. (Spanish)
- Abril, J.M., M. García-Leon, R. García-Tenorio, C.I. Sánchez, and F. El-Daoushy. 1992. Dating of marine sediments by an incomplete mixing model. **Journal of Environmental Radioactivity** 15:135-151.
- Ackermann, F., H. Bergmann, and U. Schliechert. 1983. Monitoring of heavy metals in coastal and estuarine sediments - A question of grain-size: <20 μm versus <60 μm . **Environmental Technology Letters** 4:317-328.
- Adamo, P., M. Arienzo, M. Pugliese, V. Roca, and P. Violante. 2004. Accumulation history of radionuclides in the lichen *Stereocaulon vesuvianum* from Mt. Vesuvius (south Italy). **Environmental Pollution** 127(3):455-461.

- Adriano, D., G.D. Hoyt, and J.E. Pinder III. 1981. Fallout cesium-137 on a forest ecosystem in the vicinity of a nuclear reprocessing plant. **Health Physics** 40:369-376.
- Agapkina, G.I. 2002. Cs-137 in the liquid phase of soils under natural biocenoses. **Eurasian Soil Science** 35(9):996-1002.
- Agapkina, G.I., A.I. Shcheglov, F.A. Tikhomirov, and L.N. Meculova. 1998. Dynamics of Chernobyl-fallout radionuclides in soil solutions of forest ecosystems. **Chemosphere** 36(4/5):1125-1130.
- Agapkina, G.I., F.A. Tikhomirov, A.I. Shcheglov, W. Kracke, and K. Bunzl. 1995. Association of Chernobyl-derived Pu-239+240, Am-241, Sr-90 and Cs-137 with organic matter in the soil solution. **Journal of Environmental Radioactivity** 29:257-269.
- Ageets, V.Yu. 1996. Accumulation of the radionuclides caesium-137 and strontium-90 in farm crops depending on soil properties. **Pochvovedenie I agrokhimiya** 29:249-257 (Russian)
- Agre, A.L., and V.I. Korogodin. 1960. The distribution of radioactive contamination in a stagnant reservoir. **Medical Radiology** 5:161-175.
- Agudo, E. Garcia. 1998. Global distribution of ¹³⁷Cs inputs for soil erosion and sedimentation studies, p. 117-121. In: International Atomic Energy Agency (ed), *Use of ¹³⁷Cs in the Study of Soil Erosion and Sedimentation*, **IAEA-TECDOC-1028**, Vienna, Austria.
- Aharoni, C., N.S. Pasricha, and D.L. Sparks. 1992. Adsorption and desorption kinetics of cesium in an organic matter-rich soil saturated with different cations. **Soil Science** 156:233-239.
- Ajayi, I.R. 2001. Radionuclides measurement and assay of soil and their corresponding absorbed dose rate in air in Aramoko-Ekiti, Nigeria. **Journal of Radioanalytical and Nuclear Chemistry** 250(3):571-572.
- Akers, C.R. 1976. Sedimentation of a flatland watershed in Louisiana. **Third Interagency Sedimentation Conference** 1:174-181.
- Akhtyrtsev, B.E., A.B. Akhtyrtsev, and L.A. Yablonskikh. 1999. Content and vertical distribution of heavy metals and radionuclides in hydromorphic soils of the forest-steppe zone of the Russian Plain. **Eurasian Soil Science** 32(4):394-403.
- Alam, M.N., M.I. Chowdhury, M. Kamal, S. Ghose, N. Mahmmod, A. Matin, and S.Q. Saikat. 1997. Radioactivity in sediments of the Karnaphuli River Estuary and the Bay of Bengal. **Health Physics** 73(2):385-387.

- Alam, M. N., M.I. Chowdhury, M., Zafar, M. Kamal, S. Ghose, and A.H.M. Kamal. 1998. Radionuclide concentrations in salt pans in the coastal area of Cox's Bazar, Bangladesh. **Journal of Environmental Radioactivity** 41(3):257-267.
- Albers, B.P., R. Rackwitz, S. Kleinschroth, and K. Bunzl. 2000. Spatial variability of ^{137}Cs and ^{40}K activity concentrations in soils and plants of alpine pastures: effects of micro- and meso-topography, p. 537-548. In: B. Markert, and K. Friese (eds.) **Trace Elements**, Elsevier, Amsterdam.
- Albers, B.P., R. Rackwitz, W. Schimmack, and K. Bunzl. 1998. Transect survey of radiocesium in soils and plants of two alpine pastures. **Science of the Total Environment** 216(1-2):159-172.
- Alberts, J.J., J.W. Bowling, and K.A. Orlandini. 1987. The effect of seasonal anoxia on the distribution of ^{238}Pu , $^{239,240}\text{Pu}$, ^{241}Am , ^{244}Cm , and ^{137}Cs in pond systems of the southeastern United States, pp. 371-390. In: J.E. Pinder, III, J.J. Alberts, K.W. McLeod and R.G. Schreckize (eds.), **Environmental Research on Actinide Elements**, US Department of Energy CONF-841142, Washington, DC.
- Alberts, J.J., and R.N. Muller. 1979. The distribution of $^{239,240}\text{Pu}$, ^{238}Pu , and ^{137}Cs in various particle size classes of Lake Michigan sediments. **Journal of Environmental Quality** 8:20-22.
- Alberts, J.J., L.J. Tilly, and T.J. Virgerstad. 1979. Seasonal cycling of cesium-137 in a reservoir. **Science** 203:649-651.
- Alberts, J.J., and M.A. Wahlgren. 1984. Concentration of $^{239,240}\text{Pu}$, ^{137}Cs , and ^{90}Sr in the waters of the Laurentian Great Lakes. Comparison of 1973 and 1976 values. **Environmental Science and Technology** 15:94-98.
- Alberts, J.J., M.A. Wahlgren, K.A. Orlandini, and C.A. Durbahn. 1989. The distribution of $^{239,240}\text{Pu}$, ^{238}Pu , ^{241}Am and ^{137}Cs among chemically-defined components of sediments, settling particles and net plankton of Lake Michigan. **Journal of Environmental Radioactivity** 9:89-103.
- Albrecht, A. 1999. Radiocesium and Pb-210 in sediments, soils and surface waters of a high alpine catchment: A mass balance approach relevant to radionuclide migration and storage. **Aquatic Science** 61(1):1-22.
- Albrecht, A., P. Reichert, J. Beer, and A. Luck. 1995. Evaluation of the importance of reservoir sediments as sinks for reactor-derived radionuclides in riverine systems. **Journal of Environmental Radioactivity** 28:239-269.

- Albrecht, A., R. Reiser, A. Luck, J.A. Stoll, and W. Giger. 1998. Radiocesium dating of sediments from lakes and reservoirs of different hydrological regimes. **Environmental Science and Technology** 32(13):1882-1887.
- Aldridge, J.N., P. Kershaw, J. Brown, D. McCubbin, K.S. Leonard, and E.F. Young. 2003. Transport of plutonium (Pu-239/240) and caesium (Cs-137) in the Irish Sea: comparison between observations and results from sediment and contaminant transport modelling. **Continental Shelf Research** 23(9):869-899.
- Aleksan'yan, O.M. 1978. A study of the vertical distribution of ^{90}Sr , and ^{137}Cs in bottom sediments of a sea of Azov, USSR. **Ékologiya** 5:95-97. (Russian)
- Aleksan'yan, O.M., and Y.Y Katsnel'son. 1979. Radioactive pollution of bottom sediments and its prevention. **Soviet Journal of Ecology** 10:243-245.
- Alexander, C.R., R.G. Smith, F.D. Calder, S.J. Schropp, and H.L. Windom. 1993. The historical record of metal enrichment in two Florida estuaries. **Estuaries** 16:627-637.
- Al Hamarneh, I., A. Wreikat, and K. Toukan. 2003. Radioactivity concentrations of K-40, Cs-134, Cs-137, Sr-90, Am-241, Pu-238 and Pu239+240 radionuclides in Jordanian soil samples. **Journal of Environmental Radioactivity** 67(1):53-67.
- Alhonen, P. 1979. The sedimentary record of the cultural eutrophication and pollution of lakes in Finland. **Archives of Hydrobiologia** 86:13-26.
- Aliyev, D.A., M.A. Abdullayev, and A.T. Tagiyev. 1977. Distribution of Sr^{90} and Cs^{137} in plowed soils of the dry (subtropical) steppe zone of the lesser Caucasus in the Azerbaijan SSR. **Pochvovedeniye** 7:34-35.
- Al-Kahtani, S.A., M.A. Farouk, and A.A. Ai-Zahrani. 2001. Radioactivity levels in soil of three selected sites at and around Riyadh City. **Journal of Radioanalytical and Nuclear Chemistry** 250(1):93-95.
- Allan, R.L., G.T. Cook, H.J. Duncan, A.B. MacKenzie, and I.D. Pulford. 1995. Pollutant radionuclide geochemistry in salt marsh sediments. **Contaminated soil '95: Volume 1: Proceedings of the Fifth International FZK/TNO Conference on Contaminated Soil**, 30 October-3 November, 1995, Maastricht, The Netherlands, p.721-722.
- Allredge, A.W., and F.W. Whicker. 1972. A method for measuring soil erosion and deposition with beta particle attenuation. **Journal of Range Management** 25:393-398.
- Allison, M.A. 1998. Historical changes in the Ganges-Brahmaputra delta front. **Journal of Coastal Research** 14:480-490.

- Allison, M.A. and E.B. Kepple. 2001. Modern sediment supply to the lower delta plain of the Ganges-Brahmaputra River in Bangladesh. **Geo-Marine Letters** 21(2):66-74.
- Allison, M.A., G.C. Kineke, E.S. Gordon, and M.A. Goni. 2000. Development and reworking of a seasonal flood deposit on the inner continental shelf off the Atchafalaya River. **Continental Shelf Research** 20(16):2267-2294.
- Allison, M.A., S.A. Kuehl, T.C. Martin, and A. Hassan. 1998. The importance of floodplain sedimentation for river sediment budgets and terrigenous inputs to the oceans: Insights from the Brahmaputra-Jamunsa River. **Geology** 26(2):175-178.
- Allison, M.A. and M.T. Lee. 2004. Sediment exchange between Amazon mudbanks and shore-fringing mangroves in French Guiana. **Marine Geology** 208(2-4):169-190.
- Allison, R.J. 1992. Slopes and slope processes: review. **Progress in Physics Geology** 15:423-427.
- Al-Masri, M.S., A. Aba, H. Khalil, and Z. Al-Hares. 2002. Sedimentation rates and pollution history of a dried lake: Al-Oteibeh Lake. **Science of the Total Environment** 293(1-3):177-189.
- Alongi, D.M., G. Wattayakorn, J. Pfitzner, F. Tirendi, I. Zagorskis, G.J. Brunskill, A. Davidson, and B.F. Clough. 2001. Organic carbon accumulation and metabolic pathways in sediments of mangrove forests in southern Thailand. **Marine Geology** 179(1-2):85-103.
- Al-Rayyes, A.H., and S. Mamish. 1999. Cs-137, Cs-134 and Sr-90 in the coastal Syrian mountains after the Chernobyl accident. **Journal of Environmental Radioactivity** 46(2):237-242.
- Amano, H., T. Matsunaga, S. Nagao, Y. Hanzawa, M. Watanabe, T. Ueno, and Y. Onuma. 1999. The transfer capability of long-lived Chernobyl radionuclides from surface soil to river water in dissolved forms. **Organic Geochemistry** 30(6):437-442.
- Amano, H. And Y. Onuma. 2003. Depth profiles of long lived radionuclides in Chernobyl soils sampled around 10 years after the accident. **Journal of Radioanalytical and Nuclear Chemistry** 255(1):217-222.
- Ambers, R.K.R. 2001. Using the sediment record in a western Oregon flood-control reservoir to assess the influence of storm history and logging on sediment yield. **Journal of Hydrology** 244(3-4):181-200
- Amiro, B.D., S.C. Sheppard, F.L. Johnston, W.G. Evenden, and D.R. Harris. 1996. A burning question: What happens to iodine, cesium, and chlorine in biomass fires? **Science of the Total Environment** 187:93-103.
- Ammar, E.A., A.M. El-Khatin, A.G. Wahba, and M. Elraey. 1987. Radioactive contamination from Chernobyl over Alexandria city. **Isotopenpraxis** 23:303-305.

- Amundsen, I. 1999. Biogeochemical behaviour of Cs-137, and Sr-90 in the artificial reservoirs of Mayak PA, Russia. **Science of the Total Environment** 241(1-3):107-116.
- Andersen, T.J., O.A. Mikkelsen, A.L. Moller, and M. Pejrup. 2000. Deposition and mixing depths on some European intertidal mudflats based on Pb-210 and Cs-137 activities. **Continental Shelf Research** 20(12-13):569-1591.
- Andersen, T.J. and M. Pejrup. 2001. Suspended sediment transport on a temperate, microtidal mudflat, the Danish Wadden Sea. **Marine Geology** 173(1-4):69-85.
- Anderson, D.W., E. De Jong, G.E. Verity, and E.G. Gregorich. 1986. The effect of cultivation on the organic matter of soils of the Canadian prairies. **Transactions XIII Congress of the International Society of Soil Science Hamburg** 7:1344-1345.
- Anderson, E.C. 1958. Radioactivity of people and milk: 1957. **Science** 128:882-886.
- Anderson, K.G., and J. Roed. 1994. The behaviour of Chernobyl ^{137}Cs , ^{134}Cs and ^{106}Ru in undisturbed soil: Implications for external radiation. **Journal of Environmental Radioactivity** 22:183-196.
- Anderson, L.G., K.A. Carlsson, P.O.J. Hall, E. Holm, D. Josefsson, K. Olsson, B.R.R. Persson, T. Persson, P. Roos, A. Tengberg, and M. Wedborg. 1999. The effect of the Siberian Tundra on the environment of the shelf seas and the Arctic Ocean. **Ambio** 28(3):270-280.
- Anderson, M.G., D.E. Walling, and P.D. Bates. 1996. The general context for floodplain process research, pp. 1-13. In: Anderson, M.G., D.E. Walling, and P.D. Bates (eds.), **Floodplain processes**. Wiley, Chichester.
- Anderson, N.J. 1990. Variability of diatom concentrations and accumulation rates in sediment of a small lake basin. **Limnology and Oceanography** 35:497-508.
- Anderson, N.J. 1989. A whole-basin diatom accumulation rate for a small eutrophic lake in Northern Ireland and its palaeoecological implications. **Journal of Ecology** 77:926-946.
- Anderson, N.J., and B.V. Odgaard. 1994. Recent paleolimnology of three shallow Danish Lakes. **Hydrobiologia** 275/276:411-422.
- Anderson, P., C.M. Davidson, D. Littlejohn, A.M. Ure, C.A. Shand, and M.V. Cheshire. 1997. The translocation of caesium and silver by fungi in some Scottish soils. **Communications in Soil Science and Plant Analyses** 28(6/8):635-650.

- Anderson, R.F., S.L. Schiff, and R.H. Hesslein. 1987. Determining sediment accumulation and mixing rates using ^{210}Pb , ^{137}Cs and other tracers: problems due to postdepositional mobility or coring artifacts. **Canadian Journal of Fisheries and Aquatic Science** 44:231-250.
- Andersson, I., and H. Lonsjo. 1988. Transfer of Cs-137 in two farm ecosystems. **Swedish Journal of Agriculture Research** 18:195-206.
- Andersson, K.G., and J. Roed. 1994. The behaviour of Chernobyl Cs-137, Cs-134 and Ru-106 in undisturbed soil - Implications for external radiation. **Journal of Environmental Radioactivity** 22:183-196.
- Andolina, J., and O. Guillitte. 1990. Radiocesium availability and retention sites in forest humus, pp. 135-142. In: G. Desmet, P. Nassimbeni, and M. Belli (eds.) **Transfer of radionuclides in natural and semi-natural environments**. Proceedings CEC International Conference, Passariano, Italy, 11-15 September 1999., Elsevier Applied Science, London.
- Andrello, A.C. 1997. Metodologia do ^{137}Cs para determinação da erosão e deposição de solo em uma bacia de solo LRd do norte do Paraná. **Master's degree dissertation**. Universidade Estadual de Londrina. Londrina, Paraná, Brazil.
- Andrello, A.C. and C.R. Appoloni. 2005. Cesium-137 inventories in areas of the native forest and undisturbed pasture: a comparison. Papers for poster presentation at the **Sediment Budgets Symposium** – VII IAHS Scientific Assembly, Foz do Iguaçu, PR, Brazil, 4-9 April 2005. CD Rom, 8 pp.
- Andrello, A.C., C.R. Appoloni, and M.F. Guimaraes. 2004. Soil erosion determination in a watershed from Northern Parana (Brazil) using ^{137}Cs . **Brazilian Archives of Biology and Technology** 47(4):659-667.
- Andrello, A.C., C.R. Appoloni, and M.F. Guimaraes. 2003. Use of cesium-137 to assess soil erosion plates under soybean, coffee and pasture. **Revista Brasileira de Ciencia do Solo** 27(2):223-229.
- Andrello, A.C., C.R. Appoloni, and P.S. Pariera. 1998. Metodologia do ^{137}Cs para determinação da erosão de solo em uma bacia do norte do Paraná. In **II Simpósio Nacional de Instrumentação Agropecuária**, São Carlos, São Paulo, Brazil. pp. 197-203.
- Andrello, A.C., C.R. Appoloni, and P.S. Pariera. 1997. Determinação da erosão/sedimentação do solo por meio da medida da concentração de ^{137}Cs . In **CD-Rom of 4th Meeting on Nuclear Applications**, Poços de Caldas, Minas Gerais, Brazil.
- Andrello, A.C., C.R. Appoloni, P.S. Parreira, and M.F. Guimaraes. 2001. A preliminary survey of soil erosion in a small basin in the Parana State by using Cs-137 methodology. **Radiation Physics and Chemistry** 61(3-6):635-636.

- Andrello, A.C., M.D. Guimaraes, M.D., C.R. Appoloni, and V.F. do Nascimento. 2003. Use of cesium(-137) methodology in the evaluation of superficial erosive processes. **Brazilian Archives of Biology and Technology** 46(3):307-314.
- Andren, E., T. Andren, and H. Kunzendorf. 2000. Holocene history of the Baltic Sea as a background for assessing records of human impact in the sediments of the Gotland Basin. **Holocene** 10(6):687-702.
- Anisfeld, S.C., M. Tobin, and G. Benoit. 1999. Sedimentation rates in flow-restricted and restored salt marshes in Long Island Sound. **Estuaries** 22(2A):231-244.
- Anisimov, V.S., S.V. Kruglov, R.M. Aleksakhin, L.G. Suslina, and V.K. Kuznetsov. 2002. The effect of potassium and soil acidity on the Cs-137 status in soils and its accumulation by barley plants in a pot experiment. **Eurasian Soil Science** 35(11):1169-1177.
- Anisimov, V.S., N.I. Sanzharova, and R.M. Aleksakhin. 1992. On the forms and vertical distribution of ¹³⁷Cs in soils near the accident at the Chernobyl nuclear power station. **Eurasian Soil Science** 24:1-10. (Translated from **Pochvovedeniye** 9:31-40, 1991)
- Anonymous. 1995. Sediment dating. **Bulletin of the Geological Survey of Japan**, Vol. 46, No. 5, Japan, 58 pp. (In Japanese)
- Anonymous 1995. Sediment dating. **Bulletin of the Geological Survey of Japan**, Vol. 46, No. 6, Japan, 67 pp. (In Japanese)
- Anonymous. 1988. **Proceedings of the national workshop on the use of ¹³⁷Cs to measure erosion**. Soil Conservation Service of New South Wales, Sydney, Australia, 24 pp.
- .Anspaugh, L.R., R.J. Catlin, and M. Goldman. 1988. The global impact of the Chernobyl reactor accident. **Science** 242:1513-1519.
- Antonopoulos-Domis, N, A. Clouvas, A. Hiladak, and S. Kadi. 1995. Radiocesium distribution in undisturbed soil: Measurements and diffusion-advection model. **Health Physics** 69:949-953.
- Antonopoulos-Domis, M., A. Clouvas, and F. Tervisidis. 1987. Deposition in the soils of Macedonia and Thrace of radionuclides of Cs-134 and Cs-137 from the nuclear accident of Chernobyl. **Proceedings of a symposium on "the consequences of the Chernobyl nuclear accident in Greece"**, November 19-20, 1987 N.R.C.P.S. "Democritos" Aghia Paraskevi, Athens, Greece. pp 77-82 (Greek).
- Aoyama, M., and K. Hirose. 1995. The temporal and spatial variation of ¹³⁷Cs concentration in the Western North Pacific and its marginal seas during the period from 1979 to 1988. **Journal of Environmental Radioactivity** 29(1):57-74.

- Apostolakis, C.G., E.P. Papanikolaou, C. Nobeli, and P. Kritidis. 1990. A study of radioactive cesium in relation to soil properties in Greece. In: G. Desmet, P. Nassimbeni, and M. Belli, (Eds), **Transfer of radionuclides in natural and seminatural environments**. Elsevier.
- Appleby, P.G. 2004. Environmental change and atmospheric contamination on Svalbard: sediment chronology. **Journal of Paleolimnology** 31(4):433-443.
- Appleby, P.G. 2002. Chronostratigraphic techniques in recent sediments. **Tracking Environmental Change Using Lake Sediments, Vol 1: Basin Analysis, Coring, and Chronological Techniques** 1:171-203.
- Appleby, P.G. 2000. Radiometric dating of sediment records in European mountain lakes. **Limnology** 59(supplement 1):1-14.
- Appleby, P.G. 1998. Dating recent sediment by ^{210}Pb : Problems and Solution, pp. 7-24. In: Ilus, E. (Ed.), **Dating of sediments and determination of sedimentation rates**. Proceedings of a seminar held in Helsinki Stuk A 145.
- Appleby, P.G. 1997. Sediment records of fallout radionuclides and their application to studies of sediment-water interactions. **Water Air Soil Pollution** 99(1-4):573-585.
- Appleby, P.G., H.H. Birks, R.J. Flowers, N. Rose, S.M. Peglar, M. Ramdani, M.M. Kraiem, and A.A. Fathi. 2001. Radiometrically determined dates and sedimentation rates for recent sediments in nine North African wetland lakes (the CASSARINA project). **Aquatic Ecology** 35: 347-367.
- Appleby, P.G., J.A. Dearing, and F. Oldfield. 1985. Magnetic studies of erosion in a Scottish lake catchment. 1. Core chronology and correlation. **Limnology and Oceanography** 30:1144-1153.
- Appleby, P.G., R.J. Flower, A.W. Mackay, and N.L. Rose. 1998. Paleolimnological assessment of recent environmental change in Lake Baikal: sediment chronology. **Journal of Paleolimnology** 20(2):119-133
- Appleby, P.G., E.Y. Haworth, H. Michel, D.B. Short, G. Laptev, and G.T. Piliposian. 2003. The transport and mass balance of fallout radionuclides in Blelham Tarn, Cumbria (UK). **Journal of Paleolimnology** 29(4):459-473.
- Appleby, P.G., V.J. Jones, and J.C. Ellis-Evans. 1995. Radiometric dating of lake sediment from Signy Island (maritime Antarctic): evidence of recent climatic change. **Journal of Paleolimnology** 13:179-191.

- Appleby, P.G., A.O. Koulikov, L. Camarero, M. Ventura. 2002. The input and transmission of fallout radionuclides through Redó, a high mountain lake in the Spanish Pyrenees. **Water, Air and Soil Pollution** 2(2):19-31.
- Appleby, P.G., P. Nolan, D.W. Gifford, M.J. Godfrey, F. Oldfield, N.J. Anderson, and R.W. Battabee. 1986. Pb-210 dating by low background counting. **Hydrobiologia** 142:21-27.
- Appleby, P.G., and F. Oldfield. 1992. Application of lead-210 to sedimentation studies, p.731-738. In: M. Ivanovich and R.S. Harman (eds.), **Uranium-series disequilibrium: Applications to earth, marine, and environmental sciences**. Clarendon Press, Oxford, United Kingdom.
- Appleby, P.G., and F. Oldfield. 1983. The assessment of ^{210}Pb data from sites with varying sediment accumulation rates. **Hydrobiologia** 103:29-35.
- Appleby, P.G., and F. Oldfield. 1979. Correspondence. **Environmental Science and Technology** 13:478-490.
- Appleby, P.G., and F. Oldfield. 1978. The calculation of lead-210 dates assuming a constant rate of supply of unsupported lead-210 to the sediment. **Catena** 5:1-8.
- Appleby, P.G., F. Oldfield, R. Thompson, and P. Huttunen. 1978. ^{210}Pb dating of annually laminated lake sediments from Finland. **Nature** 280:53-55.
- Appleby, P.G., N. Richardson, and P.J. Nolan. 1992. Self-absorption correction for well-type germanium detectors. **Nuclear Instrument Method B** 71:228-233.
- Appleby, P.G., N. Richardson, and P.J. Nolan. 1991. ^{241}Am dating of lake sediment. **Hydrobiologia** 214:35-42.
- Appleby, P.G., N. Richardson, P.J. Nolan, and F. Oldfield. 1990. Radiometric dating of the United Kingdom SWAP sites. **Philosophical Transaction of the Royal Society of London B** 327:233-238.
- Appleby, P.G., N. Richardson, and J.T. Smith. 1993. The use of radionuclides records for Chernobyl and weapons test fallout for assessing the reliability of Pb 210 in dating very recent sediments. **Verh. Int. Verein. Limnology** 25:266-269.
- Appleby, P.G., W. Shotyk, and A. Fankhauser. 1997. Lead-210 age dating of three peat cores in the Jura Mountains, Switzerland. **Water Air Soil Pollution** 100(3-4):223-231.
- Appleby, P.G., and J.T. Smith 1993. The transport of radionuclides in lake-catchment systems, pp. 264-275. In: **Hydrological considerations in relation to nuclear power plants**, Proceeding of an International Workshop, UNESCO, Paris.

- Aquilonius, K. 1995. Long-term distribution of Cs-137 in freshwater ecosystem and the effect of bioturbation on leakage of Cs-137 from the sediments. **NEI-SE-241**, Stockholm University (Sweden). Dept. of Systems Ecology. 27 p.
- Arapis, G.D., and M.G. Karandinos. 2004. Migration of ^{137}Cs in the soil of sloping semi-natural ecosystems in Northern Greece. **Journal of Environmental Radioactivity** 77(2):133-142.
- Arapis, G., E. Petrayev, E. Shagalova, O. Zhukova, G. Sokolik, and T. Ivanova. 1997. Effective migration velocity of ^{137}Cs and ^{90}Sr as a function of the type of soils in Belarus. **Journal of Environmental Radioactivity** 34(2):171-185.
- Armentano, T.V., and G.M. Woodwell. 1975. Sedimentation rates in a Long Island marsh determined by ^{210}Pb dating. **Limnology and Oceanography** 20:452-455.
- Armstrong, N.E., and E.F. Gloya. 1969. Mathematical models for the dispersion of radionuclides in aquatic systems, pp. 329-335. *In*: D.J. Nelson and F.C. Evans (eds.), **Symposium on radioecology**, USAEC Doc. CONF-670503, US Atomic Energy Agency, Washington, DC.
- Arnason, J.G. and B.A. Fletcher. 2003. A 40+ year record of the Cd, Hg, Pb, and U deposition in sediments of Patroon Reservoir, Albany County, New York, U.S.A. **Environmental Pollution** 123:383-391.
- Arnaud, F., M Revel, T. Winiarski, D. Bosch, E. Chapron, M. Desmet, and N. Tribovillard. 2003. Lead fall-out isotopic signal over French northern Alps: Timing and sources constraints from distant lake sediment records. **Journal de Physique IV** 107(Pt. 1):61-64.
- Arnalds, O. N.H. Cutshall, and G.A. Nielsen. 1989. Cs-137 in Montana soils. **Health Physics** 57:955-958.
- Artner, C., M.H. Gerzabek, O. Horak, and K. Mück. 1990. Determination of transfer factors for Cs-137 and Sr-90 from Chernobyl fallout. **VDLUFA-Schriftenreihe** 32:881-886. (German)
- Asselman, N.E.M., and H. Middlekoop. 1995. Floodplain sedimentation: quantities, patterns and processes. **Earth Surface Processes and Landform** 20:481-499.
- Ashley, G.M. 1977. **Sedimentology of a tidal river, Pitt River, B.C.** Ph.D. Thesis, University of British Columbia, Vancouver, BC.
- Ashley, G.M., and L.E. Moritz. 1979. Determination of lacustrine sedimentation rates by radioactive fallout (^{137}Cs), Pitt Lake, British Columbia. **Canadian Journal of Earth Science** 16:965-970.

- Ashley, G.M., J.M. Mworia, A.M. Muasya, R.B. Owen, S.G. Driese, V.C. Hover, R.W. Renaut, M.F. Goman, S. Mathai, and S.H. Blatt. 2004. Sedimentation and recent history of a freshwater wetland in a semi-arid environment: Lobo Swamp, Kenya, East Africa. **Sedimentology** 51(6):1301-1321.
- Ashmore, P., F.M. Conly, D. deBoer, Y. Martin, E. Petticrew, and A. Roy. 2000. Recent (1995-1998) Canadian research on contemporary processes of river erosion and sedimentation, and river mechanics. **Hydrological Processes** 14(9):1687-1706.
- Ashwood, T.L., and C.R. Olsen. 1988. Pearl Harbor bombing attack: a contamination legacy revealed in the sedimentary record. **Marine Pollution Bulletin** 19:68-71.
- Askbrant, S., J. Melin, J. Sandalls, G. Rauret, R. Vallejo, T. Hinton, A. Cremers, C. Vandecastelle, N. Lewyckyj, Y.Y. Ivanov, S.K. Firsakova, N.P. Arkhipov, and R.M. Alexakhin. 1996. Mobility of radionuclides in undisturbed and cultivated soils in Ukraine, Belarus and Russia six years after the Chernobyl fallout. **Journal of Environmental Radioactivity** 31(3):287-312.
- Askbrant, S., and J. Sandalls. 1998. Root uptake of ^{137}Cs and ^{90}Sr by rye grass on various soils in the CIS. **Journal of Environmental Radioactivity** 38(1):85-95.
- Askbrant S., C. Vandecasteele, R.M. Alexakhin et al. 1996. Mobility of radionuclides in undisturbed and cultivated soils in Ukraine, Belarus and Russia six years after the Chernobyl fallout. **Journal of Environment Radioactivity** 36:287-312
- Aslani, M.A.A., S. Aytas, S. Akyil, G. Yaprak, G. Yener, and M. Eral. 2003. Activity concentration of caesium-137 in agricultural soils. **Journal of Environmental Radioactivity** 65(2):131-145.
- Assimakopoulos, P.A., K.G. Ioannides, D.T. Karamanis, A.A. Pakou, K.C. Stamoulis, A.S. Mantzios, and E. Nikolaou. 1993. Radiocaesium transfer to sheep's milk as a result of soil ingestion. **Science of the Total Environment** 136:13-24.
- Assimakopoulos, P.A., K.G. Ioannides, D.T. Karamanis, A.A. Pakou, K.C. Stamoulis, A. Vayonakis, and E. Veltsos. 1993. Time dependence of the transfer factor of Cs-137 from surface soil to plants. **Science of the Total Environment** 138:309-315.
- Assinder, D.J., M. Kelly, and S.R. Aston. 1985. Tidal variations in dissolved and particulate phase radionuclide activities in the Esk estuary and their distribution coefficients and particulate activity fraction. **Journal of Environmental Radioactivity** 2:1-22.
- Assinder, D.J., S.M. Mudge, and G.S. Bourne. 1997. Radiological assessment of the Ribble Estuary: I. Distribution of radionuclides in surface sediments. **Journal of Environmental Radioactivity** 36(1):1-19.

- Aston, S.R., and E.K. Duursma. 1973. Concentration effects of ^{137}Cs , ^{65}Zn , ^{60}Co , and ^{106}Ru sorption by marine sediments with geochemical implications. **Netherlands Journal of Sea Research** 6:225-240.
- Aston, S.R., and J.E. Rae. 1982. The deposition of Windscale radiocaesium in the Wyre Estuary and the measurement of sedimentation rates. **Marine Environmental Research** 7:83-90.
- Aston, S.R., and D.A. Stanners. 1982a. Gamma emitting fission products in surface sediments of the Ravenglass estuary. **Marine Pollution Bulletin** 13:135-138.
- Aston, S.R., and D.A. Stanners. 1982b. Local variability in the distribution of Windscale fission products in estuarine sediments. **Estuaries and Coastal Shelf Science** 14:167-174.
- Aston, S.R. and D.A. Stanners. 1981. Plutonium transport to and deposition and immobility in the Irish Sea intertidal sediments. **Nature** 289:581-582.
- Aston, S.R., and D.A. Stanners. 1979. The determination of estuarine sedimentation rates by $^{134}\text{Cs}/^{137}\text{Cs}$ and other artificial radionuclide profiles. **Estuaries and Coastal Marine Science** 9:529-541.
- Astori, E., D. Bianchi, E. Cammarata, S. Gastaldo, N. Marzolla, G. Rabbia, A. Vescovi, and L. Priano. 1999. Surface contamination of radiocaesium measured and calculated in South Piemonte (Italy). **Journal of Environmental Radioactivity** 45(1):29-38.
- Audry, S., J. Schafer, G. Blanc, and J.M. Jouanneau. 2004. Fifty-year sedimentary record of heavy metal pollution (Cd, Zn, Cu, Pb) in the Lot River reservoirs (France). **Environmental Pollution** 132(3):413-426.
- Auerbach, S.I., J.S. Olson, and H.D. Waller. 1964. Landscape investigations using cesium-137. **Nature** 201:761-764.
- Auerswald, K., and W. Schimmack. 2000. Element-pool balances in soils containing rock fragments. **Catena** 40(3):279-290.
- Auffret, J.P., P. Germain, P. Guéguéniat, and Y. Lemosquet. 1971. Etude expérimentale de la fixation du césium 137 par certains sédiments de la Manche. **Cahiers Océanographiques** XXII 10:935-955. (French)
- Autenreith, R.L., J.S. Bonnet, and L. Schriebel. 1991. Aquatic sediment. **Research Journal of Water** 63:709-725.
- Authur, W.J. 1982. Radionuclide concentration in vegetation at a radioactive waste-disposal area in southern Idaho. **Journal of Environmental Quality** 11:394-399.

- Avery, S.V. 1996. Fate of caesium in the environment: Distribution between the abiotic and biotic components of aquatic and terrestrial ecosystems. **Journal of Environmental Radioactivity** 30(2):139-171.
- Avila, R., R. Bergman, M.. Scimone, S. Fesenko, N. Sancharova, and L. Moberg. 2001. A comparison of three models of Cs-137 transfer in forest ecosystems. **Journal of Environmental Radioactivity** 55(3):315-327.
- Avnimelech, Y., J.R. McHenry, and J.D. Ross. 1984. Decomposition of organic matter in lake sediment. **Environmental Science and Technology** 18:5-11.
- Axelman, J., C. Bandh, D. Broman, R. Carman, P. Jonsson, H. Larsson, H. Linder, C. Naf, and H. Pettersen. 1995. Time-trend analysis PAH and PCB sediment fluxes in the northern Baltics Proper using different dating methods. **Marine and Freshwater Research** 46:137-144.
- Aycik, G.A., D. Cetaku, H.N. Erten, and I. Salihoglu. 2004. Dating of Black Sea sediments from Romanian coast using natural Pb-210 and fallout Cs-137. **Journal of Radioanalytical and Nuclear Chemistry** 259(1):177-180.
- Baburajan, A., D.D. Rao, S. Chandramouli, R.S. Iyer, A.G. Hegde, and P.S. Nagarajan. 1999. Radionuclide ratios of cesium and strontium in Tarapur marine environment, west coast of India. **Indian Journal of Marine Sciences** 28(4):455-457.
- Bacchi, O.O.S., K. Reichard, and G. Sparovek. 2003. Sediment spatial distribution evaluated by three methods and its relation to some soil properties. **Soil and Tillage Research** 69(1-2):117-125.
- Bacchi, O.O.S., K. Reichard, G. Sparovek, and S.B.L. Ranieri. 2000. Soil erosion evaluation in a small watershed in Brazil through ^{137}Cs fallout redistribution analysis and conventional models. **Acta Geologica Hispanica** 35(3-4):251-259.
- Bachhuber, H., K. Bunzl, and W. Schimmack. 1987. Spatial variability of fallout ^{137}Cs in the soil of a cultivated field. **Environmental Monitoring and Assessment** 8:93-101.
- Bachhuber, H., K. Bunzl, and W. Schimmack. 1986. Spatial variability of distribution coefficients of ^{137}Cs , ^{65}Zn , ^{85}Sr , ^{57}Co , ^{109}Cd , ^{141}Ce , ^{103}Ru , $^{95\text{m}}\text{Tc}$, and ^{131}I in cultivated soil. **Nuclear Technology** 72:359-371.
- Bachhuber, H., K. Bunzl, W. Schimmack, and I. Gans. 1982. The migration of ^{137}Cs and ^{90}Sr in multilayered soils: results from batch, column, and fallout investigations. **Nuclear Technology** 59:291-301.

- Baeza, A., M. Delrio, A. Jimenez, C. Miro, and J. Paniagua. 1995. Influence of geology and soil particle size on the surface area/volume ratio for natural radionuclides. **Journal of Radioanalysis and Nuclear Chemistry** 189:289-299.
- Baeza, A., M. Delrio, C. Miro, and J. Paniagua. 1993. Surface and depth fallout distribution of Cs-137 and Sr-90 in soils of Caceres (Spain) - Dose commitments due to external irradiation. **Journal of Radiation Nuclear Letters** 175:297-316.
- Baeza, A., J. Paniagua, M. Rufo, J. Guillen, and A. Sterling. 2001. Seasonal variations in radionuclide transfer in a Mediterranean grazing-land ecosystem. **Journal of Environmental Radioactivity** 55(3):283-302.
- Baeza, A., J.M. Paniagua, M. Rufo, J. Barandica, A. Sterling. 1999. Dynamics of Sr-90 and Cs-137 in a soil-plant system of a Mediterranean ecosystem. **Radiochimica Acta** 85(3-4):137-141.
- Bai, Z. and G. Wan. 1999. Fallout radionuclides (^7Be and ^{137}Cs) in surface soil and lake sediments in west Yunnan and central Guizhou, China. **Chinese Science Bulletin** 44(Supplement 2):125-126.
- Bai, Z. and G. Wan. 1998. Distribution of cosmogenic ^7Be in surface soils of mountain regions and the principles of erosion trace. **Acta Pedologica Sinica** 35(2):266-275.
- Bai, Z.G., G.J. Wan, R.G. Huang, and T.S. Liu. 2002. A comparison on the accumulation characteristics of Be-7 and Cs-137 in lake sediments and surface soils in western Yunnan and central Guizhou, China. **Catena** 49(3):253-270.
- Bai Z., G. Wan, Wang ChangSheng, Wan Xi, and Huang RongGui. 1997. Geochemical speciation of soil ^7Be , ^{137}Cs , ^{226}Ra and ^{228}Ra as tracers to particle transport. **Pedosphere** 7(3):263-268.
- Bai, Z., G. Wan, C. Wang, X. Wan, and R. Huang. 1996. ^7Be distribution in surface soil of central Guizhou karst region and its erosion trace. **Progress in Natural Science** 6:700-710.
- Bajracharya, R., R. Lal, and J.M. Kimble. 1998. Use of radioactive fallout cesium-137 to estimate soil erosion on three farms in west central Ohio. **Soil Science** 163(2):133-144.
- Baker, S.J., and P.A. Cawse. 1990. A survey of radioactive caesium in soils of Cumbria and North Lancashire: comparison of accumulation pre- and post-Chernobyl. **UK Atomic Energy Report AEA-EE-0047**.
- Bakunov, N.A., and N.P. Arkhipov. 1995. Behavior of Sr-90 and Cs-137 of weapons and reactor origin in the soil-plant system. **Eurasian Soil Science** 27:40-52.

- Balgoeva, R., and L. Zikovsky. 1995. Geographic and vertical distribution of Cs-137 in soils in Canada. **Journal of Environmental Radioactivity** 27:269-274.
- Baltakmens, T., and L.P. Gregory. 1977. Profile of ⁹⁰Sr and ¹³⁷Cs concentrations in selected New Zealand soils and their bearing on milk contamination levels. **New Zealand Journal of Science** 20:425-431.
- Balistrieri, L.S., and J.W. Murray. 1984. Marine scavenging: Trace metal adsorption by interfacial sediment from the MANOP site H1. **Geochimica et Cosmochimica Acta** 48:921-929.
- Banis, Y.N., J.C. Bathurst, and D.E. Walling. 2004. Use of caesium-137 data to evaluate SHETRAN simulated long-term erosion patterns in arable lands. **Hydrological Processes** 18(10):1795-1809.
- Ban-Nai, T. And Y. Muramatsu. 2002. Transfer factors of radioactive Cs, Sr, Mn, Co and Zn from Japanese soils to root and leaf of radish. **Journal of Environmental Radioactivity** 63(3):251-264.
- Barbeau, C., R. Bougie, and J.E. Coté. 1981. Variations spatiales et temporelles du césium-137 et du carbone dans des sédiments du fjord du Saguenay. **Canadian Journal of Earth Science** 18:1004-1011. (French)
- Barber, D.A. 1964. Influence of soil organic matter on the entry of caesium-137 into plants. **Nature** 204:1326-1327.
- Barnaby, F. 1986. Chernobyl: the consequences in Europe. **Ambio** 15:332-334.
- Barra, R., M. Cisternas, C. Suarez, A. Araneda, O. Pinones, and P. Popp. 2004. PCBs and HCHs in a salt-marsh sediment record from South-Central Chile: use of tsunami signatures and Cs-137 fallout as temporal markers. **Chemosphere** 55(7):965-972.
- Barra, R., M. Cisternas, R. Urrutia, K. Pozo, P. Pacheco, O. Parra, and S. Focardi. 2001. First report on chlorinated pesticide deposition in a sediment core from a small lake in central Chile. **Chemosphere** 45(6-7):749-757.
- Bartholdy, J., C. Christiansen, and H. Kunzendorf. 2004. Long term variations in backbarrier salt marsh deposition on the Skallingen peninsula - the Danish Wadden Sea. **Marine Geology** 203(1-2):1-21.
- Bartley, R., J.O., and A. Henderson. 2004. A sediment budget for the Herbert River catchment, North Queensland, Australia. **International Association of Hydrological Sciences Publication** 288:147-154.

- Bartos, P., and F. Macasek. 1999. Radiochemical analysis and speciation of radiocesium in soils by leaching. **Czechoslovakian. Journal of Physics** 49(2, Suppl. 1):641-648.
- Bartow, S.M., C.B. Craft, and C.J. Richardsn. 1996. Reconstructing historical changes in Everglades plant community composition using pollen distributions in peat. **Lake Reservoir Management** 12:313-322.
- Basher, L.R. 2000. Surface erosion assessment using ^{137}Cs : Examples from New Zealand. **Acta Geologica Hispanica** 35(3-4):219-228.
- Basher, L.R. 1998. Surface erosion assessment in New Zealand using caesium-137. **Proceedings of SPERA98, Environmental Radioactivity and Its Application in Environmental Studies**, 5th Biennial Conference of the South Pacific Environmental Radioactivity Association, Christchurch, 16–19 February 1998.
- Basher, L.R., D.M. Hicks, B. Handyside, and C.W. Ross. 1997. Erosion and sediment transport from the market gardening lands at Pukekohe, Auckland, New Zealand. **Journal of Hydrology (NZ)** 26:71-93.
- Basher, L.R., and K.M. Matthews. 1993. Relationship between ^{137}Cs in some undisturbed New Zealand soils and rainfall. **Australian Journal of Soil Research** 31:655-663.
- Basher, L.R., K.M. Matthews, and L. Zhi. 1995. Surface erosion assessment in the South Canterbury downlands, New Zealand using Cs-137 distribution. **Australian Journal of Soil Research** 33:787-803.
- Basher, L.R., and D.J. Painter. 1997. Wind erosion in New Zealand. In **Proceedings of the International Symposium on Wind Erosion**, Manhattan, Kansas, 3–5 June 1997, USDA-ARS, Manhattan. Available at <http://www.weru.ksu.edu/symposium/proceed.htm>
- Basher, L.R. and C.W. Ross. 2002. Soil erosion rates under intensive vegetable production on clay loam, strongly structured soils at Pukekohe, New Zealand. **Australian Journal of Soil Research** 40(6):947-961.
- Basher, L.R. and C.W. Ross. 2002. Soil erosion under arable cropping in New Zealand, p. 105–110. In: Stephens, P., J. Callaghan, and A. Austin, (Compilers), **Proceedings: Soil Quality and Sustainable Land Management Conference**, Landcare Research, Palmerston North, NZ.
- Basher, L.R., C.W. Ross, and J. Dando. 2004. Effects of carrot growing on volcanic ash soils in the Ohakune area, New Zealand. **Australian Journal of Soil Research** 42(3):259-272.
- Basher, L.R., and T.H. Webb. 1997. Wind erosion rates on terraces in the Mackenzie Basin. **Journal of Royal Society New Zealand** 27(4):499-512.

- Baskaran, M. 1995. A search for seasonal variability on depositional fluxes of ^7Be and ^{210}Pb . **Journal of Geophysical Research** 100:310(II):2833-2840.
- Baskaran, M., S. Asbill, P. Santschi, J. Brooks, M. Champ, D. Adkinson, M.R. Colmer, and V.P. Makeyev. 1996. ^{137}Cs and excess ^{210}Pb in Russian Arctic sediments. **Earth and Planetary Science Letters** 140:243-257.
- Baskaran, M., S. Asbill, J. Schwantes, P. Santschi, M.A. Champ, J.M. Brooks, D. Adkinson, and V. Makeyev. 2000. Concentrations of Cs-137, Pu-239, Pu-240 and Pb-210 in sediment samples from the Pechora Sea and biological samples from the Ob, Yenisey Rivers and Kara Sea. **Marine Pollution Bulletin** 40(10):830-838.
- Baskaran, M., J.J. Kelley, A.S. Naidu, and D.F. Holleman. 1991. Environmental radiocesium in subarctic and arctic Alaska following Chernobyl. **Arctic** 44:346-350.
- Baskaran, M., and A.S. Naidu. 1995. ^{210}Pb -derived chronology, and the fluxes of ^{210}Pb and ^{137}Cs isotopes on continental shelf sediments, East Chukchi Sea, Alaskan Arctic. **Geochimica and Cosmochimica Acta** 59:4435-4448.
- Battaglia, A., D. Capra, L. Guzzl, and W. Martinotti. 1996. ^{137}Cs and naturally occurring radionuclides as a tool for sedimentation study in river reservoirs. **International Conference on Reservoir Sedimentation 1996** pp. 217-232.
- Battarbee, R.W. 1986. The eutrophication of Lough Erne inferred from changes in diatom assemblages of ^{210}Pb - and ^{137}Cs -dated sediment cores. **Proceedings Royal Irish Academy** 86B:141-168.
- Battarbee, R.W. 1984. Diatom analysis and acidification of lakes. **Philosophical Transaction of the Royal Society of London B** 305:451-477.
- Battarbee, R.W. 1978. Observations on the recent history of Lough Neagh and its drainage basin. **Philosophical Transaction of the Royal Society of London B** 281:303-345.
- Battarbee, R.W., and G. Digerfeldt. 1976. Palaeoecological studies of recent developments of Lake Vaxjosjon. I. Introduction and chronology. **Archives of Hydrobiologia**. 77:330-326.
- Battarbee, R.W., G. Digerfeldt, P. Appleby, and F. Oldfield. 1980. Palaeoecological studies of recent developments of Lake Vaxjosjon. III. Reassessment of recent chronology on the basis of modified ^{210}Pb dates. **Archives of Hydrobiologia**. 89:440-446.
- Battarbee, R.W., J.A. Grytnes, R. Thompson, P.G. Appleby, J. Catalan, A. Korhola, H.J.B. Birks, E. Heegaard, and A. Lami. 2002. Comparing paleolimnological and instrumental

- evidence of climate change for remote mountain lakes over the last 200 years. **Journal of Paleolimnology** 28(1):161-179.
- Battiston, G.A., S. Degetto, R. Gerbasi, and G. Sbrignadello. 1989. Determination of sediment composition and chronology as a tool for environmental impact investigations. **Marine Chemistry** 26:91-100.
- Battiston, G.A., S. Degetto, R. Gerbasi, G. Sbrignadello, and L. Tositti. 1988. The use of ^{210}Pb and ^{137}Cs in the study of sediment pollution in a lagoon of Venice. **Science of the Total Environment** 77:15-23.
- Baxter, M.S., R.W. Crawford, D.S. Swan, and J.G. Farmer. 1981. ^{210}Pb dating of a Loch Lomand sediment core by conventional and particle track methods and some geochemical observations. **Earth and Planetary Science Letters** 53:434-444.
- Baxter, M.S., J.G. Farmer, I.G. McKinley, D.S. Swan, and W. Jacks. 1981. Evidence of the unsuitability of gravity coring for collecting sediment in pollution and sedimentation rate studies. **Environmental Science and Technology** 15:843-846.
- Baxter, M.S., I.G. McKinley, A.B. MacKenzie, and W. Jack. 1979. Windscale radiocaesium in the Clyde Sea area. **Marine Pollution Bulletin** 10:116-120.
- Bazzoffi, P., P. Canuti, S. Morretti, G. Rodolfi, and C. Zanchi. 1096. Quantitative evaluation of some slope processes (Surface erosion, mass movement) in experimental areas with different agro-climatic conditions in central Italy. **Z. Gemorphol. Suppl.-Bd.** 60:131-148.
- Bazzoffi, P., and M. Panicucci. 1983. Erosione sui versanti e congequente sedimentazione in piccoli serbatoi artificiali. **Inst. Sperimentale Studio e Difesa Suolo, Firenze** 14:127-178. (Italian)
- Beasley, T.M., R. Carpenter, and C.D. Jennings. 1982. Plutonium, ^{241}Am and ^{137}Cs ratios, inventories, and vertical profiles in Washington and Oregon continental shelf sediments. **Geochimica et Cosmochimica Acta** 46:1931-1946.
- Beasley, T.M., and C.D. Jennings. 1984. Inventories of $^{239,240}\text{Pu}$, ^{241}Am , ^{137}Cs , and ^{60}Co in Columbia River sediments from Hanford to the Columbia River Estuary. **Environmental Science and Technology** 18:207-212.
- Beck, H.L. 1966. Environmental gamma radiation from deposited fission products 1960-1964. **Health Physics** 12:313-322.

- Beck, H.L., J. DeCampo, and C. Gogolak. 1972. In situ Ge(Li) and NaI(Tl) gamma ray spectrometry. Health and Safety Laboratory **HASL-258**, US Atomic Energy Commission, New York.
- Bedard-Haughn, A.K., and D.J. Pennock. 2002. Terrain controls on depressional soil distribution in a hummocky morainal landscape. **Geoderma** 110(3-4):169-190.
- Beks, J.P. 2000. Storage and distribution of plutonium, Am-241, Cs-137 and Pb-210(xs) in North Sea sediments. **Continental Shelf Research** 20(15):1941-1964.
- Bell, G.L., and B.J. Eadie. 1983. Variation in the distribution of suspended particles during an upwelling event in Lake Michigan in 1980. **Journal of Great Lakes Research** 9:559-567.
- Belli, M., M. Blasi, E. Capra, A. Drigo, S. Menegon, E. Piasentier, and U. Sansone. 1993. Ingested soil as a source of Cs-137 to ruminants. **Science of the Total Environment** 136:243-249.
- Belli, M. U. Sansone, and S. Menegon. 1994. Behaviour of radiocaesium in a forest in the eastern Italian Alps. **Science of the Total Environment** 157:257-260.
- Belli, M., U. Sansone, E. Piasentier, E. Capra, A. Drigo, and S. Menegon. 1993. Cs-137 transfer coefficients from fodder to cow milk. **Journal of Environmental Radioactivity** 21:1-8.
- Bellucci, L.G., B. El Moumni, F. Collavini, M. Frignani, and S. Albertazzi. 2003. Heavy metals in Morocco Lagoon and river sediments. **Journal de Physique IV** 107(Pt. 1):139-142.
- Belous, N.M., F.V. Moiseenko, V.F. Shapovalov, and M.A. Dukhanin. 1996. Improvement of floodplain and swampy farmlands polluted by radionuclides. **Khimiya v Sel'skom Khozyaistve** 3:29-31. (Russian)
- Belousova, A.P., A.I. Shmakov, and O.V. Galaktionova. 1994. Ways of investigating radionuclide migration processes in the lithosphere and hydrosphere. **Environmental Geology** 24:306-308.
- Belperio, A.P., B.W. Smith, H.A. Polach, C.A. Nittrouer, D.J. DeMaster, J.R. Prescott, J.R. Hails, and V.A. Gostin. 1984. Chronological studies of the Quaternary marine sediments of northern Spencer Gulf, South Australia. **Marine Geology** 61:265-296.
- Belyaev, V.R., V.N. Golosov, N.N. Ivanova, M.V. Markelov, and E.V. Tishkina. 2005. Human-accelerated soil redistribution within an intensively cultivated dry valley catchment in southern European Russia, p. 11-20. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.

- Belyaev, V.R., M.V. Markelov, V.N. Golosov, Y.R. Belyaev, and E.V. Tishkina. 2004. Applying various methods for assessing soil and sediment redistribution within an intensively cultivated dry valley subcatchment. **International Association of Hydrological Sciences Publication** 288:93–104.
- Belyaev, V.R., M.V. Markelov, V.N. Golosov, P. Bonte, and N.N. Ivanova. 2003. The use of cesium-137 to assess modern agrogenic transformation of soil cover in the areas subjected to Chernobyl fallout. **Eurasian Soil Science** 36(7):788-802.
- Belyaev, V.R., P.J. Wallbrink, V.N. Golosov, A.S. Murray, and A.Y. Sidorchuk. 2005. A comparison of methods for evaluating soil redistribution in the severely eroded Stavropol region, southern European Russia. **Geomorphology** 65(3-4):173-193.
- Belyaev, V.R., P.J. Wallbrink, V.N. Golosov, A.S. Murray, and A.Y. Sidorchuk. 2004. Reconstructing the development of a gully in the Upper Kalous basin, Stavropol Region (southern Russia). **Earth Surface Processes and Landforms** 29(3):323-341.
- Bem, E.M., H. Bem, and P. Wiczorkowski. 1998. Studies of radionuclide concentrations in surface soil in and around fly ash disposal sites. **Science of the Total Environment** 220(2/3):215-222.
- Benamar, M.A., A. Zerrouki, Z Idiri, and S. Tobbeche. 1997. Natural and artificial radioactivity levels in sediments in Algiers bay. **Applied Radiation and Isotopes** 48(8):1161-1164.
- Benedetti, M.M. 2003. Control of overbank deposition in the Upper Mississippi River. **Geomorphology** 56(3-4):271-290.
- Beneš, P., M. Černík, and P. Lam Ramos. 1992b. Factors affecting interaction of radiocesium with freshwater solids. II. Contact time, concentration of solid and temperature. **Journal of Radioanalytical Nuclear Chemistry Articles** 159:201-218.
- Beneš, P., M. Černík, and O. Slávik. 1994. Modelling of migration of ¹³⁷Cs accidentally released into a small river. **Journal of Environmental Radioactivity** 22:279-293.
- Bengtsson, L., T. Hellström, and I. Rakoczi. 1990. Redistribution of sediments in three Swedish lakes. **Hydrobiologia** 192:167-181.
- Benke, R.R. and K.J. Kearfott. 2002. Demonstration of a collimated in situ method for determining depth distributions using gamma-ray spectrometry. **Nuclear Instruments & Methods in Physics Research Section A-Accelerators Spectrometers Detectors and Associated Equipment** 482(3):814-831.

- Benmansour, M., M. Ibn Majah, M. Marah, T. Marfak, and D.E. Walling. 2000. Use of ^{137}Cs techniques in soil erosion in Morocco - Case study of the Zitouna basin in the north. **Proceedings of an International Symposium on Nuclear Techniques in Integrated Plant, Nutrients, Water and Soil Management**, p. 308-315, IAEA/FAO, Vienna, Austria.
- Bennett, S.J. and J.A. Dunbar. 2003. Physical and stratigraphic characteristics of sediments impounded within a flood control reservoir in Oklahoma. **Transactions of the American Society of Agricultural Engineers** 46(2):269-277.
- Bennett, S.J., C.M. Cooper, J.C. Ritchie, J.A. Dunbar, P.M. Allen, L.W. Caldwell, L.W., and T.M. McGee. 2002. Assessing sedimentation issues within aging flood control reservoirs in Oklahoma. **Journal of the American Water Resources Association** 38(5):1307-1322.
- Bennett, S.J., C.M. Cooper, J.C. Ritchie, and L.W. Caldwell. 2000. Characterizing sediments impounded by USDA-NRCS flood-control Dams: Examples from Oklahoma. **American Geophysical Union Transactions (EOS)** 81(48):F515.
- Bennett, S.J., C.M. Cooper, J.C. Ritchie, and L.W. Caldwell. 2001. Characterizing the sediment impounded by USDA-NRCS flood control dams, Oklahoma. **Seventh Federal Interagency Sedimentation Conference Proceedings IX**:55-62.
- Bennett, S.J., C.M. Cooper, J.C. Ritchie, and L.W. Caldwell. 2000. Characterizing sediments impounded by USDA-NRCS flood-control Dams: Examples from Oklahoma. **American Geophysical Union Transactions (EOS)** 81(48):F515.
- Bennion, H., J. Fluin, and G.L. Simpson. 2004. Assessing eutrophication and reference conditions for Scottish freshwater lochs using subfossil diatoms. **Journal of Applied Ecology** 41(1):124-138.
- Benninger, L.K., R.C. Aller, J.K. Cochran, and K.K. Turekian. 1979. Effects of biological sediment mixing on the ^{210}Po chronology and trace element distribution in a Long Island Sound sediment core. **Earth and Planetary Science Letters** 43:241-259.
- Benninger, L.K., and M.M. Brinson. 1988. Chronometric radionuclides in sediments of Cedar Island Salt Marsh, North Carolina. **EOS Transactions** 69:379.
- Benninger, L.K., and S. Krishnaswami. 1981. Sedimentary processes in the inner New York Bight: evidence from excess ^{210}Pb and $^{239,240}\text{Pu}$. **Earth and Planetary Science Letters** 53:158-174.

- Benninger, L.K., I.B., Suayah, and D.J. Stanley. 1998. Manzala lagoon, Nile delta, Egypt: modern sediment accumulation based on radioactive tracers. **Environmental Geology** 34(2-3):183-193.
- Benninger, L.K., and J.T. Wells. 1993. Sources of sediment to the Neuse River estuary, North Carolina. **Marine Chemistry** 43:137-156.
- Benoit, G. and T.F. Rozan. 2001. Pb-210 and Cs-137 dating methods in lakes: a retrospective study. **Journal of Paleolimnology** 25(4):455-465.
- Benoit, G., T.F. Rozan, P.C. Patton, and C.L. Arnold. 1999. Trace metals and radionuclides reveal sediment sources and accumulation rates in Jordan Cove, Connecticut. **Estuaries** 22(1):65-80.
- Benoit, G., E.X. Wang, W.C. Nieder, M. Levandowsky, and Breslin. 1999. Sources and history of heavy metal contamination and sediment deposition in Tivoli South Bay, Hudson River, New York. **Estuaries** 22(2A):167-178.
- Benson, D.W. 1960. Review of soil chemistry research at Hanford. **HW-67201**, Battelle Northwest Laboratory, Richland, WA.
- Benson, B.E., K.A. Grimm, and J.J. Clague. 1997. Tsunami deposits beneath tidal marshes on northwestern Vancouver Island, British Columbia. **Quaternary Research (Orlando)** 48(2):192-204.
- Berg, A., M. Merlini, O. Ravera, and V. Tonolli. 1961. Accumulation of fission products from fall-out in Lake Biota (Lago Maggiore). Final Report, Contract No. 59, **Rept. CNI-109**, International Atomic Energy Agency, Vienna, Austria.
- Berg, M.T., and L.J. Shuman. 1995a. A three-dimensional stochastic model of the behavior of radionuclides in forests I. Model structure. **Ecology Modelling** 83(3):359-372.
- Berg, M.T., and L.J. Shuman. 1995b. A three-dimensional stochastic model of the behavior of radionuclides in forests. II. Cs-137 behavior in forest soils. **Ecology Modelling** 83:373-386.
- Berg, M.T., and L.J. Shuman. 1995c. A three-dimensional stochastic model of the behavior of radionuclides in forests. III. Cs-137 uptake and release by vegetation. **Ecology Modelling** 83:387-404.
- Bergan, T.D. 2002. Radioactive fallout in Norway from atmospheric nuclear weapons tests. **Journal of Environmental Radioactivity** 60(1-2):189-208

- Bergeijk van, K.E., H. Noordijk, J. Lembrechts, and M.J. Frissel. 1992. Influence of pH, soil type and soil organic matter on soil-to-plant transfer of radiocesium and radiostrontium analyzed by a nonparametric method. **Journal of Environmental Radioactivity** 15:265-276.
- Berger, G.W., D. Eisma, and A.J. van Bennekom. 1987. ^{210}Pb derived sedimentation rate in the Vlieter, a recently filled-in tidal channel in the Wadden Sea. **Netherlands Journal of Sea Research** 21:287-294.
- Bergersen, E.P. 1987. Aldrin, dieldrin, and mercury profiles in recent lake sediment at the Rocky Mountain Arsenal, Colorado. **Archives of Environmental Contamination Toxicology** 16:61-67.
- Bergman, R. 1994. The distribution of radioactive caesium in boreal forest, pp. 335-379. *In*: H. Dahlgaard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Bergström, U., and S. Nordlinder. 1989. Comparison of predicted and measured Cs-137 in a lake ecosystem, pp. 283-288. *In*: W. Feldt (ed.) **The radioecology of natural and artificial radionuclides**, Proceedings of the 15th. Regional Congress of the International Radiation Protection Association of Radioecology of Natural and Artificial Radionuclides, Visby, Sweden.
- Bergström, U., B. Sundblad, and S. Nordlinder. 1994. Models for predicting radiocaesium levels in lake water and fish, pp. 93-104. *In*: H. Dahlgaard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Bernard, C. and M.R. Laverdière. 2001. Assessment of soil erosion at the watershed scale from $^{137}\text{Cesium}$ measurements, p. 1034-1038. *In*: Stott, D.E., Mohtar, R.H., and Steinhardt, G.C. (Eds.), **Sustaining the Global Farm, Selected papers from the 10th International Soil Conservation Organization Meeting**, International Soil Conservation Organization, West Lafayette, Indiana USA. 2001.
- Bernard, C. and M.R. Laverdière. 2000. Using ^{137}Cs as a tool for the assessment and the management of erosion/sedimentation risks in view of the restoration of the Rainbow Smelt (*Osmerus mordax*) fish population in the Boyer River basin (Québec, Canada). **Acta Geologica Hispanica** 35(3-4):321-327.
- Bernard, C., and M.R. Laverdière. 1997. Soil erosion and translocation in the Boyer River watershed (Quebec, as evidenced from ^{137}Cs data. **Journal of Soil and Water Conservation** 52(4):307 (Abstract)
- Bernard, C., and M.R. Laverdière. 1992a. Spatial redistribution of cesium-137 and soil erosion on Orleans Island, Quebec. **Canadian Journal of Soil Science** 72:543-554.

- Bernard, C., and M.R. Laverdière. 1992b. Assessment of soil erosion in Quebec (Canada) with Cs-137, pp.253-259. In: S. Wicherek (ed.), **Farm land erosion in temperate plains environment and hills**, Elsevier, Amsterdam.
- Bernard, C., and M.R. Laverdière. 1990. Variabilité spatiale de l'activité en césium-137 et ses repercussions sur l'estimation de l'érosion hydrique. **Pedologie** 40:299-310. (French)
- Bernard, C., M.R. Laverdière, and A.R. Pesant. 1992. Variabilité de la relation entre les pertes de césium et de sol par érosion hydrique. **Geoderma** 52:265-277. (French)
- Bernard, C. L. Mabit, M.R. Laverdière, and S. Wicherek. 1998. Cesium-137, a tool for the assessment and the management of erosion risks. **Cahiers Agricultures** 7(3):179-186. (French)
- Bernard, C., L. Mabit, S. Wicherek and M. Laverdière. 1998. Long-term soil redistribution in a small French watershed as estimated from Cesium-137 data. **Journal of Environmental Quality** 27(5):1178-1183.
- Bertine, K.K., and M.F. Mendek. 1978. Industrialization of New Haven, Conn., as recorded in reservoir sediments. **Environmental Science and Technology** 12:201-207.
- Bertolotto, R.M., B. Tortarolo, M. Frignani, L.G. Bellucci, S. Albanese, and C. Cuneo. 2003. Heavy metals in coastal sediments of the Ligurian sea off Vado Ligure. **Journal de Physique IV** 107(Pt. 1):159-162.
- Bervoets, L., L. De Bruyn, L. Van Ginneken, and R. Blust. 2003. Accumulation of Cs-137 by larvae of the midge *Chironomus riparius* from sediment: Effect of potassium. **Environmental Toxicology and Chemistry** 22(7):1589-1596.
- Betti, M., S. Giannarelli, T. Hiernaut, G. Rasmussen, and L. Koch. 1966 Detection of trace radioisotopes in soil, sediment and vegetation by glow discharge mass spectrometry. **Fresenius' Journal of Analytical Chemistry** 355(5/6):642-646.
- Bettoli, M.G., L. Cantelli, M. Cecchini, L. Tositti, O. Tubertini, and S. Valcher. 1994. Vertical distribution of Cs-137 in the lacustrine areas and preliminary results of Be-7 activity in snow samples at Terra-Nova Bay (Antarctica). **International Journal of Environmental Analytical Chemistry** 55:253-260.
- Beurskens, J.E.M., G.A.J. Mol, H.L. Barreveld, B. Van Munster, and H.J. Winkels. 1993. Geochronology of priority pollutants in a sedimentation area of the Rhine river. **Environmental Toxicological Chemistry** 12:1549-1566.

- Bianchi, T.S., E. Engelhaupt, B.A. McKee, S. Miles, R. Elmgren, S. Hajdu, C. Savage, and M. Baskaran. 2002. Do sediments from coastal sites accurately reflect time trends in water column phytoplankton? A test from Himmerfjorden Bay (Baltic Sea proper). **Limnology and Oceanography** 47(5):1537-1544.
- Bickford, M.E., and W.R. Van Schmus. 1979. Geochronology and radiogenic isotope research. **Review of Geophysics and Space Physics** 17:824-839.
- Bielders, C.L., A. Vrieling, J-L. Rajot, E. Skidmore. 2001. Techniques for Simultaneous Quantification of Wind and Water Erosion in Semi-Arid Zones, pp. 494-497. In: J.C. Ascough II and D.C. Flanagan (eds.), **Soil Erosion Research for the 21st Century**, Proceedings of the International Symposium, Honolulu, HI, St. Joseph, MI: American Society of Agricultural Engineers.
- Bilo, M., W. Steffens, F. Fuhr, and K.H. Pfeffer. 1993. Uptake of Cs-134/Cs-137 in soil by cereals as a function of several soil parameters of 3 soil types in upper Swabia and north Rhine-Westphalia (FRG). **Journal of Environmental Radioactivity** 19:25-39.
- Binford, M.W. 1990. Calculations and uncertainty analysis of ^{210}Pb dates from PIRLA project lake sediment cores. **Journal of Paleolimnology** 3:253-267.
- Binford, M.W. 1984. Dating lake sediment cores with ^{210}Pb . In: **Proceedings workshop on paleolimnological studies of the history and effects of acidic precipitation**, May 23-24, 1984, Rockland, ME.
- Binford, M.W. and M. Brenner. 1986. Dilution of ^{210}Pb by organic sedimentation in lakes of different trophic states, and applications to study of sediment-water interactions. **Limnology and Oceanography** 31:584-595.
- Birch, L., K.W. Hanselmann, and R. Bachofen. 1996. Heavy metal conservation in Lake Cadagno sediments: Historical records of anthropogenic emissions in a meromictic alpine lake. **Water Research** 30:676-687.
- Bird, G.A., and W.G. Evenden. 1996. Transfer of ^{60}Co , ^{65}Zn , ^{95}Tc , ^{134}Cs , and ^{238}U from water to organic sediment. **Water Air Soil Pollution** 86:251-261.
- Bird, G.A., and W.G. Evenden. 1994. Effect of sediment type, temperature and colloids on the transfer of radionuclides from water to sediment. **Journal of Environmental Radioactivity** 22:219-242.
- Bishop, P., B. Campbell, and C. McFadden. 1991. Absence of caesium-137 from recent sediments in eastern Australia - Indications of catchment processes? **Catena** 18:61-69.

- Bikit, I., J. Slivka, Lj. Conkic, M. Krmar, M. Veskovic, N. Zikic-Todorovic, E. Varga, S. Curcic, and D. Mrdja. 2005. Radioactivity of the soil in Vojvodina (northern province of Serbia and Montenegro). **Journal of Environmental Radioactivity** 78(1):11-19.
- Bjørnstad, H.E., J.E. Brittain, R. Saxén, and B. Sundblad. 1994. The characterization of radiocaesium transport and retention in Nordic lakes, pp. 29-44. *In*: H. Dahlgard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Blagoeva, R., and L. Zikovbsky. 1995. Geographic and vertical distribution of Cs-137 in soils in Canada. **Journal of Environmental Radioactivity** 27:269-274.
- Blais, J.M. 1998. Climatic changes in northwestern Ontario have had a greater effect on erosion and sediment accumulation than logging and fire: Evidence from ^{210}Pb chronology in lake sediments. **Biogeochemistry** 43(3):235-252.
- Blais, J.M., J. Kalff, R.J. Cornett, and R.D. Evans. 1995. Evaluation of ^{210}Pb dating in lake sediments using stable Pb, ambrosia pollen, and ^{137}Cs . **Journal of Paleolimnology** 13:169-178.
- Blakar, I.A., D. Hongve, and O. Njåstad. 1992. Chernobyl cesium in the sediments of Lake Høysjøen, Central Norway. **Journal of Environmental Radioactivity** 17:49-58.
- Blake, W.H., I.G. Droppo, P.J. Wallbrink, S.H. Doerr, R.A. Shakesby, and G.S. Humphreys. 2005. Impacts of wildfire on effective sediment particle size: implications for post-fire sediment budgets, p. 143-150. *In*: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Blake, W.H., P.J. Wallbrink, S.H. Doerr, R.A. Shakesby, and G.S. Humphreys. 2004. Sediment redistribution following wildfire in the Sydney region, Australia: a mineral magnetic tracing approach. **International Association of Hydrological Sciences Publication** 288:52-59.
- Blake, W.H., D.E. Walling, and Q. He. 2002. Using cosmogenic beryllium-7 as a tracer in sediment budget investigations. **Geografiska Annaler Series A-Physical Geography** 84A(2):89-102.
- Blake, W.H., D.E. Walling, and Q. He. 1999. Fallout beryllium-7 as a tracer in soil erosion investigations. **Applied Radiation and Isotopes** 51(5):599-605.
- Blass, A., F.S. Anselmetti, and D. Ariztegui. 2003. 60 years of glaciolacustrine sedimentation in Steinsee (Sustenpass, Switzerland) compared with historic events and instrumental meteorological data. **Eclogae Geologicae Helvetiae** 96(Suppl. 1):S59-S71.

- Blodau, C., S. Hoffmann, A. Peine, and S. Peiffer. 1998. Iron and sulfate reduction in the sediments of acidic mine lake 116 (Brandenburg, Germany): Rates and geochemical evaluation. **Water Air Soil Pollution** 108(3-4):249-270.
- Bloemendal J., F. Oldfield, and R. Thompson. 1979. Magnetic measurements used to assess sediment influx at Llyn Goddionduon. **Nature** 280:50-53.
- Bloesch, J. 1995. Mechanisms, measurement and importance of sediment resuspension in lakes. **Marine and Freshwater Research** 46:295-304.
- Bloesch, J., and R.D. Evans. 1982. ^{210}Pb dating of sediment compared with accumulation rates estimated by natural markers and measured with sediment traps. **Hydrobiologia** 92:579-586.
- Bloesch, J., and M. Strum. 1986. Settling flux and sinking velocities of particle phosphorus (PP) and particulate organic carbon (POC) in Lake Zug, Switzerland, pp. 481-490. *In*: P.G. Sly (ed.), **Sediment and water interactions**, Springer-Verlag, New York.
- Bobrov, V.A., I.A. Kalugin, J. Klerkx, A.D. Duchkov, B.L. Shcherbov, and A.S. Stepin. 1999. The rate of recent sedimentation in Lake Teletskoe according to gamma-spectroscopy (Cs-137) data. **Geology Geofiz.** 40(4):530-536.
- Bodbacka, L. 1986. Sediment accumulation in Lake Lilla Ullfjärden and Stora Ullfjärden, Sweden. **Hydrobiologia** 143:337-342.
- Bogen, J., H. Berg, and F. Sandersen. 1994. The contribution of gully erosion to the sediment budget of the River Leira. **International Association of Hydrological Sciences Publication** 224:307-315.
- Bollhöfer, A., A. Mangini, A. Lenhard, M. Wessels, F. Giovanoli, and B. Swartz. 1994. High-resolution ^{210}Pb dating of Lake Constance sediments: Stable lead in Lake Constance. **Environmental Geology** 24:267-274.
- Boltneva, L.I., Yu.A. Izrael, and I.M. Nazarov. 1977. Global caesium-137 and strontium-90 contamination and exposure rate in the territory of the USSR. **Atomic Energy** 42:355-361. (In Russian)
- Bonazzola, G.C., and R. Ropolo. 1986. Environmental radioactivity measurements after the Chernobyl accident. **Il Nuovo Saggiatore** 3:135-143. (Italian)
- Bonazzola, G.C., R. Ropolo, and A. Facchinelli. 1993. Profiles and downward migration of ^{134}Cs and ^{106}Ru deposited on Italian soils after the Chernobyl accident. **Health Physics** 64:479-484.

- Bondar', Y.I., L.S. Ivashkevich, G.S. Shmanai, and V.N. Kalinin. 2003. The effect of organic matter on Cs-137 sorption by soil. **Eurasian Soil Science** 36(8):833-837.
- Bondar', Y.I., L.S. Ivashkevich, G.S. Shmanai, and V.N. Kalinin. 2003. The effect of organic matter on ¹³⁷Cs sorption by soil. **Pochvovedenie** 2003(8):929-933.
- Bondar' Yu I., G.S. Shmanay, and T.L. Yarmolovich. 1966. Investigation of radionuclides mobility in soils and their availability to plants by ion-exchange methods. **Eurasian Soil Science** 28(8):36-42.
- Bondavalli, C. 2003. Effect of eutrophication upon radionuclide dynamics in the Sacca di Goro lagoon (Po River Delta, Italy): a combined field, experimental and modeling study. **Environmental Pollution** 125(3):433-446.
- Bonnett, P.J.P. 1990. A review of the erosional behavior of radionuclides in selected drainage basins. **Journal of Environmental Radioactivity** 11:251-266.
- Bonnett, P.J.P. 1989. A review of the erosional behavior of radionuclides in selected drainage basins. **AERE-R-13631**. United Kingdom Atomic Energy Authority Harwell, UK.
- Bonnett, P.J.P., and M.A., Anderson. 1993. Radiocaesium dynamics in a coniferous forest canopy - A Mid-Wales case study source. **Science of the Total Environment** 136:259-277.
- Bonnett, P.J.P., and P.G. Appleby. 1994. Rates of removal of sediment associated radiocaesium from the Plynlimon Experimental Catchment, Powys, UK. **Environmental Pollution** 83:327-334.
- Bonnett, P.J.P., and P.G. Appleby. 1991. Deposition and transport of radionuclides within an upland drainage basin in mid-Wales. **Hydrobiologia** 214:71-76.
- Bonnett, P.J.P., P.G. Appleby, and F. Oldfield. 1988. Radionuclides in coastal and estuarine sediments from Wirral and Lancashire. **Science of the Total Environment** 70:215-236.
- Bonnett, P.J.P., and R.S. Cambray. 1991. The record of deposition of radionuclides in the sediments of Ponsonby Tarn, Cumbria. **Hydrobiologia** 214:63-70.
- Bonnett, P.J.P., G.J.L. Leeks, and R.S. Cambray. 1989. Transport processes for Chernobyl-labelled sediments: preliminary evidence from upland mid-Wales. **Land Degradation and Rehabilitation** 1:39-59.

- Bonniwell, E.C., G. Matisoff, and P.J. Whiting. 1999. Fine sediment residence times in rivers determined using fallout radionuclides (^7Be , ^{137}Cs , ^{210}Pb). **Geomorphology** 27 (1-2):75-92.
- Bonny, A.P. 1978. The effect of pollen recruitment processes on pollen distribution over sediment surface of a small lake in Cumbria. **Journal of Ecology** 66:385-416.
- Bonotto, D.M., K.Y.M. De Almeida, and S.S. Sieber. 2005. Sedimentation rates in the Corumbataí River basin, Brazil, derived from ^{210}Pb measurements, p. 294-302. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Bonté, P., J.M. Mouchel, A.J. Thomas, M.F. Le Cloarec, J.P. Dumoulin, S. Sogon, and L. Tessier. 2000. Buffering of suspended sediment transport in lowland river during low water stages: quantification in river Seine using environmental radionuclides. **Acta Geologica Hispanica** 35(3-4):339-355.
- Bonny, A.P. 1976. Recruitment of pollen to the ses ton and sediment of some Lake District lakes. **Journal of Ecology** 64:859-887.
- Bopp, R.F., S.N. Chillrud, E.L. Shuster, H.J. Simpson, and F.D. Estabrooks. 1998. Trends in chlorinated hydrocarbon levels in Hudson River basin sediments. **Environmental Health Perspectives** 106(SUPPL. 4):1075-1081.
- Bopp, R.F., M.F. Gross, H. Tong, H.J. Simpson, S.J. Monson, B.L. Deck, and F.C. Moser. 1991. A major incident of dioxin contamination: Sediments of New Jersey Estuaries. **Environmental Science and Technology** 25:951-956.
- Bopp, R.F., H.J. Simpson, S.N. Chillrud, and D.W. Robinson. 1993. Sediment-derived chronologies of persistent contaminants in Jamaica Bay, New York. **Estuaries** 16:608-616.
- Bopp, R.F., H.J. Simpson, C.R. Olsen, and N. Kostyk. 1982. Chlorinated hydrocarbons and radionuclide chronologies in sediments of the Hudson River and estuary, New York. **Environmental Science and Technology** 16:666-676.
- Bopp, R.F., H.J. Simpson, C.R. Olsen, and N. Kostyk. 1981. Polychlorinated biphenyls in sediments of the tidal Hudson River, New York. **Environmental Science and Technology** 15:210-216.
- Boron, K.J., J.W. Mietelski, K. Lipka, P. Gaca, and M. Jasinska. 2001. Radionuclides in raised bogs: a case study of Bor za Lasem. **Journal of Environmental Monitoring** 3(3):324-329.

- Borretzen, P. and B. Salbu. 2002. Fixation of Cs to marine sediments estimated by a stochastic modelling approach. **Journal of Environmental Radioactivity** 61(1):1-20.
- Borghuis, A.M., F. Steenhuisen, J.E. Brown, and M. Sickel. 2002. A 'weighted' Cs-137 inventory calculation of Reservoir 11, Mayak PA, Russia with the novel use of remotely sensed information and sample data in a GIS. **Science of the Total Environment** 291(1-3):155-165.
- Borsilov, V.A., A.V. Konoplev, and A.A. Bulgakov. 1994. Application of the Chernobyl experience in developing methodology for assessing and predicting the consequences of radioactive contamination of the hydrosphere. **International Association of Hydrological Sciences Publication 219**:157-167.
- Borsilov, V.A., A.V. Konoplev, and A.A. Bulgakov. 1993. Application of the Chernobyl experience in developing methodology for assessing and predicting the consequences of radioactive contamination of the hydrosphere, pp. 246-263. *In: Hydrological considerations in relation to nuclear power plants*, Proceeding of an International Workshop, UNESCO, Paris.
- Borsilov, V.A., A.V. Konoplev, S.K. Revina, et al. 1988. Experimental analysis of the Chernobyl radionuclide runoff. **Meteorologiya I Gidrologiya** 11:43-53. (Russian)
- Borsilov, V.A., Y.S. Sedunov, M.A. Novitsky, et al. 1989. Physio-mathematical modeling of the washout of long-lived radionuclides from watersheds in the 30-km zone around the Chernobyl Nuclear Power Station. **Meteorologiya I Gidrologiya** 12:5-13. (Russian)
- Bossew, P. 1996. Analytical models of the vertical distribution of radionuclides in the soil. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 171-178** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Bossew, P., M. Ditto, T. Falkner, E. Henrich, K. Kienzl, and U. Rappelsberger. 2001. Contamination of Austrian soil with caesium-137. **Journal of Environmental Radioactivity** 55(2):187-194.
- Bossew, P., M. Gastberger, H. Gohla, P. Hofer, and A. Hubmer. 2004. Vertical distribution of radionuclides in soil of a grassland site in Chernobyl exclusion zone. **Journal of Environmental Radioactivity** 73(1):87-99.
- Bossew, P. And G.; Kirchner. 2004. Modelling the vertical distribution of radionuclides in soil. Part 1: the convection-dispersion equation revisited. **Journal of Environmental Radioactivity** 73(2):127-150.
- Bossew, P., H. Lettner, and A.K. Hubmer. 1996. Spatial variability of fall-out ¹³⁷Cs. **Mitteilungen der Österreichischen Bodenkundlichen Gesellschaft** 53:179-186

(Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).

- Bossey, P. and F. Strebl. 2001. Radioactive contamination of tropical rainforest soils in Southern Costa Rica. **Journal of Environmental Radioactivity** 53(2):199-213.
- Bottrill, D.E. Walling, and G.J.L. Leeks. 2000. Using recent overbank deposits to investigate sediment sources in larger river basins, pp. 369-387. In: I.D.L. Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Bottrill, D.E. Walling, and G.J.L. Leeks. 200. Geochemical characteristics of overbank deposits and their potential for determining suspended sediment provenance: an example from River Severn, UK, p. 241-257. In: S.B. Marriott and J. Alexander (eds.). **Floodplains: Interdisciplinary Approaches**. Special Publication 163. London:Geological Society.
- Boudreau, B.P. 1986a. Mathematics of tracer mixing in sediments: I. spatially-dependent, diffusive mixing. **American Journal of Science** 286:161-198.
- Boudreau, B.P. 1986b. Mathematics of tracer mixing in sediments: II. nonlocal mixing and biological conveyor-belt phenomena. **American Journal of Science** 286:199-238.
- Bouhlassa, S.M. , A. Azenfar, and A. Machrouh. 1994. ^{137}Cs fall as a tracer of erosion and sedimentation in big catchments. **Applied Radiation and Isotopes** 46:659.
- Bouhlassa, S.M. Moukhchane, and A. Aiachi. 2000. Estimates of soil erosion and deposition of cultivated soil of Nakhla watershed, Morocco, using ^{137}Cs technique and calibration models. **Acta Geologica Hispanica** 35(3-4):239-249.
- Boulyga, S.F., M. Zoriy, M.E. Ketterer, and J.S. Becker. 2003. Depth profiling of Pu, Am-241 and Cs-137 in soils from southern Belarus measured by ICP-MS and alpha and gamma spectrometry. **Journal of Environmental Monitoring** 5(4):661-666.
- Bourbonniere, R.A., S.L. Telford, and J.B. Kemper. 1996a. Depositional history of sediments in Legend and Weekes lakes: Geochronology and bulk parameters. Northern River Basins Study project report no. no. 71, Northern River Basins Study (Canada), Edmonton (Alberta), Report No.: SSC-R71-49/3-71E; ISBN-0-662-24142-8c, 67p.
- Bourbonniere, R.A., S.L. Telford, and J.B. Kemper. 1996b. Depositional history of sediments in Lake Athabasca: Geochronology, bulk parameters, contaminants and biogeochemical markers. Northern River Basins Study project report no. no. 72, Northern River Basins Study (Canada), Edmonton (Alberta), Report No.: SSC-R71-49/3-72E; ISBN-0-662-24143-6c, 149p.

- Bowen, V.T., V.E. Noshkin, and H.L. Volchok. 1970. Can land run-off be a major vector of fallout to the ocean. **HASL-217**, pp. I-119 to I-125. Health and Safety Laboratory, New York.
- Boyle, J. 2001. Redox remobilization and the heavy metal record in lake sediments: a modelling approach. **Journal of Paleolimnology** 4:423-431.
- Boyle, J.F., A.W. Mackay, N.L. Rose, and P.G. Appleby. 1998. Sediment heavy metal record in Lake Baikal: natural and anthropogenic sources. **Journal of Paleolimnology** 20(2):135-150
- Boyle, J.F., N.L. Rose, P.G. Appleby, H.J.B. Birks. 2004. Recent environmental change and human impact on Svalbard: The lake-sediment geochemical record. **Journal of Paleolimnology** 31(4):515-530.
- Boyle, J.F., N.L. Rose, H. Bennion, H. Yang, and P.G. Appleby. 1998. Environmental impact in the Jiangnan Plain: Evidence from lake sediment. **Water, Air, and Soil Pollution** 112:21-40.
- Brack, K., and R.L. Stevens. 2001. Historical pollution trends in a disturbed, estuarine sedimentary environment, SW Sweden. **Environmental Geology** 40(8):1017-1029.
- Brady, P.V., R.T. Cygan, and K.L. Nagy. 1998. Surface charge and metal sorption to kaolinite, page 371-382. In: E.A. Jenne (ed.), **Adsorption of metals by geomedia**, Academic Press, New York.
- Brady, P.V., R.T. Cygan, and K.L. Nagy. 1996. Molecular controls of kaolinite surface charge. **Journal of Colloid Interface Science** 181:356-364.
- Branca, M. and M. Voltaggio. 1993. Erosion rate in badlands of central Italy: estimation by radiocesium isotope ratio from Chernobyl nuclear accident. **Applied Geochemistry** 8:437-445.
- Branford, D, D. Fowler, and M.V. Moghaddam. 2004. Study of aerosol deposition at a wind exposed forest edge using Pb-210 and Cs-137 soil inventories. **Water Air and Soil Pollution** 157(1-4):107-116.
- Bray D.I., and H.X. Xie. 1993. A regression method for estimating suspended sediment yield from ungauged watershed in Atlantic Canada. **Canadian Journal of Civil Engineering** 20:82-87.
- Breban, D.C., N. Paunescu, J. Moreno-Bermudez, and R. Margineanu. 2004. Activity concentrations of selected artificial and natural radionuclides in water and sediment

- samples from the North Western Black Sea, 1999. **Journal of Radioanalytical and Nuclear Chemistry** 260(3):503-508.
- Bremer, E., E. De Jong, and H.H. Janzen. 1995. Difficulties in using ^{137}Cs to measure erosion in stubble-mulched soil. **Canadian Journal of Soil Science** 75:357-359.
- Brenner, M., A.J. Peplow, and C.L. Schelske. 1994. Disequilibrium between ^{226}Ra and ^{210}Pb in sediment cores from a shallow Florida lake. **Limnology and Oceanography** 39:1222-1227.
- Brenner, M., C.L. Schelske, and W.F. Kenney. 2004. Inputs of dissolved and particulate Ra-226 to lakes and implications for Pb-210 dating recent sediments. **Journal of Paleolimnology** 32(1):53-66.
- Brenner, M., C.L. Schelske, and L.W. Keenan. 2001. Historical rates of sediment and nutrient accumulation in marshes of the Upper St. Johns River Basin, Florida, USA. **Journal of Paleolimnology** 26(3):241-257.
- Brenner, M., T.J. Whitmore, and C.L. Schelske. 1996. Paleolimnological evaluation of historical trophic state conditions in hypereutrophic Lake Thonotosassa, Florida, USA. **Hydrobiologia** 331(1-3):143-152.
- Brenner, R.C., V.S. Magar, J.A. Ickes, E.A. Foote, J.E. Abbott, L.S. Bingler, and E.A. Crecelius. 2004. Long-term recovery of PCB-contaminated surface sediments at the Sangamo-Weston/Twelvemile Creek/Lake Hartwell superfund site. **Environmental Science & Technology** 38(8):2328-2337.
- Brewster, G.R. 1993. **Soil erosion monitoring and modelling using radioactive fallout ^{137}Cs** . Final Report. Canada/Nova Scotia Agreement on Soil Conservation. Soil Conservation Monitoring Program. SCM#00001(1993), 95p.
- Brewster, G.R., and T. Astatkie. 1999. The depth distribution of Cs-137 in non-eroded soil profiles, Annapolis Valley, Nova Scotia, Canada. **Radiochimica Acta** 86(3-4):175-181.
- Brewster, G.R., and V. Pillay. 1991. Using Cs-137 to assess soil erosion in the Cobequid Bay area of Nova Scotia. **Canadian Journal of Soil Science** 71:261-262.
- Bricker-Urso, S., S.W. Nixon, J.K. Cochran, D.J. Hirschberg, and C. Hunt. 1989. Accretion rates and sediment accumulation in Rhode Island salt marshes. **Estuaries** 12:300-317.
- Brigham, M.E., C.J. McCullough, and P. Wilkinson. 2001. Analysis of suspended-sediment concentrations and radioisotope levels in Wild Rice River Basin, northwestern Minnesota, 1973-1998. United States Geological Survey, **Water Resources Investigation Report 01-4192**, Washington, DC.

- Brisbin, I.L. Jr., R.J. Beyers, R.W. Dapson, R.A. Geiger, J.B. Gentry, J.W. Gibbons, M.H. Smith, and S.K. Woods. 1974. Patterns of radiocesium in the sediments of a stream channel contaminated by production reactor effluent. **Health Physics** 27:19-27.
- Brittain, J.E., H. Bjørnstad, B. Salbu, and D. Oughton. 1992. Winter transport of Chernobyl radionuclides from a mountain catchment to an ice-covered lake. **Analyst** 117:515-519.
- Brøberg, A. 1994. The distribution and characterization of ^{137}Cs in lake sediment, pp. 45-62. *In*: H. Dahlggaard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Brøberg, A., and E., Andersson. 1991. Distribution and circulation of Cs-137 in lake ecosystems, pp. 151-175. *In*: L. Moberg (ed.), **The Chernobyl fallout in Sweden**, Swedish Radiation Protection Institute, Stockholm, Sweden.
- Brøberg, A., L. Malmgren, and M. Jansson. 1995. Relations between resuspension and content of ^{137}Cs in freshwater fish in some Swedish lakes. **Journal of Aquatic Ecosystem Health** 4:285-294.
- Broom, M.J., P.D. Grimwood, and E.G. Bellinger. 1973. Caesium-137: its accumulation in littoral community. **Marine Pollution Bulletin** 6:24-26.
- Brouwer, E., B. Aaeys, A. Maes, and A. Cremers. 1983. Cesium and rubidium ion equilibria in illite clay. **Journal of Physics Chemistry** 87:1213-1219.
- Brovka, G.P., I.V. Dedyulya, and E.N. Rovdan. 1999. An experimental study of the migration of radionuclides in frozen grounds. **Colloid Journal** 61(6):701-706.
- Brown, J.E., P. McDonald, A. Parker, and J.E. Rae. 1999. The vertical distribution of radionuclides in a Ribble Estuary saltmarsh: transport and deposition of radionuclides. **Journal of Environmental Radioactivity** 43(3):259-275.
- Brown, J.E., A. Nikitin, N.K. Valetova, V.B. Chumichev, I.Y. Katrich, V.I. Berezhnoy, N.N. Pegoev, A.I. Kabanov, S.N. Pichugin, Y.Y. Vopiyashin, B. Lind, S. Grottheim, M. Sichel, and P. Strand. 2002. Radioactive contamination in the marine environment adjacent to the outfall of the radioactive waste treatment plant at ATOMFLOT, northern Russia. **Journal of Environmental Radioactivity** 61(1):111-131.
- Brown, L. 1987a. ^{10}Be : recent applications in earth Science . **Philosophical Transaction of the Royal Society of London A** 323:75-86.
- Brown, L. 1987b. ^{10}Be as a tracer of erosion and sediment transport. **Chemical Geology** 65:189-196.

- Brown, L., M.J. Pavich, R.E. Hickman, J. Klein, and R. Middleton. 1988. Erosion of the eastern United States observed with ^{10}Be . **Earth Surface Processes and Landforms** 13:441-457.
- Brown, L.R., and E.C. Wolf. 1984. **Soil erosion: quiet crisis in the world economy**, Worldwatch Paper 60, 51 pp, World Watch, Washington, DC.
- Brown, R.B. 1980. **Agricultural erosion and sediment in the Western Willamette Valley as indicated by the redistribution of cesium-137**. Ph.D. Thesis, Oregon State Univ., Corvallis, OR. (DAI no. 41:1191-b)
- Brown, R.B., N.H. Cutshall, and G.F. Kling. 1981. Agricultural erosion indicated by ^{137}Cs redistribution: I. levels and distribution of ^{137}Cs activity in soils. **Soil Science Society of America Journal** 45:1184-1190.
- Brown, R.B., and G.F. Kling. 1980. Erosion and sediment as indicated by redistribution of cesium-137, Chapter 7. **Special Report Oregon Agricultural Experiment Station, Nov. 1980** (602) pp. 90-108.
- Brown, R.B., G.F. Kling, and N.H. Cutshall. 1981. Agricultural erosion indicated by ^{137}Cs redistribution: II. estimates of erosion rates. **Soil Science Society of America Journal** 45:1191-1197.
- Brückmann, A., and V. Wolters. 1994. Microbial immobilization and recycling of ^{137}Cs in the organic layers of forest ecosystems - Relationship to environmental conditions, humification and invertebrate activity. **Science of the Total Environment** 151:249-256.
- Brugam, R.D. 1978. Pollen indicators of land-use change in Southern Connecticut. **Quaternary Research** 9:349-362.
- Brunjes, F., H. Barnewitz, and G. Kirchner. 1999. Diffusion and diffusion-convection experiments for studying the sorption of radionuclides in soils. **Czechoslovakian Journal of Physics** 49(1, Suppl. 1):175-180.
- Brunn, H., S. Georgii, and U. Eskens. 1993. Cesium-137 and cesium-134 in roe deer from North and Middle Hesse (Germany) subsequent to the reactor accident in Chernobyl. **Bulletin Environmental Contamination Toxicology** 51:633-639.
- Brunskill, G.J., S.D. Ludlam, and T.H. Peng. 1984. Fayetteville Green Lake, New York, U.S.A. VIII. Mass balance of ^{137}Cs in water, varved and non-varved sediments. **Chemical Geology** 44:101-117.

- Brunskill, G.J., D. Povoledo, B.W. Graham, and M.P. Stainton. 1971. Annual supply of ^{238}U , ^{234}U , ^{230}Th , ^{226}Ra , ^{210}Pb , ^{210}Po and ^{232}Th to lake 239 (Experimental Lakes Area, northwestern Ontario) from terrestrial and atmospheric sources. **Canadian Journal of Fisheries and Aquatic Science** 44:215-230.
- Brunskill, G.J., I. Zagorskis, and J. Pfitzner. 2002. Carbon burial rates in sediments and a carbon mass balance for the Herbert River region of the Great Barrier Reef continental shelf, North Queensland, Australia. **Estuarine Coastal and Shelf Science** 54(4):677-700.
- Brush, G.S. 1984. Patterns of recent sediment accumulation in Chesapeake Bay (Virginia-Maryland, U.S.A.) tributaries. **Chemical Geology** 44:227-242.
- Brush, G.S., E.A. Martin, R.S. DeFries, and C.A. Rice. 1982. Comparison of ^{210}Pb and pollen methods for determining rates of estuarine sediment accumulation. **Quaternary Research** 18:196-217.
- Bryant, C.L., J.G. Framer, A.B. MacKenzie, A.E. Bailey-Watts, and A. Krika. 1993. Distribution and behaviour of radiocaesium in Scottish freshwater loch sediments. **Environmental Geochemistry and Health** 15:153-161.
- Bryant, J.C., and R.H. Chabreck. 1998. Effects of impoundment on vertical accretion of coastal marsh. **Estuaries** 21(3):416-422.
- Brydsten, L., and M. Jasson. 1989. Studies of estuarine sediment dynamics using ^{137}Cs from the Tjernobyl accident as a tracer. **Estuaries and Coastal Shelf Science** 28:249-259.
- Bubbenzer, G.D. 1986. Quantifying erosion losses using cesium-137. Paper of the 1986 Summer Meetings of the American Soc. Agric. Engr. (**ASAE Microfiche 86-2042**).
- Buesseler, K.O., and C.R. Benitez. 1994. Determination of mass accumulation rates and sediment radionuclide inventories in the deep Black Sea Deep - Sea Research Part I. **Oceanographic Research Papers** 41:1605-1615.
- Buesseler, K.O., H.D. Livingston, S. Honjo, B.J. Hay, S.J. Manganini, E. Degens, V. Ittekkol, E. Izdar, and T. Konuk. 1987. Chernobyl radionuclides in a Black Sea sediment trap. **Nature** 329:825-828.
- Buesseler, K.O., and E.R. Sholkovitz. 1987. The geochemistry of fallout plutonium in the North Atlantic: I. a pore water study in shelf, slope and deep-sea sediments. **Geochimica et Cosmochimica Acta** 51:2605-2622.
- Buján, A., O.J. Santanatoglia, C. Chagas, M. Massobrio, M. Castiglioni, M.S. Yáñez, H. Ciallella, and J. Fernández. 2003. Soil erosion in a small basin through the use of ^{137}Cs technique. **Soil and Tillage Research** 69(1-2):127-137.

- Buján, A., O.J. Santanatoglia, C. Chagas, M. Massobrio, M. Castiglioni, M.S. Yáñez, H. Ciallella, and J. Fernández. 2000. Preliminary study on the use of the ^{137}Cs method for soil erosion investigation in the Pampean region of Argentina. **Acta Geologica Hispanica** 35(3-4):271-277.
- Buján, A., O.J. Santanatoglia, C. Chagas, M. Massobrio, M. Castiglioni, M. Yáñez, H. Ciallella, and J. Fernandez. 1999. Latécnica del ^{137}Cs aplicada al estudio de la erosión de suelos. Estudio de una transecta en una subcuenca en la Pampa Ondulada. **180 Reunion Anual de la Asociación Argentina de Tecnología Nuclear (AATN)**, 3 al 8 de noviembre de 1999. Bariloche, Argentina.
- Bulgakov, A.A., A.V. Konoplev, and I.G. Shkuratova. 2000. Distribution of Cs-137 in the topmost soil layer within a 30-km-wide zone around the Chernobyl nuclear power plant. **Eurasian Soil Science** 33(9):1007-1009.
- Bulgakov, A.A., V. Konoplev, V.E. Popov, and A.V. Shcherbak. 1990. The dynamic of long-lived radionuclides washed from the soil by surface rainfall runoff in Chernobyl. **Pochvovedenie** 4:47-54. (Russian)
- Bulgakov, A.A., A.V. Konoplev, E.V. Samokhvalova, and G.V. Laptev. 2005. Parameters of radiocesium sorption by bottom sediments of lakes Kozhanovskoe and Svyatoe in the Bryansk region of the Russian Federation. **Russian Meteorology and Hydrology** 2:48-54.
- Bulgakov, A.A., A.V. Konoplev, J.T. Smith, J. Hilton, R.N.J. Comans, G.V. Laptev, and B.F. Christyuk. 2002. Modelling the long-term dynamics of radiocaesium in closed lakes. **Journal of Environmental Radioactivity** 61(1):41-53.
- Bulgakov, A.A., and O.V. Shkuta. 2004. Modeling of radio-caesium soil-plant transfer. **Radioekologiya** 44(3):351-360. (In Russian)
- Bulygin, S.Y., G.A. Mozheiko, and D.O. Timchenko. 1995a. Erosion resistance parameters of forest-steppe zone soils in the Ukraine. **Pochvovedenie** 6:768-774. (Russian)
- Bulygin, S.Y., G.A. Mozheiko, and D.O. Timchenko. 1995b. Erosion resistance parameters of forest-steppe zone soils in the Ukraine. **Eurasian Soil Science** 28(10):374-382. Translated from **Pochvovedenie** (1995) 6:768-774 (Russian)
- Bulygin, S.Y., G.A. Mozheiko, and D.O. Timchenko. 1993. Rate of erosion of the chernozems of the Donets steppe. **Eurasian Soil Science** 25:117-126.
- Bulygin, S.Y., G.A. Mozheiko, and D.O. Timchenko. 1992. Rate of chernozem erosion in the Donetsk steppe. **Prochvovedeiy** 8:121-128. (Russian)

- Bundt, M., A. Albrecht, P. Froidevaux, P. Blaser, and H. Fluhler. 2000. Impact of preferential flow on radionuclide distribution in soil. **Environmental Science and Technology** 34(18):3895-3899.
- Bunker, D.J., J.T. Smith, F.R. Livens, and J. Hilton. 2001. Kinetics of metal ion sorption on lake sediments - approaches to the analysis of experimental data. **Applied Geochemistry** 16(6):651-658.
- Bunker, D.J., J.T. Smith, F.R. Livens, and J. Hilton. 2000. Determination of radionuclide exchangeability in freshwater systems. **Science of the Total Environment** 263(1-3):171-183.
- Bunzl, K. 2002. Vertical random variability of the distribution coefficient in the soil and its effect on the migration of fallout radionuclides. **Journal of Radioanalytical and Nuclear Chemistry** 254(1):15-21.
- Bunzl, K. 2002. Transport of fallout radiocesium in the soil by bioturbation: a random walk model and application to a forest soil with a high abundance of earthworms. **Science of the Total Environment** 293(1-3):191-200.
- Bunzl, K. 2001. Migration of fallout-radionuclides in the soil: effect of non-uniformity of the sorption properties on the activity-depth profiles. **Radiation and Environmental Biophysics** 40(3):237-241.
- Bunzl, K., B.P. Albers, W. Schimmack, K. Rissanen, M. Suomela, M. Puhakainen, T. Rahola, and E. Steinnes. 1999. Soil to plant uptake of fallout Cs-137 by plants from boreal areas polluted by industrial emissions from smelters. **Science of the Total Environment** 234(1-3):213-221.
- Bunzl, K., H. Förster, W. Kracke, and W. Schimmack. 1994. Residence times of fallout Pu-239+240, Pu-238, Am-241 and Cs-137 in the upper horizons of an undisturbed grassland soil. **Journal of Environmental Radioactivity** 22:11-27.
- Bunzl, K., P. Jacob, W. Schimmack, R.M. Alexakhin, N.P. Arkhipov, Y. Ivanov, and S.V. Kruglov. 1997. ¹³⁷Cs mobility in soils and its long-term effect on the external radiation exposure. **Radiation Environmental Biophysics** 36(1):31-37.
- Bunzl, K., H. Kofuji, W. Schimmack, A. Tsumura, K. Ueno, and M. Yamamoto. 1995. Residence times of global weapons testing fallout ²³⁷Np in a grassland soil compares to ²³⁹⁺²⁴⁰Pu, ²⁴¹Am and ¹³⁷Cs. **Health Physics** 68:89-93.

- Bunzl, K., and W. Kracke. 1988. Cumulative deposition of ^{137}Cs , ^{238}Pu , $^{239+240}\text{Pu}$ and ^{241}Am from global fallout in soils from forest, grassland and arable land in Bavaria (FRG). **Journal of Environmental Radioactivity** 8:1-14.
- Bunzl, K., and W. Kracke. 1984. Distribution of ^{210}Pb , ^{210}Po , stable lead and ^{137}Cs in soil, plants and moorland sheep of a heath. **Science of the Total Environment** 39:143-159.
- Bunzl, K., W. Kracke, and W. Schimmack. 1992. Vertical migration of $^{239+240}\text{Pu}$, ^{241}Am and ^{137}Cs fallout in forest soil under spruce. **Analyst** 117:469-474.
- Bunzl, K., W. Kracke, W. Schimmack, and K. Auerswald. 1995. Migration of fallout $^{239+240}\text{Pu}$, ^{241}Am and ^{137}Cs in the various horizons of a forest soil under pine. **Journal of Environmental Radioactivity** 28:17-34.
- Bunzl, K., W. Kracke, W. Schimmack, and L. Zelles. 1998. Forms of fallout ^{137}Cs and $^{239+240}\text{Pu}$ in successive horizons of a forest soil. **Journal of Environmental Radioactivity** 39(1):55-68.
- Bunzl, K., M. Puhakainen, I. Riekkinnen, P. Karhu, W. Schimmack, T. Heikinen, T. Jaakkola, V. Nikonov, V. Pavlov, T. Rahola, K. Rissanen, M. Suomela, M. Tillander, and M. Ayras. 2001. Fallout ^{137}Cs , Sr-90 and Pu239+240 in soils polluted by heavy metals: Vertical distribution, residence half-times, and external gamma-dose rates. **Journal of Radioanalytical and Nuclear Chemistry** 247(1):15-24.
- Bunzl, K., and W. Schimmack. 1991. Kinetics of sorption of ^{137}Cs , ^{85}Sr , ^{57}Co , ^{65}Zn and ^{109}Cd by the organic horizons of a forest soil. **Radiochimica Acta** 54:97-102.
- Bunzl, K., and W. Schimmack. 1989. Associations between the fluctuations of the distribution coefficients of Cs, Zn, Sr, Co, Cd, Ce, Ru, Tc, and I in the upper two horizons of a podzol forest soil. **Chemosphere** 18:2109-2120.
- Bunzl, K., W. Schimmack, M. Belli, and M. Riccardi. 1997. Sequential extraction of fallout radiocesium from soil: Small and large scale spatial variability. **Journal of Radioanalytical Nuclear Chemistry** 226:47-53.
- Bunzl, K., W. Schimmack, and P. Jacob. 2001. Uncertainty analysis of the external gamma-dose rate due to the variability of the vertical distribution of Cs-137 in the soil. **Journal of Environmental Radioactivity** 54(2):243-252.
- Bunzl, K., W. Schimmack, K. Kreutzer, and R. Schierl. 1988. The migration of fallout ^{134}Cs , ^{137}Cs and ^{106}Ru from Chernobyl and ^{137}Cs from weapons testing in a forest soil. **Z. Pflanzenernahr. Bodenk** 152:39-44.

- Bunzl, K., W. Schimmack, K. Kreutzer, and R. Schierl. 1989. Interception and retention of Chernobyl-derived ^{134}Cs , ^{137}Cs and ^{106}Ru in a spruce stand. **Science of the Total Environment** 78:77-87.
- Bunzl, K., W. Schimmack, S.V. Krouglov, and R.M. Alexakhin. 1995. Changes with time in the migration of radiocesium in the soil as observed near Chernobyl and in Germany from 1986-1994. **Science of the Total Environment** 12:23-47.
- Bunzl, K., W. Schimmack, P. Schramel, and M. Suomela. 1999. Effect of sample drying and storage time on the extraction of fallout Pu239+240, Cs-137 and natural Pb-210 as well as of stable Cs, Pb and Mn from soils. **Analyst** 124(9):1383-1387.
- Bunzl, K., W. Schimmack, L. Zelles, and B.P. Albers. 2000. Spatial variability of the vertical migration of fallout Cs-137 in the soil of a pasture, and consequences for long-term predictions. **Radiation and Environmental Biophysics** 39(3):197-205.
- Bunzl, K., and W. Schultz. 1985. Distribution coefficients of ^{137}Cs and ^{85}Sr by mixtures of clay and humic material. **Journal of Radioanalytical Nuclear Chemistry Articles** 90:23-37.
- Bunzl, K. and J. Tschiersch. 2001. Detection of radioactive hot particles in environmental samples using a Marinelli-beaker measuring geometry. **Radiochimica Acta** 89(9):599-604.
- Buravlev, Y.P., M.N. Lebedinskiy, S.K. Drich, and V.K. Chumak. 1992. Migration of Cs-137 and Ce-144 in soils of the evacuated zone around the Chernobyl Nuclear Power Plant. **Soviet Soil Science** 23:121-125.
- Burch, G.J., C.J. Barnes, I.D. Moore, R.D. Barling, D.H. Mackensie, and J.M. Olley. 1988. Detection and prediction of sediment sources in catchments: use of Be-7 and Cs-137, pp. 146-151. *In: Proceedings, hydrology and water resources symposium*, Australian Inst. Eng., Canberra, Australia.
- Burrough, P.A., M. Gillespie, B. Howard, and B. Prister. 1996. Redistribution of Chernobyl ^{137}Cs in Ukraine wetlands by flooding and runoff. **International Association of Hydrological Sciences Publication No. 235**:269-277.
- Burrough, P.A., M. Van der Perk, B.J. Howard, B.S. Prister, U. Sansone, and O.V. Voitsekhovitch. 1999. Environmental mobility of radiocaesium in the Pripjat catchment, Ukraine/Belarus. **Water Air Soil Pollution** 110(1-2):35-55.
- Busacca, A.J., C.A. Cook, and D.J. Mulla. 1993. Comparing landscape-scale estimation of soil erosion in the Palouse using Cs-137 and RUSLE. **Journal of Soil and Water Conservation** 48:361-367.

- Buscail, R., P. Ambatsian, A. Monaco, and M Bernat. 1997. Pb-210, manganese and carbon: Indicators of focusing processes on the northwestern Mediterranean continental margin **Marine Geology** 137:271-286.
- Bush, B., L.A. Shane, M. Wahlen, and M.P. Brown. 1987. Sedimentation of 74 PCB congeners in the upper Hudson River. **Chemosphere** 16:733-744.
- Butkus, D., M. Lebedite, G. Lubyte, K. Matusevicius, and J. Mazeika. 2001. Cs-137 and Sr-90 in the soils of Lithuania. **Geochemistry International** 39(7):719-724.
- Buzdalkin, K.N. 1985. Cs-137 redistribution by horizontal migration in soil. **Doklady Akademii Nauk Belarusi** 38:104-107.
- Cearetta, A., M.J. Irabien, I. Ulibarri, I. Yusta, I.W. Croudace, and A.B. Cundy. 2002. Recent salt marsh development and natural regeneration of reclaimed areas in the Plentzia estuary, N. Spain. **Estuarine Coastal and Shelf Science** 54(5):863-886.
- Cahill, R.A., and J.D. Steele. 1986. ¹³⁷Cs as a tracer of recent sedimentary processes in Lake Michigan. **Hydrobiologia** 143:29-35.
- Cahill, R.A., and M.T. Unger. 1993. Evaluation of the extent of contaminated sediments in the West Branch of the Grand Calumet River, Indiana-Illinois, USA. **Water Science Technology** 28:53-58.
- Caillet, S., P. Arpagaus, F. Monna, and J. Dominik. 2001. Factors controlling ⁷Be and ²¹⁰Pb atmospheric deposition as revealed by sampling individual rain events in the region of Geneva, Switzerland. **Journal of Environmental Radioactivity** 53:241-256.
- Caitcheon, G.G. 1993. Applying environmental magnetism to sediment tracing. **International Association of Hydrological Sciences Publication No.215**:285-292.
- Caitcheon, G.G. 1993. Sediment source tracing using environmental magnetism: a new approach with examples from Australia. **Hydrological Processes** 7:349-358.
- Caitcheon, G. 1990. Sedimentation in Lake Albert - the history of sediment sources and catchment sediment yields. **Australian Journal of Soil and Water Conservation** 3:42-46.
- Caitcheon, G.G., T.D. Donnelly, P.J. Wallbrink, and A.S. Murray. 1995. Nutrient and sediment sources in Chaffey Reservoir Catchment. **Australian Journal of Soil and Water Conservation** 8(2):41-49.
- Caitcheon, G., I. Prosser, P. Wallbrink, G. Douglas, J. Olley, A. Hughes, G. Hancock, and A. Scott. 2001. Sediment delivery from Moreton Bay's main tributaries: a multifaceted

- approach to identifying sediment sources, p. 103-107. In: I. Rutherford, F. Sheldon, G. Brierley, and C. Kenyon (eds.), **Proceedings of the Third Australian Stream Management Conference**, Brisbane, Australia, 27-29 August 2001, Cooperative Research Centre for Catchment Hydrology, Melbourne, Australia.
- Calcagno, T.H., and G.M. Ashley. 1984. Sediment processes in an impoundment, Union Lake, New Jersey. **Environmental Geology and Water Science** 6:237-246.
- Callaway, J.C., R.D. DeLaune, and W.H. Patrick Jr. 1996a. Chernobyl ^{137}Cs used to determine sediment accretion rates at selected northern European coastal wetlands. **Limnology and Oceanography** 41 (3):444-450.
- Callendar, E., and P.C. Van Metre. 1997. Reservoir sediment cores show U.S. lead declines. **Environmental Science and Technology** 31:424A-428A.
- Callender, E., and K.C. Rice. 2000. The urban environmental gradient: Anthropogenic influences on the spatial and temporal distributions of lead and zinc in sediments. **Environmental Science and Technology** 34:232-238.
- Callender, E., and J.A. Robbins. 1993. Transport and accumulation of radionuclides and stable elements in a Missouri River reservoir. **Water Resources Research** 29:1787-1804.
- Calmet, D., and J.M. Fernandez. 1990. Caesium distribution in northwest Mediterranean seawater, suspended particles, and sediment. **Coastal Shelf Research** 10:895-913.
- Cambray et al. 1987. Observation of radioactivity from the Chernobyl accident. **Nuclear Energy** 26:77-101.
- Cambray, R.S., P.A. Cawse, J.A. Garland, J.A.B. Gibson, P. Johnson, G.N.J. Lewis, D. Newton, L. Salmon, and B.O. Wade. 1987. Observations on radioactivity from the Chernobyl accident. **Nuclear Energy** 26:77-101.
- Cambray, R.S., and J.D. Eakins. 1982. Pu, ^{241}Am and ^{137}Cs in soil in West Cumbria and a maritime effect. **Nature** 300:46-48.
- Cambray, R.S., and J.D. Eakins. 1980. Studies of environmental radioactivity in Cumbria, Part 1. Concentrations of plutonium and ^{137}Cs in environmental samples from West Cumbria and a possible maritime effect. **AERE-R-9807**. U.K. Atomic Energy Authority Report, Harwell, UK.
- Cambray, R.S., K. Playford, and R.C. Carpenter. 1989. Radioactive fallout in air and rain: results to the end of 1988. **AERE-R-10155**. U.K. Atomic Energy Authority Report, Harwell, UK.

- Cambray, R.S., K. Playford, and G.N.J. Lewis. 1985. Radioactive fallout in air and rain: results to the end of 1984. **AERE-R-11915**. U.K. Atomic Energy Authority Report, Harwell, UK.
- Cambray, R.S., K. Playford, and G.N.J. Lewis. 1983. Radioactive fallout in air and rain: results to the end of 1982. **AERE-R-10859**. U.K. Atomic Energy Authority Report, Harwell, UK.
- Cambray, R.S., K. Playford, G.N.J. Lewis, and R.C. Carpenter. 1989. Radioactive fallout in air and rain: results to the end of 1988. **AERE-R-13575**. U.K. Atomic Energy Authority Report, Harwell, UK.
- Camarero, L., P. Masque, W. Devos, I. Ani-Ragolta, J. Catalan, H.C. Moor, et al. 1998. Historical variations in lead fluxes in the Pyrenees (Northesat Spain) from a dated lake sediment core. **Water, Air, and Soil Pollution** 105:439-449.
- Campbell, B.L. 1983. Application of environmental caesium-137 for the determination of sedimentation rates in reservoirs and lakes and related catchment studies in developing countries. Radioisotopes in Sediment Studies, **Technology Document 298:7-30**, International Atomic Energy Agency, Vienna, Austria.
- Campbell, B.L. 1982. **Application of environmental caesium-137 for the determination of sedimentation rates in reservoirs and lakes and related catchment studies in developing countries**. AAEC Research Establishment, Lucas Heights Research Lab., PMB Sutherland 3322, N.S.W., Australia.
- Campbell, B.L., P.L. Airey, and G.E. Calf. 1987. Use of isotopic techniques in hydrological and erosion-sedimentation studies in tropical and temperate zones of the Asian-Pacific region, pp. 751-766. *In*: V. Gardiner (ed.), **International geomorphology**, Part 1. Wiley, London.
- Campbell, B.L., G.L. Elliott, and R.J. Loughran. 1986. Measurement of soil erosion from fallout ¹³⁷Cs. **Search** 17:148-149.
- Campbell, B.L., G.L. Elliott, and R.J. Loughran. 1985. Nuclear fallout as an aid to measuring soil erosion. **Journal of Soil Conservation New South Wales** 42:86-89.
- Campbell, B.L., G.L. Elliott, and R.J. Loughran. 1980a. Nuclear fallout aids the hydrologist. **Environmental Newsletter** 5:2-3.
- Campbell, B.L., G.L. Elliott, and R.J. Loughran. 1980b. Sediment dynamics in a small Hunter Valley catchment, Vol. 6, pp. 1-17. *In*: **Hunter environment**, University Of Newcastle, N.S.W., Australia.

- Campbell, B.L., R.J. Loughran, and G.L. Elliott. 1988. A method for determining sediment budgets using caesium-137. **International Association of Hydrological Sciences Publication No. 174**:171-179.
- Campbell, B.L., R.J. Loughran, and G.L. Elliott. 1992. The role of caesium-137 in the concept of total catchment management, pp. 93-97. In: G.J. Hamilton, K.M. Howes, and R. Attwater (eds.), Proceedings 5th Australian Soil Conservation Conference, Western Australian Department of Agriculture, Perth, Australia.
- Campbell, B.L., R.J. Loughran, and G.L. Elliott. 1982. Caesium-137 as an indicator of geomorphic processes in a drainage system. **Australian Geographical Studies** 20:49-64.
- Campbell, B.L., R.J. Loughran, G.L. Elliott, and D.J. Shelly. 1986. Mapping drainage basin sediment sources using caesium-137. **International Association of Hydrological Sciences Publication No. 159**:437-446.
- Campbell, B.L., and M. Ross. 1980. Determination of sedimentation rate in Stephens Creek reservoir using environmental caesium-137. **Papers of the Newcastle (16th) Conference of the Institute of Australian Geographers**, pp. 43-51.
- Camps, M.; A. Rigol, S. Hillier, M. Vidal, and G. Rauret. 2004. Quantitative assessment of the effects of agricultural practices designed to reduce ¹³⁷Cs and ⁹⁰Sr soil-plant transfer in meadows. **Science of the Total Environment** 332(1/3):23-38.
- Cao, Y.Z., D.R. Coote, N.C. Nolin, and C. Wang. 1993. Using ¹³⁷Cs to investigate net soil erosion at two soil benchmark sites in Quebec. **Canadian Journal of Soil Science** 73:515-526.
- Cao, Y.Z., D.R. Coote, H.W. Rees, C. Wang, and T.L. Chow. 1994. Effects of intensive potato production on soil quality and yield at a benchmark site in New Brunswick. **Soil and Tillage Research** 29:23-34.
- Capra, D., U. Facchini, V. Gianelle, G. Ravasini, O. Ravena, A. Pizzala, and P. Bacci. 1987. The Chernobyl accident: the radioactive contamination in the area of Lake Como and in other Northern Italy sites. **Nuovo Cimento** 10:285-313.
- Carbol, P., D. Solatie, N. Erdmann, T. Nysten, and M. Betti, 2003. Deposition and distribution of Chernobyl fallout fission products and actinides in a Russian soil profile. **Journal of Environmental Radioactivity** 68(1)27-46.
- Carey, W.L. 1996. **Transgression of Delaware's fringing tidal salt marshes: Surficial morphology, subsurface stratigraphy, vertical accretion rates, and geometry of adjacent and antecedent surfaces**. Ph.D. Dissertation, University of Delaware, Newark, DE, 337p.

- Carini, F., M. Brambilla, N. Mitchell, and Z. Ould-Dada. 2003. Cesium-134 and Strontium-90 in strawberry plants following wet aerial deposition. **Journal of Environmental Quality** 32(6):2254-2264.
- Carlsen, L., P. Bo, and G. Larsen. 1984. Radionuclide-humic acid interactions studied by dialysis, pp. 167-178. *In*: G.G. Barney, J.D. Navratil, and W.W. Schultz (eds.), **Geochemical behavior of disposed radioactive waste**, American Chemical Soc., Seattle, WA.
- Carlsson, S. 1978. A model for the movement and loss of ^{137}Cs in a small watershed. **Health Physics** 34:33-37.
- Carlsson, S. 1976. Cesium-137 in a dysoligotrophic lake, a radioecological field study. **LUNDO-MERI-NFRA 76-1005**, 180 pp. Radiation Physic Department, University of Lund, Lund, Sweden.
- Carpenter, R., T.M. Beasley, D. Zahnle, and B.L.K. Somayajulu. 1987. Cycling of fallout (Pu, ^{241}Am , ^{137}Cs) and natural (U, Th, ^{210}Pb) radionuclides in Washington continental slope sediments. **Geochimica et Cosmochimica Acta** 51:1897-1921.
- Carr, A.P., and M.W.L. Blackley. 1986. Implications of sedimentological and hydrological processes on the distribution of radionuclides: an example of a salt marsh near Ravenglass, Cumbria. **Estuaries and Coastal Shelf Science** 22:529-543.
- Carrard, G. (Comp.) 1980. Nuclear method can give early warning of erosion. **AAEC Nuclear News** 7:1-2.
- Carrigan, P.A. Jr., and R.J. Pickering. 1967. Radioactive materials in bottom sediments of the Clinch River. **ORNL-3721**, Part A and B, Oak Ridge National Laboratory, Oak Ridge, TN.
- Carroll, J., F. Boisson, S.W. Fowler, and J.L. Teyssie. 1997 Radionuclide adsorption to sediments from nuclear waste dumping sites in the Kara Sea. **Marine Pollution Bulletin** 35(7-12):296-304.
- Carroll, J., F. Boisson, J.L. Teyssie, S.E. King, M. Krosshavn, M.L. Carroll, S.W. Fowler, P.P. Povinec, and M.S. Baxter. 1999. Distribution coefficients (K-d's) for use in risk assessment models of the Kara Sea. **Applied Radiation and Isotopes** 51(1):121-129.
- Carroll, J., and I.H. Harms. 1999. Uncertainty analysis of partition coefficients in a radionuclide transport model. **Water Research** 33(11):2617-2626.

- Carroll, J.L., I. Lerche, J.A. Abraham, and D.J. Cisar. 1999. Sediment ages and flux variations from depth profiles of ^{210}Pb : Lake and marine examples. **Applied Radiation and Isotopes** 50:793-804.
- Carroll, J.L., I. Lerche, J.A. Abraham, and D.J. Cisar. 1995. Model-determined sediment ages from ^{210}Pb profiles in un-mixed sediment. **Nuclear Geophysics** 9:553-565.
- Carroll, J., M. Williamson, I. Lerche, E. Karabanov, and D.F. Williams. 1999. Geochronology of Lake Baikal from Pb-210 and Cs-137 radioisotopes. **Applied Radiation and Isotopes** 50(6):1105-1119.
- Carter, J., P.N. Owens, D.E. Walling and G.J.L. Leeks. 2003. Fingerprinting suspended sediment sources in a large urban river system. **The Science of The Total Environment** 314-316:513-534.
- Carter, M., and G. Kackanoski. 1997. Relationship between landscape position and soil loss under different soil types and land use practices in Prince Edward Island. **Journal of Soil and Water Conservation** 52(4):305 (Abstract)
- Carter, M.W., and A.A. Moghissi. 1977. Three decades of nuclear testing. **Health Physics** 33:55-71.
- Carton, J., D.E. Walling, P.N. Owens, and G.J.L. Leek. 2000. Spatial and temporal variability of the chromium content of suspended and flood-plain sediments in the River Aire, Yorkshire, UK, p. 219-226. In: M. Stone (ed.). The role of erosion and sediment transport in nutrient and contaminant transfer. **International Association of Hydrological Sciences Publication 263**, Wallingford, IAHS Press.
- Cawse, P. 1983. The accumulation of ^{137}Cs and $^{239+240}\text{Pu}$ in soils of Great Britain, and transfer to vegetation, pp. 47-61. In: P.J. Coughtrey (ed.), **Ecological aspects of radionuclide release**. Blackwell, Oxford.
- Cawse, P.A., and A.D. Horrill. 1986. A survey of caesium-137 and plutonium in British soils in 1977. **AERE R-10155**. United Kingdom Atomic Energy Authority Report, Harwell, UK.
- Cearreta, A., M.J. Irabien, E. Leorri, I. Yusta, I.W. Croudace, and A.B. Cundy. 2000. Recent anthropogenic impacts on the Bilbao estuary, Northern Spain: Geochemical and microfaunal evidence. **Estuarine Coastal and Shelf Science** 50(4):571-592.
- Cenci, R.M., A. Basset, F. Sena, D. Dabergami, S.S. Di Nicolantonio, G. Ligetta, F. Bo, and C.N. Murray. 2002. Trace elements in sediment cores of Lake Alimini (Lecce Italy). **Fresenius Environmental Bulletin** 11(9B):681-685.

- Cerling, T.E., S.J. Morrison, and R.W. Sobocinski. 1990. Sediment-water interaction in a small stream: adsorption of ^{137}Cs by bed load sediments. **Water Resources Research** 26:1165-1176.
- Cerling, T.E., and R.R. Turner. 1982. Formation of freshwater Fe-Mn coatings on gravel and behavior of ^{60}Co , ^{90}Sr , and ^{137}Cs in a small watershed. **Geochimica et Cosmochimica Acta** 46:1333-1343.
- Cerling, T.E. and B.P. Spalding. 1999. Distribution and relationship of radionuclides to streambed gravels in a small watershed. **Environmental Geology** 9:99-116.
- Cerrai, E., B. Schreiber, and C. Triulzi. 1967. Vertical distribution of Sr^{90} , Ce^{144} , Pm^{147} , and Eu^{155} in coastal marine sediments. **Energia Nucleare** 14:586-592.
- Cerrai, E., B., and C. Triulzi. 1969. Vertical distribution of Cs^{137} , Sb^{125} , and Co^{60} in coastal marine sediments. **Energia Nucleare** 16:36-40.
- Chague-Goff, C., and M.R. Rosen. 2001. Using sediment chemistry to determine the impact of treated wastewater discharge on a natural wetland in New Zealand. **Environmental Geology** 40(11-12):1411-1423.
- Chakrapani, G.J., and V. Subramanian. 1993. Rates of erosion and sedimentation in the Mahanadi River Basin. **Indian Journal of Hydrology** 149:39-48.
- Chamard, P., R.H. Velasco, M. Belli, G. Disilvestro, G. Ingraio, and U. Sansone. 1993. Caesium-137 and strontium-90 distribution in a soil profile. **Science of the Total Environment** 136:251-258.
- Chamberlain, A.C. 1970. Interception and retention of radioactive aerosols by vegetation. **Atmosphere Environmental** 4:57-78.
- Chang, Z.Y., L.J. Diao, S.S. Jiang, A.L. Li, M. Zhao, and Y.G. Zhao. 2004. Determination of Sr-90 and Cs-137 concentrations in the IAEA reference material Soil-6. **Journal of Radioanalytical and Nuclear Chemistry** 260(1):61-68.
- Chant, L.A., and R.J. Cornett. 1991. Smearing of gravity core profiles in soft sediment: note. **Limnology and Oceanography** 36:1492-1498.
- Chanton, J.P., C.S. Martens, and G.W. Kipphut. 1983. Lead-210 sediment geochronology in a changing coastal environment. **Geochimica et Cosmochimica Acta** 47:1791-1804.
- Chappell, A. 1999. The limitations of using Cs-137 for estimating soil redistribution in semi-arid environments. **Geomorphology** 29(1-2):135-152.

- Chappell, A. 1998. Using remote sensing and geostatistics to map ^{137}Cs -derived net soil flux in south-west Niger. **Journal of Arid Environmental** 39(3):441-455.
- Chappell, A. 1997. ^{137}Cs -derived net (30 year) soil flux, and the mapping of landform, net soil flux and surface characteristics, pp.231-238. In: P. Kabat, S. Prince, and L. Prihodko (eds.), **Hydrologic Atmospheric Pilot Experiment in the SAHEL (HAPEX-Sahel): Methods, measurements and selected results from the west central supersite, Report 130**, DLO Staring Centre, Wageningen, The Netherlands.
- Chappell, A. 1996. Modelling the spatial variation of processes in the redistribution of soil: Digital terrain models and ^{137}Cs in southwestern Niger. **Geomorphology** 17:249-261.
- Chappell, A., and M. Oliver. 2000. Using geostastics to improve estimates of ^{137}Cs -derived net soil flux, pp. 221-239. In: I.D.L Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Chappell, A., and M. Oliver. 1997. Geostatistical analysis of soil redistribution in SW Niger, West Africa, pp. 961-972. In: E.Y. Baafi and N.A. Schonfield (eds.), **Quantative Geology and Geophysics**, Kluwer, Dorecht.
- Chappell, A., M. Oliver, and A. Warren. 1996. Net soil flux derived from multivariate soil property classification in Southwest Niger: A quantified approach based on ^{137}Cs , PP. 69-85. In: B. Buerkert, B.E. Allison, and M. Von Oppen (eds.), **Wind erosion in West Africa: the problem and its control. Proceedings**, Margraf Verlag Weikersheim, Germany.
- Chappell, A., M. Oliver, A. Warren, C. Agnew, and M.A. Charlton. 1997. Examining the factors controlling the spatial scale of variation in soil redistribution processes from south-west Niger. In: M.G., Anderson and S.M. Brooks (eds.), **Advances in Hillslope Processes**, John Wiley and Sons, London.
- Chappell, A. and A. Warren. 2003. Spatial scales of Cs-137-derived soil flux by wind in a 25 km² arable area of eastern England. **Catena** 52(3-4):209-234.
- Chappell, A., A. Warren, M.A. Oliver, and M. Charlton. 1998. The utility of ^{137}Cs for measuring soil redistribution rates in southwest Niger. **Geoderma** 81(3-4):313-337.
- Chappell, A., A. Warren, N. Taylor, and M. Charlton. 1999. Soil flux (loss and gain) in southwestern Niger and its agricultural impact. **Land Degradation and Development** 9(4):295-310.
- Chappell, A., A. Warren, N. Taylor, and M. Charlton. 1998. Soil flux (loss and gain) in southwestern Niger and its agricultural impact. **Land Degradation and Development** 9(4):295-310.

- Charbit, S., C. Rabouille, and G. Siani. 2002. Effects of benthic transport processes on abrupt climatic changes recorded in deep-sea sediments: A time-dependent modeling approach - art. no. 3194. **Journal of Geophysical Research-Oceans** 107(C11): NIL_191-NIL209.
- Charles, D.F., D.R. Whitehead, D.R. Engstrom, B.D. Fry, R.A. Hites, S.A. Norton, J.S. Owen, L.A. Roll, S.C. Schindler, J.P. Smol, A.J. Uutala, J.R. White, and R.J. Wise. 1987. Paleolimnological evidence for recent acidification of Big Moose Lake, Adirondack Mountain N.Y. (USA). **Biogeochemistry** 3:267-296.
- Charles, M.J., and R.A. Hites. 1987. Sediment as archives of environmental pollution trends. **Advances in Chemistry Series** 216:365-389.
- Charlesworth, S.M. and J.A. Lees. 2001. The application of some mineral magnetic measurements using heavy metals mineral analyses for characterising fine sediments in an urban catchment, Coventry, UK. **Journal of Applied Geophysics** 48:113-125.
- Charlesworth, S.M., L.M. Ormerod, and J.A. Lees. 2000. Tracing sediments within urban catchments using heavy metal, mineral magnetic, and radionuclide signature, pp. 345-368. In: I.D.L. Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Charmasson, S., P. Bouisset, O. Radekovitch, A. Pruchon, and M. Arnaud. 1998. Long-core profiles of ^{137}Cs , ^{134}Cs , ^{60}Co and ^{210}Pb in sediment near the Rhone river (Northwestern Mediterranean Sea). **Estuaries** 21(3):367-378.
- Cheam, V., G. Lawson, J. Lechner, and R. Desrosiers. 1998. Recent metal pollution in Agassiz Ice Cap. **Environmental Science** 32(24):3974-3979.
- Chebotina, M.Y., and V.F. Bochenin. 1981. ^{90}Sr and ^{137}Cs in bottom sediments of a fresh water lake. **Gidrobiologia ZH** 17:82-82. (Russian)
- Chelmicki, W., and J. Swiechwiez. 1992. Application of Cs-137 and soil trapping methods for studying slope processes in the Carpathian foothills. **Pirineos** 139:3-14.
- Chen, S., and Y. Lai. 2005. Sediment delivery and budgets in reservoir watersheds, p.333-340. In: A.J. Horowitz, and D.E. Walling (eds.). **Sediment Budgets 2. International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.
- Chen, Z.Y., Y. Saito, Y. Kanai, T.Y. Wei, L.Q. Li, H.S. Yao, and Z.H. Wang. 2004. Low concentration of heavy metals in the Yangtze estuarine sediments, China: a diluting setting. **Estuarine Coastal and Shelf Science** 60(1):91-100.

- Chenhall, B.E., I. Yassini, A.M. Depers, G. Caitcheon, B.G. Jones, G.E. Bailey, and G.S. Ohmsen. 1995. Anthropogenic marker evidence for accelerated sedimentation in Lake Illawarra, New South Wales, Australia. **Environmental Geology** 26:124-135.
- Chenouard, L., and C. Lalou. 1969. Gamma-ray spectrometry as a tool for a rapid investigation of detritic cores. **Journal of Sedimentary Petrology** 39:1477-1483.
- Cheshire, M.V., and C. Shand. 1991. Translocation and plant availability of radiocaesium in an organic soil. **Plant and Soil** 134:287-296.
- Chesnokov, A.V., V.I. Fedin, A.P. Govorun, O.P. Ivanov, V.I. Liksonov, V.N. Potapov, S.V. Smirnov, S.B. Shcherbak, and L.I. Urutskoev. 1997. Collimated detector technique for measuring a ¹³⁷Cs deposit in soil under a clean protected layer. **Applied Radiation and Isotopes** 48(9):1265-1272.
- Chesnokov, A.V., A.P. Govorun, V.N. Fedin, O.P. Ivanov, V.I. Liksonov, V.N. Potapov, S.B. Shcherbak, S.V. Smirnov, and L.I. Urutskoev. 1999. Method and device to measure Cs-137 soil contamination in-situ. **Nuclear Instruments and Methods Physics Research Sect. A-Accel. Spectrom. Dect. Assoc. Equip.** 420(1-2):336-344.
- Chesnokov, A.V., A.P. Govorun, M.V. Ivanitskaya, V.I. Liksonov, and S.B. Shcherbak. 1999. Cs-137 contamination of Techa river flood plain in Brodokalmak settlement. **Applied Radiation and Isotopes** 50(6):1121-1129.
- Chesnokov, A.V., A.P. Govorun, V.G. Linnik, and S.B. Shcherbak. 2000. Cs-137 contamination of the Techa river flood plain near the village of Muslumovo. **Journal of Environmental Radioactivity** 50(3):179-191.
- Chiarenzelli, J.R., C.; Alexander, A. Isley, R. Scrudato, J. Pagano, and W. Ramirez. 2001. Polychlorinated biphenyls in nonaccumulating, century-old sediments: Sources, signatures, and mechanism of introduction. **Environmental Science & Technology** 35(14):2903-2908.
- Chibowski, S., A. Komosa, M. Reszka, J. Solecki, and J. Zygmunt. 2000. Study on the horizontal transport of some radionuclides in the Wieprz river valley. **Journal of Radioanalytical and Nuclear Chemistry** 246(1):199-206.
- Chibowski, S., and A. Mitura. 1995. Studies of the rate of migration of radiocesium in some types of soils of Eastern Poland. **Science of the Total Environment** 170:193-198.
- Chibowski, S., J. Solecki, and J. Szczypa. 1997. The examination of the Roztocze region environment. Radioisotope monitoring of soils and plants. The heavy metal content in soil. **Polish Journal of Environmental Studies** 6(3):17-27.

- Chibowski, S., J. Solecki, J. Szczypa, and R. Suprynowicz. 1994. Study of radioactive contamination of Eastern Poland. **Science of the Total Environment** 158:71-77.
- Chibowski, S. and J. Zygmunt. 2002. The influence of the sorptive properties of organic soils on the migration rate of Cs-137. **Journal of Environmental Radioactivity** 61(2):213-223.
- Chibowski, S., J. Zygmunt, and Z. Klimowicz. 1999. Investigation of adsorption and vertical migration of Cs-137 in three kinds of soil at Lublin vicinity. **Journal of Radioanalytical Nuclear Chemistry** 242(2):287-295.
- Chittenden D.M. II 1983. Factors affecting the soluble-suspended distribution of strontium-90 and cesium-137 in Dardanelle Reservoir, Arkansas. **Environmental Science and Technology** 17:26-31.
- Chiu, C.Y., S.Y. Lai, Y.M. Lin, and H.C. Chiang. 1999. Distribution of the radionuclide Cs-137 in the soils of a wet mountainous forest in Taiwan. **Applied Radiation and Isotopes** 50(6):1097-1103.
- Chiu, C.Y., S.Y. Lai, C.J. Wang, and Y.M. Lin. 1999. Transfer of Cs-137 from soil to plants in a wet montane forest in subtropical Taiwan. **Journal of Radioanalytical Nuclear Chemistry** 239(3):511-515.
- Chiu, C.Y., S.M. Shih, C.J. Wang, and C.C. Huang. 2002. Availability and immobilization of Cs-137 in organic soils of a subtropical perhumid forest ecosystem. **Water Air and Soil Pollution** 137(1-4):193-201.
- Chmura, G.L., L.L. Helmer, C.B. Beecher, and E.M. Sunderland. 2001. Historical rates of salt marsh accretion on the outer Bay of Fundy. **Canadian Journal of Earth Sciences** 38(7):1081-1092.
- Chmura, G.L., A. Coffey, and R. Crago. 2001. Variations in surface sediment deposition on salt marshes in the Bay of Fundy. **Journal of Coastal Research** 17:221-227.
- Chmura, G.L. and G.A. Hung. 2004. Controls on salt marsh accretion: A test in salt marshes of Eastern Canada. **Estuaries** 27(1):70-81.
- Chmura, G.L., and E.C. Kesters. 1994. Storm deposition and Cs-137 accumulation in fine-grained marsh sediments of the Mississippi Delta Plain. **Estuaries and Coastal Shelf Science** 39:33-44.
- Choi, Y.H., K.M. Lim, H.J. Choi, G.S. Choi, H.S. Lee, and C.W. Lee. 2005. Plant uptake and downward migration of ⁸⁵Sr and ¹³⁷Cs after their deposition on to flooded rice fields: lysimeter experiments with and without the addition of KCl and lime. **Journal of Environmental Radioactivity** 78(1):35-49.

- Choppin, G.R. 1988. Humics and radionuclide migration. **Radiochimica Acta** 44/45:23-28.
- Chorover, J., M.J. DiChiaro, and O.A. Chadwick. 1999. Structural charge and cesium retention in a chronosequence of Tephritic soils. **Soil Science Society of America Journal** 63(1):169-177.
- Chou, F., H. Chung, S. Teng, and S. Sheu. 2005. Screening plant species native to Taiwan for remediation of ^{137}Cs -contaminated soil and the effects of K addition and soil amendment on the transfer of ^{137}Cs from soil to plants. **Journal of Environmental Radioactivity** 80(2):175-181.
- Chowdhury, M.I., M.N. Alam, and S.K.S. Hazari. 1999. Distribution of radionuclides in the river sediments and coastal soils of Chittagong, Bangladesh and evaluation of the radiation hazard. **Applied Radiation and Isotopes** 51(6):747-755.
- Christensen, E.R. 1982. A model for radionuclides in sediment influenced by mixing and compaction. **Journal of Geophysical Research** 87:566-572.
- Christensen, E.R., and P.K. Bhunia. 1986. Modelling radiotracers in sediments: comparison with observations in Lake Michigan and Huron. **Journal of Geophysical Research** 91:8559-8571.
- Christensen, E.R., and N. Chien. 1981. Fluxes of arsenic, lead, zinc, and cadmium to Green Bay and Lake Michigan sediments. **Environmental Science and Technology** 15:553-558.
- Christensen, E.R., and R.H. Goetz. 1987. Historical fluxes of particle-bound pollutants from deconvolved sedimentary records. **Environmental Science and Technology** 21(11):1088-1096.
- Christensen, E.R., and J.F. Karl. 1996. Unmixing of lead, ^{137}Cs , and PAH records in Lake sediments using curve fitting with first- and second-order corrections. **Water Research** 30(11):2543-2558.
- Christensen, E.R., and R.J. Klein. 1991. Unmixing of ^{137}Cs , Pb, Zn, and Cd records in lake sediment. **Environmental Science and Technology** 25:1627-1637.
- Christensen, E.R., and C.K. Lo. 1986. Polychlorinated biphenyls in dated sediments of Milwaukee Harbour, Wisconsin, USA. **Environmental Pollution (Series B)** 12:217-232.
- Christensen, E.R., and X. Zhang. 1993. Sources of polycyclic aromatic hydrocarbons to Lake Michigan determined from sedimentary records. **Environmental Science and Technology** 27(1):139-146.

- Christensen, V.G., and K.E. Juracek. 2001. Variability of metals in reservoir sediment from two adjacent basins in the central Great Plains. **Environmental Geology** 40:470-481.
- Church, M. 1980. Records of recent geomorphological events, pp. 13-29. *In*: R.A. Cullingford, D.A. Davidson, and J. Lewin (eds.), **Timescales in geomorphology**, Wiley, London.
- Churchill, J.H., C.T. Hess, and C.W. Smith. 1979. Measurement and computer modelling of radionuclide uptake by marine sediments near a nuclear power reactor. **Health Physics** 38:327-340.
- Cisternas, M. and A. Araneda. 2001. Anthropogenic isotope (Pb-210, Cs-137) variations in the sedimentary record from a lake in the Nahuelbuta mountain range, Chile. **Revista Geologica de Chile** 28(1):105-115.
- Cisternas, M., A. Araneda, P. Martinez, and S. Perez. 2001. Effects of historical land use on sediment yield from a lacustrine watershed in central Chile. **Earth Surface Processes and Landforms** 26(1):63-76.
- Cisternas M., R. Ierate, A. Aranea, P. Debels, and F. Rios. 1999. Soil erosion and sedimentation rates in a small eutrophic lake in southern Chile estimated by ^{210}Pb isotope analysis. 9 pages. *In*: Proceedings of Isotope Techniques in Water Resources Development and Management, **IAEA-CSP2/C**, Vienna, Austria.
- Ciuffo, L., H. Velasco, M. Belli, and U. Sansone. 2003. Cs-137 soil-to-plant transfer for individual species in a semi-natural grassland. Influence of potassium soil content. **Journal of Radiation Research** 44(3):277-283.
- Cizdziel, J.V. and V.F. Hodge. 2000. Attics as archives for house infiltrating pollutants: trace elements and pesticides in attic dust and soil from southern Nevada and Utah. **Microchemical Journal** 64(1):85-92.
- Cizdziel, J.V., V.F. Hodge, and S.H. Faller. 1998. Plutonium anomalies in attic dust and soils at locations surrounding the Nevada Test Site. **Chemosphere** 37(6):1157-1168.
- Clague, J.J., and P.T. Bobrowsky. 1994. Evidence for a large earthquake and tsunami 100-400 years ago on western Vancouver Island, British Columbia. **Quaternary Research** 14:176-184.
- Clague, J.J., P.T. Bobrowsky, and T.S. Hamilton. 1994. A sand sheet deposited by the 1964 Alaska Tsunami at Port-Alberni, British-Columbia. **Estuaries and Coastal Shelf Science** 38:413-421.
- Clark, M.A. and P. Fritz. 1997. **Environmental isotopes in hydrogeology**. Lewis Publishers, Boca Raton, Florida, 328p.

- Clark, M.J., and F.B. Smith. 1988. Wet and dry deposition of Chernobyl releases. **Nature** 332:245-249.
- Claval, D., L. Garcia-Sanchez, J. Real, R. Rouxel, S. Mauger, and L. Slegier. 2004. Erosion of atmospherically deposited radionuclides as affected by soil disaggregation mechanisms. **Journal of Environmental Radioactivity** 77(1):47-61.
- Clemens, G., and K. Stahr. 1994. Present and past soil erosion rates in catchments of the Kraichgau Area (SW-Germany). **Catena** 22:153-168.
- Clifton, J., P. McDonald, A. Plater, and F. Oldfield. 1999. Derivation of a grain-size proxy to aid the modelling and prediction of radionuclide activity in salt marshes and mud flats of the eastern Irish Sea. **Estuaries and Coastal Shelf Science** 48(5):511-518.
- Clifton, J., P. McDonald, A. Plater, and F. Oldfield. 1997. Relationships between radionuclide content and textural properties in Irish sea intertidal sediments. **Water Air Soil Pollution** 99(1-4):209-216.
- Clifton, R.J., and E.I. Hamilton. 1982. The application of radioisotopes in the study of estuarine sedimentary processes. **Estuaries and Coastal Shelf Science** 14:433-466.
- Clifton, R.J., P.G. Watson, J.T. Davey, and P.E. Frickers. 1995. A study of processes affecting the uptake of contaminants by intertidal sediments, using the radioactive tracers: Be-7, Cs-137 and unsupported Pb-210. **Estuaries and Coastal Shelf Science** 41:459-474.
- Cline, J.F., and W.H. Richards. 1972. Radioactive strontium and cesium in cultivated and abandoned plots. **Health Physics** 23:317-324.
- Clint, G.M., and J. Dighton. 1992. Uptake and accumulation of radiocaesium by mycorrhizal and non-mycorrhizal heather plants. **New Phytologist** 121:555-561.
- Clymo, R.S. 1983. Peats, pp. 159-224. *In*: A.J. Core (ed.), **Mires: swamps, bogs, fen and moor. Ecosystems of the world, 4A**. Elsevier, New York.
- Clymo, R.S., F. Oldfield, P.G. Appleby, G.W. Pearson, P. Ratnessar, and N. Richardson. 1990. A record of atmospheric deposition on a rain-dependent peatland. **Philosophical Transaction of the Royal Society of London B** 303:331-338.
- Coard, M.A., S.M. Cousen, A.H. Cuttler, H.J. Dean, J.A. Dearing, T.I. Eglinton, A.M. Greaves, K.P. Lacey, P.E. O'Sullivan, D.A. Pickering, M.M. Rhead, J.K. Rodwell, and H. Simola. 1983. Paleolimnological studies of annually-laminated sediments in Loe Pool, Cornwall, U.K. **Hydrobiologia** 103:185-191.

- Cochran, T.B., W.M. Arkin, R.S. Norris, and J.S. Sands. 1995. **Nuclear Weapons Data Book**. Harper and Row, New York.
- Cockran, J.K. 1985. Particle mixing rates in sediments of the eastern equatorial Pacific: evidence from ^{210}Pu , $^{239+240}\text{Pu}$ and ^{137}Cs distribution at MANOP sites. **Geochimica et Cosmochimica Acta** 49:1195-1210.
- Cochran, J.K., S.B. Moran, N.S. Fisher, T.M. Beasley, and J.M. Kelley. 2000. Sources and transport of anthropogenic radionuclides in the Ob River system, Siberia. **Earth and Planetary Science Letters** 179(1):125-137.
- Cockran, J.K., and J.K. Osmond. 1974. Gamma spectrometry of deep-sea cores and sediment accumulation rates. **Deep Sea Research** 21:721-737.
- Coleman, N.T., D. Craig, and R.J. Lewis. 1963. Ion exchange reactions of cesium. **Soil Science Society of America Proceedings**. 27:287-289.
- Coleman, N.T., R.J. Lewis, and D. Craig. 1963. Sorption of cesium by soil and its displacement by salt solutions. **Soil Science Society of America Proceedings** 27:290-294.
- Colgan, P.A., P. McCann, E.J. McGee, and I.R. McAulay. 1993. Short and long-term losses of cesium-137 from peatland soils. **Irish Journal of Agriculture and Food Research** 32:37-46.
- Collins, A.L., and D.E. Walling. 2004. Documenting catchment suspended sediment sources: problems, approaches and prospects. **Progress in Physical Geography** 28(2):159-196.
- Collins, A.L. and D. E. Walling. 2002. Selecting fingerprint properties for discriminating potential suspended sediment sources in river basins. **Journal of Hydrology** 261(1-4):218-244.
- Collins, A.L., D.E. Walling, and G.J.L. Leek. 2005. Storage of fine-grained sediment and associated contaminants within the channels of lowland permeable catchments in the UK, p. 259-268. In: D.E. Walling and A.J. Horowitz(eds.). *Sediment Budgets 1*. **International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Collins, A.L., D.E. Walling, and G.J.L. Leeks. 1999. Fingerprinting the origin of fluvial suspended sediment in larger river basins: Combining assessment of spatial provenance and source type. **Geografiska Annaler, Series A: Physical Geography** 81:.
- Collins, A.L., D.E. Walling, and G.J.L. Leeks. 1998. Use of composite fingerprints to determine the provenance of the contemporary suspended sediment load transport by rivers. **Earth Surface Processes and Landforms** 23:31-52.

- Collins, A.L., D.E. Walling, and G.J.L. Leeks. 1997. Source type ascription for fluvial suspended sediment based on quantitative composite fingerprinting techniques. **Catena** 29:131-142.
- Collins, A.L., D.E. Walling, and G.J.L. Leeks. 1997. Use of geochemical records preserved in floodplain deposits to reconstruct recent changes in river basin sediment sources. **Geomorphology** 19:151-167.
- Collins, A.L., D.E. Walling, H.M. Sickingabula, and G.J.L. Leeks. 2001. Suspended sediment source fingerprinting in a small tropical catchment and some management implications. **Applied Geography** 21(4):387-412.
- Collins, A.L., D.E. Walling, H.M. Sickingabula, and G.J.L. Leeks. 2001. Using Cs-137 measurements to quantify soil erosion and redistribution rates for areas under different land use in the Upper Kaleya River basin, southern Zambia. **Geoderma** 104(3-4):299-323.
- Colman, S.M., P.C. Baucom, J. F. Bratton, T.M. Cronin, J.P. McGeehin, D. Willard, A.R. Zimmerman, and P.R. Vogt. 2002. Radiocarbon dating, chronologic framework, and changes in accumulation rates of Holocene Estuarine sediments from Chesapeake Bay. **Quaternary Research** 57:58-70.
- Colman, S.M., J.P. Bradbury, J.P. McGeehin, C.W. Holmes, D. Edginton, and A.M. Sarna-Wojcicki. 2004. Chronology of sediment deposition in Upper Klamath Lake, Oregon. **Journal of Paleolimnology** 31(2):139-149.
- Colman, S.M. and J.F. Bratton. 2003. Anthropogenically induced changes in sediment and biogenic silica fluxes in Chesapeake Bay. **Geology** 31(1):71-74.
- Colman, S.M., J.W. King, G.A. Jones, R.L. Reynolds, and M.H. Bothner. 2000. Holocene and recent sediment accumulation rates in Southern Lake Michigan. **Quaternary Science Reviews** 19(16):1563-1580.
- Comans, R.N.J., M. Haller, and P. De Preter. 1991. Sorption of cesium on illite: non-equilibrium behavior and reversibility. **Geochimica et Cosmochimica Acta** 55:433-440.
- Comans, R.N.J., J. Hilton, O. Voitsekhovitch, G. Laptev, V. Popov, M.J. Madruga, A. Bulgakov, J.T. Smith, N. Movchan, and A.A. Konoplev. 1998. A comparative study of radiocesium mobility measurements in soils and sediments from the catchment of a small upland oligotrophic lake (Devoke Water, U.K.). **Water Research** 32(9): 2846-2855.
- Comans, R.N.J., and D. Hockley. 1992. Kinetics of cesium sorption on illite. **Geochimica et Cosmochimica Acta** 56:1157-1164.

- Comans, R.N.J., J.J. Middleburg, J. Zonderhuis, R.J.W. Woittiez, G.J. DeLange, A.K. Das, and C.H. Van der Weijden. 1989. Mobilization of radio caesium in pore water of lake sediments. **Nature** 367-369.
- Connor, D.M., T.G. Hinton, and C.M. Bell. 1997. Variance partitioning as a guide for sampling and comparing spatial distributions of Hg and ¹³⁷Cs in sediment. **Science of the Total Environment** 206(2-3):167-176.
- Connor, R.F., G.L. Chmura, and C.B. Beecher. 2001. Carbon accumulation in Bay of Fundy salt marshes: Implications for restoration of reclaimed marshes. **Global Biogeochemical Cycles** 15(4):943-954.
- Constantine, J.A., G.B. Pasternack, and M.L. Johnson. 2003. Floodplain evolution in a small, tectonically active basin of northern California. **Earth Surface Processes and Landforms** 28(8):869-888.
- Cook, C. 1990. **The evaluation of soil movement rates in a closed watershed using Cs-137 as a tracer**. Unpublished MS Thesis, Washington State Univ., Pullman, Washington, USA.
- Cook, G.T., A.B. MacKenzie, P. McDonald, and S.R. Jones. 1997. Remobilization of Sellafield-derived radionuclides and transport from the North-east Irish Sea. **Journal of Environmental Radioactivity** 35(3):227-241.
- Cooper, C.M., and J.R. McHenry. 1987. Sediment deposition and its effects on a Mississippi River oxbow lake. **Environmental Geology and Water Science** 13:33-37.
- Cooper, C.M., J.C. Ritchie, S. Testa, II, S. Smith, Jr., and T. Welch. 2001. Grenada Reservoir, Mississippi: Flood Control, sediment, and reservoir dynamics. **Seventh Federal Interagency Sedimentation Conference Proceedings** P:75-78.
- Cooper, C.M., F.R. Schiebe, and J.C. Ritchie. 1991. An inexpensive sampler for obtaining bulk sediment cores. **Environmental Geology and Water Science** 18(2):115-117.
- Cooper, C.M., S. Smith, Jr., S. Testa, III, J.C. Ritchie, and T.D. Welch. 2003. A Mississippi USA flood control reservoir: Life Expectancy and Contamination. **International Journal of Ecology and Environmental Science** 28:151-160.
- Cooper, J.R., J.W. Gilliam, R.B. Daniels, and W.P. Robarge. 1987. Riparian areas as filters for agricultural sediment. **Soil Science Society of America Journal** 51:416-420.
- Cooper, J.R., J.W. Gilliam, and T.C. Jacobs. 1986. Riparian areas as a control of nonpoint pollution, pp. 166-190. *In*: D.L. Correll (ed.), **Watershed research perspectives**, Smithsonian Institution Press, Washington, DC.

- Cooper, L.W., J.M. Grebmeier, I.L. Larsen, C. Solis, and C.R. Olsen. 1995. Evidence for re-distribution of ^{137}Cs on Alaskan tundra, lakes, and marine sediments. **Science of the Total Environment** 160/161:295-306.
- Cooper, L.W., I.L. Larsen, T.M. Beasley, S.S. Dolvin, J.M. Grebmeier, J.M. Kelley, M. Scott, and A. Johnson-Pyrtle. 1998. The distribution of radiocesium and plutonium in sea ice-entrained Arctic sediments in relation to potential sources and sinks. **Journal of Environmental Radioactivity** 39(3):279-303.
- Cooper, L.W., C.R. Olsen, D.K. Solomon, I.L. Larsen, R.B. Cook, and J.M. Grebmeier. 1991. Stable isotopes of oxygen and natural and fallout radionuclides used for tracing runoff during snowmelt in an Arctic watershed. **Water Resources Research** 27:2171-2179.
- Coppinger, K.D., W.A. Reiners, I.C. Burke, and R.K. Olson. 1991. Net erosion on a sagebrush steppe landscape as determined by cesium-137 distribution. **Soil Science Society of America Journal** 55:254-258.
- Copplestone, D., M.S. Johnson, and S.R. Jones. 2001. Behaviour and transport of radionuclides in soil and vegetation of a sand dune ecosystem. **Journal of Environmental Radioactivity** 55(1):93-108.
- Copplestone, D., M.S. Johnson, and S.R. Jones. 2000. Radionuclide behaviour and transport in a coniferous woodland ecosystem: The distribution of radionuclides in soil and leaf litter. **Water Air and Soil Pollution** 122(3-4):389-404.
- Corbett, D.R., B. McKee, and D. Duncan. 2004. An evaluation of mobile mud dynamics in the Mississippi River deltaic region. **Marine Geology** 209(1-4):91-112.
- Cornett, R.J., and L. Chant. 1984. $^{239,240}\text{Pu}$ residence times in freshwaters and accumulation in shield lake sediments. **Canadian Journal of Fisheries and Aquatic Science** 45:407-415.
- Cornett, R.J., L. Chant, and D. Link. 1984. Sedimentation of ^{210}Pb in Laurentian shield lake sediment. **Water Pollution Research Journal of Canadian** 19:97-109.
- Cornett, R.J., L.A. Chant, B.A. Risto, and E. Bonvin. 1994. Identifying resuspended particles using isotope ratios. **Hydrobiologia** 284:69-77.
- Correchel, V., O.O.S. Bacchi, I.C. De Maria, S.C.F. Dechen, and K. Reichard. 2005. A comparison of erosion rates obtained using the ^{137}Cs technique and direct measurements on runoff plots, p. 64-69. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.

- Cosma, C., L. Daraban, D. Ristoiu, M. Todica, and C. Ronneau. 1999. Calibration of NaI(Tl) spectrometer for radiocesium volume-samples. Some results from Transylvania region. **Czechoslovakian Journal of Physics** 49(1, Suppl. 1):211-216.
- Coughtrey, P.J. 1988. Models of radionuclide transport in soils. **Soil Use Management** 4:84-90.
- Coughtrey, P.J., J.A. Kirton, and N.G. Mitchell. 1989. Transfer of radioactive caesium from soil to vegetation and comparison with potassium in upland grasslands. **Environmental Pollution** 62:281-315.
- Coughtrey, P.J., and M.C. Thorne. 1983. **Radionuclide distribution and transport in terrestrial and aquatic ecosystems: a critical review**. A.A. Balkema, Rotterdam.
- Couillard, Y., M. Courcelles, A. Cattaneo, and S. Wunsam. 2004. A test of the integrity of metal records in sediment cores based on the documented history of metal contamination in Lac Dufault (Quebec, Canada). **Journal of Paleolimnology** 32(2):149-162.
- Cox, M.E., and B.L. Frankhauser. 1984. Distribution of fallout ¹³⁷Cesium in Hawaii. **Health Physics** 46:65-71.
- Craft, C.B., and W.P. Casey. 2000. Sediment and nutrient accumulation in floodplain and depressional freshwater wetlands of Georgia, USA. **Wetlands** 20(2):323-332.
- Craft, C.B., and J. Richardson. 1998. Recent and long-term organic soil accretion and nutrient accumulation in the Everglades. **Soil Science Society of America Journal** 62(3):834-843.
- Craft, C.B., and J. Richardson. 1993a. Peat accretion and nitrogen, phosphorus, and organic carbon accumulation in nutrient-enriched and unenriched peatland. **Ecology Applications** 3:446-458.
- Craft, C.B., and J. Richardson. 1993b. Peat accretion and phosphorous accumulation along a eutrophication gradient in the northern Everglades **Biogeochemistry** 22:133-156.
- Craft, C.B., E.D. Seneca, and S.W. Broome. 1993. Vertical accretion in microtidal regularly and irregularly flooded estuarine marshes. **Estuaries and Coastal Shelf Science** 37:371-386.
- Cranwell, P.A. 1977. Organic chemistry of Cam Loch (Sutherland) sediments. **Chemical Geology** 20:205-221.
- Cranwell, P.A. 1976. Decomposition of aquatic biota and sediment formation: lipid components of two blue-green algal species and detritus resulting from microbial attack. **Freshwater Biology** 6:481-488.

- Cranwell, P.A. 1973. Branched-chain and cyclopropanoid acids in a recent sediment. **Chemical Geology** 11:307-313.
- Creemers, A., A. Elsen, P. De Preter, and A. Maes. 1988. Quantitative analysis of radiocaesium retention in soils. **Nature** 335:247-249.
- Creemers, A., A. Elsen, E. Valcke, J. Wauters, F.J. Sandalls, and S.L. Gaudern. 1990. The sensitivity of upland soils to radiocesium contamination, pp. 238-248. *In*: G. Desment, P. Nassimbeni, and M. Belli (eds.), **Transfer of radionuclides in natural and semi-natural environments**, Proceedings of a CEC workshop, Udine, Italy, Elsevier Applied Science, London.
- Crete, M., M.A. Lefebvre, L. Zikovsky, and P. Walsh. 1992. Cadmium, lead, mercury and cesium-137 in fruticose lichens of Northern Quebec. **Science of the Total Environment** 121:217-230.
- Crickmore, M.J., G.S. Tazioli, P.G. Appleby, and F. Oldfield. 1990. The use of nuclear techniques in sediment transport and sedimentation problems. **IHP-III Project 5.2 SC-90/WS-49**, 170 pp. UNESCO, Paris, France.
- Crockett, J.S. and C.A. Nittrouer. 2004. The sandy inner shelf as a repository for muddy sediment: an example from Northern California. **Continental Shelf Research** 24(1):55-73.
- Cromroy, H.L., W.A. Goldsmith, C.R. Phillips, and W.P. Bonner. 1967. Uptake of cesium-137 from contaminated soil by selected grass crops. **Radiation Health Data Report** 8:421-424.
- Cronin, T., D. Willard, A. Karlsen, S. Ishman, S. Verardo, J. McGeehin, R. Kerhin, C. Holmes, S. Colman, and A. Zimmerman. 2000. Climatic variability in the eastern United States over the past millennium from Chesapeake Bay sediments. **Geology** 28(1):3-6.
- Cross, M.A., J.T. Smith, R. Saxen, and D. Timms. 2002. An analysis of the environmental mobility of radiostrontium from weapons testing and Chernobyl in Finnish river catchments. **Journal of Environmental** 60(1-2):149-163.
- Crout, N., N. Beresford, and A. Sanchez. 2003. Predicting transfer of radionuclides: soil-plant-animal, p. 261-286. *In*: Scott, E.M. (Ed.) **Modelling radioactivity in the environment**. Elsevier, Amsterdam, Netherlands.
- Crozier, C.R., I. Devai, and R.D. DeLaune. 1995. Methane and reduced sulfur gas production by fresh and dried wetland soils. **Soil Science Society of America Journal** 59:277-284.

- Crusius, J., and R.F., Anderson. 1995a. Evaluating the mobility of ^{137}Cs , $^{239+240}\text{Pu}$ and ^{210}Pb from their distributions in laminated lake sediments. **Journal of Paleolimnology** 13:119-141.
- Crusius, J., and R.F., Anderson. 1995b. Sediment focusing in six small lakes inferred from radionuclide profiles. **Journal of Paleolimnology** 13:143-155.
- Crusius, J., and R.F., Anderson. 1991. Core compression and surficial sediment loss of lake sediments of high porosity caused by gravity coring. **Limnology and Oceanography** 36:1021-1031.
- Crusius, J., and R.F., Anderson. 1990. ^{137}Cs mobility inferred from ^{210}Pb and $^{239,240}\text{Pu}$ analyses of laminated lake sediments. **EOS Transactions** 71:72.
- Cuesta Aguilar, M.J., and A. Delgado Cuenca. 1997a. Comparacion de procesos erosivos en suelos agricolas mediante el radioisotopo Cesio-137 (Comparison of erosive processes in cultivated soils using the radioisotope caesium-137). **ITEA Produccion Vegetal** 93(1):65-73. (Spanish)
- Cuesta Aguilar, M.J., and A. Delgado Cuenca. 1997b. Isotopic technique for the quantitative estimation of erosion. Original Title: Tecnicas isotopicas para la cuantificacion de la erosion. **Agricultural Revista Agropecuaria** 66(776):230-234. (Spanish)
- Cundy, A.B., and I.W. Croudace. 1996. Sediment accretion and recent sea-level rise in the solent, southern England - inferences from radiometric and geochemical studies. **Estuaries and Coastal Shelf Science** 43(4):449-467.
- Cundy, A.B., and I.W. Croudace. 1995. Sedimentary and geochemical variations in a salt marsh-mud flat environment from the mesotidal Hamble estuary, southern England. **Marine Chemistry** 51:115-132.
- Cundy, A. B., and I.W. Croudace. 1995. Physical and chemical associations of radionuclides and trace metals in estuarine sediments: an example from Poole Harbour, Southern England. **Journal of Environmental Radioactivity** 29:191-211.
- Cundy, A.B., I.W. Croudace, A. Cearreta and M. J. Irabien. 2003. Reconstructing historical trends in metal input in heavily-disturbed, contaminated estuaries: studies from Bilbao, Southampton Water and Sicily. **Applied Geochemistry** 18(2):311-325.
- Cundy, A.B., I.W. Croudace, A. Cearreta, and M.J. Irabien. 2003. Reconstructing historical trends in metal input in heavily-disturbed, contaminated estuaries: studies from Bilbao, Southampton Water and Sicily. **Applied Geochemistry** 18(2):311-325.

- Cundy, A.B., I.W. Croudace, J. Thomson, and J.T. Lewis. 1997. Reliability of salt marshes as "geochemical recorders" of pollution input: A case study from contrasting estuaries in southern England. **Environmental Science and Technology** 31(4):1093-1101.
- Cundy, A.B., S. Kortekaas, T. Dewez, I.S. Stewart, P.E.F. Collins, I.W. Croudace, H. Maroukian, D. Papanastassiou, P. Gaki-Papanastassiou, K. Pavlopoulos, and A. Dawson. 2000. Coastal wetlands as recorders of earthquake subsidence in the Aegean: a case study of the 1894 Gulf of Atalanti earthquakes, central Greece. **Marine Geology** 170(1-2):3-26.
- Cundy, A.B., A.J. Long, C.T. Hill, C. Spencer, I.W. Croudace. 2002. Sedimentary response of Pagham Harbour, southern England to barrier breaching in AD 1910. **Geomorphology** 46(3-4):163-176.
- Cunha, I.I.L., and E.L. Fabra. 1995. Cs-137 radioactivity data in Brazil. **Fresenius Environmental Bulletin** 4:19-24.
- Cunha, I.I.L., R.C.L. Figueira, and R.T. Saito. 1999. Application of radiochemical methods and dispersion model in the study of environmental pollution in Brazil. **Journal of Radioanalytical Nuclear Chemistry** 239(3):477-482.
- Cunha, I.I.L., C.S. Munita, R.P. Paiva, and A. Teixeira. 1993. Levels of cesium-137 in seawater and fish from the Brazilian Coast. **Science of the Total Environment** 140:431-435.
- Currie, L.A. 1968. Limits for qualitative detection and quantitative determination. Application to radiochemistry. **Analytical Chemistry** 40:586-593.
- Cushing, C.E., and D.G. Watson. 1974. Aquatic studies of Gable Mountain pond. **BNWL-1884**, 24 pp. Battelle Pacific Northwest Laboratories, Richland, WA.
- Cutshall, N.H., I.L. Larsen, and M.M. Nichols. 1981. Man-made radionuclides confirm rapid burial of kepone in James River sediments. **Science** 213:440-442.
- Cygan, R.T., K.L. Nagy, and P.V. Brady. 1998. Molecular models of cesium sorption to kaolinite, p.383-399. In: E.A. Jenne (ed.), **Adsorption of Metals by Geomedia**, Academic Press, New York.
- Czajka-Kaczka, A. 2003. The rate of sedimentation on the regulated rivers floodplains, the upper Vistula and the upper Odra Rivers, Southern Poland, 4 pp. In: Thorndycraft et al. [ed.] **Palaeofloods, Historical Data and Climatic Variability: Applications in Flood Risk Assessment**, Proceedings of PHEFRA International Workshop, Barcelona, Spain.

- Czuczwa, J.M., and R.A. Hites. 1984. Environmental fate of combustion-generated polychlorinated dioxins and furans. **Environmental Science and Technology** 18:444-450.
- Dahlgaard, H. 1994a. **Nordic radioecology the transfer of radionuclides through Nordic ecosystems to man**, Elsevier, New York, 483pp.
- Dahlgaard, H. 1994b. Sources of Cs-137, Sr-90 and Tc-99 in the East Greenland current. **Journal of Environmental Radioactivity** 25:37-55.
- Dahlgaard, H., M. Eriksson, S.P. Nielsen, and H.P. Joensen. 2004. Levels and trends of radioactive contaminants in the Greenland environment. **Science of the Total Environment** 331(1-3):53-67.
- Dahlman, R.C., and S.I. Auerbach. 1968. Preliminary estimation of erosion and radiocesium redistribution in a fescue meadow. **ORNL-TM-2343**, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- Dahlman, R.C., C.W. Francis, and T. Tamura. 1975. Radiocesium cycling in vegetation and soil, pp. 462-481. *In*: F.G. Howell, J.B. Gentry, and M.H. Smith (eds.), **Mineral cycling in southeastern ecosystems**, USAEC Symposium Series, CONF-740513, US Atomic Energy Commission, Washington, DC.
- Dahm, H., J. Niemeyer, and D. Schroder. 2002. Application of the Weibull distribution to describe the vertical distribution of cesium-137 on a slope under permanent pasture in Luxembourg. **Journal of Environmental Radioactivity** 63(3):207-219.
- Dalgleish, H.Y., and I.D.L. Foster. 1996. ¹³⁷Cs losses from a loamy surface water gleyed soil (Inceptisol): A laboratory simulation experiment. **Catena** 26(3-4):227-245.
- Darrah, P.R. and S. Staunton. 2000. A mathematical model of root uptake of cations incorporating root turnover, distribution within the plant, and recycling of absorbed species. **European Journal of Soil Science** 51(4):643-653.
- da Silva, J.R.M., and C. Alexandre. 2004. Soil carbonation processes as evidence of tillage-induced erosion. **Soil & Tillage Research** 78(2):217-224.
- Das, H.A. 1998. Precision and accuracy of environmental Cs-137 measurements. **Isotopes and Environmental Health Studies** 34(3):265-277.
- Davidson, C.I., J.R. Harrington, M.J. Stephenson, M.C. Monaghan, J. Pudykiewicz, and W.R. Schell. 1987. Radioactive cesium from the Chernobyl accident in the Greenland ice sheet. **Science** 237:633-634.

- Davies, K.S., and G. Shaw. 1993. Fixation of Cs-137 by soil and sediment in the Esk estuary, Cumbria, UK. **Science of the Total Environment** 132:71-92.
- Davies, S.J., S.E. Metcalfe, A.B. MacKenzie, A.J. Newton, G.H. Endfield, and J.G. Farmer. 2004. Environmental changes in the Zirahuen Basin, Michoacan, Mexico, during the last 1000 years. **Journal of Paleolimnology** 31(1):77-98.
- Davis, F.W. 1985. Historical changes in submerged macrophyte communities of upper Chesapeake Bay. **Ecology** 66:981-983.
- Davis, J.J. 1963. Cesium and its relationship to potassium in ecology, pp. 539-556. *In*: V. Schultz and A.W. Klement Jr. (eds.), **Radioecology**, Reinhold, New York.
- Davis, J.J., and R.F. Foster. 1958. Bioaccumulation of radioisotopes through aquatic food chains. **Ecology** 39:137-535.
- Davis, M.B., and M.S. Ford. 1982. Sediment focusing in Mirror Lake, New Hampshire. **Limnology and Oceanography** 27:137-150.
- Davis, R.B., C.T. Hess, S.A. Norton, D.W. Hanson, K.D. Hoagland, and D.S., Anderson. 1984. ¹³⁷Cs and ²¹⁰Pb dating of sediment from soft-water lakes in New England (U.S.A.) and Scandinavia, a failure of ¹³⁷Cs dating. **Chemical Geology** 44:151-185.
- Davis, R.B., and S.A. Norton. 1978. Paleolimnology of six New England lakes, pp. 217-308. *In*: R.W. Hardy (ed.), **The impact of urbanization on New England lakes, selected technical papers**, Vol. III, New England Council Water Center Dir., Boston, MA.
- Davis, R.B., S.A. Norton, D.F. Brakke, F. Berge, and C.T. Hess. 1980. Atmospheric deposition in Norway during the past 300 years as recorded in SNSF lake sediments, Part IV. Synthesis and comparison with New England, pp. 274-275. *In*: D. Drablos and A. Tollan (eds.), **Proceedings international conference on ecological impact of acid precipitation**, Sandefjord, Norway.
- Davis, R.B., S.A. Norton, C.T. Hess, and D.F. Brakke. 1983. Paleolimnological reconstruction of the effect of atmospheric deposition of acid and heavy metals on the chemistry and biology of lakes in New England and Norway. **Hydrobiologia** 103:113-123.
- Davison, W., J. Hilton, J. Hamilton-Taylor, M. Kelly, F. Livens, E. Rigg, T.R. Carrick, and D.L. Singleton. 1993. The transport of Chernobyl derived caesium through two freshwater lakes in Cumbria, U.K. **Journal of Environmental Radioactivity** 19:125-153.
- Davison, W., P. Spezzano, and J. Hilton. 1993. Remobilization of caesium from freshwater sediments. **Journal of Environmental Radioactivity** 19:109-124.

- Dawson, R., and E.K. Duursma. 1974. Distribution of radioisotopes between phytoplankton, sediment and sea water in a dialysis compartment system. **Netherlands Journal of Sea Research** 8:339-353.
- Dawson, L.A., and P.I. Pohl. 1997. Modeling and risk assessment of a 30-year-old subsurface radioactive-liquid drain field. **Water Resources Research** 33(11):2535-2545.
- Day, D.G., and B.L. Campbell. 1986. Environmental caesium-137 as an indicator of accelerated erosion and sedimentation in Birchams Creek, NSW. Centre for Resource and Environmental Studies, ANU, Canberra: **Working Paper 1986/42**.
- Day, L.R., and H.H. Zumpe. 1986. Radioactivity in silt from the River Lea, England. **Environmental Pollution (Series B)** 12:75-84.
- de Alba, S. 2001. Modeling the effects of complex topography and patterns of tillage on soil translocation by tillage with mouldboard plough. **Journal of Soil and Water Conservation** 56(4):335-345.
- de Brouwer, S., Y. Thiry and C. Myttenaere. 1994. Availability and fixation of radiocaesium in a forest brown acid soil. **Science of the Total Environment** 143:183-191.
- Dearing, J.A. 1992. Sediment yields and sources in a Welsh upland catchment during the past 800 years. **Earth Surface Processes and Landforms** 17:1-22.
- Dearing, J.A. 1991. Lake sediment records of erosional processes. **Hydrobiologia** 214:99-106.
- Dearing, J.A. 1983. Changing patterns of sediment accumulation in a small lake in Scania, Southern Sweden. **Hydrobiologia** 103:59-64.
- Dearing, J.A., J.F. Boyle, P.G. Appleby, A.W. Mackay, et. al. 1998. Magnetic properties of recent sediments in Lake Baikal, Siberia. **Journal of Paleolimnology** 20(2):163-173.
- Dearing, J.A., J.K. Elnor, and C.M. Happey-Wood. 1981. Recent sediment flux and erosional processes in a Welsh upland lake-catchment based on magnetic susceptibility measurements. **Quaternary Research** 16:356-372.
- Dearing, J.A., H. Hakansson, B. Lieberg-Jonsson, A. Persson, S. Skansjo, D. Widholm, and F. El-Daoushy. 1987. Lake sediments used to quantify the erosional response to land use change in southern Sweden. **Oikos** 50:60-78.
- Dearing, J.A., R.I. Morton, T.W. Price, and I.D.L. Foster. 1986. Tracing movement of top soil by magnetic measurements: two case studies. **Physics and Earth Planetary International** 42:93-104.

- De Cort, E., G. Dubois, S.D. Fridman, M.G. Germenchuk, Y.A. Izrael, A.R. Jones, B.B. Kelly, E.V. Kvasnikova, I.I. Matveenکو, I.M. Nazarov, V.A. Sitak, E.D. Stukin. L.Y. Tabachny, Y.S. Tsaturov, and S.I. Avdyushin. 1998. Atlas of caesium deposition in Europe after the Chernobyl accident. **European Commission Report EUR 16733**, 176pp.
- Deevey, E.S. Jr. 1988. Estimation of downward leakage from Florida lakes. **Limnology and Oceanography** 33:1308-1320.
- Degryse, F., E. Smolders, and A. Cremers. 2004. Enhanced sorption and fixation of radiocaesium in soils amended with K-bentonites, submitted to wetting-drying cycles. **European Journal of Soil Science** 55(3):513-522.
- de Jong, E., C.B.M. Begg, and R.G. Kachanoski. 1983. Estimates of soil erosion and deposition from some Saskatchewan soils. **Canadian Journal of Soil Science** 63:607-617.
- de Jong, E., and R.G. Kachanoski. 1988. The importance of erosion in the carbon balance of prairie soils. **Canadian Journal of Soil Science** 68:111-119.
- de Jong, E., and T.E. Kowalchuk. 1995. The effect of shelterbelts on erosion and soil properties. **Soil Science** 159:337-345.
- de Jong, E., P.A. Nestor, and D.J. Pennock. 1998. The use of magnetic susceptibility to measure long-term soil redistribution. **Catena** 32(1):23-35.
- de Jong, E., H. Villar, and J.R. Bettany. 1982. Preliminary investigations on the use of ^{137}Cs to estimate erosion in Saskatchewan. **Canadian Journal of Soil Science** 62:673-683.
- de Jong, E., C. Wang, and H.W. Rees. 1986. Soil distribution on three cultivated New Brunswick hillslopes calculated from ^{137}Cs measurement, solum data and the USLE. **Canadian Journal of Soil Science** 66:721-730.
- de Koning, A. and R.N.J. Comans. 2004. Reversibility of radiocaesium sorption on illite. **Geochimica et Cosmochimica Acta** 68(13):2815-2823.
- de Koning, A., P.A. Geelhoed-Bonouvrie, and R.N.J. Comans. 2000. Comparing in situ distribution coefficients and exchangeability of radiocaesium in freshwater sediments with laboratory predictions. **Science of the Total Environment** 257(1):29-35.
- Delakowitz, B., and G. Meinrath. 1998. Decommissioning of a nuclear power plant: Determination of site-specific sorption coefficients for Co-60 and Cs-137. **Isotopes and Environmental Health Studies** 34(4):371-380.

- DeLaune, R.D. 1986. The use of $\delta^{13}\text{C}$ signature of C-3 and C-4 plants in determining past depositional environments in rapidly accreting marshes of the Mississippi River deltaic plain, Louisiana, U.S.A. **Chemical Geology** 59:315-320.
- DeLaune, R.D., R.H. Baumann, and J.G. Gosselink. 1983. Relationship among vertical accretion, coastal submergence, and erosion in Louisiana Gulf Coast marsh. **Journal of Sedimentary Petrology** 53:147-157.
- DeLaune, R.D., and R.P. Gambrell. 1996. Role of sedimentation in isolating metal contaminants in wetland environments. **Journal of Environmental Science Health Part A Environmental Science Engr., and Toxic and Hazardous Substance Control** 31(9):2349-2362.
- DeLaune, R.D., G.L. Jones, and C.J. Smith. 1986. Radionuclide concentrations in Louisiana soils and sediments. **Health Physics** 51:239-244.
- DeLaune, R.D., A. Jugsujinda, G.W. Peterson, and W.H. Patrick. 2003. Impact of Mississippi River freshwater reintroduction on enhancing marsh accretionary processes in a Louisiana estuary. **Estuarine Coastal and Shelf Science** 58(3):653-662.
- DeLaune, R.D., C.W. Lindau, R.S. Knox, and C.J. Smith. 1990. Fate of nitrogen and phosphorus entering a Gulf Coast fresh water lake: a case study. **Water Resources Bulletin** 26:621-631.
- DeLaune, R.D., J.A. Nyman, and W.H. Patrick Jr. 1994. Peat collapse, ponding and wetland loss in a rapidly submerging coastal marsh. **Journal of Coastal Research** 10:1021-1030.
- DeLaune, R.D., and W.H. Patrick Jr. 1990. Nitrogen cycling in Louisiana Gulf Coast brackish marshes. **Hydrobiologia** 199:73-79.
- DeLaune, R.D., W.H. Patrick Jr., and R.J. Buresh. 1978. Sedimentation rates determined by ^{137}Cs dating in a rapidly accreting salt marsh. **Nature** 275:532-533.
- DeLaune, R.D., W.H. Patrick Jr., and S.R. Pezeshki. 1987. Foreseeable flooding and death of coastal wetland forest. **Environmental Conservation** 14:129-133.
- DeLaune, R.D., W.H. Patrick, and C.J. Smith. 1992. Marsh aggradation and sediment distribution along rapidly submerging Louisiana Gulf Coast. **Environmental Geology and Water Science** 20:57-64.
- DeLaune, R.D., C.N. Reddy, and W.H. Patrick Jr. 1981. Accumulation of plant nutrients and heavy metals through sedimentation processes and accretion in a Louisiana salt marsh. **Estuaries** 4:328-334.

- DeLaune, R.D., C.J. Smith, and W.H. Patrick Jr. 1986. Sedimentation patterns in a Gulf Coastal backbarrier marsh: response to increasing submergence. **Earth Surface Processes and Landforms** 11:485-490.
- DeLaune, R.D., C.J. Smith, W.H. Patrick Jr., and H.H. Roberts. 1987. Rejuvenated marsh and bay-bottom accretion on rapidly subsiding Coastal Plain of the U.S. Gulf coast: a second-order effect of the emerging Atchafalaya delta. **Estuaries and Coastal Shelf Science** 25:381-389.
- DeLaune, R.D., C.J. Smith, and M.N. Sarafyan. 1986. Nitrogen cycling in a freshwater marsh of *Panicum hemitomon* on the deltaic plain of the Mississippi River. **Journal of Ecology** 74:249-256.
- DeLaune, R.D., J.H. Whitcomb, W.H. Patrick, Jr., H.H. Pardue, and S.R. Pezeshki. 1989. Accretation and canal impact on a rapidly subsiding wetland: ^{137}Cs and ^{210}Pb techniques. **Estuaries** 12:247-259.
- Dellapenna, T.M., S.A. Kuehl, and L. Pitts. 2001. Transient, longitudinal, sedimentary furrows in the York River subestuary, Chesapeake Bay: Furrow evolution and effects on seabed mixing and sediment transport. **Estuaries** 24(2):215-227.
- Dellapenna, T.M., S.A. Kueh, and L.C. Schaffner. 1998. Sea-bed mixing and particle residence times in biologically and physically dominated estuarine systems: A comparison of Lower Chesapeake Bay and the York River subestuary. **Estuaries and Coastal Shelf Science** 46(6):777-795.
- Delle Site, A., O. Ferretti, V. Marchionni, and C. Papucci. 1984. Measurement of ^{137}Cs , $^{239,240}\text{Pu}$ and ^{238}Pu in some coastal sediment of Tyrrhenian sea. **Communications of the European Communities, (Rep) EUR(CECED9)**, pp. 233-243.
- Delvaux. B., N. Kruyts, and A. Cremers. 2000. Rhizosperic mobilization of radiocesium in soils. **Environmental Science and Technology** 34:1489-1493.
- DeMaster, D.J., B.A. McKee, C.A. Nittrouer, D.C. Brewster, and P.E. Biscaye. 1985. Rates of sediment reworking at the Hebble Site based on measurements of Th-234, Cs-137 and Pb-210. **Marine Geology** 66:133-148.
- Demirel, H., I. Özer, I. Çelenk, M. M. Halitligil, and A. Özmen. 1994. Uptake of cesium-137 by crops from contaminated soil. **Journal of Environmental Quality** 23:1280-1282.
- De Preter, P.M. 1990. **Radiocesium retention in the aquatic, terrestrial and urban environment: a quantitative and unifying analysis**. Doctoraatsproefschrift Nr. 1990. Katholieke Universiteit te Leuven, Leuven, Belgium.

- De Preter, P.M., L. Van Loom, A. Maes, and A. Cremers. 1991. Solid/liquid distribution of radiocaesium in boon clay: a quantitative interpretation. **Radiochemica Acta** 52/53:299-302.
- De Roo, A.P.J. 1991. The use of ^{137}Cs as a tracer in an erosion study in South Limburg (The Netherlands) and the influence of Chernobyl fallout. **Hydrological Processes** 5:215-227.
- De Roo, A.P.J. et al. 1989. Soil erosion modelling using "ANSWERS" and Geographic Information Systems. **Earth Surface Processes and Landforms** 14:517-532.
- De Roo, A.P.J., and D.E. Walling. 1994. Validating the ANSWERS soil erosion model using ^{137}Cs , pp 246-263. *In*: R.J. Rickson (ed.) **Conserving Soil Resources: European Perspective**, Wallingford, UK.
- Derose, R.C., N.A. Trustrum, and P.M. Blaschke. 1993. Post-deforestation soil loss from steepland hillslopes in Taronki, New Zealand. **Earth Surface Processes and Landforms** 18:131-144.
- Desai, M.V.M., N.N. Dey, V.V. Kulkarni, and K.C. Pillai. 1989. Distribution of ^{137}Cs in various size fractions of bottom sediments of Bombay Harbour Bay. **Indian Journal of Marine Sciences** 18:198-200.
- Desideri, D., S. Giuliani, M.A. Meli, C. Testa, C. Triulzi, and M. Vaghi. 2004. Presence of Cs-137, Pu isotopes and Am-241 in ligurian and Tyrrhenian Seas sediments. **Journal of Radioanalytical and Nuclear Chemistry** 260(1):9-12.
- Desideri, D., M.A. Meli, C. Roselli, and C. Testa. 2002. Geochemical partitioning of actinides, Cs-137 and K-40 in a Tyrrhenian sea sediment sample: Comparison to stable elements. **Journal of Radioanalytical and Nuclear Chemistry** 251(1):37-41.
- Desloges, J.R. 1987. **Paleohydrology of the Bella Coola river basin: an assessment of environmental reconstruction**. Ph.D. Thesis. University of British Columbia, Canada.
- Desloges, J.R. and R. Gilbert. 1998. Sedimentation Chilko Lake: A record of the geomorphic environment of the eastern Coastal mountains of British Columbia, Canada. **Geomorphology** 25:75-91.
- Desloges, J.R. and R. Gilbert. 1995. Sedimentary records of Moose Lake: Implication for glacial activity in the Mount Robson area, British Columbia. **Canadian Journal of Earth Sciences** 32:65-78.
- Desloges, J.R. and R. Gilbert. 1991. Sedimentary records of Harrison Lake: Implication for deglaciation in southwestern British Columbia. **Canadian Journal of Earth Sciences** 28:800-815.

- Desmet, G., P. Nassimbeni, and M. Belli. 1990. **Transfer of Radionuclides in Natural and Semi-natural Environments**. Elsevier Applied Science, London.
- Desmet, G.M., L.R. Van Loon, and B.J. Howard. 1991. Chemical speciation and bioavailability of elements in the environment and their relevance to radioecology. **Science of the Total Environment** 100:124.
- Desmet, P., T.A. Quine, and G. Govers. 1997. An improved cesium-137 calibration model to evaluate the relative importance of tillage erosion. **Journal of Soil and Water Conservation** 52(4):306 (Abstract)
- Dharmasiri, J.K. 1996. Fallout Cs-137 distribution with depth of soil under tropical climatic conditions in Sri Lanka. **Proceedings of the 4th Biennial Workshop of the South Pacific Environmental Radioactivity Association (SPERA)**, pp. 1-16.
- Dickman, M.D., and H.G. Thode. 1985. The rate of lake acidification in four lakes north of Lake Superior and its relationship to downcore sulphur isotope ratios. **Water Air Soil Pollution** 26:233-253.
- Dickman, M., H.G. Thode, S. Rao, and R., Anderson. 1988. Downcore sulphur isotope ratio and diatom inferred pH in an artificially acidified Canadian Shield lake. **Environmental Pollution** 49:265-288.
- Dickson, J.H., D.A. Stewart, R. Thompson, G. Turner, M.S. Baxter, N.D. Drndarsky, and J. Rose. 1978. Palynology, paleomagnetism, and radioactive dating of Flandrian marine and freshwater sediments of Loch Lomond. **Nature** 274:548-553.
- Dietz, R., F. Riget, M. Cleemann, A. Aarkrog, P. Johansen, and J.C. Hansen. 2000. Comparison of contaminants from different trophic levels and ecosystems. **Science of the Total Environment** 245(1-3):221-231.
- Digerfeldt, G., R. Battarbee, and L. Bengtsson. 1975. Report of annually laminated sediments in Lake Järlasjön, Nacka, Stockholm. **Geologiska Foreningens I Stockholm Forhand Lingar** 97:29-40.
- Dighton, J., G.M. Clint, and J. Poskitt. 1991. Uptake and accumulation of ¹³⁷Cs by upland grassland soil fungi: A potential pool of Cs immobilization. **Mycology Research** 95:1052-1056.
- Di Gregorio, D.E., H. Huck, R. Aristegui, G. De Lazzari, and A. Jech. 2004. Cs-137 contamination in tea and yerba mate in South America. **Journal of Environmental Radioactivity** 76(3):273-281.

- Di Lauro, A., F. Fernex, G. Fierro, J.L. Ferrand, J.P. Pupin, and J. J.P.; Gasparro. 2004. Geochemical approach to the sedimentary evolution of the Bay of Nice (NW Mediterranean sea). **Continental Shelf Research** 24(2):223-239.
- Dinescu, L.C. and O.G. Dului. 2001. Heavy metal pollution of some Danube Delta lacustrine sediments studied by neutron activation analysis. **Applied Radiation and Isotopes** 54(5):853-859.
- Di Stefano, C. and C. Ferro. 2002. Linking clay enrichment and sediment delivery processes. **Biosystems Engineering** 81(4):465-479.
- Di Stefano, C., V. Ferro, and P. Porto. 2000. Applying the bootstrap technique for studying soil redistribution by caesium-137 measurements at basin scale. **Hydrological Science s Journal** 45(2):171-185.
- Di Stefano, C., V. Ferro, and P. Porto. 1999. Linking sediment yield and caesium-137 spatial distribution at basin scale. **Journal of Agricultural Engineering Research** 74(1):41-62.
- Di Stefano, C., V. Ferro, and S. Rizzo. 2000. Assessing soil erosion in a small Sicilian basin by caesium-137 measurements and a simplified mass balance model. **Hydrological Sciences Journal-Journal des Sciences Hydrologiques** 45(6):817-832.
- Dodd, J.D., and G.L. Van Amburg. 1970. Transfer to and distribution of ¹³⁴cesium in the soil of two grassland habitats. **Canadian Journal of Science** 50:121-129.
- Dolgov, V.M., P.I. Datskevich, V.N. Zemskov, and O.D. Khvalei. 1997. Radioecological monitoring of lakes of Braslav group in the zone of the influence of Ingalsk NPP. **Gidrobiologicheskii Zhurnal** 33(2):88-93. (RUSSIAN)
- Domanov, M.M., and A.E. Gorbunov. 1992. The prognosis of the field of cesium-137 in the upper layers of the Black Sea. **Okeanologiya** 32:253-256.
- Domanov, M.M., V.V. Kobylaynsky, A.I. Svininnikov, E.G. Vodaynaay, M.V. Vladimirov, and O.L. Kuznetsov. 2004. Anthropogenic radionuclides and radioecological situation in the sea of Japan. **Okeanologiya** 44(3):380-388.
- Domanov, M.M., E.A. Kontar', R.D. Kos'yan, Yu.A. Sapozhnikov, and K.N. Shimkus. 1996. Anthropogenic radionuclides in the north-west Black Sea. **Okeanologiya** 36(4):550-555. (RUSSIAN)
- Dominik, J. 1989. Application des radio-isotopes naturels at anthropogènes pour l'étude des processus sédimentaires dans le Léman. **Cashier Fac. Science Université de Genève** 19:83-95. (French)

- Dominik, J., D. Burrus, and J.P. Vernet. 1987. Transport of the environmental radionuclides in an alpine watershed. **Earth and Planetary Science Letters** 84:165-180.
- Dominik, J., U. Förstner, A. Mangini, and H. Reineck. 1978. ^{210}Pb and ^{137}Cs chronology of heavy metal pollution in a sediment core from the German Bight (North Sea) **Senckenbergiana Marit** 10:213-227.
- Dominik, J., J.L. Loizeau, and D. Span. 1992. Radioisotopic evidence of perturbations of recent sedimentary records in lakes: a word of caution from climate studies. **Climate Dynamics** 6:145-152.
- Dominik, J., A. Mangini, and G. Müller. 1981. Determination of recent deposition rates in Lake Constance with radioisotopic methods. **Sedimentology** 28:653-677.
- Dominik, J., A. Mangini, and F. Prosi. 1984. Sedimentation rate variations and anthropogenic metal fluxes into Lake Constance sediments. **Environmental Geology** 5:151-157.
- Dominik, J., and D. Span. 1992. The fate of Chernobyl cesium-137 in Lake Lugano. **Aquatic Science** 54:238-254.
- Donnelly, J.P., J. Butler, S. Roll, M. Wengren, and T. Webb III. 2004. A backbarrier overwash record of intense storms from Brigantine, New Jersey. **Marine Geology** 210(1-4):107-121.
- Donoghue, J.F. 1990. Trends in Chesapeake Bay sedimentation rates during the Late Holocene. **Quaternary Research** 34:33-46.
- Donoghue, J.F., O.P. Bricker and C.R. Olsen. 1989. Particle-borne radionuclides as tracers for sediment in the Susquehanna River and Chesapeake Bay. **Estuaries and Coastal Shelf Science** 29:341-360.
- Doran, P.T., G.W. Berger, W.B. Lyons, R.A. Wharton, M.L. Davisson, J. Southon, and J.E. Dibb. 1999. Dating Quaternary lacustrine sediments in the McMurdo Dry Valleys, Antarctica. **Paleogeography, Paleoclimatology and Paleoecology** 147(3-4):223-239.
- Doran, P.T., R.A. Wharton, W.B. Lyons, D.J. Des Marais, and D.T., andersen. 2000. Sedimentology and geochemistry of a perennially ice-covered epishelf lake in Bunger Hills Oasis, East Antarctica. **Antarctic Science** 12(2):131-140.
- Dörr, H. 1995. Application of ^{210}Pb in soils. **Journal of Paleolimnology** 13:157-168.
- Dörr, H., and K.O. Münnich. 1991. Lead and cesium transport in European forest soils. **Water Air Soil Pollution** 57:809-818.

- Dörr, H., and K.O. Münnich. 1989. Downward movement of soil organic matter and its influence on trace element transport (Pb-210, Cs-137) in soil. **Radiocarbon** 31:655-663.
- Dörr, H., and K.O. Münnich. 1987. Spatial distribution of soil ¹³⁷Cs and ¹³⁴Cs in West Germany after Chernobyl. **Naturwissenschaften** 74:249-251.
- dos Santos, E.A. 2001. Estudo de equações de calibração para a metodologia do Césio-137 de determinação da erosão de solos. **Masters Degree Dissertation**. Universidade Estadual de Londrina. Londrina, Paraná, Brazil.
- Drissner, J., W. Burmann, F. Enslin, R. Heider, E. Klemt, R. Miller, G. Schick, and G. Zibold. 1998. Availability of caesium radionuclides to plants - classification of soils and role of mycorrhiza. **Journal of Environmental Radioactivity** 41(1):19-32.
- Drissner, J., E. Klemt, T. Klenk, R. Miller, G. Zibold, M. Burger, and A. Jakob. 1999. Investigations on the caesium-137 household of Lake Lugano, Switzerland. **Czechoslovakian Journal of Physics** 49(1, Suppl. 1):133-139.
- Drndarski, N and M. Krizman. 1994. Radioisotopes in periphyton and sediments from the Kolubara River and its tributaries. **Water Research** 28:1471-1474.
- Drndarski, N.D., and N. Lavi. 1996. Radioactivity in sediments from the Grliška impoundment. **Water Research** 30(6):1539-1542.
- Du, M., H. Yang, Q. Chang, K. Minami, and T. Hatta. 1998). Caesium-137 fallout depth distribution in different soil profiles and significance for estimating soil erosion rate. **Sciences of Soil** 3:3 [Online]
<http://link.springer.de/link/service/journals/10112/tocs/t8003001.htm>
- Dubois, G. and P. Bossew. 2003. Chernobyl Cs-137 deposition in Austria: analysis of the spatial correlation of the deposition levels. **Journal of Environmental Radioactivity** 65(1):29-45.
- Duchemin, M., L. Mabit, M. Lachance, C. Bernard, G. Morin, R. Lagacé, and M.R. Laverdière. 2002. Sedimentary budget of a small agricultural watershed using the CEQÉROSS model and Caesium-137 measurements. **Agrosol** 13(1):23-34. (French)
- Duchesne, S., P. Boyer, and K. Beaugelin-Seiller. 2003. Sensitivity and uncertainty analysis of a model computing radionuclides transfers in fluvial ecosystems (CASTEAUR): application to Cs-137 accumulation in chubs. **Ecological Modelling** 166(3):257-276.
- Duliu, O.G., L.C. Dinescu, M.C. Dinescu, R.D. Dorcioman, N.G. Mihailescu, and I.S. Vanghelie. 1996. Some considerations concerning ¹³⁷Cs vertical profile in the Danube Delta: Matita Lake core. **Science of the Total Environment** 188(1): 9-14.

- Dumat, C, M.V. Cheshire, A.R. Fraser, C.A. Shand, and S. Staunton. 1997. The effect of removal of soil organic matter and iron on the adsorption of radiocaesium. **European Journal of Soil Science** 48(4):675-683.
- Dunigan, E.P. and C.W. Francis. 1972. Adsorption and desorption of ^{60}Co , ^{85}Sr , and ^{137}Cs on soil humic acid. **Soil Science** 114:494-497.
- Dunn, D.L., W.G. Win, and P.J. Bresnahan. 1996. Copping measurements of radionuclides in L Lake with an underwater HPGe detector. **Report No.: WSRC-TR-95-0397** 36p, Westinghouse Savannah River Co., Aiken, SC.
- Duran, E.B., P.P. Povinec, S.W. Fowler, P.L. Airey, and G.H. Hong. 2004. Cs-137 and Pu239+240 levels in the Asia-Pacific regional seas. **Journal of Environmental Radioactivity** 76(1-2):139-160.
- Durham, R.W., and S.R. Joshi. 1984a. Dose equivalent commitments from fallout radionuclides in the open waters of the Great Lakes. 1973-1981. **Environmental Monitoring and Assessment** 4:405-417.
- Durham, R.W., and S.R. Joshi. 1984b. Lead-210 dating of sediments from some northern Ontario lakes, pp. 75-85. *In*: W.C. Mahaney (ed.), **Quaternary dating methods**, Elsevier, Amsterdam.
- Durham, R.W., and S.R. Joshi. 1981. Sedimentation rates in western Nipigon Bay, Lake Superior using the ^{210}Pb method. **Science of the Total Environment** 22:51-59.
- Durham, R.W., and S.R. Joshi. 1980a. Recent sedimentation rates, ^{210}Pb fluxes, and particle settling velocities in Lake Huron, Laurentian Great Lakes. **Chemical Geology** 31:53-66.
- Durham, R.W., and S.R. Joshi. 1980b. The ^{210}Pb and ^{137}Cs profiles in sediment cores from Lake Matagami and Quevillon, northwest Quebec, Canada. **Canadian Journal of Earth Science** 17:1746-1750.
- Durham, R.W., and S.R. Joshi. 1980c. Radioactive dating of sediment cores from four contiguous lakes in Saskatchewan, Canada. **Science of the Total Environment** 15:65-71.
- Durham, R.W., S.R. Joshi, and R.J. Allan. 1980. Radioactive dating of sediment cores from four contiguous lakes in Saskatchewan, Canada. **Science of the Total Environment** 15:65-71.

- Durham, R.W., and B.G. Oliver. 1983. History of Lake Ontario contamination from the Niagara River sediment radiodating and chlorinated hydrocarbons analysis. **Journal of Great Lakes Research** 9:160-168.
- Dushenkov, S., A. Mikheev, A. Prokhnevsky, M. Ruchko, and B. Sorochinsky. 1999. Phytoremediation of radiocesium-contaminated soil in the vicinity of Chernobyl, Ukraine. **Environmental Science and Technology** 33(3):469-475.
- Duursma, E.K., and C.J. Bosch. 1970. Theoretical, experimental and field studies concerning diffusion of radioisotopes in sediments and suspended particles of the sea. Part B: methods and experiments. **Netherlands Journal of Sea Research** 4:395-469.
- Duursma, E.K., and D. Eisma. 1973. Theoretical experimental and field studies concerning the molecular diffusion of radioisotopes in sediments and suspended solid particles in the sea. Part C: Applications to field studies. **Netherlands Journal of Sea Research** 6:265-284.
- Duursma, E.K., and C. Hoede. 1967. Theoretical experimental and field studies concerning the molecular diffusion of radioisotopes in sediments and suspended solid particles in the sea. Part A: theories and mathematical calculations. **Netherlands Journal of Sea Research** 3:423-457.
- Dyer, A., and J.K.K. Chow. 1999. The uptake of radioisotopes onto clays and other natural materials - II. Cesium, strontium and ruthenium onto soils and peat. **Journal of Radioanalytical and Nuclear Chemistry** 242(2):321-328.
- Dyer, F.J., and J.M. Olley. 1999. The effects of grain abrasion and disaggregation on Cs-137 concentrations in different size fractions of soils developed on three different rock types. **Catena** 36(1-2):143-151.
- Dyer, F.M., J. Thomson, I.W. Croudace, R. Cox, and R.A. Wadsworth. 2002. Records of change in salt marshes: A radiochronological study of three Westerschelde (SW Netherlands) marshes. **Environmental Science & Technology** 36(5):854-861.
- Eades, L.J., J.G. Farmer, A.B. MacKenzie, A. Kirika, and A.E. Bailey-Watts. 2002. Stable lead isotopic characterisation of the historical record of environmental lead contamination in dated freshwater lake sediment cores from northern and central Scotland. **Science of the Total Environment** 292(1-2):55-67.
- Eades, L.J. J.G. Farmer, A.B. MacKenzie, A. Kirika, and A.E. Bailey-Watts. 1998. High-resolution profile of radiocaesium deposition in Loch Lomond sediments. **Journal of Environmental Radioactivity** 39(2):107-115.

- Eadie, B.J., and J.A. Robbins. 1987. The role of particulate matter in the movement of contaminants in the Great Lakes, pp. 319-364. *In*: R.A. Hites and S.J. Eisenreich (eds.), **Sources and fates of aquatic pollutants**, American Chemical Society, Washington, DC.
- Eakins, J.D., and R.S. Cambray. 1985. Studies of environmental radioactivity in Cumbria, Part 6: the chronology of discharge of caesium-137, plutonium, and americium-241 from BNFL Sellafield, as recorded in lake sediments. **AERE-R-11182**. United Kingdom Atomic Energy Authority Report, Harwell, UK.
- Eakins, J.D., R.S. Cambray, K.C. Chambers, and A.E. Lally. 1984. The transfer of natural and artificial radionuclides to Brotherswater from its catchment, pp. 125-144. *In*: E.Y. Haworth and J.W.G. Lund (eds.), **Lake sediment and environmental history**, University of Minnesota Press, Minneapolis, MN.
- Eakins, J.D., and R.T. Morrison. 1978. A new procedure for the determination of lead-210 in lake and marine sediments. **Journal of Applied Radiation and Isotopes** 29:531-536.
- Eberl, D.D. 1980. Alkali cation selectivity and fixation by clay minerals. **Clays Clay Minerology** 28:161-172.
- Eckblad, J.W., N.L. Peterson, K. Ostlie, and A. Temte. 1977. The morphometry, benthos and sedimentation rates of a floodplain in Pool 9 of the upper Mississippi River. **American Midland Naturalist** 97:433-443.
- Eckh ell, J., P. Jonsson, M. Meili, and R. Carman. 2000. Storm influence on the accumulation and lamination of sediments in deep areas of the Northwestern Baltic Proper. **AMBIO: A Journal of the Human Environment** 29(4):238-245.
- Edberg, N. 1980. Determination of recent sedimentation rates in lakes by ¹³⁷Cs. **Vatten** 36:35-44.
- Edgington, D.N., and D.M. Nelson. 1986. The persistence of pollutants in large lakes: the lessons from study of radioactivity, pp. 250-266. *In*: T.H. Sibley and C. Myttenaere (eds.), **Application of distribution coefficients to radioecological assessment models**, Elsevier, London.
- Edgington, D.N., J.C. Ritchie, and J.A. Robbins. 1975. Comments on the paper: "Use of rivers to predict accumulation in sediments of radionuclides discharged from nuclear power plants" by P. Plato. **Health Physics** 29:429-431.
- Edgington, D.N., and J.A. Robbins. 1990. Time scales of sediment focusing in Lake Michigan as revealed by measurements of fallout Cs-137, pp. 210-223. *In*: M. Tilzer and C. Serruya (eds.), **Large Lakes: ecological structure and function**. Science Technology, Madison, WI.

- Edgington, D.N., and J.A. Robbins. 1988. Time scales of sediment focusing in Lake Michigan as revealed by measurement of fallout Cs-137. *In*: D. Imboden (ed.), **Functional and structural properties of large lakes**, Societas International Limnologiue Symposium, Konstunz, Germany.
- Edgington, D.N., and J.A. Robbins. 1979. Reply to Appleby and Oldfield (1979). **Environmental Science and Technology** 13:480-482.
- Edgington, D.N., and J.A. Robbins. 1977. Radionuclide geochronology and pollution history in lake sediment. **Transactions of American Nuclear Science** 27:117.
- Edgington, D.N., and J.A. Robbins. 1976a. The behavior of plutonium and other long-lived radionuclides in Lake Michigan II. Patterns of deposition in sediments, pp. 245-260. *In*: **Impacts of nuclear releases into the aquatic environment**, International Atomic Energy Agency, Vienna, Austria.
- Edgington, D.N., and J.A. Robbins. 1976b. Patterns of deposition of natural and fallout radionuclides in Lake Michigan and their relation to limnological processes, pp. 705-729. *In*: J.O. Nriagu (ed.), **Environmental biochemistry, volume 2: metal transfer and ecological mass balances**, Ann Arbor Science Publishers, Ann Arbor, MI.
- Edgington, D.N., and J.A. Robbins. 1976c. Records of lead deposition in Lake Michigan sediments since 1800. **Environmental Science and Technology** 10:266-274.
- Edgington, D.N., and J.A. Robbins. 1976d. Patterns of deposition of radionuclides in sediments, pp. 1-12. *In*: **Symposium on nonbiological transport and transformation of pollutants on land and water: processes and critical data required for predictive description**, Gaithersburg, MD.
- Edgington, D.N., and J.A. Robbins. 1976e. Patterns of natural and fallout radionuclides in sediment of Lake Michigan, pp. 705-729. *In*: J.O. Nriagu (ed.), **Environmental biogeochemistry**, Vol. 2, Ann Arbor Science Publication Inc., Ann Arbor, MI, USA.
- Edgington, D.N., and J.A. Robbins. 1974a. Determination of recent sedimentation rates in Lake Michigan using Pb-210 and Cs-137, pp. 39-62. *In*: **Radiological and environmental research division annual report, ecology**, January-December 1973, Argonne National Laboratory, Argonne, IL.
- Edgington, D.N., and J.A. Robbins. 1974b. The application of natural and fallout radionuclides to the studies of Lake Michigan, pp. 443-458. *In*: **Proceeding conference on nuclear methods in environmental research**, US ERDA Conference 740701, US Energy Research and Development Authority, Washington, DC.

- Edgington, D.N., J.A. Robbins, and J.O. Karttunen. 1974. The distribution of Pb-210 and stable lead in Lake Michigan sediments, pp. 63-76. *In: Radiological and environmental research division annual report, Ecology*, January-December 1973, Argonne National Laboratory, Argonne, IL.
- Edgington, D.N., J. Val Klump, J.A. Robbins, Y.S. Kusner, V.D. Pampura, and I.V. Sandimirov 1991. Sedimentation rates, residence time, and radionuclide inventories in Lake Baikal from ^{137}Cs and ^{210}Pb in sediment cores. **Nature** 350:601-604.
- Edwards, K. 1980. Runoff and soil loss in the wheat belt of New South Wales, pp. 94-98. *In: International Association of Hydrological Sciences proceedings of the agricultural engineering conference.*
- Effler, S.W. 1987. The impact of a chlor-alkali plant on Onondaga Lake and adjoining systems. **Water Air Soil Pollution** 33:85-115.
- Effler S.W., and C.F. Carter. 1987. Spatial variability in selected physical characteristics and processes in Cross Lake, New York. **Water Resources Bulletin** 23:243-249.
- Effler, S.W., M.C. Rand, and T.A. Tamayo. 1979. The effect of heavy metals and other pollutants on the sediments of Onondaga Lake. **Water Air Soil Pollution** 12:117-134.
- Efremova, T.T., F.V. Sukhorukov, S.P. Efremov, and V.V. Budashkina. 2002. Accumulation of Cs-137 in peatbogs on the Ob and Tom' river interfluvium. **Eurasian Soil Science** 35(1):91-98.
- Efurd, D.W., G.G. Miller, and D.J. Rokop. 1997. Evaluation of the anthropogenic radionuclide concentrations in sediments and fauna collected in the Beaufort Sea and northern Alaska. Los Alamos National Lab., NM., **Report No.: LA-13302-MS**, 52p
- Egorov, V.N., P.P. Povinec, G.G. Polikarpov, N.A. Stokozov, S.B. Gulina, L.G. Kulebakina, and I. Osvath. 1999. Sr-90 and Cs-137 in the Black Sea after the Chernobyl NPP accident: inventories, balance and tracer applications. **Journal of Environmental Radioactivity** 43(2):137-155.
- Ehlers, J., K. Nagorny, P. Schmidt, B. Stieve, and K. Zietlow. 1993. Storm surge deposits in North Sea salt marshes dated by Cs-134 and Cs-137 determination. **Journal of Coastal Research** 9:698-701.
- Elejalde, C., M. Herranz, F. Legarda, and F. Romero. 2000. Determination and analysis of distribution coefficients of Cs-137 in soils from Biscay (Spain). **Environmental Pollution** 110(1):157-164.

- Elejalde, C., M. Herranz, F. Romero, and F. Legarda. 1996. Correlations between soil parameters and radionuclide contents in samples from Biscay (Spain). **Water Air Soil Pollution** 89(1/2):23-31.
- Elert, M., A. Butler, J. Chen, C. Dovlete, A. Konoplev, A. Golubenkov, M. Sheppard, O. Togawa, and T. Zeevaert. 1999. Effects of model complexity on uncertainty estimates. **Journal of Environmental Radioactivity** 42(2-3):255-270.
- Ellickson, K.M., C.J. Schopfer, and P.J. Liroy. 2002. The bioaccessibility of low level radionuclides from two Savannah River Site soils. **Health Physics** 83(4):476-484.
- Ellies, E. 2000. Soil erosion and its control in Chile - An overview. **Acta Geologica Hispanica** 35(3-4):279-284.
- Elliott, G.L., B.L. Campbell, and R.J. Loughran. 1990. Correlation of erosion measurement and soil caesium-137 content. **Journal of Applied Radiation and Isotopes** 41:713-717.
- Elliott, G.L., B.L. Campbell, and R.J. Loughran. 1984. Correlation of erosion and erodability assessments using Caesium-137. **Journal of Soil Conservation (New South Wales)** 40:24-29.
- Elliott, G.L., D. Clift, and R.J. Loughran. 2002. **A National Reconnaissance Survey of Soil Erosion in Australia: Northern Territory. A report for the Australian National Landcare Program**, The University of Newcastle, Newcastle, Australia 85 p.
- Elliott, G.L., and B.E. Cole-Clark. 1993. Estimates of erosion on potato lands on Krasnozems at Dorrigo, N.S.W. using the caesium-137 technique. **Australian Journal of Soil Research** 31:209-223.
- Elliott, G.L., R.D. Lang, and B.L. Campbell. 1983. The association of tree species, landform, soils and erosion on Narrabeen sandstone west of Putty, New South Wales. **Australian Journal of Ecology** 8:321-331.
- Elliott, G.L., R.J. Loughran, I. Packer, L.T. Maliszewski, S.J. Curtis, M.J. Saynor, C.D. Morris, and R.B. Epis. 1997. **A national reconnaissance survey of soil erosion: Australia, New South Wales**. Project Number 1989090, No. 8. Australian Landcare Program Report, Department of Primary Industries and Energy, Australia.
- Elliott, G.L., R.J. Loughran, P. Shields, and B. Powell. 1996. **A national reconnaissance survey of soil erosion - Australia: Queensland**. A report for the Australian Land Care Program. The University of Newcastle, 40 p

- Ellis, J., and S. Kanamori. 1977. Water pollution studies on Lake Illawarra III. Distribution of heavy metals in sediments. **Australian Journal of Marine Freshwater Research** 28:485-496.
- El-Masry, K.I., and G.M. Friedman. 2000. Metal pollution in carbonate sediments of main basin of Mariute Lake, Alexandria, Egypt. **Carbonates and Evaporites** 15(2):169-194.
- El Mamoney, M.H. and A.E.M. Khater. 2004. Environmental characterization and radio-ecological impacts of non-nuclear industries on the Red Sea coast. **Journal of Environmental Radioactivity** 73(2):151-168.
- Elnimr, T., T. Sharshar, and A. El-Abd. 1999. Study on nuclear activities by the measurement of residual radioactivity. **Czechoslovakian Journal of Physics** 49(1, Suppl. 1):217-221.
- Elprince, A.M., C.L. Rich, and D.C. Martens. 1977. Effects of temperature and hydroxy aluminum interlayers on the adsorption of trace radioactive caesium by sediments near water-cooled nuclear reactors. **Water Resources Research** 13:375-380.
- Ely, L.L., R.H. Webb, and Y. Enzel. 1992. Accuracy of post-bomb ^{137}Cs and ^{14}C in dating fluvial deposits. **Quaternary Research** 38:196-204.
- Engstrom, D.R. and H.E. Wright. 1984. Chemical stratigraphy of lake sediments as a record of environmental change, pp.11-67. In: E. Y. Hawroth and J.W.G. Lund (eds.), **Lake sediment and environmental history**, Leichester University Press, Leichester, UK.
- Engstrom, D.R., E.B. Swain, and J.C. Kingston. 1985. A paleolimnological record of human disturbance from Harvey's Lake, Vermont: geochemistry, pigment and diatoms. **Freshwater Biology** 15:261-288.
- Entry, J.A., P.T. Rygiwicz, and W.H. Emmingham. 1993. Accumulation of cesium-137 and strontium-90 in Ponderosa pine and Monterey pine seedlings. **Journal of Environmental Quality** 22:742-746.
- Entry, J. A., N. C. Vance, M. A. Hamilton, D. Zabowsky, L. S. Watrud, and D. C. Adriano. 1996. Phytoremediation of soil contaminated with low concentrations of radionuclides. **Water, Air, and Soil Pollution** 88:167-176.
- Entry, J.A., and L.S. Watrud. 1998. Potential remediation of ^{137}Cs and ^{90}Sr contaminated soil by accumulation in Alamo switchgrass. **Water Air Soil Pollution** 104(3-4):339-352.
- Entry, J.A., L.S. Watrud, R.S. Manasse, and N.C. Vance. 1997. Phytoremediation and remediation and reclamation of soils contaminated with radionuclides, pp. 299-306. In: E.L. Kruger, T.A. Anderson, and J.R. Coats. (eds.), **Phytoremediation of Soil and Water Contaminants**. American Chemical Society, Washington, DC.

- Entry, J.A., L.S. Watrud, and M. Reeves. 2001. Influence of organic amendments on the accumulation of Cs-137 and Sr-90 from contaminated soil by three grass species. **Water Air and Soil Pollution** 126(3-4):385-398.
- Entry, J.A., L.S. Watrud, and M. Reeves. 1999. Accumulation of Cs-137 and Sr-90 from contaminated soil by three grass species inoculated with mycorrhizal fungi. **Environmental Pollution** 104(3):449-457.
- Environmental Measurement Laboratory (EML). 1977. Final tabulations of monthly ⁹⁰Sr fallout data: 1954-1976. **HASL-329, UC-11**, Environmental Measurement Laboratory, New York.
- Eremeev, V.N., L.M. Ivanov, A.D. Kirwan, and T.M. Margolina. 1995a. Analysis of caesium pollution in the Black Sea by regularization methods. **Marine Pollution Bulletin** 30:460-462.
- Eremeev, V.N., L.M. Ivanov, A.D. Kirwan, and T.M. Margolina. 1995b. Amount of Cs-137 and Cs-134 radionuclides in the Black Sea produced by the Chernobyl accident. **Journal of Environmental Radioactivity** 27:49-63.
- Erfurt, G., M.R. Krbetschek, V.J. Bortolot, and F. Preusser. 2003. A fully automated multi-spectral radioluminescence reading system for geochronometry and dosimetry. **Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms** 207(4):487-499.
- Eriksson, M., E. Holm, P. Roos, and H. Dahlgaard. 2004. Distribution and flux of Pu-238, Pu-239, Pu-240, Am-241, Cs-137 and Pb-210 to high arctic lakes in the Thule district (Greenland). **Journal of Environmental Radioactivity** 75(3):285-299.
- Erlenkeuser, H., and W. Balzer. 1988. Rapid appearance of Chernobyl radiocesium in the deep Norwegian Sea sediments. **Oceanologica Acta** 11:101-106.
- Erskine, W.D., A. Mahmoudzadeh, C.M. Browning, and C. Myers. 2003. Sediment yields and soil loss rates from different land uses on Triassic shales in western Sydney, NSW. **Australian Journal of Soil Research** 41(1):127-140.
- Erskine, W.D., A. Mahmoudzadeh, and C. Myers. 2002. Land use effects on sediment yields and soil loss rates in small basins of Triassic sandstone near Sydney, NSW, Australia. **Catena** 49(4):271-287
- Erten, H.N. 1997. Radiochronologies of lake sediments. **Pure and Applied Chemistry** 69(1):71-76.

- Erten, H.N., H.R. von Gunten, E. Rössler, and M. Strum. 1985. Dating the sediments of Lake Zurich (Switzerland) with ^{210}Pb and ^{137}Cs . **Schweiz. Z. Hydrology** 47:5-11.
- Erten, N.N., S. Aksoyoglu, and H. Gokturk. 1988. Sorption/desorption of caesium on clay and soil fraction from various regions of Turkey. **Science of the Total Environment** 69:269-296.
- Erten, N.N., S. Aksoyoglu, S. Hahpoglu, and H. Gokturk. 1988. Sorption of caesium and strontium on montmorillonite and kaolinite. **Radiochimica Acta** 44/45:147-151.
- Esposito, M., P. Polic, P. Bartolomei, V. Benzi, M. Martellini, O. Cvetkovic, V. Damjanov, M. Simic, Z. Zunic, B. Zivancevic, S. Simic, and J. Jovanovic. 2002. Survey of natural and anthropogenic radioactivity in environmental samples from Yugoslavia. **Journal of Environmental Radioactivity** 61(3):271-282.
- Essington, E.H., and E.M. Romney. 1985. Mobilization of ^{137}Cs during rainfall simulation studies at the Nevada Test Site, pp. 35-38. *In*: L.J. Lane (ed.) **Proceedings of the rainfall simulator workshop**, Society for Range Management, Denver, CO.
- Evans, D.W., J.J. Alberts, and R.A. Clark III. 1983. Reversible ion-exchange fixation of cesium-137 leading to mobilization from reservoir sediments. **Geochimica et Cosmochimica Acta** 47:1041-1049.
- Evans, E.J., and A.I. Dekker. 1966a. Plant uptake of Cs-137 from nine Canadian soils. **Canadian Journal of Soil Science** 46:167-176.
- Evans, E.J., and A.I. Dekker. 1966b. Fixation and release of Cs-137 in soils and soil separates. **Canadian Journal of Soil Science** 46:217-222.
- Evans, H.E., D.C. Lasenby, and P.J. Dillon. 1986. The effect of core compression on the measurement of zinc concentration and anthropogenic burdens in lake sediments. **Hydrobiologia** 132:185-192.
- Evans, J.E., T.C. Johnson, E.C. Alexander, Jr, R.S. Lively, and S.J. Eisenreich. 1981. Sedimentation rates and depositional processes in Lake Superior from ^{210}Pb geochronology. **Journal of Great Lakes Research** 7:299-310.
- Evans, J.E., N.S. Levine, S.J. Roberts, J.F. Gottgens, and D.M. Newman. 2002. Assessment using GIS and sediment routing of the proposed removal of Ballville Dam, Sandusky River, Ohio. **Journal of the American Water Resources Association** 38(6):1549-1565.
- Evans, J.E., S.D. Mackey, J.F. Gottgens, and W.M. Gill. 2000. Lessons from a Dam failure. **Ohio Journal of Science** 100(5):121-131.

- Evans, J.K., J.F. Gottgens, W.M. Gill, and S.D. Mackey. 2000. Sediment yields controlled by intrabasinal storage and sediment conveyance over the interval 1842-1994: Chagrin River, northeast Ohio, USA. **Journal of Soil and Water Conservation** 55(3):264-270.
- Evans, M.S. 1996. Depositional history of sediment in Great Slave Lake: Spatial and temporal patterns in geochronology, bulk parameters, PAHs and chlorinated contaminants. **Canadian Northern River Basins Study project Report No. SSC-R71-49/3-99E; ISBN-0-662-24644-6**, 198 p.
- Evans, R. 1995. Some methods of directly assessing water erosion - a comparison of measurements made in plots and in fields. **Progress in Physical Geography** 19(1):115-129.
- Evans, R.D., and F.H. Rigler. 1983. A test of lead-210 dating for the measurement of whole lake soft sediment accumulation. **Canadian Journal of Fisheries and Aquatic Science** 40:506-515.
- Eyman, L.D., and N.R. Kevern. 1975. Cesium-137 and stable cesium in a hypereutrophic lake. **Health Physics** 28:549-555.
- Facchinelli, A., L. Gallini, E. Barberis, M. Magnoni, and A.S. Hursthouse. 2001. The influence of clay mineralogy on the mobility of radiocaesium in upland soils of NW Italy. **Journal of Environmental Radioactivity** 56(3):299-307.
- Facchinelli, A., M. Magnoni, L. Gallini, and E. Bonifacio. 2002. Cs-137 contamination from Chernobyl of soils in Piemonte (North-West Italy): Spatial distribution and deposition model. **Water Air and Soil Pollution** 134(1-4):341-352.
- Facher, E., and R.A. Schmidt. 1996. A siliceous chrysophycean cyst-based pH transfer function for Central European lakes. **Journal of Paleolimnology** 16(3):275-321.
- Fahaad, A.A., A.W. Ali, and R.M. Shihab. 1989. Mobilization and fractionation of ¹³⁷Cs in calcareous soils. **Journal of Radiation Nuclear Chemistry** 130:192-201.
- Faleh, A., A. Navas, and A. Sadiki. 2005. Erosion and dam siltation in a Rif catchment (Morocco), p. 58-64. In: A.J. Horowitz, and D.E. Walling (eds.). **Sediment Budgets 2. International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.
- Farmer, J.G. 1983. Metal pollution in marine sediment cores from the west coast of Scotland. **Marine Environmental Research** 8:1-28.
- Farmer, J.G. 1978. Lead concentration profiles in lead-210 dated Lake Ontario sediment cores. **Science of the Total Environment** 10:117-127.

- Farmer, J.G. 1977. The determination of sedimentation rates in Lake Ontario using ^{210}Pb dating methods. **Canadian Journal of Earth Science** 15:431-437.
- Farmer, J.G., L.J. Eades, A.B. MacKenzie, A. Kirika, and A.E. Bailey-Watts. 1996. Stable lead isotope record of lead pollution in Loch Lomond sediments since 1630 A.D. **Environmental Science and Technology** 30:3080-3083.
- Farmer, J.G., D.S. Swan, and M.S. Baxter. 1980. Records and sources of metal pollutants in a dated Loch Lomond sediment core. **Science of the Total Environment** 16:131-147.
- Faulkner, D., and S. McIntyre. 1996. Persisting sediment yields and sediment delivery changes. **Water Resources Bulletin** 32(4):817-829.
- Favarger, P., and J. Vernet. 1979. L'isotope ^{137}Cs utilisé comme dateur de la pollution des sédiments lacustres. **Archives of Science** 32:25-41. (French)
- Fawaris, B.H., and K.J. Johanson. 1995a. Fractionation of caesium (^{137}Cs) in coniferous forest soil in central Sweden. **Science of the Total Environment** 170:221-228.
- Fawaris, B.H., and K.J. Johanson. 1995b. Sorption of ^{137}Cs from undisturbed forest soil in a zeolite trap. **Science of the Total Environment** 172:251-256
- Feely, H.W., H.L. Volchok, E.P. Hardy, Jr., and L.E. Toonkel. 1978. Worldwide deposition of ^{90}Sr through 1976. **American Chemistry Society Journal** 12:808-809.
- Feijtel, T.C., R.D. DeLaune, and W.H. Patrick Jr. 1988a. Biogeochemical control on metal distribution and accumulation in Louisiana sediments. **Journal of Environmental Quality** 17:88-94.
- Feijtel, T.C., R.D. DeLaune, and W.H. Patrick Jr. 1988b. Seasonal pore water dynamics in marshes of Barataria Basin, Louisiana. **Soil Science Society of America Journal** 52:59-67.
- Feijtel, T.C., R.D. DeLaune, and W.H. Patrick Jr. 1985. Carbon flow in coastal Louisiana. **Marine Ecology Progress Series** 24:255-260.
- Feng, M.Y., D.E. Walling, X.B. Zhang, and A.B. Wen. 2003. A study on responses of soil erosion and sediment yield to closing cultivation on sloping land in a small catchment using Cs-137 technique in the Rolling Loess Plateau, China. **Chinese Science Bulletin** 48(19):2093-2100.
- Fernex, F., P. Zarate-del Valle, H. Ramirez-Sanchez, F. Michaud, C. Parron, J. Dalmaso, G. Barci-Funel, and M. Guzman-Arroyo. 2001. Sedimentation rates in Lake Chapala

- (western Mexico): possible active tectonic control. **Chemical Geology** 177(3-4):213-228.
- Ferro, V. 1997. Further remarks on a distributed approach to sediment delivery. **Hydrologic Science Journal** 42(5):633-647.
- Ferro, V., V. Bagarello, C. Di Stefano, G. Giordano, and P. Porto. 2001. Monitoring and predicting sediment yield in a small Sicilian basin. **Transactions of the American Society of Agricultural Engineers** 44(3):585-595
- Ferro, V., C. Di Stefano, G. Giordano, and S. Rizzo. 1998. Sediment delivery processes and spatial distribution of caesium-137 in a small Sicilian basin. **Hydrological Processes** 12(5):701-711.
- Ferro, V., G. Giordano, and P. Porto. 1998. Validating a distributed approach of sediment delivery processes at basin scale. **Proc. XIII International CIGR Congress, Rabat**, 241-251.
- Ferro, V., and M. Minacapilli. 1995. Sediment delivery processes at basin scale. **Hydrologic Science Journal** 40(6):703-717.
- Fesenko, S.V., A.Yu., Pakhomov, A.D. Pasternak, V.A. Goryainov, G.A. Fesenko, and A.V. Panov. 2004. Regularities of changes in ¹³⁷Cs content in milk in the long term after the Chernobyl accident. **Radioekologiya** 44(3):336-345. (In Russian)
- Fesenko, S.V., N.V. Soukhova, N.I. Sanzharova, R. Avila, S.I. Spiridonov, D. Klein, and P.M. Badot. 2001. Cs-137 availability for soil to understory transfer in different types of forest ecosystems. **Science of the Total Environment** 269(1-3):87-103.
- Fesenko, S.V., N.V. Soukhova, N.L. Sanzharova, R. Avila, S.I. Spiridonov, D. Klein, E. Lucot, and P.M. Badot. 2001. Identification of processes governing long-term accumulation of Cs-137 by forest trees following the Chernobyl accident. **Radiation and Environmental Biophysics** 40(2):105-113.
- Fesenko, S.V., O.G. Skotnikova, A.M. Skryabin, N.G. Safronova, and I.A. Gontarenko. 2004. Modeling of long-term radionuclide migration in a non-running fresh-water reservoir. **Radioekologiya** 44(4):466-472. (In Russian)
- Fesenko, S.V., N.V. Soukhova, N.I. Sanzharova, S.I. Spiridonov, R. Avila, D. Klein, and E. Lukaus. 2003. Analysis of factors determining accumulation of Cs-137 by woody plants. **Russian Journal of Ecology** 34(5):309-313.

- Fesenko, S.V., S.I. Spiridonov, N.I. Sanzharova, and R.M. Alexakhin. 1996. Modelling of ^{137}Cs availability in soils subjected to contamination after the accident at the Chernobyl NPP. **Radiatsionnaya Biologiya Radioekologiya** 36(4): 479-487. (RUSSIAN)
- Fesenko, S.V., S.I. Spiridonov, N.I. Sanzharova, and R.M. Alexakhin. 1997a. Dynamics of ^{137}Cs bioavailability in a soil-plant system in areas of the Chernobyl Nuclear Power Plant accident zone with a different physico-chemical composition of radioactive fallout. **Journal of Environmental Radioactivity** 34(3):287-313.
- Fesenko, S.V., S.I. Spiridonova, N.I. Sanzharova, and R.M. Aleksakhin. 1997b. Evaluation of ^{137}Cs ecological half-lives in the root-containing zone of meadow ecosystem soils. **Radiatsionnaya Biologiya Radioekologiya** 37(2):267-280. (Russian)
- Fesenko, S.V., S.I. Spiridonov, N.I. Sanzharova, and P.M. Aleksakhin. 1997c. Mathematical model of the biological availability of ^{137}Cs in the soils of grassland ecosystems. **Pochvovedenie** (No. 1):42-48. (RUSSIAN)
- Filipovic-Vincekovic, N. D. Barisic, N, Masic, and S. Liluic. 1991. Distribution of fallout radionuclides through the soil surface layer. **Journal of Radioanalytical Nuclear Chemistry Articles** 148:53-62.
- Fisenne, I.M. 1968. Distribution of ^{210}Pb and ^{226}Ra in soil. U.S. Dept. Energy, Washington, DC, Rept. **UCRL-18140**.
- Fisher, J.B., W.J. Lick, P.L. McCall, and J.A. Robbins. 1980. Vertical mixing of lake sediments by tubificid Oligochaetes. **Journal of Geophysical Research** 85:3998-4006
- Fisher, N.S., S.W. Fowler, F. Boisson, J. Carroll, K. Rissanen, B. Salbu, T.G. Sazykina, and K.L. Sjoebloom. 1999. Radionuclide bioconcentration factors and sediment partition coefficients in Arctic Seas subject to contamination from dumped nuclear wastes. **Environmental Science and Technology** 33(12):1979-1982.
- Fitzgerald, S.A., J.V. Klump, P.W. Swarzenski, R.A. Mackenzie, and K.D. Richards. 2001. Beryllium-7 as a tracer of short-term sediment deposition and resuspension in the Fox River, Wisconsin. **Environmental Science & Technology** 35(2):300-305.
- Fleishman, D.G., V.A. Nikiforov, A.A. Saulus, and V.T. Komov. 1994. Cs-137 in fish of some lakes and rivers of the Bryansk Region and North-West Russia in 1990-1992. **Journal of Environmental Radioactivity** 24:145-158.
- Flores, O.B., J.E.G. Benites, and A.M. Estrada. 2001. Estimación de la tasa de erosión en suelos agrícolas mediante el radioisótopo cesio-137. **Congreso Latino Americano 25 e Cubano de La Ciencia del Suelo, 5**, Varadero, Cuba.

- Flower, R.J. 2001. Change, Stress, Sustainability, and Aquatic ecosystems Resilience In North African wetland lakes during the 20th century: an introduction to integrated biodiversity studies within the CASSARNIA Project. **Aquatic Ecology** 36:261-280.
- Flower, R.J. 1998. Paleolimnology and recent environmental change in Lake Baikal: An introduction and overview of interrelated concurrent studies. **Journal of Paleolimnology** 20(2):107-117.
- Flower, R.J., R.W. Battarbee, J. Natkanski, B. Rippey, and P.G. Appleby. 1988. The recent acidification of large Scottish Loch located partly within a national nature reserve and site of special scientific interest. **Journal of Applied Ecology** 25:715-724.
- Flower, R.J., A.C. Stevenson, J.A. Dearing, I.D.L. Foster, A. Airey, B. Rippey, J.P.F. Wilson, and P.G. Appleby. 1989. Catchment disturbance inferred from paleolimnological studies of three contrasted sub-humid environments in Morocco. **Journal of Paleolimnology** 1:293-322.
- Flury, M., S. Czigany, G. Chen, and J.B. Harsh. 2004. Cesium migration in saturated silica sand and Hanford sediments as impacted by ionic strength. **Journal of Contaminant Hydrology** 71(1-4):111-126.
- Flury, M., J.B. Mathison, and J.B. Harsh. 2002. In situ mobilization of colloids and transport of cesium in Hanford sediments. **Environmental Science & Technology** 36(24):5335-5341.
- Flynn, W.W. 1970. A rapid solvent extraction method of the determination of caesium-137 in environmental materials. **Analytica Chimica Acta** 50:365-373.
- Fogh, C.L., K.G., andersson, and J. Roed. 2000. In situ performance of the CORAD device measuring contamination levels and penetration ratio of Cs-137. **Nuclear Instruments and Methods in Physics Research Section B-Beam Interactions with Materials and Atoms** 160(3):408-414.
- Fogh, C.L., J. Roed, and K.G., Andersson. 1999. Radionuclide resuspension and mixed deposition at different heights. **Journal of Environmental Radioactivity** 46(1):67-75.
- Fokin, A.D., S.P. Torshin, and M. Kaupenjohann. 2003. The formation of initial gradients of Cs-137 concentrations in soils at the aggregate level. **Eurasian Soil Science** 36(8):826-832.
- Fontaine, T.A., T.D. Moore, and B. Burgoa. 2000. Distributions of contaminant concentration and particle size in fluvial sediment. **Water Research** 34(13):3473-3477.

- Fornes, W.L., G. Matisoff, C.G. Wilson, and P.J. Whiting. 2000. Cs-137 derived soil erosion rates under changing tillage practices. **EOS (Transaction of American Geophysical Union)** 81:385 (Abstract)
- Forsberg, S., K. Rosen, and F. Brechignac. 2001. Chemical availability of Cs-137 and Sr-90 in undisturbed lysimeter soils maintained under controlled and close-to-real conditions. **Journal of Environmental Radioactivity** 54(2):253-265.
- Forsberg, S., K. Rosen, V. Fernandez, and H. Juhan. 2000. Migration of Cs-137 and Sr-90 in undisturbed soil profiles under controlled and close-to-real conditions. **Journal of Environmental Radioactivity** 50(3):235-252.
- Forsberg, S. and M. Strandmark. 2001. Migration and chemical availability of Cs-137 and Sr-90 in Swedish long-term experimental pastures. **Water Air and Soil Pollution** 127(1-4):157-171.
- Förster, H., and Schimmack. 1992. Influence of stemflow on the depth distribution of radiocesium in soil under beech stand. **Naturwissenschaften** 79:23-24.
- Förstner, U. 1987. Sediment-associated contaminants - an overview of scientific bases for developing remedial options. **Hydrobiologia** 149:221-246.
- Forsyth, T.J. 1994. The use of cesium-137 measurements of soil erosion and farmers' perceptions to indicate land degradation amongst shifting cultivators in northern Thailand. **Mountain Research and Development** 14:229-244.
- Foster, G.R., and T.E. Hakonson. 1984. Predicted erosion and sediment delivery of fallout plutonium. **Journal of Environmental Quality** 13:595-602.
- Foster, I.D.L. (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Foster, I.D.L. 1995. Lake and reservoir bottom sediments as a source of soil erosion and sediment transport data in the U.K., pp. 265-283. *IN*: I.D.L. Foster, A.M. Gurnell, and B.W. Webb (eds.), **Sediment and water quality in River Catchments**, Wiley, Chichester, U.K.
- Foster, I.D.L., J. Boardman, J. Keay-Bright, and M.E. Meadows. 2005. Meadows Land degradation and sediment dynamics in the South African Karoo, p. 207-213. In: A.J. Horowitz, and D.E. Walling (eds.). **Sediment Budgets 2. International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.
- Foster, I.D.L., A.S. Chapman, R.M. Hodgkinson, A.R. Jones, J.A. Lees, S.E. Turner, and M. Scott. 2003. Changing suspended sediment and particulate phosphorus loads and

- pathways in underdrained lowland agricultural catchments; Herefordshire and Worcestershire, UK. **Hydrobiologia** 494(1-3):119-126.
- Foster, I.D.L., and S.M. Charlesworth. 1996. Heavy metals in the hydrologic cycle: trends and explanation. **Hydrological Processes** 10:227-261.
- Foster, I.D.L., and S.M. Charlesworth. 1994. Variability in physical, chemical, and magnetic properties of reservoir sediments; implications for sediment source tracing. **International Association of Hydrological Sciences Publication** 224:153-160.
- Foster, I.D.L., H. Dalgeish, J.A. Dearing, and E.D. Jones. 1994. Quantifying soil erosion and sediment transport in drainage basins: Some observations on the use of ¹³⁷Cs. **International Association of Hydrological Sciences Publication No. 224:55-64**
- Foster, I.D.L., J.A. Dearing, and P.G. Appleby. 1986. Historical trends in catchment sediment yields: a case study in reconstruction from lake-sediment records in Warwickshire, UK. **Hydrological Science Journal** 31:427-443.
- Foster, I.D.L., J.A. Dearing, A. Simpson, A.D. Carter, and P.G. Appleby. 1985. Lake catchment based studies of erosion and denudation in the Merevale Catchment, Warwickshire, U.K. **Earth Surface Processes and Landforms** 10:45-68.
- Foster, I.D.L., R. Grew, and J. Dearing. 1990. Magnitude and frequency of sediment transport in agricultural catchments: a paired lake-catchment study in Midland England, pp. 153-171. *In: J. Boardman, I.D.L. Foster, and J.A. Dearing (eds.), Soil erosion of agricultural land*, Wiley, London.
- Foster, I.D.L., A.M. Gurnell and D.E. Walling. 2000. Sediment delivery to a proglacial river: Mineral magnetic, geochemical and the potential for radionuclide fingerprinting, pp. 323-343. *In: I.D.L Foster, (ed.) Tracers in Geomorphology*, John Wiley and Sons, Chichester, UK.
- Foster, I.D.L., and J.A. Lees. 2000. Tracers in geomorphology: Theory and applications in tracing fine particulate sediments, pp. 3-20. *In: I.D.L Foster (ed.) Tracers in Geomorphology*, John Wiley and Sons, Chichester, UK.
- Foster, I.D.L., and J.A. Lees. 1999. Changing headwater suspended sediment yields in the LOIS catchments over the last century: a paleolimnological approach. **Hydrological Processes** 13(7):1137-1153.
- Foster, I.D.L., and J.A. Lees. 1998. Changes in the physical and geochemical properties of suspended sediment delivered to the headwaters of LOIS river basins over the last 100 years: a preliminary analysis of lake and reservoir bottom sediments. **Hydrological Processes** 13(7):1067-1086.

- Foster, I.D.L., J.A. Lees, A.R. Jones, A.S. Chapman, and S.E. Turner. 2002. The possible role of agricultural land drains in sediment delivery to a small reservoir, Worcestershire, UK: a multiparameter fingerprint study, p. 433–442. In: F.J. Dyer, M.C. Thoms, and J.M. Olley (eds.), *The Structure, Function and Management Implications of Fluvial Sedimentary Systems*, **International Association of Hydrological Sciences Publication No. 276**.
- Foster, I.D.L., J.A. Lees, P.N. Owens, and D.E. Walling. 1998. Mineral magnetic characterisation of sediment source from an analysis of lake and floodplain sediments in the catchment of the Old Mill reservoir and Slapton Ley, South Devon, UK. **Earth Surface Processes and Landform** 23:685-703.
- Foster, I.D.L., P.N. Owens, and D.E. Walling. 1996. Sediment yields and sediment delivery in the catchments of Slapton Lower Ley, South Devon, UK. **Field Studies** 8:629-661.
- Foster, I.D.L., and D.E. Walling. 1994. Using reservoir deposits to reconstruct changing sediment yields and sources in the catchment of the Old Mill Reservoir, South Devon, UK, over the past 50 years. **Hydrologic Science Journal** 39:347-368.
- Foster, I.D.L., D.E. Walling, and P. Owens. 1993. Sediment yields and budgets in the Start Valley, pp 25-30. In: T.P. Burt (ed.), *A field guide to geomorphology of the Slapton Region*, British Geomorphological Research Group, **Occasional Publications of the Field Studies Council** 27, Shrewsbury, UK.
- Foulquier, L., J.P. Baudin, and A. Lambrechts. 1989. Données sur les transferts du ^{137}Cs et du ^{60}Co dans un écosystème fluvial: le Rhône. **Rev. Sciences Eau** 2:641-659. (French)
- Fox, W.M., M.S. Johnson, S.R. Jones, R.T. Leah, and D. Copplesstone. 1999. The use of sediment cores from stable and developing salt marshes to reconstruct historical contamination profiles in the Mersey Estuary, UK. **Marine Environmental Research** 47(4):311-329.
- Foyn, L., and I. Svaeren. 1997. Distribution and sedimentation of radionuclides in the Barents Sea. **ICES Journal of Marine Science** 54(3):333-340.
- Fraga, V.D. and I.H. Salcedo. 2004. Declines of organic nutrient pools in tropical semi-arid soils under subsistence farming. **Soil Science Society of America Journal** 68(1):215-224.
- Fraley, L., G. Chavez, and O.D. Markham. 1993. Seasonal variations in deposition and retention of cerium-141 and cesium-134 in cool desert vegetation. **Journal of Environmental Radioactivity** 21:203-212.
- Francaviglia, R., and K. Parris. 2004. Meeting recommendations, summary and conclusions, p. ix-xxx. In: Francaviglia, F. (ed.) **Agricultural impacts of soil erosion and biodiversity:**

- Developing indicators for policy analysis**, Proceeding from an OECD Expert Meeting, Rome, Italy, March 2003.
- France, R.L., and J.M. Blais. 1998. Lead concentrations and stable isotopic evidence for transpolar contamination of plants in the Canadian High Arctic. **Ambio** 27(7):506-508.
- France, R.L., J. Svoboda, and H.W. Taylor. 1993. Latitudinal distribution of cesium-137 fallout in 1990 on *Saxifraga oppositifolia* from Elles Mere Island Canada. **Canadian Journal of Botany** 71:708-711.
- Francis, C.W., and F.S. Brinkley. 1976. Preferential adsorption of ¹³⁷Cs to micaceous minerals in contaminated freshwater sediments. **Nature** 260:511-513.
- Franciskovic-Bilinski, S., H. Bilinski, D. Barisic, and N. Horvatincic. 2003. Analysis of karst tufa from Guangxi, China. **Acta Geologica Sinica-English Edition** 77(2):267-275.
- Franklin, R.E., P.L. Gersper, and N. Holowaychuk. 1967. Analysis of gamma-ray spectra from soils and plants: II. effects of trees on the distribution of fallout. **Soil Science Society of America Proceedings** 31:43-45.
- Fredericks, D.J., V. Norris, and S.J. Perrens. 1988. Estimating erosion using caesium-137: I. measuring caesium-137 activity in soil. **International Association of Hydrological Sciences Publication No. 174**:225-231.
- Fredericks, D.J., and S.J. Perrens. 1988. Estimating erosion using caesium-137: II. Estimating rates of soil loss. **International Association of Hydrological Sciences Publication No. 174**:225-231.
- Fredriksson, L., B. Eriksson, B.G. Rasmuson, K. Eduarson, B. Gahne, and K. Low. 1958. Studies of soil-plant-animal interrelationships with respect to fission products, peaceful uses of atomic energy, pp. 449-470. *In: Proceedings 2nd international conference*, United Nations, Geneva, Switzerland.
- Freeland, J.A., J.L. Richardson, and L.A. Foss. 1999. Soil indicators of agricultural impacts on northern prairie wetlands: Cottonwood Lake Research Area, North Dakota, USA. **Wetlands** 19(1):56-64.
- Frere, M.H., and H.J. Roberts Jr. 1963. The loss of strontium⁹⁰ from small cultivated watersheds. **Soil Science Society of America Proceedings** 27:82-83.
- Frid, A.S., and V.S. Grakovskiy. 1988. Diffusion of ¹³⁷Cs in soils. **Pochvovedeniye** 2:78-86.

- Fridman, Sh.D, E.V. Kvasnikova, V.N. Golosov, and N.N. Ivanova. 1997. Caesium-137 migration in the geographical complexes of the Central Russian hills. **Meteorology and Hydrology** 5: 45-55 (in Russian).
- Frielinghaus, M. and W. Vahrson. 1998. Soil translocation by water erosion from agricultural cropland into wet depressions (morainic kettle holes). **Soil and Tillage Research** 46(1-2):23-30.
- Frignani, M., L.G. Bellucci, C. Carraro, and M. Favotto. 2001. Accumulation of polychlorinated dibenzo-p-dioxins and dibenzofurans in sediments of the Venice Lagoon and the industrial area of Porto Marghera. **Marine Pollution Bulletin** 42(7):544-553.
- Frignani, M., L.G. Bellucci, M. Favotto, and S. Albertazzi. 2003. Polycyclic aromatic hydrocarbons in sediments of the Venice Lagoon. **Hydrobiologia** 494(1-3):283-290.
- Frignani, M., L.G. Bellucci, L. Langone, and H. Muntau. 1997. Metal fluxes to the sediments of the northern Venice Lagoon. **Marine Chemistry** 58(3-4):275-292.
- Frignani, M., and L. Langone. 1991. Accumulation rates and ^{137}Cs distribution in sediment off the Po river delta and Emilia-Romagna coast (northwestern Adriatic Sea, Italy). **Continental Shelf Research** 11:525-542.
- Frignani, M., D. Sorgente, L. Langone, S. Albertazzi, and M. Ravaioli. 2004. Behavior of Chernobyl radiocesium in sediments of the Adriatic Sea off the Po River delta and the Emilia-Romagna coast. **Journal of Environmental Radioactivity** 71(3):299-312.
- Frissel, M.J., and R. Pennders. 1983. Models for the accumulation and migration of ^{90}Sr , ^{137}Cs , $^{239+240}\text{Pu}$ and ^{241}Am in the upper layer of soils, pp. 63-72. *In*: P.J. Coughtrey, J.N.B. Bell, and T.M. Roberts (eds.), **Ecological aspects of radionuclide release**. Blackwell, Oxford.
- Frissel, M.J., J.F. Soutjesdijk, A.C. Hoolwijk, and H.W. Koster. 1987. The Cs-137 contamination of soils in the Netherlands and its consequences for the contamination of crop products. **Netherlands Journal of Agriculture Science** 35:339-346.
- Fröhlich, K., T. Franke, R. Gellermann, and D. Herbert. 1987. Silicon-32 in different aquifer types and implications for ground water dating. **Proceedings of the Isotope Techniques in Water Resources Development**, pp. 149-163. International Atomic Energy Agency, Vienna, Austria.
- Froehlich, W. 2004. Soil erosion, suspended sediment sources and deposition in the Maw-Ki-Syiem drainage basin, Cherrapunji, northeastern India. **International Association of Hydrological Sciences Publication** 288:138-146.

- Froehlich, W. 1995. Sediment dynamics in the Polish Flysch Carpathians, pp. 453-461. *In*: I.D.L. Foster, A.M. Gurnell, and B.W. Webb (eds.), **Sediment and water quality in river catchments**, Wiley, Chichester, UK.
- Froehlich, W., D.L. Higgitt, and D.E. Walling. 1993. The use of cesium-137 to investigate soil erosion and sediment delivery from cultivated slopes in the Polish Carpathians, pp 271-283. *In*: S. Wicherek (ed.), **Farmland erosion**, Elsevier, Amsterdam.
- Froehlich, W., and D.E. Walling. 2005. Using environmental radionuclides to elucidate sediment sources within a small drainage basin in the Polish Flysch Carpathians, p. 102-112. *In*: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Froehlich, W., and D. Walling. 1999. The use of fallout radionuclides and classical monitoring techniques in investigations of sediment transfer through fluvial systems in the Polish Flysch Carpathians, p 18. *In*: M.A. Hassan (Ed.) **International Conference on Drainage Basin Dynamics and Morphology**, Jerusalem, May 22-29, 1999. (Abstract).
- Froehlich, W., and D. Walling. 1997. The role of unmetalled roads as a sediment source in the fluvial systems of the Polish Flysch Carpathians. **International Association of Hydrological Sciences Publication No. 245**:159-168.
- Froehlich, W., and D.E. Walling. 1994. Use of Chernobyl-derived radiocaesium to investigate contemporary overbank sedimentation of the flood plains of Carpathian rivers. **International Association of Hydrological Sciences Publication No. 224**:161-169.
- Froehlich, W., and D.E. Walling. 1992. The use of radionuclides in investigations of erosion and sediment delivery in the Polish Flysch Carpathians. **International Association of Hydrological Sciences Publication No. 209**:61-76.
- Fuhrmann, M., M. Lasat, S. Ebbs, J. Cornish, and L. Kochian. 2003. Uptake and release of cesium-137 by five species and influenced by soil amendments in field experiments. **Journal of Environmental Quality** 32(6):2272-2279.
- Fuhrmann, M, M. M. Lasat, D. Ebbs, L. V. Kochian, and J. Cornish. 2002. Uptake of cesium-137 and strontium-90 from contaminated soil by three plant species; application to phytoremediation. **Journal of Environmental Quality** 31:904-909.
- Fuhrmann, M., H. Zhou, J. Neiheisel, and R. Dyer. 2001. Sorption of radioactive contaminants by sediment from the Kara Sea. **Marine Pollution Bulletin** 43(1-6):102-110.
- Fujikawa, Y., M. Fukui, D.J. Drew, and T.T Vandergraaf. 1993. Large analysis of the migration of instantaneously injected cesium in artificial fractures of Lac du Bonnet Granite, Manitoba, Canada. **Journal of Contamination Hydrology** 14:207-232.

- Fujikawa, Y., J. Zheng, I. Cayer, M. Sugahara, H. Takigami, and A. Kudo. 1999. Strong association of fallout plutonium with humic and fulvic acid as compared to uranium and Cs-137 in Nishiyama soils from Nagasaki, Japan. **Journal of Radioanalytical Nuclear Chemistry** 240(1):69-74.
- Fujiyoski, R. And S. Sawamura. 2004. Mesoscale variability of vertical profiles of environmental radionuclides (^{40}K , ^{226}Ra , ^{210}Pb , and ^{137}Cs) in temperate forest soils in Germany. **Science of Total Environment** 320(2-3):177-188.
- Fukui, M. 1990. Desorption kinetics and mobility of some radionuclides in sediments. **Health Physics** 59:879-889.
- Fukumori, E., E.R. Christensen, and R.J. Klein. 1992. A model of ^{137}Cs and other tracers in lake sediment considering particle size and the inverse solution. **Earth and Planetary Science Letters** 114:85-99.
- Fukuyama, T., Y. Onda, C. Takenaka, and T. Yamamoto. 2001. Estimation of soil erosion using radionuclide in reservoir sediment and forest soil. **Journal of Japanese Society for Erosion Control Engineering** 54:4-11 (In Japanese)
- Fukuyama, T. and C. Takenaka. 2004. Upward mobilization of (CS)-C-137 in surface soils of *Chamaecyparis obtusa* Sieb. et Zucc. (hinoki) plantation in Japan. **Science of the Total Environment** 318(1-3):187-195.
- Fulajtar, E. 2003. Assessment of soil erosion on arable land using ^{137}Cs measurements: a case study from Jaslovske Bohunice, Slovakia. **Soil and Tillage Research** 69(1-2):139-152.
- Fulajtar, E. 2000. Assessment of soil erosion through the use of ^{137}Cs at Jaslovske Bohunice, Western Slovakia. **Acta Geologica Hispanica** 35(3-4):291-300.
- Fulajtár, E. 1999. Assessment of soil erosion through the use of ^{137}Cs at Jaslovske Bohunice, Western Slovakia, pp. 67-79. IN: G. Richter, J.H. Rubio, O. Nestroy, J. Poesen and P. Bielek (eds.), **Soil Conservation in Large-scale land use, Proceedings**, Soil and Water Conservation Research Institute, Bratislava, Slovak Republic.
- Fuller, C.C., A. van Geen, M. Baskaran, and R. Anima. 1999. Sediment chronology in San Francisco Bay, California, defined by Pb-210, Th-234, Cs-137, and Pu-239, Pu-240. **Marine Chemistry** 64(1-2):7-27.
- Fuller, C. and D.E. Hammond. 1983. The fallout rate of Pb-210 on the western coast of the United States. **Geophysical Research Letters** 10(12):1164-1167.

- Fulop, M., and P. Ragan. 1997. In-situ measurements of ^{137}Cs in soil by unfolding method. **Health Physics** 72(6):923-930.
- Gabler, H.E. and A. Suckow. 2003. Chronology of anthropogenic heavy-metal fluxes and Pb isotopes ratios derived from a radiometrically dated lake sediment in Northern Germany. 144:243-262.
- Gaggino, G.F., G. Parise, G. Premazzi, and A. Provini. 1984. Trends in evolution of nutrient and trace elements in sediments from 13 Italian subalpine lakes over the last 30 years. **Proceedings third international symposium on the interaction between sediments and water**, Geneva, Switzerland, pp. 135-138.
- Galas, C., U. Sansone, M. Belli, S. Barbizzi, P. Cyffroy, G. P. Fanzutti, V. Kanivets, R. Ocone, R. Piani, M. Repetti, M. Riccardi, C. Terzoni, and O.V. Voitsekhovitch. 2002. Intercomparison of suspended particles sampling methodologies. **Accreditation and Quality Assurance** 7(5):202-208.
- Gale, H.J., D.L.O. Humphreys, and E.M.R. Fisher. 1964. Weathering of cesium-137 in soil. **Nature** 4916:257-261.
- Galimov, E.M., N.P. Laverov, O.V. Stepanets, and M.V. Vladimirov. 2004. Radiogeochemical investigations of 2002 in shallow bays of the Novaya Zemlya Archipelago. **Geochemistry International** 42(1):1-10.
- Gallegos, G. 1995. Surveillance monitoring of soils for radioactivity: Lawrence Livermore National Laboratory 1976 to 1992. **Health Physics** 69(4):487-493.
- Gallagher, D., E.J. McGee, and P.I. Mitchell. 2001. A recent history of C-14, Cs-137, Pb-210, and Am-241 accumulation at two Irish peat bog sites: An east versus west coast comparison. **Radiocarbon** 43(2B, Pt. 2):517-525.
- Gallagher, K.A., A.J. Wheeler, and J.D. Orford. 1996. An assessment of the heavy metal pollution of two tidal marshes on the north-west coast of Ireland. **Biology and Environment: Proceedings of the Royal Irish Academy** 96B(3):177-188.
- Gallagher, L., R.W. Macdonald, and D.W. Paton. 2004. The historical record of metals in sediments from six lakes in the Fraser River Basin, British Columbia. **Water Air and Soil Pollution** 152(1-4):257-278.
- Galloway, J.N., and G.E. Likens. 1979. Atmospheric enhancement and metal deposition in Adirondack lake sediment. **Limnology and Oceanography** 24:427-433.
- Gambrell, R.P., R.D. DeLaune, W.H. Patrick, and A. Jugsujinda. 2001. Mercury distribution in sediment profiles of six Louisiana Lakes. **Journal of Environmental Science and**

Health Part A-Toxic/Hazardous Substances & Environmental Engineering
36(5):661-676.

- Garcia-Oliva, F., L. Martinez, and J.M. Maass. 1995a. Soil ^{137}Cs activity in a tropical deciduous ecosystem under pasture conversion in Mexico. **Journal of Environmental Radioactivity** 26:37-49.
- Garcia-Oliva, F., L. Martinez, and J.M. Maass. 1995b. Long-term net soil erosion as determined by ^{137}Cs redistribution in an undisturbed and perturbed tropical deciduous forest ecosystem. **Geoderma** 68:135-147.
- García-Olivares, A., and A. Agüero. 1993. A model for the behavior of ^{137}Cs in watershed scenarios. **Journal of Contamination Hydrology** 13:183-211.
- García-Tenorio, R, C.I. Sanches-Angulo, M. García-León, J.M. Abril, and F. El-Daoushy. 1992. The use of ^{137}Cs in marine and lacustrine sediment dating. **Nuclear Geophysics** 6:395-403.
- Garland, J.A., W.A. McKay, P.J. Burton, and R.S. Cambray. 1990. Studies of environmental radioactivity on the coast of Northern Ireland. **Nuclear Energy** 29:205-233.
- Garland, J.A., W.A. McKay, R.S. Cambray, and P.J. Burton. 1989. Man-made radionuclides in the environment of Dumfries and Galloway. **Nuclear Energy** 28:369-392.
- Garnham, G.W., G.A. Codd, and G.M. Gadd. 1993. Uptake of cobalt and cesium by microalgal-clay and cyanobacterial-clay mixtures. **Microbiology Ecology** 25:71-82.
- Garrett, A.R. Jr, S.L. Cummings, and J.E. Regnier. 1971. Accumulation of ^{137}Cs and ^{90}Sr by Florida forages in a uniform environment. **Health Physics** 21:67-70.
- Garten, C.T. Jr, J.B. Gentry, J.E. Pinder III, R.R. Scharitz, and M.H. Smith. 1975. Radiocaesium dynamics in a contaminated floodplain ecosystem in the southeastern United States, pp. 331-347. *In: Impact of nuclear releases into aquatic environments*, International Atomic Energy Agency, Vienna,
- Garten, C.T., D.M. Hamby, and R.G. Schreckhise. 2000. Radiocesium discharges and subsequent environmental transport at the major US weapons production facilities. **Science of the Total Environment** 255(1-3):55-73.
- Gascó, C. and M.P. Antón. 1997. Influence of the submarine orography on the distribution of long-lived radionuclides in the Palomares marine ecosystem. **Journal of Environmental Radioactivity** 34(2):111-125.

- Gascó, C., M.P. Antón, and P. Rivas. 1995. Man-made radioactivity in the Almanzora gulch and beach-edge of Palomares, Spain. **Radiation Protection Dosimetry** 58(4):301.
- Gascó, C., M.P. Antón, R. Delfanti, A.M. González, J. Meral, and C. Papucci. 2002. Variation of the activity concentrations and fluxes of natural (^{210}Po , ^{210}Pb) and anthropogenic ($^{239,240}\text{Pu}$, ^{137}Cs) radionuclides in the Strait of Gibraltar (Spain). **Journal of Environmental Radioactivity** 62(3):25-46.
- Gascó, C., M.P. Antón, A. Espinosa, A. Aragón, A. Álvarez, N. Navarro, and E. García-Toraño. 1997. Procedures to define Pu isotopic ratios characterizing a contaminated area in Palomares (Spain). **Journal of Radioanalytical and Nuclear Chemistry, Articles** 222:81-86.
- Gascó, C., M.P. Anton, M. Pozuelo, J. Meral, A.M. Gonzalez, C. Papucci, and R. Delfanti. 2002. Distributions of Pu, Am and Cs in margin sediments from the western Mediterranean (Spanish coast). **Journal of Environmental Radioactivity** 59(1):75-89.
- Gascó, C., L. Romero, and E. Iranzo. 1992. Transuranics transfer in a Spanish marine ecosystem. **International Journal of Radioanalytical and Nuclear Chemistry** 156(11):151-163.
- Gascó, C., L. Romero, A. M. Lobo, and J. Palomares. 1992. Geochemical aspects and distribution of long-lived radionuclides in Marine sediments from Palomares. **International Journal of Radioanalytical and Nuclear Chemistry** 161(12):389-400.
- Gavshin, V.M., B.L. Shcherbov, M.S. Mel'gunov, V.D. Strakhovenko, V.A. Bobrov, and V.M. Tsibul'chik. 1999. Cs-137 and Pb-210 in lacustrine sediments of Stepnoi Altai as indicators of the dynamics of anthropogene changes in geochemical background throughout the 20th century. **Geologiya i Geofizika** 40(9):1331-1341.
- Gearing, J.N., D.E. Buckley, and J.N. Smith. 1991. Hydrocarbon and metal content in a sediment core from Halifax Harbour: a chronology of contamination **Canadian Journal of Fisheries and Aquatic Science** 48:2344-2354.
- Gehy, M.A. and H. Schleicher. 1990. **Absolute age determination: Physical and chemical dating methods and their applications**. Springer-Verlag, Berlin, Germany, 503p.
- Gellis, A.C., R.M.T. Webb, W.J. Wolfe, S.C.I. McIntyre. 1996. Land use, upland erosion, and reservoir sedimentation, Lago Loiza, Puerto Rico. **Geological Society of America, Abstracts with Programs** 28:A79.
- Gelen, A., O. Diaz, M.J. Simon, E. Herrera, J. Soto, J. Gomez, C. Rodenas, J. Beltran, and M. Ramirez. 2003. Pb-210 dating of sediments from Havana Bay. **Journal of Radioanalytical and Nuclear Chemistry** 256(3):561-564.

- Gelen, A., J. Soto, J. Gomez, and O. Diaz. 2004. Sediment dating of Santander Bay, Spain. **Journal of Radioanalytical and Nuclear Chemistry** 261(2):437-441.
- Geng, G.Q., and D.R. Coote. 1991. The residual effects of soil loss on the chemical and physical quality of three soils. **Geoderma** 48:415-429.
- Gennadiev, A.N., K.R. Olson, S.S. Chernyanskii, R.L. Jones, and W.I. Woods. 2002. Quantification of soil erosion rates within the Indian mounds area in Illinois. **Eurasian Soil Science** 35:8-17.
- Gerdol, R., S. Degetto, D. Mazzotta, and G. Vecchiata. 1994. The vertical distribution of Cs-137 derived from Chernobyl fall-out in the uppermost *Sphagnum* layer of two peatlands in the southern Alps. **Water Air Soil Pollution** 75:93-106.
- Gerino, M., G. Stora, and J.P. Durbec. 1994. Quantitative estimation of bioturbative and bioadvective sediment mixing: In situ experimental approach. **Oceanologica Acta** 17:547-554.
- Gerritse, R., F. Hernandez, A.S. Murray, P.J. Wallbrink, and G. Brunskill. 1995. Distribution of organochlorines, polycyclic aromatic hydrocarbons, phosphorus and Cs-137 in sediment profiles from Ellen Brook in western Australia. **Marine and Freshwater Research** 46:843-851.
- Gerritse, R.G., P.J. Wallbrink, and A.S. Murray. 1998. Accumulation of phosphorus and heavy metals in the Peel-Harvey estuary in Western Australia: Results of a preliminary study. **Estuaries and Coastal Shelf Science** 47(6):679-693.
- Gersper, P.L. 1970. Effect of American beech trees on the gamma radioactivity of soils. **Soil Science Society of America Proceedings** 34:318-323.
- Gerstmann, U.C., G. Rosner, and P. Schramel. 2004. Bioavailability of Pu239+240 and Cs-137 in aerosols and deposited dusts: a comparative study by fractional extraction. **Radiation and Environmental Biophysics** 43(2):111-117.
- Gerzabek, M.H., S.A. Mohammad, and K. Muck. 1992. Cesium-137 in soil texture fractions and its impact on Cesium-137 soil-to-plant transfer. **Communications in Soil Science and Plant Analyses** 70(1):140-144.
- Gerzabek, M.H., K. Muck, F. Steger, and S.M. Algader. 1996. Leaching of ⁶⁰Co, ¹³⁷Cs and ²²⁶Ra in lysimeter experiments. **Bodenkultur** 47(2):71-80.
- Gerzabek, M.H., and S.M. Ullah. 1988. Über die Verteilung von ¹³⁷Cs in den Korngrößenfraktionen zweier kontaminierter Böden. **Bodenkultur** 39:293-297. (German)

- Gholami, M., and S.M. Nojoumi. 1997. Measurement of Cesium -137 in water, fish and bed sediment of Bakhtegan Lake using gamma spectroscopy. **Abstracts of Papers American Chemical Society** 213(1-3):ENVR 163.
- Ghuman, G.S., B.G. Motes, S.J. Fernandez, K.W. Guardipee, G.W. McManus, C.M. Wilcox, and F.J. Weesner. 1993. Distribution of antimony-125, cesium-137, and iodine-129 in the soil plant system around a nuclear fuel reprocessing plant. **Journal of Environmental Radioactivity** 21:161-176.
- Giani, L., H. Gebhardt, W. Gusy, and H. Helmers. 1987. Verhalten einiger radioaktiver nuklide (freigesetzt durch den reaktorunfall in Tschernobyl) in typischen Böden Norddeutschlands. **Z. Pflanzenernähr. Bodenk.** 30:103-107. (German)
- Giani, L., and H. Helmers. 1997. Migration of cesium-137 in typical soils of North Germany ten year after the Chernobyl accident. **Z. Pflanzenernähr. Bodenk.** 160(1):81-83.
- Gibbs-Eggar, Z., B. Jude, J. Dominik, J.L. Loizeau, and F. Oldfield. 1999. Possible evidence for dissimilatory bacterial magnetite dominating the magnetic properties of recent lake sediments. **Earth and Planetary Science Letters** 168(1-2):1-6.
- Gibley, J., S. Bradley, and D.E. Walling. 1987. The deposition of caesium 137 on grassland at a site in SW England following the Chernobyl accident. **Grass Forage Science** 42:439-442.
- Gilbert, R., and J.R. Desloges. 1987. Sediments of ice-dammed, self-draining Ape Lake, British Columbia. **Canadian Journal of Earth Science** 14:
- Gill, A.C., J.R. McHenry, and J.C. Ritchie. 1976. Efficiency of nitrogen, carbon, and phosphorus retention by small agricultural reservoirs. **Journal of Environmental Quality** 5:310-315.
- Gillett, A.G., and N.M.J. Crout. 2000. A review of Cs-137 transfer to fungi and consequences for modelling environmental transfer. **Journal of Environmental Radioactivity** 48(1):95-121.
- Gilli, A., F.S. Anselmetti, D. Ariztegui, and J.A. McKenzie. 2003. A 600-year sedimentary record of flood events from two sub-alpine lakes (Schwendiseen, Northeastern Switzerland). **Eclogae Geologicae Helvetiae** 96(1):S49-S58.
- Gillieson, D., A. Cochrane, and A. Murray, and P.J. Wallbrink. 1994. Surface hydrology and soil erosion in an arid karst: Nullarbor Plain, Australia. **Environmental Geology** 23(2):125-133.

- Gillieson D.S. and P. Wallbrink. 1999. Integrating satellite data & fallout radionuclides to monitor ecosystem processes in the arid zone of Australia, pp. 51-58. In: **Proceedings of the International Geographical Union seminar on land degradation and desertification**, Aveiro, Portugal.
- Gillieson, D., P. Wallbrink, and A. Cochrane. 1996. A vegetation change, erosion risk and land management on the Nullarbor Plain, Australia. **Environmental Geology** 28(3):145-153.
- Gillieson, D. S., P.J. Wallbrink, A.S. Murray, and J.A. Cochrane. 1996. Estimates of wind erosion risk and rates using GIS modelling and Caesium-137 on the Nullarbor Plain karst, Australia. **Z. Geomorph. N.F., Suppl.-Bd.** 105:73-90.
- Gilliam, J.W. 1994. Riparian wetlands and water quality. **Journal of Environmental Quality** 23:896-900.
- Godoy, J.M., Z.L.Carvalho, F.D. Fernandes, O.M. Danelon, A.C.M. Ferreira, and L.A. Roldao. 2003. Cs-137 in marine samples from the Brazilian southeastern coastal region. **Journal of Environmental Radioactivity** 70(3):193-198.
- Godoy, J.M., J.R.D. Guimaraes, and Z.L. Carvalho. 1993. Cs-137 pre-concentration from water samples using a Prussian Blue impregnated ion-exchanger. **Journal of Environmental Radioactivity** 20:213-219.
- Godoy, J.M., L.A. Schuch, D.J.R. Nordemann, V.R.G. Reis, M. Ramalho, J.C. Recio, R.R.A. Brito, and M.A. Olech. 1998. ^{137}Cs , $^{226,228}\text{Ra}$, ^{210}Pb and ^{40}K concentrations in Antarctic soil, sediment and selected moss and lichen samples. **Journal of Environmental Radioactivity** 41(1):33-45.
- Goff, J.R., and C. Chague-Goff. 1999. A late Holocene record of environmental changes from coastal wetlands: Abel Tasman National Park, New Zealand. **Quaternary International** 56:39-51.
- Goff, J.R., G.B. Dunbar, and P.J. Barrett. 1998. Monthly to decadal sediment accumulation rates in a semi-enclosed embayment. **Journal of Coastal Research** 14(2):461-471.
- Goldberg, E.D. 1963. Geochronology with lead-210 radioactive dating. **STI/PUB/68**, pp. 121-131, International Atomic Energy Agency, Vienna, Austria.
- Goldberg, E.D., E. Gamble, J. Griffin, and M. Koide. 1977. Pollution history of Narragansett Bay as recorded in its sediment. **Estuarine and Coastal Marine Science** 5:549-561.
- Goldberg, E.D., and M. Koide. 1962. Geochronological studies of deep sea sediments by the ionium/thorium method. **Geochemica et Cosmochimica Acta** 26:417-450.

- Golikov, Yu. N., P.I. Datskevich, V.M. Dolgov, F.D. Komissarov, and O.D. Khvalei. 1997. Radioecological situation of Lake Ezerische (Belarus). **Gidrobiologicheskii Zhurnal** 33(4):94-100. (Russian)
- GolosoV, V.N. 2003. Application of Chernobyl-derived ^{137}Cs for the assessment of soil redistribution within a cultivated field. **Soil and Tillage Research** 69(1-2):85-98.
- GolosoV, V.N. 2002. Special considerations for areas affected by Chernobyl fallout, p. 165-184. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- GolosoV, V.N. 1998. Redistribution of sediments within small river catchments in the agricultural zone of Russia. **Geomorphologie: Relief, Processes, Environment** 1:53-64.
- GolosoV, V.N. 1998. Sediment accumulation in the Russian Plain Balkas. **Eroziya Pochv I Ruslovye ProtseSSy** 11:97-112.
- GolosoV, V.N. 1996. Redistribution of sediments in a small river catchment of temperate zone. **International Association of Hydrological Sciences Publication No.** 236:339-346.
- GolosoV, V.N. 1996. Some approaches for studying the intensity of small river aggradation. **International Journal of Sediment Research** 11(2):38-46.
- GolosoV, V.N. 1992. On cyclic patterns of erosion and deposition processes in agricultural zone of the Russian Plain. **Geomorfologiya** N3:43-51 (in Russian).
- GolosoV, V.N. and N.N. Ivanova. 1993. Some causes of the disappearance of the river network due to intensive agricultural land development. **Vodnye ResourSy** 20(6):684-688. (in Russian).
- GolosoV, V.N., N.N. Ivanova, L. Litvin, and A.Yu. Sidorchuk. 1992. Sediment budgets in river basins and small river aggradation of small rivers of the Russian Plains. **Geomorphologiy** 4:62-73. (In Russian).
- GolosoV, V.N. E.V. Kvasnikova, A.V. Panin, N.N. and Ivanova. 1998. Radionuclide migration in the Chernobyl contamination zone, pp 38-49. In: **Environmental Radioactivity and Its Application in Environmental Studies**, Proceeding of the International Symposium, 16-20 February 1998, Christchurch, New Zealand.
- GolosoV, V., and L. Litvin. 2005. The sediment budgets of cultivated slopes and slope catchments: an evaluation of the influence of slope morphology, p.3-10. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, Uk. IAHS Press.

- Golosov, V.N., L.F. Litvin, and A.N. Silant'yev. 1990. Use of radioisotope methods to estimate the intensity of soil erosion, pp. 190-201. *In: Study of dangerous natural phenomena: methods and results. A collection of scientific papers.* MGU, Moscow.
- Golosov, N.V., M.V. Markelov, A.V. Panin, and D.E. Walling. 1998. Cs-137 contamination of river systems in Central Russia as a result of the Chernobyl incident, p. 535-546. *In: Hydrology in a changing environment (Proceedings of the Hydrological Society International Conference, Exeter, UK, July 1998)*, Wiley, Chichester, UK.
- Golosov, V.N., I.V. Ostrova, A.N. Silant'ev and I.G. Shkuratova. 1992. Radioisotope method of assessment of basin accumulation. **Geomorphologika** 1:30-36. (In Russian).
- Golosov, V.N., A.V. Panin, and N.N. Ivanova. 1997. Small river aggradation in European Russia during the period of intensive agriculture, p. 615-620. *In: Wang, S.S.Y., E.J. Langendoen, and F.D. Shields (eds.), Proceedings of the Conference on Landscape Disturbed by Channel Incision*, University of Mississippi, Oxford, Mississippi.
- Golosov, V.N., A.V. Panin, and M.V. Markelov. 1999. Chernobyl Cs-137 redistribution in the small basin of the Lokna river, Central Russia. **Physics and Chemistry of the Earth Part A-Solid Earth and Geodesy** 24(10):881-885.
- Golosov, V.N., D.E. Walling, E.V. Kvasnikova, E.D. Stukin, A.N. Nikolaev, and A.V. Panin. 2000. Application of a field-portable scintillation detector for studying the distribution of Cs-137 inventories in a small basin in Central Russia. **Journal of Environmental Radioactivity** 48(1):79-94.
- Golosov, V.N., D.E. Walling, and A.V. Panin. 2000. Post-fallout redistribution of Chernobyl-derived caesium-137 in small catchments within the Lokna River basin. **International Association of Hydrological Sciences Publication No.** 263:49-57.
- Golosov, V.N., D.E. Walling, A.V. Panin, E.D. Stukin, E.V Kvasnikova, and N.N. Ivanova. 1999. The spatial variability of Chernobyl-derived Cs-137 inventories in a small agricultural drainage basin in central Russia 11 years after the Chernobyl incident. **Applied Radiation and Isotopes** 51(3):341-352.
- Golosov, V.N., D.E. Walling, E.D. Stukin, A.N. Nikolaev, E.V Kvasnikova, and A.V. Panin. 2000. Application of a field-portable scintillation detector for studying the distribution of Cs-137 inventories in a small basin in Central Russia. **Journal of Environmental Radioactivity** 48(4):79-94.
- Gommers, A. T. Gafvert, E. Smolders, R. Merckx, and H. Vandenhove. 2005. Radiocaesium soil-to-wood transfer in commercial willow short rotation coppice on contaminated farm land. **Journal of Environmental Radioactivity** 78(3):267-287.

- Gommers, A., Y. Thiry, H. Vandenhove, C.M. Vandecasteele, E. Smolders, and R. Merckx. 2000. Radiocesium uptake by one-year-old willows planted as short rotation coppice. **Journal of Environmental Quality** 29(5):1384-1390.
- Gonzales, G.J., M.T. Saladen, and T.E. Hakonson. 1995. Effects of pocket gopher burrowing on cesium-133 distribution on engineering plots. **Journal of Environmental Quality** 24:1056-1062.
- Goodbred, S.L., and S.A. Kuehl. 1998. Floodplain processes in the Bengal Basin and the storage of Ganges-Brahmaputra river sediment: an accretion study using Cs-137 and Pb-210 geochronology. **Sedimentary Geology** 121(3-4):239-258.
- Goor, F., V. Davydochuk, and U. Vandenhove. 2003. GIS-based methodology for Chernobyl contaminated land management through biomass conversion into energy - a case study for Polessie, Ukraine. **Biomass & Bioenergy** 25(4):409-421.
- Goor, F., and Y. Thiry. 2004. Processes, dynamics and modelling of radiocaesium cycling in a chronosequence of Chernobyl-contaminated Scots pine (*Pinus sylvestris* L.) plantations. **Science of the Total Environment** 325(1-3):163-180.
- Goreau, T.J. 1977. Qualitative effects of sediment mixing on stratigraphy and biochemistry: a signal theory approach. **Nature** 265:525-526.
- Gorham, E., and J.E. Sanger. 1976. Fossilized pigments as stratigraphic indicators of cultural eutrophication in Shagawa Lake northeastern, Minnesota. **Geology Society of America Bulletin** 87:1638-1642.
- Goshawk, J.A., S. Clarke, C.N. Smith, and P. McDonald. 2003. MEAD (part I) - a mathematical model of the long-term dispersion of radioactivity in shelf sea environments. **Journal of Environmental Radioactivity** 68(2):115-135.
- Gottgens, J.F., and T.L. Crisman. 1993. Quantitative impacts of lake-level stabilization on material transfer between water and sediment in Newmans Lake, Florida. **Canadian Journal of Fisheries and Aquatic Science** 50:1610-1616.
- Govers, G., D.A. Lobb, and T.A. Quine. 1999. Preface - Tillage erosion and translocation: emergence of a new paradigm in soil erosion research. **Soil and Tillage Research** 51(3-4):167-174'
- Govers, G., T.A. Quine, P.J.J. Desmet, and D.E. Walling. 1996. The relative contribution of soil tillage and overland flow erosion to soil redistribution on agricultural land. **Earth Surface Processes and Landforms** 21:929-946.

- Govers, G., T.A. Quine, and D.E. Walling. 1993. The effect of water erosion and tillage movement on hillslope profile development: a comparison of observations and model results, pp. 285-300. *In*: S. Wicherek (ed.), **Farm land erosion in temperate plains environments and hills**, Elsevier, Amsterdam.
- Govers, G., K. Vandaele, P. Desmet, J. Poesen, and K. Bunte. 1995. The role of tillage in soil redistribution on hillslopes. **European Journal of Soil Science** 45:469-478.
- Govorun, A.P., A.V. Chesnokov, and S.B. Shcherbak. 1999. Characteristic features of the Cs-137 and Sr-90 distributions in the floodplain of the Techa river near the village of Brodokalmak. **Atomic Energy** 86(1):63-69.
- Govorun, A.P., A.V. Chesnokov, and S.B. Shcherbak. 1998. ¹³⁷Cs soil contamination in the Techa river flood plain near Muslyumovo village. **Atomnaya Energiya** 84(6):545-550. (Russian)
- Golovatyj, S.E., and S.M. Rydaya. 2002. Forms of radionuclides ⁹⁰Sr, ¹³⁷Cs and physicochemical properties of the soils at the 30 km restricted zone around Chernobyl NPP. **Pochvovedenie i Agrokimiya** 32:228-238, 316, 326. (In Russian).
- Graham, E.R. 1963. Factors affecting Sr-85 and I-131 removal by runoff water. **Water and Sewage Works** 110:407-410.
- Graham, E.R., and D.D. Killion. 1962. Soil colloids as a factor in the uptake of cobalt, caesium and strontium in plants. **Soil Science Society of America Proceedings** 26:545-547.
- Graham, J.C., and S.L. Simon. 1996. A study of ¹³⁷Cs in soil profiles from the Marshall Islands. **Science of the Total Environment** 183(3):255-268.
- Graney, J.R., and T.M. Eriksen. 2004. Metals in pond sediments as archives of anthropogenic activities: a study in response to health concerns. **Applied Geochemistry** 19(7):1177-1188.
- Graney, J.R., A.N. Halliday, G.J. Keeler, J.O. Nriagu, J.A. Robbins, and S.A. Norton. 1995. Isotopic record of lead pollution in lake sediment from the northeastern United States. **Geochimica et Cosmochimica Acta** 59:1715-1728.
- Graustein, W.C., and K.K. Turekian. 1986. ²¹⁰Pb and ¹³⁷Cs in air and soil measure the rates and vertical profile of aerosol scavenging. **Journal of Geophysical Research** 91:14355-14366.
- Grebmeier, J.M., and J.P. Barry. 1991. The influence of oceanographic processes on plegalic-benthic coupling in polar regions: a benthic perspective. **Journal of Marine Systems** 2:495-518.

- Grebmeier, J.M., L.W. Cooper, I.L Larson, C. Solis, and C.R. Olsen. 1993. Cesium-137 inventories in Alaskan tundra, lake and marine sediment: An indicator of recent organic matter transport. **Report No, IAEA-SM-329/21/0 (Conf.-930412-1)**, 22pp.
- Green, N., B.T. Wilkins, and D.J. Hammond. 1994. The transfer of Cs-137 and Sr-90 along the soil-pasture-cows' milk pathway in an area of land reclaimed from the sea. **Journal of Environmental Radioactivity** 23:151-170.
- Gregorich, E.G. 1996. Soil quality: A Canadian prospective, p. 40-52. In: K.C. Cameron et al (eds.), **Soil Quality Indicators for Sustainable Agriculture in New Zealand. Proceeding of a Workshop**, Lincoln University, Christchurch, New Zealand.
- Gregorich, E.G., and D.W., Anderson. 1985. Effects of cultivation and erosion on four toposequences in the Canadian prairies. **Geoderma** 36:343-354.
- Gregorich, E.G., K.J. Greer, D.W. Anderson, and B.C. Liang. 1998. Carbon distribution and losses: erosion and deposition effects. **Soil Tillage Research** 47:299-310.
- Gregory, T.K., and M.A. Charette. 1997. Heavy metal contamination in sediment from Crane Creek, Florida. **Florida Scientist** 60(2):81-88.
- Gri, N., D. Stammose, P. Guillou, and M. Genet. 2000. Mobility of Cs-137 related to speciation studies in contaminated soils of the Chernobyl area. **Journal of Radioanalytical and Nuclear Chemistry** 246(2):403-409.
- Giffin, D. And D.R. Corbett. 2003. Evaluation of sediment dynamics in coastal systems via short-lived radioisotopes. **Journal of Marine Systems** 42(3-4):83-96.
- Griffith, M. 1978. Specific blue-green algal carotenoids in sediments of Esthwaite Water. **Limnology and Oceanography** 23:777-784.
- Grimes, J.A., and S.R. Rushforth. 1983. Diatoms of surface sediments of Utah Lake, Utah, U.S.A. **Hydrobiologia** 99:161-174.
- Gritchenko, Z.G., L.M. Ivanova, Y.A. Panteleev, N.A. Tishkova, T.K. Ikaheimonen, E. Ilus, and R. Saxén. 1996. Joint Russian-Finnish study of radioactive contamination in the NW part of Lake Ladoga. **Hydrobiologia** 322 (1/3):125-128.
- Grosbois, C.A., A.J. Horowitz, J.J. Smith, and K.A. Elrick. 2001. The effect of mining and related activities on the sediment-trace element geochemistry of Lake Coeur d'Alene, Idaho, USA. Part III. Downstream effects: the Spokane River Basin. **Hydrological Processes** 15(5):855-875.

- Grousset, F.E., J.M. Jouanneau, P. Castaing, G. Lavaux, and C. Latouche. 1999. A 70 year record of contamination from industrial activity along the Garonne River and its tributaries (SW France). **Estuaries and Coastal Shelf Science** 48(3):401-414.
- Grzybowska, D., and G.J. Soszka. 1978. ^{90}Sr and ^{137}Cs contamination level in Zarnowiec lake. **Bulletin de L'Academie Polonaise des Science s Serie des Science s Biologiques Cl. II** 26:751-757.
- Gschwend, P.M., and R.A. Hites. 1981. Fluxes of polycyclic aromatic hydrocarbons to marine and lacustrine sediments in the northeastern United States. **Geochimica et Cosmochimica Acta** 45:2359-2367.
- Gubala, C.P., D.H. Landers, M. Monetti, M. Heit, T. Wade, B. Lasorsa, and S. Allengil. 1995. The rates of accumulation and chronologies of atmospherically derived pollutants in Arctic, Alaska. **Science of the Total Environment** 161:347-361.
- Guevara, S.R. and M. Arribere. 2002. Cs-137 dating of lake cores from the Nahuel Huapi National Park, Patagonia, Argentina: Historical records and profile measurements. **Journal of Radioanalytical and Nuclear Chemistry** 252(1):37-45.
- Guevara, S.R., J. Massaferrero, G. Villarosa, M. Arribere, and A. Rizzo. 2002. Heavy metal contamination in sediments of Lake Nahuel Huapi, Nahuel Huapi National Park, Northern Patagonia, Argentina. **Water Air and Soil Pollution** 137(1-4):21-44.
- Guevara, S.R., A. Rizzo, R. Sanchez, and M. Arribere. 2003. Pb-210 fluxes in sediment layers sampled from Northern Patagonia lakes. **Journal of Radioanalytical and Nuclear Chemistry** 258(3):583-595.
- Guimarães, M.F. 1988. **Césio-137 da precipitação radioativa ("fallout") no estudo da erosão e sedimentação de solo. Pira-cicaba**, S P. Doctoral Thesis. Escola Superior de Agricultura "Luiz de Queiroz", Universidade de São Paulo- Brazil. 136p
- Guimaraes, M.F., V.F. Nascimento, and J. Ritchie. 2003. Application of cesium-137 in a study of soil erosion and deposition in Southeastern Brazil. **Soil Science** 168(1):45-53.
- Guinasso, N.L. Jr and D.R. Schink. 1975. Quantitative estimates of biological mixing rates in abyssal sediments. **Journal of Geophysical Research** 80:3032-3043.
- Gulin, S.B., C.G. Polikarpov, V.N. Egorov, J.M. Martin, A.A. Korotkov, and N.A. Stokozov. 2002. Radioactive contamination of the north-western Black Sea sediments. **Estuarine Coastal and Shelf Science** 54(3):541-549.
- Gulin, S.B., G.G. Polikarpov, V.N. Egorov, V.N. Zherko, and N.A. Stokozov. 1995. Reconstruction of chronology of the ^{137}Cs and chloroorganic pollutant input to the

western Black Sea deep sediments (from 1940s to 1990s) **Dopovivi Natsional'noyi Akademiyi Nauk Ukrayiny** 1:93-96. (Russian)

- Gulin, S.B., G.G. Polikarpov, and J.M. Martin. 2003. Geochronological reconstruction of Cs-137 transport from the Coruh river to the SE Black Sea: comparative assessment of radionuclide retention in the mountainous catchment area. **Continental Shelf Research** 23(17-19):1811-1819.
- Gulinck, H., I. Vanden Berghe, and E. Abts. 1988. Dynamics, interactions and connectivity of linear elements in rural landscapes of central Belgium. Planning opportunities, pp. 89-91. *In: K.F. Schreiber (ed.), **Connectivity in landscape ecology***, Proceedings of the 2nd International Seminar of the International Association for Landscape Ecology, Munster, Germany.
- Gunkel, G. 2003. Limnology of a high mountain tropical lake, in Ecuador: Characteristics of sediments and rate of sedimentation. **Revista de Biologia Tropical** 51(2):381-390.
- Guo, J.F., M. Atarashi-Andoh, and H. Amano. 2003. Variation of C-14, Cs-137 and stable carbon composition in forest soil and its implications. **Journal of Radioanalytical and Nuclear Chemistry** 255(1):223-229.
- Gutierrez, M., and H.R. Fuentes. 1991. Competitive adsorption of cesium, cobalt and strontium in conditioned clayey soil suspensions. **Journal of Environmental Radioactivity** 13:271-282.
- Gwynn, J.P., M. Dowdall, C. Davids, O.G. Selnaes, B. Lind. 2004. The radiological environment of Svalbard. **Polar Research** 23(2):167-180.
- Haak, E., and T. Rydberg. 1998. Deposition, transfer and migration of ^{137}Cs and ^{90}Sr in Swedish agricultural environments, and use of ^{137}Cs in erosion studies, p. 27-38. *In: International Atomic Energy Agency (ed), **Use of ^{137}Cs in the Study of Soil Erosion and Sedimentation, IAEA-TECDOC-1028***, Vienna, Austria.
- Haciyakupoglu, S. T.A. Ertek, N. Celebi, G. Karahan, C. Firat, A.E. Erginal, and H. Kaya. 2002. Caesium-137 (^{137}Cs) profile on a dynamic soils at the Eastern Coasts of Buyukcekmece Lake (Turkish). **Proceedings of the IVth National Conference for Coastal and Marine Environments of Turkey**, Dokuz Eylul University Volume 2:1283-1290, Izmir, Turkey, 5-8 November, 2002.
- Haciyakupoglu, S., T.A. Ertek, G. Karahan, Z.F. Ozturk, A.E. Erginal, N. Celebi, and H. Saygin. 2003. Research on erosion using Cs-137 measurements in the Riva Creek Basin and Buyukcekmece Lake Basin (Istanbul / NW Turkey). **International Scientific Conference on Agricultural Water Management And Mechanization Factors For Sustainable Agriculture, Proceedings Abstracts**, P.46, 8-11 October 2003 National

Centre For Agrarian Sciences Institute For Land Reclamation And Agricultural
Mechanization, Sofia, Bulgaria

- Haciyakupoglu, S., T.A. Ertek, Z.F. Ozturk, G. Karahan, A.E. Erginal, N. Celebi, H. Kaya, and H. Saygin. 2003. Research on erosion in Buyukcekmece Lake Basin; One of the main drinking water sources In Istanbul. WASWC Balkan Meeting 2003, 1-2 July 2003, Sofia, Bulgaria (<http://www.swcc.cn/waswc/articles/proceedings/PROCEEDINGS.htm>).
- Haciyakupoglu, S., T.A. Ertek, N. Celebi, G. Karahan, Z.F. Ozturk, A. E. Erginal, H.Kaya, H.Saygin. Buyukcekmece Golu Havzasi İle Riva Deresi Havzasi Topraklarında Cs-137 Olcumleriyle Erozyon Arařtırmaları. **VIII. Ulusal Nukleer Bilimler ve Teknolojileri Kongresi**, www.taek.gov.tr/kongreler/nbtk2003/program/poster1.htm, S.16, 15-17 Ekim 2003 Erciyes Universitesi, Kayseri.)Turkish)
- Haciyakupoglu, S., T.A. Ertek, D.E. Walling, Z.F. Ozturk, G. Karahan, A.E. Erginal, N. Celebi, L. Gureli, H. Kaya, and H. Akgun. 2003. Investigation of the erosion in Istanbul - Buyuk Cekmece Lake using Caesium-137 measurements. **Proceeding of the Sixth International Conference of the Mediterranean Coastal Environment**, Vol 3, P.1855-1864, 07-11 October 2003, Ravenna, Italy.
- Haciyakupoglu, S., T.A. Ertek, D.E. Walling, Z.F. Ozturk., G. Karahan, A.E. Erginal, and N. Celebi. 2003. Interpretation of the erosion effect with Caesium-137 profiles measurements in Western Side Of Istanbul (NW Turkey). **Symposium 25 Years of Assessment of Erosion, Proceedings Book 239**, 239b-239e, 240, 22-26 September 2003, Ghent, Belgium.
- Haciyakupoglu, S., T.A. Ertek, D.E. Walling, and Yayinlanmamis Rapor. 2003. The use of Cs-137, Pb-210 and Be-7 measurements for assessing soil erosion and sedimentation in the Riva Basin (Istanbul, NW Turkey). **First Research Co-ordination Meeting (311-RC-888) of the Co-ordinated Research Project Assessing The Effectiveness Of Soil Conservation Techniques For Sustainable Watershed Management Using Fallout Radionuclides** , 19-23 May2003 Vienna, Austria. Summary of Progress Report. (<http://www.iaea.or.at/programmes/nafa/d1/mtc/abstracts-rcm-19-23-may.pdf>)
- Hagedorn, F. and M. Bundt. 2002. The age of preferential flow paths. **Geoderma** 108(1-2):119-132.
- Haghiri, F. 1970. Fate of strontium-90 in soil, plants, and water. **Ohio Report** 55:74-77.
- Hai, P.S., P.N. Son, N.N. Dien, V.H. Tan, and P.D. Hien. 1999. Assessment of erosion and accretion in catchment areas based on ²¹⁰Pb and ¹³⁷Cs contents in soil and sediment, pp. 415-418. In Stevenson N. R. (Ed.), **Isotope Production and Applications in the 21st Century**. World Scientific, Vancouver, Canada.

- Hairr, L. 1974. **An investigation of factors influencing radiocesium cycling in estuarine sediments in the Hudson River.** Ph.D. Thesis, New York University, New York.
- Håkanson, L. 2005. A new general mechanistic river model for radionuclides from single pulse fallouts which can be run by readily accessible driving variables. **Journal of Environmental Radioactivity** 80(3):357-382.
- Håkanson, L. 2004. A new generic sub-model for radionuclide fixation in large catchments from continuous and single-pulse fallouts, as used in a river model. **Journal of Environmental Radioactivity** 77(3):247-273.
- Håkanson, L. 2004. Modelling the transport of radionuclides from land to water. **Journal of Environmental Radioactivity** 73(3):267-287.
- Håkanson, L. 2004. Internal loading: A new solution to an old problem in aquatic sciences. **Lakes and Reservoirs: Research and Management** 9(1):3-23.
- Håkanson, L. 2003. A general management model to optimize lake liming operations. **Lakes and Reservoirs: Research and Management** 8(2):105-140.
- Håkanson, L. 2001. Assessment of critical loading of lakes as a basis for remedial measures: A review of fundamental concepts. **Lakes and Reservoirs: Research and Management** 6(1):1-20.
- Håkanson, L. 1999. A compilation of empirical data and variations in data concerning radiocesium in water, sediments and fish in European lakes after Chernobyl. **Journal of Environmental Radioactivity** 44(1):21-42.
- Håkanson, L. 1994. A review on effect-dose-sensitivity models for aquatic ecosystems. **Internationale Revue der Gesamten Hydrobiologie** 79:621-667.
- Håkanson, L. 1980. An ecological risk index for aquatic pollution control. A sedimentological approach. **Water Research** 14:975-1001.
- Håkanson, L., and T. Andersson. 1992. Remedial measures against radioactive caesium in Swedish lake fish after Chernobyl. **Aquatic Science** 54:141-164.
- Håkanson, L., J.E. Brittain, L. Monte. R. Heling, U. Bergström, and V. Suolanen. 1996. Modelling of radiocesium in Lakes: The VAMP model. **Journal of Environmental Radioactivity** 33(3):255-308.
- Håkanson, L., and A. Källström. 1978. An equation of state for biologically active lake sediment and its implications for interpretations of sediment data. **Sedimentology** 25:205-226.

- Håkanson, L., F. Ottosson, O. Abrahamsson, and T. Johansson. 1998. Presentation of a model simulating the response of lakes to fertilizations to reduce radiocesium levels in fish. **Journal of Environmental Radioactivity** 41(3):343-380.
- Håkanson, L. and T. Sazykina. 2001. A blind test of the MOIRA lake model for radiocesium for Lake Uruskul, Russia, contaminated by fallout from the Kyshtym accident in 1957. **Journal of Environmental Radioactivity** 54(3):327-344.
- Håkanson, L., T.G. Sazykina, and I.I. Kryshev. 2002. A general approach to transform a lake model for one radionuclide (radiocesium) to another (radiostrontium) and critical model tests using data for four Ural lakes contaminated by the fallout from the Kyshtym accident in 1957. **Journal of Environmental Radioactivity** 60(3):319-350.
- Hakem, N., J.A. Apps, G.J. Moridis, and I. Al Mahamid. 2004. Sorption of fission product radionuclides, Cs-137 and Sr-90, by Savannah River Site sediments impregnated with colloidal silica. **Radiochimica Acta** 92(7):419-432.
- Hakem, N.L., I. Al Mahamid, J.A. Apps, and G.J. Moridis. 2000. Sorption of cesium and strontium on Hanford soil. **Journal of Radioanalytical and Nuclear** 246(2):275-278.
- Hakonson, T.E. and L.J. Lane. 1993. The role of physical process in the transport on man-made radionuclides in arid ecosystems, pp. 101-176. In: R.M. Harrison (ed.), **Biogeochemical pathways of artificial radionuclides**, John Wiley and Sons, New York.
- Hakonson, T.E., and F.W. Wicker. 1975. Cesium kinetics in a montane lake ecosystem. **Health Physics** 28:699-706.
- Häkkinen, U., and E. Lakanen. 1968. Strontium 90 and caesium 137 in some Finnish soil profiles. **Ann. Agric. Fenn.** 7:123-126.
- Halldin, S., A. Rodhe, and B. Bjurman. 1990. Urban storm water transport and wash-off of caesium-137 after the Chernobyl accident. **Water Air Soil Pollution** 49:139-158.
- Hamilton, E.I., and K.R. Clarke. 1984. The recent sedimentation history of the Esk estuary Cumbria, U.K.: the application of radiochronology. **Science of the Total Environment** 35:325-386.
- Hancock, G.J. and J.R. Hunter. 1999. Use of excess ^{210}Pb and ^{228}Th to estimate rates of sediment accumulation and bioturbation in Port-Phillip-Bay, Australia. **Marine and Freshwater Research** 50:533-545.
- Hansen, H.J.M., and A. Aarkrog. 1990. A different surface geology in Denmark, the Faroe islands and Greenland influences the radiological contamination of drinking water. **Water Research** 24:1137-1141.

- Hanslik, E., V. Edinakova-Krizova, D. Ivanovova, E. Kalinova, B.Sedlarova, and P. Smonek. 2005. Observed half-lives of ^3H , ^{90}Sr and ^{137}Cs in hydrosphere in the Vltava River basin (Bohemia). **Journal of Environmental Radioactivity** 81(2-3):307-320.
- Hao, Y.L., R. Lal, R.C. Izaurralde, J.C. Ritchie, L.B. Owens, and D.L. Hothem. 2001. Historic assessment of agricultural impacts on soil and soil organic carbon erosion in an Ohio watershed. **Soil Science** 166(2):116-126.
- Hao Y., R. Lal, L.B. Owens, and R.C. Izaurralde. 2001. Soil organic carbon assessment by cesium-137, pp. 451-465. In: Lal, R., J.M. Kimble, R.F. Follett, and B.A. Stewart, **Assessment Methods for Soil Carbon**, Lewis Publishers, Boca Raton, FL.
- Harbor, J., and J. Warburto. 1993. Relative rates of glacial and nonglacial erosion in Alpine environments. **Arctic A.R.** 25:1-7.
- Hardaway, C., W.-J. Sheu, J.R. Meriwether, J. Sneddon, and J.N. Beck. 1998. The effect of diagenetic processes on the radiochronology of soft sediments using ^{210}Pb and ^{137}Cs . **Microchemical Journal** 58(1):127-134.
- Hardy, E.P. 1975. Regional uniformity of cumulative radionuclides fallout. **HASL-288**. Health and Safety Laboratory, New York.
- Hardy, E.P., P.W. Krey, and H.L. Volchok. 1973. Global inventory and distribution of fallout plutonium. **Nature** 241:444-445.
- Hardy, E.P., H.D. Livingston, J.C. Burke, and H.L. Volchok. 1978. Time pattern of off-site plutonium contamination from Rocky Flats Plant by lake sediment analyses. **EML-342**, pp. I-123 to I-146. Environmental Monitoring Laboratory, New York.
- Hardy, E.P., M.W. Meyer, J.S. Allen, and L.T. Alexander. 1968. Strontium-90 on the earth's surface. **Nature** 219:584-587.
- Hargrove, W.W., F.M. Hoffman, and D.A. Levine. 1995. Interpolation of bottom bathymetry and potential erosion in a large Tennessee reservoir system using GRASS. **Department of Energy Conference CONF-9503121-3**, 6p.
- Harper, R.J., and R.J. Gilkes. 1994. Evaluation of the Cs-137 techniques for estimating wind erosion losses for some sandy Western Australian soils. **Australian Journal of Soil Research** 32:1369-1387.
- Harper, R.J., R.J. Gilkes, M. Hill, and D.J. Carter. 2002. The incidence of wind erosion as related to soil properties and geomorphic history in south-western Australia, pp. 158-162. In: J.A. Lee and T.M. Zobeck (eds.), **Proceedings of ICAR5/GCTE-SEN Joint**

Conference, International Center for Arid and Semiarid Lands Studies, Texas Tech University, Lubbock, Texas, USA Publication 02-2.

- Harrison, J., H. Heijnis, and G. Caprarelli. 2003. Historical pollution variability from abandoned mine sites, Greater Blue Mountains World Heritage Area, New South Wales, Australia. **Environmental Geology** 43(6):680-687.
- Hartig, E.K., V. Gornitz, A. Kolker, F. Mushacke, and D. Fallon. 2002. Anthropogenic and climate-change impacts on salt marshes of Jamaica Bay, New York City. **Wetlands** 22(1):71-89.
- Haselwandter, V.K. 1978. Accumulation of radioactive nuclide ^{137}Cs in fruit bodies of Basidiomycetes. **Health Physics** 34:713-715.
- Haselwandter, V.K. 1977. Radioaktives Cäsium ($\text{Cs } 137$) in fruchtkörpern verschiedener Basidiomycetes. **Zeitschr. F. Pilzkunde** 43:323-326. (German)
- Hasholt, B., and D.E. Walling. 1992. Use of caesium-137 to investigate sediment sources and sediment delivery in a small glacierized mountain drainage basin in Eastern Greenland. **International Association of Hydrological Sciences Publication No. 209**:87-100.
- Hasholt, B., D.E. Walling, and P.N. Owens. 2000. Sedimentation in Arctic proglacial lakes: Mittivakkat Glacier, south-east Greenland. **Hydrological Processes** 14:679-699.
- Haslett, S.K., A.B. Cundy, C.F.C. Davies, E.S. Powell, and I.W. Croudace. 2003. Salt marsh, sedimentation over the past c. 120 years along the West Cotentin Coast of Normandy (France): Relationship to sea-level rise and sediment supply. **Journal of Coastal Research** 19(3):609-620.
- Hatton, R.S., R.D. DeLaune, and W.H. Patrick Jr. 1983. Sedimentation, accretion, and subsidence in marshes of Barataria Basin, Louisiana. **Limnology and Oceanography** 28:494-502.
- Haugen, L.E. 1992. Small-scale variation in deposition of radiocaesium from the Chernobyl fallout on cultivated grasslands in Norway. **Analyst** 117:465-468.
- Hausmann, S., A.F. Lotter, J.F.N. van Leeuwen, C. Ohlendorf, G. Lemcke, E. Gronlund, and M. Strum. 2002. Interactions of climate and land use documented in the varved sediments of Seebergsee in the Swiss Alps. **Holocene** 12(3):279-289.
- Hawks, P.H., J.C. Ritchie, and J.R. McHenry. 1974. Measuring recent valley sedimentation rates using fallout cesium-137. **Geology Society of America Abstracts with Program** 6:363.

- Haworth, E.Y. 1984. Stratigraphic changes in algal remains (diatoms and chrysophytes) in recent sediments of Blelham Tarn, English Lake District, pp. 165-190. *In*: E.Y. Haworth and J.W.G. Lund (eds.), **Lake sediment and environmental history**, University of Minnesota Press, Minneapolis, MN.
- Haworth, E.Y. 1980. Comparison of continuous phytoplankton records with the diatom stratigraphy in recent sediments of Blelham Tarn. **Limnology and Oceanography** 25:1093-1103.
- Haworth, E.Y. 1976. The changes in the composition of diatoms assemblages found in the surface sediments of Blelham Tarn in the English Lake District during 1973. **Annals of Botany** 40:1195-1205.
- Hayes, D.W., and W.H. Sackett. 1987. Plutonium and cesium radionuclide in sediments of the Savannah River estuary. **Estuaries and Coastal Shelf Science** 25:69-74.
- He, Q., and P. Owens. 1995. Determination of suspended sediment provenance using caesium-137, unsupported lead-210 and radium-226: A numerical mixing model approach, pp. 207-227. *In*: I.D.L. Foster, A.M. Gurnell, and B.W. Webb (eds.), **Sediment and water quality in river catchments**, John Wiley and Sons, London.
- He, Q. and D.E. Walling. 2003. Testing distributed soil erosion and sediment delivery models using ^{137}Cs measurements. **Hydrological Processes** 17(5):901-916.
- He, Q., and D.E. Walling. 1998. Calibrating and validating a spatially distributed sediment delivery model using soil caesium-137 data. **Proceedings of the Hong Kong International Conference on Modeling Geographical and Environmental Systems with Geographical Information Systems**. Chinese University of Hong Kong Press, Hong Kong, 272-277
- He, Q., and D.E. Walling. 1997. The distribution of fallout ^{137}Cs and ^{210}Pb in undisturbed and cultivated soils. **Applied Radiation and Isotopes** 48:677-690.
- He, Q., and D.E. Walling. 1996a. Interpreting particle size effects in the absorption of ^{137}Cs and unsupported ^{210}Pb by mineral soils and sediments. **Journal of Environmental Radioactivity** 30:117-137.
- He, Q., and D.E. Walling. 1996b. Use of fallout Pb-210 to investigate longer-term rates and patterns of overbank sediments deposition on the flood plains of lowland rivers. **Earth Surface Processes and Landforms** 21:141-154.
- He, Q., and D.E. Walling. 1996c. Rates of overbank sedimentation on the floodplains of British lowland rivers documented using fallout ^{137}Cs . **Geograf. Annal.** 78A:223-234.

- He, Q., D.E. Walling, and P.N. Owens. 1996. Interpreting the ^{137}Cs profiles observed in several small lakes and reservoirs in southern England. **Chemical Geology** 129:115-131.
- He, Q., D.E. Walling, and P.J. Wallbrink. 2002. Alternative methods and radionuclides for use in soil-erosion and sedimentation investigations, p. 185-216. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Health and Safety Laboratory Fallout Program. 1977. Final tabulation of monthly ^{90}Sr fallout data: 1954-1976. **HASL-329**, Health and Safety Laboratory, New York.
- Health and Safety Laboratory Fallout Program. 1972. **HASL-258**, A-40-41, A-93-94, Health and Safety Laboratory, New York.
- Heathwaite, A.L. 1993. Catchment control on the recent sediment history of Slapton Ley, Southwest England, pp. 241-259. In: D.S.G. Thomas and R.J. Allison (eds.), **Landscape sensitivity**, John Wiley and Sons, Chichester, UK.
- Heathwaite, A.L., and T.P. Burt. 1993. The evidence for past and present erosion in the Slapton catchment. Southwest Devon. In: J. Boardman, I.D.L. Foster, and J.A. Dearing (eds.), **Soil erosion on agricultural land**, John Wiley, Chichester, UK.
- Hebel, S.J., and D.C. Wilkin. 1982. Agricultural land management strategies for sediment reduction. **Landscape Architecture** 1982:91-95.
- Heckrath, G., J. Djurhuus, T.A. Quine, K. VanOost, G. Govers, and Y. Zhang. 2005. Tillage erosion and its effect on soil properties and crop yield in Denmark. **Journal of Environmental Quality** 34(1):312-324.
- Heijnen, H., G.W. Berger, and D. Eisma. 1987. Accumulation rates of estuarine sediments in the Dollard Area: comparison of ^{210}Pb and pollen influx methods. **Netherlands Journal of Sea Research** 21:295-301.
- Hien, P.D., H. T. Hiep, N. H. Quang, N. Q. Huy, N. T. Binh, P. S. Hai, N. Q. Long, and V. T. Bac. 2002. Derivation of ^{137}Cs deposition density from measurements of ^{137}Cs inventories in undisturbed soils. **Journal of Environmental Radioactivity** 62(3):295-303.
- Heinrich, G., K. Oswald, and H.J. Muller. 1999. Lichens as monitors of radiocesium and radiostrontium in Austria. **Journal of Environmental Radioactivity** 45(1):13-27.
- Heit, M., and K. Miller. 1987. Cesium-137 sediment depth profiles and inventories in Adirondack lake sediments. **Biogeochemistry** 3:243-265.

- Heit, M., K.M. Miller, P. Krey, D. Bogen, and H. Freely. 1984. Other radionuclides: plutonium with some comments about ^{137}Cs chronologies in freshwater sediments. **Workshop on paleolimnological studies of the history and effects of acidic precipitation**, Rockland, ME. pp. 34-77.
- Heit, M., Y.L. Tan, C.S. Klusek, and J.C. Burke. 1981. Anthropogenic trace elements and polycyclic aromatic hydrocarbons in sediment cores from two lakes in the Adirondack acid lake region. **Water Air Soil Pollution** 15:441-464.
- Heit, M., Y.L. Tan, C.S. Klusek, H.L. Volchok, and J.C. Burke. 1980. The origin and deposition history of trace elements and polynuclear aromatic hydrocarbons in two remote lakes in the Adirondack acid rain region. **EML-381**, pp. I-75 to I-127. Environmental Measurements Laboratory, New York.
- Heit, M., Y.L. Tan, K.M. Miller, J. Quanci, C. Marinetti, and S. Silvestri. 1986. The sediment chronology and polycyclic aromatic hydrocarbon concentrations and fluxes in Cayuga Lake, N.Y., **EML-451**. Environmental Measurement Laboratory, New York, 53pp.
- Helal, A.A., D.M. Imam, and H.F. Aly. 1998. Interaction of Cs^+ , Sr^{2+} and Gd^{3+} with humin. **Journal of Radioanalytical Nuclear Chemistry** 237(1-2):7-10.
- Heldal, H.E., P. Varskog, and L. Foy. 2002. Distribution of selected anthropogenic radionuclides (Cs-137 , Pu-238 , Pu-239 , Pu-240 and Am-241) in marine sediments with emphasis on the Spitsbergen-Bear Island area. **Science of the Total Environment** 293(1-3):233-245.
- Helmer, R.G., R.J. Gehrke, and M.V. Carpenter. 1999. Three types of photon detectors for in situ measurements. **Nuclear Instruments Methods Physics Research Sect. A-Accel. Spectrom. Dect. Assoc. Equip.** 422(1-3):826-831.
- Helton, J.C., A.B. Muller, and A. Bayer. 1985. Contamination of surface-water bodies after reactor accidents by the erosion of atmospherically deposited radionuclides. **Health Physics** 48:757-771.
- Herczeg, A.L., A.K. Smith, and J.C. Dighton. 2000. A 120 year record of changes in nitrogen and carbon cycling in Lake Alexandrina, South Australia: C : N, $\delta\text{N-15}$ and $\delta\text{C-13}$ in sediments. **Applied Geochemistry** 16(1):73-84.
- Hermanson, M.H. 1993. Historical accumulation of atmospherically derived pollutant trace metals in the Arctic as measured in dated sediment cores. **Water Science Technology** 28:33-41.

- Hermanson, M.H. 1991. Chronology and sources of anthropogenic trace-metals in sediment cores from small shallow Arctic lakes. **Environmental Science and Technology** 25:2059-2064.
- Hermanson, M.H. 1990. ^{210}Pb and ^{137}Cs chronology of sediments from small, shallow Arctic lakes. **Geochimica et Cosmochimica Acta** 54:1443-1451.
- Hermanson, M.H., and E.R. Christensen. 1991. Recent sedimentation in Lake Michigan. **Journal of Great Lakes Research** 17:33-50.
- Hermanson, M.H., E.R. Christensen, D.J. Buser, and L.M. Chen. 1991. Polychlorinated biphenyls in dated sediments cores from Green Bay and Lake Michigan. **Journal of Great Lakes Research** 17:94-108.
- Herranz, M., C. Elejalde, F. Legarda, and F. Romero. 2001. Sr-90 content of soils from Biscay (Spain). **Applied Radiation and Isotopes** 55(4):521-525.
- Hesslein, R.H. 1987. Whole-lake metal radiotracer movement in fertilized lake basins. **Canadian Journal of Fisheries and Aquatic Science** 44:74-82.
- Hesslein, R.H., W.S. Broecker, and D.W. Schindler. 1980. Fates of metal radiotracers added to a whole lake: sediment-water interactions. **Canadian Journal of Fisheries and Aquatic Science** 37:378-386.
- Hetherington, J.A., and D.F. Jefferies. 1974. The distribution of some fission product radionuclides in sea and estuarine sediments. **Netherlands Journal of Sea Research** 8:319-338.
- Hewitt, A.E. 1996. Estimating surface erosion using ^{137}Cs at a semi-arid site in Central Otago, New Zealand. **Journal of Royal Society of New Zealand** 26(1):107-118.
- Hien, P.D., H.T. Hiep, N.H. Quang, N. Q. Huy, N.T. Binh, P.S. Hai, N.Q. Long, and V.T. Bac. 2002. Variability of ^{137}Cs inventories in undisturbed soils across the territory of Viet Nam, p. 316-322. In: **Nuclear techniques in integrated plant nutrient, water and soil management**. Proceedings of an International Symposium held in Vienna, Austria, 16-20 October 2000, International Atomic Energy Agency, Vienna, Austria.
- Hien, P.D., H.T. Hiep, N.H. Quang, N.Q. Huy, N.T. Binh, P.S. Hai, N.Q. Long, and V.T. Bac. 2002. Derivation of Cs-137 deposition density from measurements of Cs-137 inventories in undisturbed soils. **Journal of Environmental Radioactivity** 62(3):295-303.
- Hien, P.Z., N.T. Binh, T.Y. VT Bac, and N.T. Ngo. 1994. Variations of caesium isotope concentrations in air and fallout at Dalat, South Vietnam, 1986-91. **Journal of Environmental Radioactivity** 22:55-62.

- Higgitt, D.L. 1995. Quantifying erosion rates from caesium-137 measurements: A comment on Elliott and Cole-Clark. **Australian Journal of Soil Research** 33:709-714.
- Higgitt, D.L. 1995. The development and application of caesium-137 measurements in erosion investigations, pp.287-305. *In*: I.D.L. Forster, A.M.B. Gurnell, and B.W. Webb (eds.), **Sediment and waters quality in river catchments**, John Wiley and Sons, London.
- Higgitt, D.L. 1995. Quantifying erosion rates from caesium-137 measurements: A comment on Elliott and Cole-Clark (1993): "Estimates of erosion on potato lands on Krasozems at Dorrigo, N.S.W. using the caesium-137 technique". **Australian Journal of Soil Research** 33:709-714.
- Higgitt, D.L. 1991. Soil erosion and soil problems. **Progress in Physical Geology** 15:91-100.
- Higgitt, D.L., W. Froehlich, and D.E. Walling. 1992. Applications and limitations of Chernobyl radiocaesium measurements in a Carpathian erosion investigation, Poland. **Land Degradation and Rehabilitation** 3:15-26.
- Higgitt, D.L., and X. Liu. 1997. Patterns of sediment yield in the Upper Yangtze River basin, China. **International Association of Hydrological Sciences Publication No.** 236:205-214.
- Higgitt, D.L., X.X. Lu, and L.J. Pu. 2000. Soil erosion assessment using ¹³⁷Cs: Example from contrasting environments in Southern China, pp. 165-182. *In*: I.D.L. Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Higgitt, D.L., J.S. Rowan, and D.E. Walling. 1993. Catchment-scale deposition and redistribution of Chernobyl radiocaesium in upland Britain. **Environmental International** 19:155-166.
- Higgitt, D.L., and D.E. Walling. 1993. The value of caesium-137 measurements for estimating soil erosion and sediment delivery in an agricultural catchment, Avon, UK, pp. 301-315. *In*: S.Wicherek (ed) **Farm land erosion: In temperate plains environment and hills**, Elsevier, Amsterdam.
- Higgitt, D.L., D.E. Walling, and M.J. Haigh. 1994. Estimating rates of ground retreat on mining spoils using caesium-137. **Applied Geography** 14:294-307.
- Higgy, R.H., and M. Pimpl. 1998. Natural and man-made radioactivity in soils and plants around the research reactor of Inshass. **Applied Radiation and Isotopes** 49(12):1709-1712.

- Hillmann, U., W. Schimmack, P. Jacob, and K. Bunzl. 1996. In situ gamma-spectrometry several years after deposition of radiocesium: Part I. Approximation of depth distributions by the Lorentz function. **Radiation Environmental Biophysics** 35(4):297-303.
- Hilton, J. 1985. A conceptual framework for predicting the occurrence of sediment focusing and sediment redistribution in small lakes. **Limnology and Oceanography** 30:1131-1143.
- Hilton, J., R.S. Cambray, and N. Green. 1992. Chemical fractionation of radioactive caesium in airborne particles containing bomb fallout, Chernobyl fallout and atmospheric materials from the Stellafield site. **Journal of Environmental Radioactivity** 15:103-111.
- Hilton, J., L. Davison, J. Hamilton-Taylor, M. Kelly, F.R. Livens, E. Rigg, and D.L. Singleton. 1994. Similarities in the behaviour of Chernobyl derived Ru-103, Ru-106 and Cs-137 in two freshwater lakes. **Aquatic Science** 56:133-144.
- Hilton, J., J.P. Lishman, and P.V. Allen. 1986. The dominant processes of sediment distribution and focusing in a small, eutrophic, monomictic lake. **Limnology and Oceanography** 31:125-133.
- Hilton, J., F.R. Livens, P. Spezzano, and D.R.P. Leonard. 1993. Retention of radioactive caesium by different soils in the catchment of a small lake. **Science of the Total Environment** 129:253-266.
- Hilton, J., E. Rigg, W. Davison, J. Hamilton-Taylor, M. Kelly, F.R. Livens, and D.L. Singleton. 1995. Modeling and interpreting element ratios in water and sediments: A sensitivity analysis of post-Chernobyl Ru:Cs ratios. **Limnology and Oceanography** 40:1302-1309
- Hilton, J., and P. Spezzano. 1994. An investigation of possible processes of radiocaesium release from organic upland soils to water bodies. **Water Research** 28:975-983.
- Hinton, T.G., C.M. Bell, F.W. Whicker, and T. Philippi. 1999. Temporal changes and factors influencing Cs-137 concentration in vegetation colonizing an exposed lake bed over a three-year period. **Journal of Environmental Radioactivity** 44(1):1-19.
- Hird, A.B., D.L. Rimmer, and F.R. Livens. 1996a. Factors affecting the caesium fixation in upland organic soils. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 69-76** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Hird, A.B., D.L. Rimmer, and F.R. Livens. 1996b. Factors affecting the sorption and fixation of caesium in acid organic soil. **European Journal of Soil Science** 47(1):97-104.
- Hird, A.B., D.L. Rimmer, and F.R. Livens. 1995. Total caesium-fixing potential of acid organic soils. **Journal of Environmental Radioactivity** 26:103-118.

- Hirose, K., M. Aoyama, Y. Katsuragi, and Y. Sugimura. 1987. Annual deposition of ^{90}Sr , ^{137}Cs , and $^{239,240}\text{Pu}$ from 1961-1980 nuclear explosions: a simple model. **Journal of the Meteorological Society of Japan** 65(2):259-277.
- Hirschberg, D.J., and J.R. Schubel. 1979. Recent geochemical history of flood deposits in the northern Chesapeake Bay. **Estuaries and Coastal Marine Science** 9:771-784.
- Hodge, V., C. Smith, and J. Whiting. 1996. Radiocesium and plutonium: Still together in "background" soils after more than thirty years. **Chemosphere** 32(10):2067-2075.
- Hoehn, E., J. Eikenberg, T. Fierz, W. Drost, and E. Reichlmayr. 1998. The Grimsel Migration Experiment: Field injection-withdrawal experiments in fractured rock with sorbing tracers. **Journal of Contaminant Hydrology** 34(1-2):85-106.
- Hogbom, L. and H.O. Nohrstedt. 2001. The fate of Cs-137 in coniferous forests following the application of wood-ash. **Science of the Total Environment** 280(1-3):133-141.
- Hohenemser, C., M. Deicher, A. Ernst, H. Hofsäss, G. Linder, and E. Recknagel. 1986. Chernobyl: an early report. **Environmental International** 28:6-43.
- Holgýe, Z., S. Foltanova, and R. Filgas. 1999. Contents of Pu-238, Pu-239, Pu-240 and Cs-137 in sediments and shore depositions of the Vltava river in 1995-1996. **Journal of Radioanalytical and Nuclear Chemistry** 241(3):601-604.
- Holgýe, Z., and M. Maly. 2000. Sources, vertical distribution, and migration rates of Pu-239, Pu-240, Pu-238, and Cs-137 in grassland soil in three localities of central Bohemia. **Journal of Environmental Radioactivity** 47(2):135-147.
- Holgýe, Z., E. Schlesingerova, J. Tecl, and R. Filgas. 2004. Pu-238, Pu-239, Pu-240, Am-241, Sr-90 and Cs-137 in soils around nuclear research centre Rez, near Prague. **Journal of Environmental Radioactivity** 71(2):115-125.
- Holmes, J.A., M.J. Allen, F.A. Street-Perrott, M. Ivanovich, R.A. Perrott, and M.P. Waller. 1999. Late Holocene palaeolimnology of Bal Lake, Northern Nigeria, a multidisciplinary study. **Paleogeography Paleoclimatology and Paleoecology** 148(1-3):169-185.
- Hong, G.H., S.H. Lee, S.H. Kim, C.S. Chung, and M. Baskaran. 1999. Sedimentary fluxes of Sr-90, Cs-137, Pu-239, Pu-240 and Pb-210 in the East Sea (Sea of Japan). **Science of the Total Environment** 238(Special issue SI):225-240.
- Hong, G.H., S.H. Kim, S.H. Lee, C.S. Chung, A.V. Tkalin, E.L. Chaykovskaya, and T.F. Hamilton. 1999. Artificial radionuclides in the East Sea (Sea of Japan) proper and Peter the Great Bay. **Marine Pollution Bulletin** 38(10):933-943.

- Hongve, D., I.A. Blakar, and J.E. Brittain. 1995. Radiocesium in the sediments of Øvre Heimdalsvatn, a Norwegian subalpine lake. **Journal of Environmental Radioactivity** 27:1-11.
- Horowitz, A.J., K.A. Elrick, and R.B. Cook. 1993. Effect of mining and related activities on sediment trace element geochemistry of Lake Coeur D'Alene, USA Part I: Surface sediments. **Hydrological Processes** 7:403-423.
- Horowitz, A.J., K.A. Elrick, J.A. Robbins, and R.B. Cook. 1995. Effect of mining and related activities on sediment trace element geochemistry of Lake Coeur D'Alene, USA Part II: Subsurface sediments. **Hydrological Processes** 9:35-54.
- Horrill, A.D., and G. Clint. 1994. Caesium cycling in heather moorlands ecosystems, pp. 395-416. *In*: S.M. Ross (ed.), **Toxics in Plant-Soil Systems**, John Wiley, Chichester, UK.
- Horrill, A.D., and M. Howard. 1991. Chernobyl fallout in three areas of upland pasture in west Cumbria. **Journal of Radiological Protection** 11:249-257.
- Horrill, A.D., and S. Mudge. 1990. The influence of grassland management on the radionuclide inventory in west Cumbria, UK. **Journal of Environmental Radioactivity** 12:143-165.
- Hotzl, H., G. Rosner, and R. Winkler. 1992. Sources of present Chernobyl-derived caesium concentrations in surface air and deposition samples. **Science of the Total Environment** 119:231-242.
- Hou, X.L., C.L. Fogh, J. Kucera, K.G. Andersson, H. Dahlgard, and S.P. Nielsen. 2003. Iodine-129 and Caesium-137 in Chernobyl contaminated soil and their chemical fractionation. **Science of the Total Environment** 308(1-3):97-109.
- Howard, B.J., N.A. Beresford, and F.R. Livens. 1990. An overview of caesium in the semi-natural ecosystem of an upland sheep farm, *In*: G. Desmet, P. Nossimbeni, and M. Belli (eds.), **Transfer of radionuclides in natural and seminatural ecosystems**, Elsevier, Amsterdam.
- Howard, B.J., F.R. Livens, and C.B. Walters. 1996 A review of radionuclides in tide-washed pastures on the Irish sea coast in England and Wales and their transfer to food products. **Environmental Pollution** 93(1):63-74.
- Howard, B.J., N. Semioschkina, G. Voigt, M. Mukusheva, and J. Clifford. 2004. Radiostrontium contamination of soil and vegetation within the Semipalatinsk test site. **Radiation and Environmental Biophysics** 43(4):285-292.

- Howarth, R.J, G. Evans, I. Croudace, and A.B. Cundy. 2005. Sources and timing of anthropogenic pollution in the Ensenada de San Simon (inner Ria de Vigo), Galicia, NW Spain: an application of mixture-modelling and nonlinear optimization to recent sedimentation. **Science of the Total Environment** 340(1-3):149-176.
- Hrabovskyy, V., O. Dzendzelyuk, I. Katerynychuk, and Y. Furgala. 2004. Monitoring of radionuclides contamination of soils in Shatsk National Natural Park (Volyn Region, Ukraine) during 1994-2001. **Journal of Environmental** 72(1-2):25-33.
- Hu, S., Y. Wang, E. Appel, Y. Zhu, V. Hoffmann, C. Shi, and Y. Yu. 2003. Magnetic responses to acidification in Lake Yangzonghai, SW China. **Physics and Chemistry of the Earth** 28(16-19):711-717.
- Hubbard, J.E., and W.D. Striffler. 1973. Cesium 137 in a mountain channel. **Water Resources Research** 9:1440-1442.
- Hughes, R.G. and O.A.L. Paramor. 2004. On the loss of salt marshes in south-east England and methods for their restoration. **Journal of Applied Ecology** 41(3):440-448.
- Huh, C.A., and H.Y. Chen. 1999. History of lead pollution recorded in East China Sea sediments. **Marine Pollution Bulletin** 38(7):545-549.
- Huh, C.-A., K. -S. Chu, C.-L. Wei, and P.-M. Liew. 1996. Lead-210 and plutonium fallout in Taiwan as recorded at a subalpine lake. **Journal of Southeast Asian Earth Science** 14:373-376.
- Huh, C.-A., L.F. Small, S. Niemi, B.P. Finney, B.M. Hickey, D.S. Gorsline, and P.M. Williams. 1990. Sedimentation dynamics in the Santa Monica-San Pedro Basin off Los Angeles: Radiochemical, sediment trap and transmissometer studies. **Continental Shelf Research** 10:137-164.
- Huh, C.A., and C.C.; Su. 2004. Distribution of fallout radionuclides (Be-7, Cs-137, Pb-210 and Pu-239,Pu-240) in soils of Taiwan. **Journal of Environmental Radioactivity** 77(1):87-100.
- Huh, C.A., and C.C. Su. 1999. Sedimentation dynamics in the East China Sea elucidated from Pb-210, Cs-137 and Pu-239,Pu-240. **Marine Geology** 160(1-2):183-196.
- Huh, C.A., D.L. Zahnle, L.F. Small, and V.E. Noshkin. 1987. Budgets and behaviors of uranium and thorium series isotopes in Santa Monica Basin sediments. **Geochimica et Cosmochimica Acta** 51:1743-1754.

- Hulse, S.E., S.A. Ibrahim, F.W. Whicker, and P.L. Chapman. 1998. Comparison of ^{241}Am , $^{239,240}\text{Pu}$, and ^{137}Cs concentrations in soil around Rocky Flats. **Health Physics** 76:275-286.
- Hunt, G.J., and P.J. Kershaw. 1990. Remobilization of artificial radionuclides from the sediment of the Irish Sea. **Journal of Radiological Protection** 10:147-151.
- Huntley, S.L., H. Carlson-Lynch, G.W. Johnson, D.J. Paustenbach, and B.L. Finley. 1998. Identification of historical PCDD-F sources in Newark Bay estuary subsurface sediments using polytopic vector analysis and radioisotope dating techniques. **Chemosphere** 36(6):1167-1185.
- Huntley, S.L., R.J. Wenning, S.H. Su, N.L. Bonnevie, and D.J. Paustenbach. 1995. Geochronology and sedimentology of the lower Passaic River, New Jersey. **Estuaries** 18:351-361.
- Hutchinson, S.M. 1995. Use of magnetic and radiometric measurements to investigate erosion and sedimentation in a British upland catchment. **Earth Surface Processes and Landforms** 20:293-314.
- Hutchinson, S.M. 1994. Distribution of ^{137}Cs in saltmarsh sediment in the Dee Estuary, NW England. **Marine Pollution Bulletin** 28:262-265.
- Hutchinson, S.M., and D. Prandle. 1994. Siltation in salt marsh of the Dee Estuary derived from ^{137}Cs analysis of shallow cores. **Estuaries and Coastal Shelf Science** 38:471-478.
- Hutchinson-Benson, E., J. Svoboda, and H.W. Taylor. 1985. The latitudinal inventory of ^{137}Cs in vegetation and topsoil in Northern Canada, 1980. **Canadian Journal of Botany** 63:784-791.
- Igarashi, Y. 2004. Atmospheric process studies through long-term monitoring of radioactive fallout. **Journal of Radiation Research** 44(4):378-379.
- Igarashi, Y., M. Aoyama, K. Hirose, T. Miyao, and S. Yabuki. 2001. Is it possible to use Sr-90 and Cs-137 as tracers for the aeolian dust transport? **Water Air and Soil Pollution** 130(1-4, Pt. 2):349-354.
- Igarashi, Y., M. Aoyama, K. Hirose, T. Miyao, K. Nemoto, M. Tomita, and T. Fujikawa. 2003. Resuspension: Decadal monitoring time series of the anthropogenic radioactivity deposition in Japan. **Journal of Radiation Research** 44(4):319-328.
- Ikeuchi, Y. 2003. Temporal variations of Sr-90 and Cs-137 concentrations in Japanese coastal surface seawater and sediments from 1974 to 1998. **Deep-Sea Research Part II-Topical Studies in Oceanography** 50(17-21):2713-2726.

- Ilacqua, V., N.C.J. Freeman, J. Fagliano, and P.J. Liroy. 2003. The historical record of air pollution as defined by attic dust. **Atmospheric Environment** 37(17):2379-2389.
- International Atomic Energy Agency. 2001. *Assessment of Soil Erosion Through the Use of ¹³⁷Cs and Related Techniques as a Basis for Soil Conservation, Sustainable Agricultural Production and Environmental Protection (D1-50.05)* Final Report of the FAO/IAEA Co-ordinated Research Project. IAEA-311-D1-RC-629.4
- International Atomic Energy Agency. 1998. *Use of ¹³⁷Cs in the Study of Soil Erosion and Sedimentation, IAEA-TECDOC-1028*, Vienna, Austria.
- International Atomic Energy Agency. 1995. Use of Nuclear Techniques in Studying Soil Erosion and Siltation. **IAEA TECDOC 828**. IAEA, Vienna, Austria
- Inbar, M. 1992. Rates of fluvial erosion in basins with a Mediterranean climate. **Catena** 19:393-409.
- Inbar, M. 1982. Measurement of fluvial sediment transport compared with lacustrine sedimentation rates: the flow of the River Jordan into Lake Kinneret. **Hydrological Science Journal** 4:439-449.
- Inn, K.G.W., Z.C. Lin, Z.Y. Wu, C. McMahon, J.J. Filliben, P. Krey, M. Feiner, C.K. Liu, R. Holloway, J. Harvey, I.L. Larsen, T. Beasley, C.A. Huh, S. Morton, D. McCurdy, P. Germain, J. Handl, M. Yamamoto, B. Warren, T.H. Bates, A. Holms, B.R. Harvey, D.S. Popplewell, M.J. Woods, S. Jerome, K.J. Odell, P. Young, and I. Croudace. 2001. The NIST natural-matrix radionuclide standard reference material program for ocean studies. **Journal of Radioanalytical and Nuclear Chemistry** 248(1):227-231.
- Iivari, T.A. 1991. Cesium-137 study of sediment from channel projects. **Fifth Federal Interagency Sediment Conference** PS:18-24.
- Ionita, I. and R.M. Margineanu. 2000. Use of ¹³⁷Cs technique in soil erosion and sedimentation studies in Romania. **Proceedings of the Symposium on Research Methods in Plant Cropping**, AGRIS Publication, p. 79-92 (in Romanian)
- Ionita, I. and R.M. Margineanu. 2000. Application of ¹³⁷Cs for measuring soil erosion/deposition rates in Romania. **Acta Geologica Hispanica** 35(3-4):311-319.
- Ionita, I., R.M. Margineanu, and C. Hurjui. 2000. Assessment of the reservoir sedimentation rates from ¹³⁷Cs measurements in the Moldavian Plateau. **Acta Geologica Hispanica** 35(3-4):357-367.

- Irlweck, K. 1985. Depth distribution of $^{137}\text{Cesium}$, $^{90}\text{strontium}$ and $^{210}\text{lead}$ in sediments of Lake Mondsee, Austria. **Journal of Radiation Nuclear Chemistry Letters** 93:115-124.
- Irlweck, K., and D.L. Danielopol. 1985. Caesium-137 and lead-210 dating of recent sediment from Mondsee (Austria). **Hydrobiologia** 128:175-185.
- Irlweck, K., B. Khademi, E. Henrich, and R. Kronraff. 1993. Pu-239(240), Pu-238, Sr-90, Ru-103 and Cs-137 concentrations in surface air in Austria due to dispersion of Chernobyl releases over Europe. **Journal of Environmental Radioactivity** 20:133-148.
- Isaksson, M. 1997. Methods of measuring radioactivity in the environment. **LUNFD6-NFFR-1017**, Lund University (Sweden). 61 p
- Isaksson, M., and B. Erlandsson. 1998a. Investigation of the distribution of ^{137}Cs from fallout in the soils of the city of Lund and the province of Skane in Sweden. **Journal of Environmental Radioactivity** 38(1):105-131.
- Isaksson, M., and B. Erlandsson. 1998b. Models for the vertical migration of ^{137}Cs in the ground: A field study. **Journal of Environmental Radioactivity** 41(2):163-182.
- Isaksson, M., and B. Erlandsson. 1995. Experimental determination of the vertical and horizontal distribution of ^{137}Cs in the ground. **Journal of Environmental Radioactivity** 27:141-160.
- Isaksson, M., B. Erlandsson, and S. Mattsson. 2001. A 10-year study of the Cs-137 distribution in soil and a comparison of Cs soil inventory with precipitation-determined deposition. **Journal of Environmental Radioactivity** 55(1):47-59.
- Iskander, F.Y., S. Landsberger, and S.D Warren. 2000. Determination of Cs-137 in soil samples by low-level Compton suppression gamma-counting. **Journal of Radioanalytical and Nuclear Chemistry** 244(1):159-163.
- Itakura, T., E.Y. Kuo, and J.R. Twining. 2004. Properties of two tropical soils in relation to the transport of radionuclides in the rhizosphere. **Journal of Environmental Radioactivity** 76(1/2):253-264.
- Itoh, N. Y. Tani, T. Nagatani, and M. Somapp. 2003. Phototrophic activity and redox condition in Lake Hamana, Japan, indicated by sedimentary photosynthetic pigments and molybdenum over the last ~250 years. **Journal of Paleolimnology** 29(4):403-422.
- Ivanova, N.N., V.N. Golosov, and M.V. Markelov. 2000. Comparison of methods for evaluating the intensity of erosion-accumulation processes on tilled slopes. **Pochvovedenie** 7:876-887 (in Russian)

- Ivanov, Y.A., N. Lewyckyj, S.E. Levchuk, B.S. Prister, S.K. Firsakova, N.P. Arkhipov, A.N. Arkhipov, S.V. Kruglov, R.M. Alexakhin, J. Sandalls, and S. Askbrant. 1997. Migration of ^{137}Cs and ^{90}Sr from Chernobyl fallout in Ukrainian, Belarussian and Russian soils. **Journal of Environmental Radioactivity** 35(1):1-21.
- Izrael, Y.A., E.V. Kvasnikova, I.M. Nazarov, and S.D. Fridman. 1994. Global and regional radioactive caesium-137 contamination of the European territory of the former USSR. **Meteorology and Hydrology** 5(1): 5-9 (in Russian)
- Jaakkola, T., K. Tolonen, P. Huttunen, and S. Leskinen. 1983. The use of ^{137}Cs and $^{239,240}\text{Pu}$ for dating lake sediments. **Hydrobiologia** 103:15-19.
- Jackson, W.A., D. Craig, and H.M. Hugo. 1965. Effects of various cations on cesium uptake from soils and clay suspensions. **Soil Science** 99:345-353.
- Jagoe, C.H., R.K. Chesser, M.H. Smith, M.D. Lomakin, S.K. Lingenfelter, and C.E. Dallas. 1998. Levels of cesium, mercury and lead in fish, and cesium in pond sediments in an inhabited region of the Ukraine near Chernobyl. **Environmental Pollution** 98(2):223-232.
- Jagoe, C. H., C.E. Dallas, R.K. Chesser, M.H. Smith, S.K. Lingenfelter, J.T. Lingenfelter, K. Holloman, and M. Lomakin. 1998. Contamination near Chernobyl: Radiocaesium, lead and mercury in fish and sediment radiocaesium from waters within the 10 km zone. **Ecotoxicology** 7(4):201-209.
- Jia, G.G., C. Triulzi, F.N. Marzano, M. Belli, and M. Vaghi. 2000. The fate of plutonium, Am-241, Sr-90 and Cs-137 in the Antarctic ecosystem. **Antarctic Science** 12(2):141-148.
- Jasinski, T., and J.A. Robbins. 1988. Radiotracers in Polish lake sediments. **EOS Transactions** 69:1119.
- Jaworowski, Z. 1966. Temporal and geographical distribution of radium D (lead 210). **Nature** 212:886-889.
- Jefferies, D.F., and A.K. Steele. 1989. Observed and predicted concentrations of caesium-137 in the seawater of the Irish Sea. **Journal of Environmental Radioactivity** 10:173-189.
- Jefferies, D.F., A.K. Steele, and A. Preston. 1982. Further studies on the distribution of ^{137}Cs in British coastal water I. **Irish Sea Deep-Sea Research** 29:713-738.
- Jefferies, D.F., A.K. Steele, and A. Preston. 1973. Distribution of caesium-137 in British coastal water. **Marine Pollution Bulletin** 4:118-122.

- Jenkins, C.E., N.A. Wogman, and H.G. Rieck. 1972. Radionuclide distribution in Olympic National Park, Washington. **Water Air Soil Pollution** 1:181-204.
- Jenns, N., C.M. Heppell, T.P. Burt, J. Walden, I.D.L. Foster. 2002. Investigating contemporary and historical sediment inputs to Slapton Higher Ley: an analysis of the robustness of source ascription methods when applied to lake sediment data. **Hydrological Processes** 16(17):3467-3486.
- Jenne, E.A., and J.S. Wahlberg. 1968. Role of certain stream-sediment components in radioion sorption. **U.S. Geological Survey, Paper 433-F**, 16 pp, Washington, DC.
- Jensen, A. 1997. Historical deposition rates of Cd, Cu, Pd, and Zn in Norway and Sweden estimated by Pb-210 dating and measurements of trace elements of cores of peat bogs. **Water Air Soil Pollution** 95:205-220.
- Jensen, C., H. Kunzendorf, and K.D. Vorren. 2002. Pollen deposition rates in peat and lake sediments from the *Pinus sylvestris* L. forest-line ecotone of northern Norway. **Review of Palaeobotany and Palynology** 121(2):113-132.
- Jha, S.K., S.B. Chavan, G.G. Pandit, and S. Sadasivan. 2003. Geochronology of Pb and Hg pollution in a coastal marine environment using global fallout Cs-137. **Journal of Environmental Radioactivity** 69(1-2):145-157.
- Johansen, M.P., T.E. Hakonson, F.W. Whicker, and D.D. Breshears. 2003. Pulsed redistribution of a contaminant following forest fire: Cesium-137 in runoff. **Journal of Environmental Quality** 32(6): 2150-2157.
- Johansen, M.P., T.E. Hakonson, F.W. Whicker, J.R. Simanton, and J.J. Stone. 2001. Hydrologic response and radionuclide transport following fire at semiarid sites. **Journal of Environmental Quality** 30(6):2010-2017.
- Johanson, K.J., R. Bergstrom, O. Eriksson, and A. Erixon. 1994. Activity concentrations of Cs-137 in moose and their forage plants in Mid-Sweden. **Journal of Environmental Radioactivity** 22:251-267.
- Johanson, K.J., M.I. Dolgilevich, and G.I. Vasenkov. 1997. Functions of organic substance, determining the behaviour of radiocaesium in the soil-plant system. **Visnik Agrarnoi Nauki** 3:52-54 (Russian)
- Johnson, T.C. 1984. Sedimentation in large lakes. **Annual Review of Earth and Planetary Science** 12:179-204.
- Johnson-Pyrtle, A. and M.R. Scott. 2001. Distribution of Cs-137 in the Lena River estuary-Laptev Sea system. **Marine Pollution Bulletin** 42(10):912-926.

- Johnson-Pyrtle, A., M.R. Scott, T.E. Laing, and J.P. Smol. 2000. Cs-137 distribution and geochemistry of Lena River (Siberia) drainage basin lake sediments. **Science of the Total Environment** 255(1-3):145-159.
- Johnston, C.A. 1992. Sediment and nutrient retention by freshwater wetland - effects of surface water quality. **Cr. R. Environmental Contamination**. 21:491-565.
- Johnston, C.A., G.D. Bubenzer, G.B. Lee, F.W. Madison, and J.R. McHenry. 1984. Nutrient trapping by sediment deposited in a seasonally flooded lakeside wetland. **Journal of Environmental Quality** 13:283-290.
- Johnston, S.E. 1981. **A comparison of dating methods in laminated lake sediments in Maine**. M.S. Thesis, University of Maine, Orno, ME.
- Johnston, S.E., S.A. Norton, C.T. Hess, R.B. Davis, and R.S., Anderson. 1982. Chronology of atmospheric deposition of acid and metals in New England based on the record in lake sediment, pp. 177-187. In: L.H. Keith (ed.), **Energy and environmental chemistry. Vol. 2. Acid rain**, Ann Arbor Science Publishers, Ann Arbor, MI.
- Jones, D.G. 2001. Development and application of marine gamma-ray measurements: a review. **Journal of Environmental Radioactivity** 53(3):313-333.
- Jones, D.G., J.M. Miller, and P.D. Roberts. 1984. The distribution of ^{137}Cs in surface intertidal sediments from the Solway Firth. **Marine Pollution Bulletin** 15:187-194.
- Jones, D.G., P.D. Roberts, M.H. Strutt, J.J. Higgo, and J.R. Davis. 1999. Distribution of Cs-137 and inventories of Pu-238, Pu-239/240, Am-241 and Cs-137 in Irish Sea intertidal sediments. **Journal of Environmental Radioactivity** 44(2-3):159-189.
- Jones, D.R., W.R. Eason, and J. Dighton. 1998. Investigation of spatial and temporal patterns of ^{137}Cs partitioning in *Eriophorum vaginatum* L. in relation to its nutrient retrieval and storage strategy. **Journal of Environmental Radioactivity** 40(3):271-288.
- Jones, D.R., L. Paul, and N.G. Mitchell. 1999. Effects of ameliorative measures on the radiocaesium transfer to upland vegetation in the UK. **Journal of Environmental Radioactivity** 44(1):55-69.
- Jones, F., and R.G. Castle. 1987. Radioactivity monitoring of the water cycle following the Chernobyl accident. **Journal of the Institute of Water Environmental Management** 1:205-217.
- Jones, P.A., R.J. Loughran, and G.L. Elliott. 2000. Sedimentation in a semi-arid zone reservoir in Australia determined by ^{137}Cs . **Acta Geologica Hispanica** 35(3-4):329-338.

- Jönsson, A., and R. Carman. 2000. Distribution of PCBs in Sediment from Different Bottom Types and Water Depths in Stockholm Archipelago, Baltic Sea. **AMBIO: A Journal of the Human Environment** 29(4):277-281.
- Jonsson, P. 2000. Sediment Burial of PCBs in the Offshore Baltic Sea. **AMBIO: A Journal of the Human Environment** 29(4):260-267.
- Jonsson, P., J. Eckh ell, and P. Larsson. 2000. PCB and DDT in Laminated Sediments from Offshore and Archipelago Areas of the NW Baltic Sea. **AMBIO: A Journal of the Human Environment** 29(4):268-276.
- Jordan, P., B. Rippey, and N.J. Anderson. 2002. The 20th century whole-basin trophic history of an inter-drumlin lake in an agricultural catchment. **Science of the Total Environment** 297(1-3):161-173.
- Joshi, R.M., P.M. Ravi, and R.P. Gurg. 2001. Base line radioactivity levels in Kaiga site soil and its migration to biosphere. **Journal of Radioanalytical and Nuclear Chemistry** 247(3):571-574.
- Joshi, S.R. 1991. Radioactivity in Lake Michigan - Review. **Science of the Total Environment** 100:61-104.
- Joshi, S.R. 1989. Common analytical errors in the radiodating of recent sediments. **Environmental Geology and Water Science** 14:203-207.
- Joshi, S.R. 1988. West valley-derived radionuclides in the Niagara River area of Lake Ontario. **Water Air Soil Pollution** 37:111-120.
- Joshi, S.R. 1987a. Nondestructive determination of lead-210 and radium-226 in sediments by direct photon analysis. **Journal of Radioanalytical Nuclear Chemistry Articles** 116:169-182.
- Joshi, S.R. 1987b. Early Canadian results on the long-range transport of Chernobyl radioactivity. **Science of the Total Environment** 63:125-137.
- Joshi, S.R. 1985. Recent sedimentation rates and ²¹⁰Pb fluxes in Georgian Bay and Lake Huron. **Science of the Total Environment Articles** 41:219-233.
- Joshi, S.R., and R.W. Durham. 1976. Determination of ²¹⁰Pb, ²²⁶Ra and ¹³⁷Cs in sediments. **Chemical Geology** 18:155-160.

- Joshi, S.R., and M.E. Fox. 1985. The ^{210}Pb and ^{137}Cs profiles in sediment cores from Bay of Quinte, Lake Ontario. **Journal of Radioanalytical Nuclear Chemistry Articles** 90:207-215.
- Joshi, S.R., and A. Mudock. 1988. Direct determination of geochronologically useful radionuclides in sediments by low-energy photon analysis. **Nuclear Instruments and Methods in Physics Research** A263:529-536.
- Joshi, S.R., and B.S. Shukla. 1991. The role of water/soil distribution coefficient in the watershed transport of environmental radionuclides. **Earth and Planetary Science Letters** 105:314-318.
- Joshi, S.R., B.S. Shukla, and R. McNeely. 1988. The calculation of lead-210 dates from McKay lake sediments. **Journal of Radioanalytical Nuclear Chemistry Articles** 125:341-349.
- Jouanneau, J.M., P. Castaing, F. Grousset, P. Buat-Menard, and P. Pedemay. 1999. Recording and chronology of a cadmium contamination by Cs-137 in the Gironde estuary (SW France). **Comptes Rendus de l'Academie des Science s Serie II Fascicule A-Science s de la Terre et des Planetes** 329(4):265-270.
- Joussein, E., N. Kruyts, D. Righi, S. Petit, and B. Delvaux. 2004. Specific retention of radiocesium in volcanic ash soils devoid of micaceous clay minerals. **Soil Science Society of America Journal** 68(1):313-319.
- Juang, T.C. 1988. Tracing soil erosion sources of The-chi reservoir watershed by radiochemical and geochemical methods. **Soil and Fertilizer in Taiwan** 1988:17-24.
- Juracek, K.E. 2004. Flood-related, organic-carbon anomalies as possible temporal markers in reservoir bottom sediments. **Lake and Reservoir Management** 20(4):309-321.
- Juzdan, Z. 1988. Worldwide deposition of ^{90}Sr through 1985. USDOE Report, **EML-515**, Environmental Monitoring Laboratory, New York.
- Kachanoski, R.G. 1993. Estimating soil loss from changes in soil cesium-137. **Canadian Journal of Soil Science** 73:515-526.
- Kachanoski, R.G. 1987. Comparison of measured soil 137-cesium losses and erosion rates. **Canadian Journal of Soil Science** 67:199-203.
- Kachanoski, R.G., and M.R. Carter. 1999. Landscape position and soil redistribution under three soil types and land use practices in Prince Edward Island. **Soil and Tillage Research** 51(3-4):211-217.

- Kachanoski, R.G., and E. de Jong. 1984. Predicting the temporal relationship between cesium-137 and erosion rate. **Journal of Environmental Quality** 13:301-304.
- Kacieszczenko, J., and Z. Banasik. 1981. An effect of bioturbation on the results of the ¹³⁷Cs dating technique used for lacustrine sediments. **Ekologia Polska** 29:615-623.
- Kada, J., and M. Heit. 1992. The inventories of anthropogenic lead, zinc, arsenic, cadmium and radionuclides cesium-137 and excess lead-210 in lake sediment of the Adirondack region, USA. **Hydrobiologia** 246:231-241.
- Kada, J., M. Heit, and K.M. Miller. 1994. Chronology of anthropogenic trace element input to four Utah lakes reconstructed using sediment cores. **Water Air Soil Pollution** 75:353-369.
- Kadlec, R.H., and J.A. Robbins. 1984. Sedimentation and sediment accretion in Michigan coastal wetlands (U.S.A.). **Chemical Geology** 44:119-150.
- Kagan, L.M., and V.D. Kadatsky. 1996. Depth migration of Chernobyl originated ¹³⁷Cs and ⁹⁰Sr in soils of Belarus. **Journal of Environmental Radioactivity** 33(1):27-39.
- Kagawa, A., T. Aoki, N. Okada, and Y. Katayama. 2002. Tree-ring Strontium-90 and Cesium-137 as potential indicators of radioactive pollution. **Journal of Environmental Quality** 31(6):2001-2007.
- Kakiuchi, H., H. Amano, and M. Ichimasa. 2002. Chemical speciation of radionuclides through the microbial process in soils. **Journal of Radioanalytical and Nuclear Chemistry** 252(2): 437-439.
- Kaminski, S. 1991. Radionuklide aus dem Tschernobyl-Fallout im Bodensee. **GWF-Wasser Abwasser** 132:671-674.
- Kamiyama, K., S. Okuda, and M. Koyama. 1982. Vertical distribution of ¹³⁷Cs and its accumulation rate in lake sediment. **Japanese Journal of Limnology** 43:35-38.
- Kang, W.J. and J.H. Trefry. 2003. Retrospective analysis of the impacts of major hurricanes on sediments in the lower Everglades and Florida Bay. **Environmental Geology** 44(7):771-780.
- Kanivets, V.V. 1996. Analyzing basic trends in radioactivity for the Dnieper water system since the Chernobyl accident. **Visnik Agrarnoi Nauki** 4:39-48. (Russian)
- Kansanen, P.H. 1985. Assessment of pollution history from recent sediment in Lake Vavajavesi, southern Finland II. Changes in the Chironomidae, Chaoboridae and Ceratopogonidae (Diptera) fauna. **Ann. Zool. Fennici** 22:57-90.

- Kansanen, P.H., and T. Jaakkola. 1985. Assessment of pollution history from recent sediment in Lake Vavajavesi, southern Finland I. Selection of representative profiles, their dating and chemostratigraphy. **Ann. Zool. Fennici** 22:13-55.
- Kansanen, P.H., T. Jaakkola, S. Kulmala, and R. Suutarinen. 1991. Sedimentation and distribution of gamma-emitting radionuclides in bottom sediments of southern Lake Päijänne, Finland after the Chernobyl accident. **Hydrobiologia** 222:121-140.
- Kansanen, P.H., and J. Seppala. 1992. Interpretation of mixed sediment profiles by means of a sediment-mixing model and radioactive fallout. **Hydrobiologia** 243:371-379.
- Kapala, J., M. Zalewski, M. Tomczak, Z. Mnich, and M. Karpinska. 2002. Fluctuation of radiocaesium concentrations in the near-surface atmospheric layer in Bialystok in the period 1992-1999. **Nukleonika** 47(2):69-73.
- Karavaeva, Y.N., N.V. Kulikov, I.V. Molchanova, V.N. Pozolotina, and P.I. Yushkov. 1994. Accumulation and distribution of long-living radionuclides in the forest ecosystems of the Kyshtym accident zone. **Science of the Total Environment** 157:147-151.
- Karavaeva, Y.N., I.V. Molchanova, and V.N. Pozolotina. 1997. ^{90}Sr and ^{137}Cs behavior in the Techa and Iset river floodplains. **Atomic Energy** 83(6):462-464.
- Kashparov, V.A., S.M. Lundin, S.I. Zvarych, V.I. Yoshchenko, S.E. Levchuk, Y.V. Khomutinin, I.M. Maloshtan, and V.P. Protsak. 2003. Territory contamination with the radionuclides representing the fuel component of Chernobyl fallout. **Science of the Total Environment** 317(1-3):105-119.
- Kasi, S.S.H. 2001. Cesium deposition in soil and its effects. **Radiation Physics and Chemistry** 61(3-6):673-675.
- Kasimovsky, A.A. 1993. Analytical solution for the model of soil radionuclide migration with fixation-leaching reaction. **Ecology Modelling** 66:217-229.
- Katajisto, T. 1996. Copepod egg survive a decade in the sediments of the Baltic Sea. **Hydrobiologica** 320:153-159.
- Kato, Y., H. Kitazato, M. Shimanaga, T. Nakatsuka, Y. Shirayama, and T. Masuzawa. 2003. Pb-210 and Cs-137 in sediments from Sagami Bay, Japan: sedimentation rates and inventories. **Progress in Oceanography** 57(1):77-95.
- Kawabata, T. 1967. Studies on the sorption and release of radionuclides by river sediments. **Journal of Radiation Research** 8:20-30.

- Kearney, M.S., J.C. Stevenson, and L.G. Ward. 1994. Spatial and temporal changes in marsh vertical accretion rates at Monie Bay: Implications for sea-level rise. **Journal of Coastal Research** 10:1010-1020.
- Kedhi, K. 1989. Radiotracer study of deposition caused by suspended sediments of river Seman. **Journal of Radioanalytical Nuclear Chemistry Letters** 135:395-402.
- Keilty, T.J., D.S. White, and P.F. Landrum. 1988. Sublethal responses to endrin in sediment by *Stylocdrilus heringianus* (Lumbriculidae) as measured by a ¹³⁷Cesium marker layer technique. **Aquatic Toxicology** 13:251-270.
- Kemp, A.L.W., T.W., Anderson, R.L. Thomas, and A. Mudrochova. 1974. Sedimentation rates and recent sediment history of Lakes Ontario, Erie and Huron. **Journal of Sedimentary Petrology** 44:207-218.
- Kemp, A.L.W. and R.L. Thomas. 1976. Impact of man's activities on the chemical composition in sediments of Lake Ontario, Erie, and Huron. **Water, Air, and Soil Pollution** 5:469-490.
- Kemp, A.L.W., R.L. Thomas, C.I. Deli, and J.M. Jaquel. 1976. Cultural impact on geochemistry of sediment in Lake Erie. **Journal of Fisheries Research** 33:440-462.
- Kendall, C. and J.J. McDonnell. 1998. **Isotope tracers in catchment hydrology**. Elsevier Science, Amsterdam, The Netherlands.
- Kerfoot, W.C., and L.J. Weider. 2004. Experimental paleoecology (resurrection ecology): Chasing Van Valen's Red Queen hypothesis. **Limnology and Oceanography** 49:(4, Part 2):1300-1316.
- Kershaw, P.J., D. McCubbin, and K.S. Leonard. 1999. Continuing contamination of north Atlantic and Arctic waters by Sellafield radionuclides. **Science of the Total Environment** 238(Special issue SI):119-132.
- Kershaw, P.J., D.S. Woodhead, S.J. Malcolm, D.J. Allington, and M.B. Lovett. 1990. A sediment history of Sellafield discharge. **Journal of Environmental Radioactivity** 12:201-241.
- Ketterer, M.E., K.M. Hafer, V.J. Jones, and P.G. Appleby. 2004. Rapid dating of recent sediments in Loch Ness: inductively coupled plasma mass spectrometric measurements of global fallout plutonium. **Science of the Total Environment** 322(1-3):221-229.
- Ketterer, M.E., B.R. Watson, G. Matisoff, C.G. Wilson. 2002. Rapid dating of recent aquatic sediments using Pu activities and Pu-240/Pu-239 as determined by quadrupole

- inductively coupled plasma mass spectrometry. **Environmental Science & Technology** 36(6):1307-1311.
- Keum, D.K., H.S. Lee, H.J. Choi, H.S. Kang, K.M. Lim, Y.H. Choi, and C.W. Lee. 2004. A dynamic compartment model for assessing PF the transfer of radionuclide deposited onto flooded rice-fields. **Journal of Environmental Radioactivity** 76(3):349-367.
- Khan, S.A. 1990. The Chernobyl source term: A critical review. **Nuclear Safety** 31:353-374.
- Khanbilvardi, R., V. Shestopalov, I. Onishchenko, V. Bublyas, and V. Gudzenko. 1999. Role of erosion processes in transfer of radionuclides: Results of field experiments. **Journal of the American Water Resources Association** 35(4):887-898.
- Kienzl, K., P. Henrich, P. Bossew, and T. Falkner. 1996. Contamination of Austrian soil by caesium-137. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 187-190** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Kim, C.S., M.H. Lee, C.K. Kim, and K.H. Kim. 1998. ^{90}Sr , ^{137}Cs , $^{239+240}\text{Pu}$ and ^{238}Pu concentrations in surface soils of Korea. **Journal of Environmental Radioactivity** 40(1):75-88.
- Kim, G., L.Y. Alleman, and T.M. Church. 2004. Accumulation records of radionuclides and trace metals in two contrasting Delaware salt marshes. **Marine Chemistry** 87(3-4):87-96.
- Kim, G., N. Hussain, T.M. Church, and W.L. Carey. 1997. The fallout isotope ^{207}Bi in a Delaware salt marsh: A comparison with ^{210}Pb and ^{137}Cs as a geochronological tool. **Science of the Total Environment** 196(1):31-41.
- Kim, K-H. 1995. Use of Cs-137 redistribution in estimating deposition at the Sansu reservoir. **Agricultural Chemistry and Biotechnology** 38:157-162. (Chinese)
- Kinnersley, R.P., A.J.H. Goddard, M.J. Minski and G. Shaw. 1997. Interception of caesium-contaminated rain by vegetation. **Atmospheric Environment** 31(8):1137-1145.
- Kirchner, G. 1998a. Modeling the migration of fallout radionuclides in soil using a transfer function model. **Health Physics** 74(1):78-85.
- Kirchner, G. 1998b. Applicability of compartmental models for simulating the transport of radionuclides in soil. **Journal of Environmental Radioactivity** 38:339-352.
- Kirchner, G., and D. Baumgartner. 1992. Migration rates of radionuclides deposited after the Chernobyl accident in various North German soils. **Analyst** 117:475-479.

- Kirchner, G., and G. Nageldinger. 1996. Sorption/desorption processes of cesium and strontium in soil: Is the K_d -concept adequate? **Mitt. d. Österr. Bodenkundl. Ges., H. 53.** S. 43-50 (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Kirihara, S., R. Nakamura, M. Nakahara, M. Notoya, and Y. Aruga. 1993. Translocation of Sr-85, Cs-137, Co-57, and Zn-65 through *Stoloniferous haptera* between the thalli of *Ecklonia stolonifera* Okamura (Laminariales, Phaeophyta) Nippon Suisan Gakkaishi. **Bulletin of Japanese Society of Scientific Fisheries** 59:589-592.
- Kirk, G.J.D., and S. Staunton. 1989. On predicting the fate of radioactive caesium in soil beneath grassland. **Journal of Soil Science** 40:71-84.
- Kiss, J.J., E. de Jong, and L.W. Martz. 1988. The distribution of fallout cesium-137 in southern Saskatchewan, Canada. **Journal of Environmental Quality** 17:445-452.
- Kiss, J.J., E. de Jong, and H.P.W. Rostand. 1986. An assessment of soil erosion in west-central Saskatchewan using cesium-137. **Canadian Journal of Soil Science** 66:591-600.
- Klechkovdkii, V.M., G.G. Polikarpov, and R.M. Aleksakhi. 1973. Behavior of strontium-90 and cesium-137 in soil, Chapter 4. pp 78-102. *In: Radioecology*, Wiley, New York.
- Kleiss, B.A. 1996. Sediment retention in a bottomland hardwood wetland in eastern Arkansas. **Wetlands** 16(3):321-333.
- Klement Jr., A.W. (ed.). 1965. Radioactive fallout from nuclear weapons tests. **US Atomic Energy Agency Symposium Series, CONF-765.**
- Klemt, E., J. Drissner, V. Flügel, S. Kaminski, G. Lindner, M. Walsen, and G. Zibold. 1996. Bioavailability of cesium radionuclides in prealpine forest and lakes. **Mitt. d. Österr. Bodenkundl. Ges., H. 53.** S. 267-274. (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Kliashtorin, A.L., F.A. Tikhomirov, and A.I. Shcheglov. 1994. Vertical radionuclide transfer by infiltration water in forest soils in the 30 km Chernobyl accident zone. **Science of the Total Environment** 157:285-288.
- Klik, A., W. Jester, and C. Rauter. 2005. Sediment transport in a small agricultural watershed-evaluation of WEPP simulations with measured data, p. 127-135. *In: A.J. Horowitz, and D.E. Walling (eds.). Sediment Budgets 2. International Association of Hydrological Sciences Publication 292*, Wallingford, UK, IAHS Press.
- Klik, A. and W. Sokol. 2001. A new measuring device for field erosion plots, pp. 233-236. *In: J.C. Ascough II and D.C. Flanagan (eds.), Soil Erosion Research for the 21st Century*,

Proceedings of the International Symposium, Honolulu, HI, St. Joseph, MI: American Society of Agricultural Engineers.

- Klik, A., A.S. Zartl, J. Rosner. 2001. Tillage effects on soil erosion, nutrient, and pesticide transport, pp. 71-71. In: J.C. Ascough II and D.C. Flanagan (eds.), **Soil Erosion Research for the 21st Century**, Proceedings of the International Symposium, Honolulu, HI, St. Joseph, MI: American Society of Agricultural Engineers.
- Klimchouk, A.B., and V.V. Gudzenko. 1996. Chernobyl radiocaesium in a karst system, Marble Cave, Crimea. **Environmental Geology** 28(3):161-166.
- Kline, J.R., J.A. Colon, and S.S. Brar. 1973. Distribution of ^{137}Cs in soils and vegetation on the island of Puerto Rico. **Health Physics** 24:469-475.
- Klobe, W.D., and R.G. Gast. 1970. Conditions affecting cesium fixation and sodium entrapment in hydrobiotite and vermiculite. **Soil Science Society of America Proceedings** 34:746-750.
- Klusek, C.S. 1987. Strontium-90 in food and bone from fallout. **Journal of Environmental Quality** 16:195-199.
- Klyashtorin, A.L., A.I. Shcheglov, and O.B. Tsvetnova. 1999. Vertical migration of Cs-137 in pine forest biogeocenoses. **Eurasian Soil Science** 32(12):1347-1351.
- Knapinska-Skiba, D., R. Bojanowski, Z. Radecki, and M. Lotocka. 1995. The biological and physico-chemical uptake of radiocesium by particulate matter of natural origin (Baltic Sea). **Netherlands Journal of Aquatic Ecology** 29(3-4):283-290.
- Knapinska-Skiba, D., R. Bojanowski, Z. Radecki, and G.E. Millward. 2001. Activity concentrations and fluxes of radiocesium in the southern Baltic sea. **Estuarine Coastal and Shelf Science** 53(6):779-786.
- Knatko, V.A., V.V. Gurkov, V.D. Asimova, E.B. Shpakovskaya, and E.A. Shimanovich. 1994. Soil milk transfer of Cs-137 in an area of Byelarus after the Chernobyl accident. **Journal of Environmental Radioactivity** 22:269-278.
- Knatko, V.A., A. Skomorkhov, V.D. Asimova, L.I. Strakh, A.P. Bogdanov, and V.P. Mironov. 1996. Characteristics of ^{90}Sr , ^{137}Cs and $^{239,240}\text{Pu}$ migration in undisturbed solid of southern Belarus after the Chernobyl accident. **Journal of Environmental Radioactivity** 30:185-196.
- Kniskern, T.A. and S.A. Kuehl. 2003. Spatial and temporal variability of seabed disturbance in the York River subestuary. **Estuarine Coastal and Shelf Science** 58(1):37-55.

- Ko, S., T. Aoki, H. Ohnishi, J. Takada, and Y. Katayama. 2003. Distribution and circulation of radionuclides originating from fallout in a forest. **Journal of Radioanalytical and Nuclear Chemistry** 255(2):347-349.
- Kodaira, K., M. Kato, and M. Ishikawa. 1973. Radiochemical analysis of ^{210}Pb , as well as distribution of ^{210}Pb , ^{90}Sr , and ^{137}Cs in soil profiles. **Radioisotopes, Tokyo** 22:331-336.
- Koh, M., and J.R. McHenry. 1987. Determining sediment rates using cesium-137 fallout at Larto Lake. **Journal of Korean Society of Soil Science and Fertility** 15:207-212.
- Koide, M., K.W. Bruland, and E.D. Goldberg. 1973. Th-238/Th-232 and Pb-210 geochronologies in marine and lake sediments. **Geochimica et Cosmochimica Acta** 37:1171-1187.
- Koide, M., R. Michel, E.D. Goldberg, M.M. Herron, and C.C. Langway Jr. 1982. Characterization of pre- and post-moratorium tests to polar ice caps. **Nature** 296:544-547.
- Koide, M., A. Soutar, and E.D. Goldberg. 1972. Marine geochronology with ^{210}Pb . **Earth and Planetary Science Letters** 14:442-446.
- Komarneni, S. 1978. Cesium sorption and desorption behavior of kaolinites. **Soil Science Society of America Journal** 42:531-532.
- Komosa, A. 2002. Study on geochemical association of plutonium in soil using sequential extraction procedure. **Journal of Radioanalytical and Nuclear Chemistry** 252(1):121-128.
- Komosa, A. 1999. Migration of plutonium isotopes in forest soil profiles in Lublin region (Eastern Poland). **Journal of Radioanalytical Nuclear Chemistry** 240(1):19-24.
- Konitzer, K. 1992. Sedimentroerelsers betydelse foer foerdelning och tillgaenglighet av Cs-137 I en mellansvensk skogssjoe (Redistribution of Cs-137 in sediment caused by sediment movements), **Limnologiska Institutionen Report No. NEI-SE-139**, 24pp. Uppsala, Sweden.
- Konitzer, K., and M. Meili. 1995. Retention and horizontal redistribution of sedimentary Chernobyl Cs-137 in a small Swedish forest lake. **Marine and Freshwater Research** 46:153-158.
- Konoplev, A.V., R. Avila, A.A. Bulgakov, K.J. Johanson, I.V. Konopleva, and V.E. Popov. 2000. Quantitative assessment of radiocaesium bioavailability in forest soils. **Radiochimica Acta** 88(9-11):789-792.

- Konoplev, A.V., A.A. Borzilov, Ts.I. Bobovnikova, Y.P., Virchenko, V.E. Popov, I.V. Kuntayakov, and V.B. Chumichev. 1988. Distribution of radionuclides in fallout from the Chernobyl nuclear power station accident in the soil-water system. **Meteorol. Hidrol.** 12:63-??.
- Konoplev, A.V., and A.A. Bulgakov. 2000. Sr-90 and Cs-137 exchange distribution coefficient in soil-water systems. **Atomic Energy** 88(2):158-163.
- Konoplev, A.V., and A.A. Bulgakov. 2000. Transformation of the forms of Sr-90 and Cs-137 in soil and bottom deposits. **Atomic Energy** 88(1):56-60.
- Konoplev, A.V., and A.A. Bulgakov. 1995. Modelling of the transformation of speciation processes of Chernobyl origin ^{137}Cs and ^{90}Sr in the soil and in bottom sediments, p.311-321. *In: Proceedings of a Symposium on Environmental Impact of Radioactive Releases.* International Atomic Energy Agency, Vienna, Austria.
- Konoplev, A.V., and A.A. Bulgakov. 1993. Wash-off of long-lived radionuclides with surface run-off from catchment of the 30-km zone around Chernobyl NPP. *In: UNESCO Workshop on the Hydrological Impact of Nuclear Power Plants*, Paris, September, 1992>
- Konoplev, A.V., A.A. Bulgakov, J. Hilton, R.N.J. Comans, and V.E. Popov. 1997. Long-term kinetics of radiocesium fixation by soils, pp. 173-182. *In: G. Demet, R.J. Blust, R.N.J. Comans, J.A. Fernandez, J. Hilton, and A. De Bettencourt (eds.), Freshwater and Estuarine Radioecology, Studies in Environmental Science*, Elsevier, Amsterdam.
- Konoplev, A.V., A.A. Bulgakov, F.O. Hoffman, B. Kanyar, G. Lyashenko, S.K. Nair, A. Popov, W. Raskob, K.M. Thiessen, B. Watkins, and M. Zheleznyak. 1999. Validation of models of radionuclide wash-off from contaminated watersheds using Chernobyl data. **Journal of Environmental Radioactivity** 42:(2-3):131-141.
- Konoplev, A.V., A.A. Bulgakov, V.E. Popov, J. Hilton, and R. Coman. 1996. Long-term investigation of cesium 137 fixation by soils. **Radiation Protection Dosimetry** 64(1-2):15-18.
- Konoplev, A.V., A.A. Bulgakov, V.E. Popov, and Ts.I. Bobovnikova. 1992. Behaviour of long-lived Chernobyl radionuclides in soil-water Systems. **Analyst** 117:1041-1047.
- Konoplev, A., S. Kaminski, E. Klemt, I. Konopleva, R. Miller, and G. Zibold. 2002. Comparative study of Cs-137 partitioning between solid and liquid phases in Lakes Constance, Lugano and Vorsee. **Journal of Environmental Radioactivity** 58(1):1-11.
- Konoplev, A.V., and I.V. Konopleva. 1999. Characteristics of steady-state selective sorption of radiocesium on soils and floor sediments. **Geokhimiya** 2:207-214.

- Konoplev, A.V., L.P. Kopylova, Ts.I. Bobovnikova, A.A. Bulgakov, and A.A. Siverina. 1992. ^{90}Sr and ^{137}Cs distribution in the bottom sediment-water reservoir system in the Chernobyl close-in zone. **Soviet Meteorology and Hydrology** 1:27-33.
- Konshin, O.V. 1992a. Transfer of ^{137}Cs from soil to grass - analysis of possible sources of uncertainty. **Health Physics** 63:307-315.
- Konshin, O.V. 1992b. Applicability of the convection-diffusion mechanism for modeling migration of ^{137}Cs and ^{90}Sr in soil. **Health Physics** 63:219-300.
- Konshin, O.V. 1992c. Mathematical model of ^{137}Cs migration in soil: analysis of observations following the Chernobyl accident. **Health Physics** 63:301-306.
- Konshin, O.V. 1992d. Transfer of ^{137}Cs from soil to grass - analysis of possible sources of uncertainty. **Health Physics** 63:307-315.
- Koren, N. and M. Klein. 2000. Rate of sedimentation in Lake Kinneret, Israel: spatial and temporal variations **Earth Surface Processes and Landforms** 25(8):895-904.
- Korhonen, R. 1990. Modelling transfer of Cs-137 fallout in a large Finnish water course. **Health Physics** 59:443-454.
- Korobova, E.M., and V.G. Linnik. 1998. ^{137}Cs and ^{90}Sr mobility in soil and transfer in soil-plant systems in the Novozybkov district affected by the Chernobyl accident. **Applied Geochemistry** 13(7):803-814.
- Korobova, E.M., and V.G. Linnik. 1994. Geochemical landscape strategy in monitoring the areas contaminated by the Chernobyl radionuclides. **Landscape and Urban Planning** 27:91-96.
- Korschgen, C.E., G.A. Jackson, L.F. Muessig, and D.C. Southworth. 1987. Sedimentation on Lake Onalaska, Navigation Pool 7, Upper Mississippi River, since impoundment. **Water Resources Research** 23:221-226.
- Kosmas, C., St. Gerontidis, M. Marathianou, B. Detsis, Th. Zafiriou, W. Nan Muysen, G. Govers, T. Quine, and K. Vanoost. 2001. The effects of tillage displaced soil on soil properties and wheat biomass. **Soil and Tillage Research** 58(1-2):31-41.
- Kotova, A.Y. and N.I. Sanzharova. 2002. The fate of radionuclides in different soil types. **Eurasian Soil Science** 35(1):99-110.
- Kotwicki, V., and P. Isdale. 1991. Hydrology of Lake Eyre, Australia - El Nino Link. **Paleontology Pollution** 84:87-98.

- Kozhevnikova, T.L., N.N. Mishenkov, L.N. Martyushova, and D.A. Krivolutskii. 1993. Accumulation of Sr-90 and Cs-137 by fruit bodies of mushrooms. **Russian Journal of Ecology** 24:391-394.
- Kraft, J. C., Y. Hi-Il, and M. Khalequzzaman. 1992. Geologic and human factors in the decline of the tidal salt marsh lithosome: the Delaware estuary and Atlantic coastal zone. **Sedimentary Geology** 80:233-246.
- Kramer, K.J.M., R. Misdrop, C. Berger, and R. Duyts. 1991. Maximum pollutant concentration at the wrong depth - a misleading pollutant history in a sediment core. **Marine Chemistry** 36:183-198.
- Krasnov, V.P., S.P. Irklienko, A.A. Orlov, and G.K. Pristupa. 1996. Migration of radio-caesium in Scots pine stands. **Lesnoe Khozyaistvo** 5:28-29 (Russian).
- Krause, A.K., S.W. Franks, J.D. Kalma, R.J. Loughran, and J.S. Rowan. 2003. Multi-parameter fingerprinting of sediment deposition in a small gullied catchment in SE Australia. **Catena** 53(4):327-348.
- Krause, A., R.J. Loughran, and J.D. Kalma. 2003. The use of caesium-137 to assess surface soil erosion status in a water-supply catchment in Hunter Valley, New South Wales. **Australian Geographical Studies** 41(1):73-84.
- Krause, A., R.J. Loughran, and J.D. Kalma. 1999. Preliminary Assessment of Erosion in the Williams River Catchment Using an Empirical Soil Loss Estimator and Soil Tracers, pp. 877-882. In: L. Oxley, F. Scrimgeour, and T. Jakeman (eds.), **MODSIM 99 - International Congress on Modelling and Simulation Proceedings**, 6-9 December 1999, University of Waikato, NZ.
- Krause, A.K., R.J. Loughran, and J.D. Kalma. 2003. The use of Caesium137 to assess surface soil erosion status in a water supply catchment in the Hunter Valley, New South Wales, Australia. **Australian Geographical Studies** 41(1):73-84.
- Krause, A.K., R.J. Loughran, and J.D. Kalma. 1999. Tracing sediment sources in the Williams River catchment using caesium-137 and heavy metals: towards an assessment of the relative importance of surface erosion and gully erosion. **Water 99 Joint Congress-Brisbane**, Australia 6-8 July 1999, pp. 981-986.
- Krey, P.W., E.P. Hardy, and M. Heit. 1980. Nevada test site fallout in the area of Enterprise, Utah. **EML-372**, 30 pp. Environmental Monitoring Laboratory, New York.
- Krey, P.W., M. Heit, and K. Miller. 1990. Radioactive fallout reconstruction from contemporary measurement of reservoir sediments. **Health Physics** 59:541-554.

- Krezoski, J.R., S.C. Mozley, and J.A. Robbins. 1978. Influence of benthic macroinvertebrates on mixing of profundal sediments in southeastern Lake Huron. **Limnology and Oceanography** 23:1011-1016.
- Krezoski, J.R., M. Oladipo, L. Adjarova, C. Shick, and T. Tissue. 1995. Cesium-labeled phlogopite as a tracer for in situ studies of sediment burial, reworking, and resuspension rates. **International Journal of Environmental Analytical Chemistry** 59:213-223.
- Krezoski, J.R., and J.A. Robbins. 1985. Vertical distribution of feeding and particle-selective transport of ^{137}Cs in lake sediment by lumbriculid *Oligochaetes*. **Journal of Geophysical Research** 90:11999-12006.
- Krezoski, J.R., J.A. Robbins, and D.S. White. 1984. Dual radiotracer measurement of zoobenthos-mediated solute and particle transport in freshwater sediments. **Journal of Geophysical Research** 89:7937-7947.
- Kriete, C., A. Suckow, and B. Harazim. 2004. Pleistocene meteoric pore water in dated marine sediment cores off Callao, Peru. **Estuarine Coastal and Shelf Science** 59(3):499-510.
- Krishnaswami, S., L.K., Benninger, R.C. Aller, and K.L. Von Damm. 1980. Atmospherically-derived radionuclides as tracers of sediment mixing and accumulation in near-shore marine and lake sediments: evidence from ^7Be , ^{210}Pb and $^{239,240}\text{Pu}$. **Earth and Planetary Science Letters** 47:307-318.
- Krishnaswami, S., and D. Lal. 1978. Radionuclide limnology, pp. 153-177. *In*: A. Lerman (ed.), **Lakes chemistry, geology, and physics**, Springer-Verlag, New York.
- Krishnaswami, L.K., D. Lal, J.M. Martin, and M. Maybeck. 1971. Geochronology of lake sediments. **Earth and Planetary Science Letters** 11:407-414.
- Krishnamurthy, R.V., M. Machavaram, M. Baskaran, J.M. Brooks, and M.A. Champ. 2001. Organic carbon flow in the Ob, Yenisey Rivers and Kara Sea of the Arctic region. **Marine Pollution Bulletin** 42(9):726-732.
- Kritidis, P., C.H. Chaloulou, and H. Florou. 1996. Radiological assessment of the impact of the Chernobyl nuclear accident in Greece. **Fresenius Environment Bulletin** 5:729-734.
- Kritidis, P., H. Florou, and E. Papanikolaou. 1990. Delayed and late impacts of the Chernobyl accident on the Greek environment. **Radiation and Protection Dosimetry** 30(3):187-190.

- Krivolutskii, D.A., V.L. Usachev, I.A. Ryabtsev, and O.V. Tarasov. 1989. Global sediment radionuclide migration in trophic chains of arid zone biogeocoenoses. **Zh. Obshch Biology** 50:595-605. (Russian)
- Krom, M.D., A. Kaufman, and H. Hornung. 1994. Industrial mercury in combination with natural Pb-210 as time-dependent tracers of sedimentation and mercury removal from Haifa Bay, Israel. **Estuaries and Coastal Shelf Science** 38:625-642.
- Krouglov, S.V., A.D. Kurinov, and R.M. Alexakhin. 1998. Chemical fractionation of ^{90}Sr , ^{106}Ru , ^{137}Cs and ^{144}Ce in Chernobyl-contaminated soils: an evolution in the course of time. **Journal of Environmental Radioactivity** 38(1):59-76.
- Kruglov, S.V., N.A. Vasil'yeva, A.D. Kurinov, and R.M. Aleksakhin. 1996. Distribution of radionuclides from Chernobyl fallout with regard to fractions of the soil-particle distribution of sod-podzolic soils. **Eurasian Soil Science** 28 (7):26-35. Translated from **Pochvovedeniye** (1995) 5:551-557 (Ru).
- Krumhansl, J.L., P.V. Brady, and H.L. Anderson. 2001. Reactive barriers for Cs-137 retention. **Journal of Contaminant Hydrology** 47(2-4):233-240.
- Kruse-Irmer, S. and L. Giani. 2003. Vertical distribution and bioavailability of Cs-137 in organic and mineral soils. **Journal of Plant Nutrition and Soil Science-Zeitschrift fur Pflanzenernahrung und Bodenkunde** 166(5):635-641.
- Kruyts, N. and B. Delvaux. 2002. Soil organic horizons as a major source for radiocesium biorecycling in forest ecosystems. **Journal of Environmental Radioactivity** 58(2-3, Special issue SI):175-190
- Kruyts, N., Y. Thiry, and B. Delvaux. 2000. Respective horizon contribution to cesium-137 soil-to-plant transfer: A rhizospheric experimental approach. **Journal of Environmental Quality** 29(4):1180-1185.
- Kruyts, N., H. Titeux, and B. Delvaux. 2004. Mobility of radiocesium in three distinct forest floors. **Science of the Total Environment** 319(1-3):241-252.
- Ku, W.C. 1973. Aquatic sediments. **Journal of Water Pollution Control Federation** 45:1301-1310.
- Kubica, B., J.W. Mietelski, J. Golas, S. Skiba, E. Tomankiewicz, P. Gaca, M. Jasinska, and M. Tuteja-Krysa. 2002. Concentration of Cs-137, K-40, Pu-238 and Pu-239+240 radionuclides and some heavy metals in soil samples from two main valleys from Tatra National Park. **Polish Journal of Environmental Studies** 11(5):537-545.

- Kudelsky, A.V., Ye.P. Petryaev, S.V. Ovsyannikova, G.A. Sokolik, V.I. Pashkevich, and A.A. Petrovich. 1995. ^{137}Cs behaviour in bog ecosystems. **Seriya Biyalagichnykh Navuk** 5:97-102. (Russian)
- Kudelsky, A.V., J.T. Smith, S.V. Ovsyannikova, and J. Hilton. 1996. Mobility of Chernobyl-derived ^{137}Cs in a peatbog system within the catchment of the Pripyat River, Belarus. **Science of the Total Environment** 188(2-3):101-113.
- Kudo, A. 1997. Behaviour of plutonium at the surface and in a geologic environment. **Radiochimica Acta** 82:159-166.
- Kudo, A., and E.F. Gloya. 1971. Transport of ^{137}Cs - II Interaction with bed sediments. **Water Research** 5:71-79.
- Kudo, A., J. Zheng, R. Yamada, G. Tao, T. Sasaki, and M. Sugahara. 2000. Global transport rates and future prediction of hazardous materials: Pu and Cs from Nagasaki to Canadian Arctic. **Water Science and Technology** 42(7-8):163-169.
- Kudo, A., J. Zheng, R.M. Koerner, D.A. Fisher, D.C. Santry, Y. Mahara, and M. Sugahara. 1998. Global transport rates of ^{137}Cs and $^{239+240}\text{Pu}$ originating from the Nagasaki A-bomb in 1945 as determined from the analysis of Canadian Arctic ice cores. **Journal of Environmental Radioactivity** 40(3):289-298.
- Kuhn, W., J. Handl, and P. Schuller. 1984. The influence of soil parameters on $^{137}\text{Cs}^+$ -uptake by plants from long-term fallout on forest clearing and grassland. **Health Physics** 46:1083-1093.
- Kulander, L., and L. Strömquist. 1989. Exploring the use of top-soil ^{137}Cs content as indicator of sediment transfer rates in a small Lesotho catchment. **Z. Geomorph. N.F.** 33:455-456.
- Kumar, B., R.P. Nachiappan, S.P., Rai, U. Saravanakumar, and S.V. Navada. 1999. Improved prediction of life expectancy for a Himalayan lake: Nainital, UP., India. **Mountain Research and Development** 19(2):113-121.
- Kumar, U.S., S.V. Navada, S.M. Rao, R.P. Nachiappan, B. Kumar, T.M. Krishnamoorthy, S.K. Jha, and V.K. Shukla. 1999. Determination of recent sedimentation rates and pattern in Lake Naini, India by Pb-210 and Cs-137 dating techniques. **Applied Radiation and Isotopes** 51(1):97-105.
- Kunzendorf, H. and B. Larsen. 2002. A 200-300 year cyclicity in sediment deposition in the Gotland Basin, Baltic Sea, as deduced from geochemical evidence. **Applied Geochemistry** 17(1):29-38.

- Kuwabara, J., M. Yamamoto, S. Oikawa, K. Komura, and D.J. Assinder. 1999. Measurements of Tc-99, Cs-137, Np-237, Pu isotopes and Am-241 in sediment cores from intertidal coastal and estuarine regions in the Irish Sea. **Journal of Radioanalytical Nuclear Chemistry** 240(2):593-601.
- Kuznetsov, Y.V., V.K. Legin, A.E. Shishlov, A.V. Stepanov, Y.V., Savitskii, and V.N. Strukov. 1999. Behavior of Pu-239, Pu-240 and Cs-137 in the system Yenisei River-Kara Sea. **Radiochemistry** 41(2):190-196.
- Kuznetsov, M.S., L.F. Litvin, A.D. Kim, V.V. Demidov, A.D. Fless, and E.N. Esafova. 1994. The assessment of soil erosion hazard in polluted areas of Tula region. **Pochvovedenie** 49:15-29.
- Kuznetsov, M.S., M.M. Pushkaryova, A.D. Fless, L.F. Litvin, Ye L. Blokhin and V.V. Demidov. 1996. Forecasting water erosion and radionuclides migration rates in polluted area of Bryanskaya region. **Eurasian Soil Science** 28(9):121-132.
- Kuznetsov, V.K., and N.I. Sanzharova. 1997. Horizontal migration of artificial radionuclides at different degrees of soil surface sodding. **Ékologiya (Moscow)** 0 (2):150-152.
- Kuznetsov, V.K., N.I. Sanzharova, V.S. Anisimov, S.V. Kruglov, and N.V. Belova. 2004. Radiological and agrochemical substantiation of the optimal contents of mobile potassium forms in mineral soils subjected to radioactive contamination. **Agrokhimiya** 6:74-82. (In Russian)
- Kuznetsov, V.K., N.I. Sanzharova, V.I. Brovkin, and O.B. Abramova. 2000. The Cs-137 intake in agricultural crops from soils differing in the degree of soil development. **Eurasian Soil Science** 33(Suppl. 1):S96-S99.
- Kvasnikova, E.V., A.N. Pegoev, and E.D. Stukin. 1999. Influence of the migration of Cs-137 on its vertical profile in the soil of terrain subjected to accumulative denudation. **Atomic Energy** 86(2):142-147.
- Kvasnikova, E.V., E.D. Stukin, V.N. Golosov, N.N. Ivanova, and A.V. Panin. 1999. Caesium-137 behaviour in small agricultural catchments on the area of the Chernobyl contamination. **Czechoslovakian Journal of Physics** 49(S1):181-187.
- Labadz, J.C., T.P. Burt, and A.W.R. Potter. 1991. Sediment yield and delivery in the Blanket Peat Moorelands of the southern Pennines. **Earth Surface Processes and Landforms** 16:255-271.
- LaBrecque, J.J. and P.R. Cordoves. 2003. Spatial distribution of cesium-137 in surface soils on the Araya and Paria Peninsulas (Venezuela). **Journal of Radioanalytical and Nuclear** 258(2):227-231.

- LaBrecque, J.J., P.A. Rosales, and P.R. Cordoves. 2002. The effect of the tropical cloud (fog) forest on the spatial distribution of cesium-137 in soils in the Henri Pittier National Park (Edo. Aragua, Venezuela). **Journal of Radioanalytical and Nuclear Chemistry** 253(1):87-92.
- LaBrecque, J.J., P.A. Rosales, and P.R. Cordoves. 2001. Anomalously high values of cesium-137 in soils on the Peninsula de Paraguana (Venezuela). **Journal of Radioanalytical and Nuclear Chemistry** 247(3):563-566.
- Liang, X. 1998. Dating sediments on several lakes inferred from radionuclide profiles. **Journal of Environmental Science (China)** 10(1):56-63.
- Lal, D. 1991. Cosmic-ray labeling of erosion surfaces, in situ nuclide production rates and erosion models. **Earth and Planetary Science Letters** 104:424-439.
- Lal, D., E. Barg, and M. Pavich. 1991. Development of cosmogenic nuclear methods for the study of soil erosion and formation rates. **Current Science** 61:636-640.
- Lal, D., V.N. Nijampurkar, and S. Rama. 1970. Silicon-32. **Proceeding Hydrology 1970**, pp. 847-868, International Atomic Energy Agency, Vienna, Austria.
- Lal, R. 2001. Soil degradation by erosion. **Land Degradation & Development** 12(6):519-539.
- Lambert, C.P., and D.E. Walling. 1987. Floodplain sedimentation: a preliminary investigation of contemporary deposition within the lower reaches of the River Culm, Devon, UK. **Geografiska Annaler** 69A:393-404.
- Lamoureux, S.F. 1999. Catchment and lake controls over the formation of varves in monomictic Nicolay Lake, Cornwall Island, Nunavut. **Canadian Journal of Earth Sciences** 36(9):1533-1546.
- Lance, J.C., S.C. McIntyre, D.G. DeCoursey, P.G. Sharpe, S.S. Rousseva, and B.L. Campbell. 1986. Using cesium-137 to estimate erosion rates on rangeland, pp. 79-89. *In*: **Erosion control: protecting our future**, International Erosion Control Association.
- Lance, J.C., S.C. McIntyre, R.R. Lowrance, B.L. Campbell, and R.L. Miller. 1986. Cesium-137 measures erosion rates and sediment movement. **4th Federal Interagency Sedimentation Conference**, pp. 4-1 to 4-9.
- Lance, J.C., S.C. McIntyre, J.W. Naney, and S.S. Rousseva. 1986. Measuring sediment movement at low erosion rates using cesium-137. **Soil Science Society of America Journal** 50:1303-1309.

- Landsberger, S. and C. Mann. 2003. Determination and correlation of Cs-137 and unsupported Pb-210 activities in soil. **Journal of Radioanalytical and Nuclear Chemistry** 258(1):55-57.
- Landrum, P.F., M.L. Gedeon, G.A. Burton, M.S. Greenberg, and C.D. Rowland. 2002. Biological responses of *Lumbriculus variegatus* exposed to fluoranthene-spiked sediment. **Archives of Environmental Contamination and Toxicology** 42(3):292-302.
- Lane, A. 2004. Bathymetric evolution of the Mersey Estuary, UK, 1906-1997: causes and effects. **Estuarine Coastal and Shelf Science** 59(2):249-263.
- Langham, W.H. 1965. Biospheric contamination by radioactive fallout, pp. 1-18. In: P.H. Folders (ed.), **Radioactive fallout soils, plants, foods, man**, Elsevier, Amsterdam.
- Luque, J.A. and R. Julià. 2002. Lake sediment response to land-use and climate change during the last 1000 years in the oligotrophic Lake Sanabria (northwest of Iberian Peninsula). **Sedimentary Geology** 148(1-2):343-355.
- Larsen, R.J. 1985. Worldwide fallout of Sr-90 through 1983. USDOE Rep. **EML-444**, Environmental Monitoring Laboratory, New York.
- Larsen, R.J. and Z.R. Juzdan. 1986. Worldwide fallout of Sr-90 through 1984. USDOE Rep. **EML-457**, Environmental Monitoring Laboratory, New York.
- Lasat, M.M., M. Fuhrmann, S.D. Ebbs, J.E. Cornish, and L.V. Kochain. 1998. Phytoremediation of a radiocesium-contaminated soil: Evaluation of Cesium-137 bioaccumulation in the shoots of three plant species. **Journal of Environmental Quality** 27(1):165-169.
- Lasat, M.M., W.A. Norvell, and L.V. Kochian. 1997. Potential for phytoextraction of ¹³⁷Cs from a contaminated soil. **Plant and Soil** 195(1):99-106.
- Lauritzen, B. and T. Mikkelsen. 1999. A probabilistic dispersion model applied to the long-range transport of radionuclides from the Chernobyl accident. **Atmospheric Environment** 33(20):3271-3279.
- Leady, B.S. and J.F. Gottgens. 2001. Mercury accumulation in sediment cores and along food chains in two regions of the Brazilian Pantanal. **Wetland Ecology and Management** 9:349-361.
- Lee, M.H., and C.W. Lee. 2000. Association of fallout-derived Cs-137, Sr-90 and Pu-239, Pu-240 with natural organic substances in soils. **Journal of Environmental Radioactivity** 47(3):253-262.

- Lee, M.H., and C.W. Lee. 1999. Determination of Cs-137, Sr-90 and fallout Pu in the volcanic soil of Korea. **Journal of Radioanalytical Nuclear Chemistry** 239(3):471-476.
- Lee, M.H., C.W. Lee, and B.H. Boo. 1997 Distribution and characteristics of $^{239,240}\text{Pu}$ and ^{137}Cs in the soil of Korea. **Journal of Environmental Radioactivity** 37(1):1-16.
- Lee, M.H., C.W. Lee, D.S. Moon, K.H. Kim, and B.H. Boo. 1998. Distribution and inventory of fallout Pu and Cs in the sediment of the East Sea of Korea. **Journal of Environmental Radioactivity** 41(2):99-110.
- Lee, S.V. and A.B. Cundy. 2001. Heavy metal contamination and mixing processes in sediments from the Humber Estuary, Eastern England. **Estuarine Coastal and Shelf Science** 53(5):619-636.
- Lees, J.A., R.J. Flower, and P.G. Appleby. 1998. Mineral magnetic and physical properties of surficial sediments and onshore samples from the southern basin of Lake Baikal, Siberia. **Journal of Paleolimnology** 20(2):175-186
- Lees, J.A., R.J. Flower, D. Ryves, E. Vologina, et al. 1998. Identifying sedimentation patterns in Lake Baikal using whole core and surface scanning magnetic susceptibility. **Journal of Paleolimnology** 20(2):187-202.
- Lees, J., I. Foster, D. Jones, P. Owens, D. Walling, and G. Leeks. 1997. Sediment yield in a changing environment: a historical reconstruction using reservoir bottom-sediment in three contrasting small catchments, North York Moors, UK. **International Association of Hydrological Sciences Publication No. 245**:169-179.
- Legarda, F., C. Elejalde, M. Herranz, and F. Romero. 2001. Distribution of fallout Cs-137 in soils from Biscay. **Radiation Physics and Chemistry** 61(3-6):683-684.
- Lehman, J.T. 1975. Reconstructing the rate of accumulation of lake sediment: the effect of sediment focusing. **Quaternary Research** 5:541-550.
- Lehotský, M. 1999. Soil erosion investigation using cesium-137 and dendrogeomorphic methods, (Case study in Jablonka Catchment), pp. 81-87. IN: G. Richter, J.H. Rubio, O. Nestroy, J. Poesen and P. Bielek (eds.), **Soil Conservation in Large-scale land use, Proceedings**, Soil and Water Conservation Research Institute, Bratislava, Slovak Republic.
- Lehotský, M., and M. Stankoviansky. 1992. Detection of water erosion-accumulation processes with the use of the ^{137}Cs method. **Geografický časopis** 3. (In Slovak)

- Lehotský, M., M. Stankoviansky, and V. Linkeš. 1993. Use of caesium-137 in study of pedogenic processes, pp. In: S. Wicherek (ed.), **Farmland erosion**, Elsevier, Amsterdam.
- Leland, H.V., S.N. Leoma, J.F. Elder, and D.J. Wilkes. 1978. Heavy metals and related trace elements - Review. **Journal of the Water Pollution Control Federation** 50:1469-1514.
- Lemmin, U., and D.M. Imboden. 1987. Dynamics of bottom currents in a small lake. **Limnology and Oceanography** 32:62-75.
- Lentsch, J.W. 1974. **The fate of gamma-emitting radionuclides released into the Hudson River estuary and an evaluation of their environmental significance**. Ph.D. Thesis, New York University, New York.
- Leonard, E.M. 1986. Varve studies at Hector Lake, Alberta, Canada, and the relationship between glacial activity and sedimentation. **Quaternary Research** 25:199-214.
- Leonova, E.M., A.D. Krasnyuk, and V.I. Petrova. 1998. Cesium-137 accumulation behavior for bottom surface sediments of the Barents Sea. **Geokhimiya (Geokhimiya) Moscow : Rossiiskaya Akademiya Nauk**. 12:1284-1290.
- Lerman, A. 1979. **Geochemical processes: water and sediment**. Wiley, New York.
- Lerman, A., and T.A. Lietzke. 1975. Uptake and migration of tracers in lake sediment. **Limnology and Oceanography** 20:497-510.
- Lettner, H., P. Bossew, and A.K. Hubmer. 2000. Spatial variability of fallout Caesium-137 in Austrian alpine regions. **Journal of Environmental Radioactivity** 47(1):71-82.
- Lettner, H., P. Bossew, A. Hubmer, and M. Gastberger. 1996. Variability of the depth-profiles of ¹³⁷Cs in soils of the province of Salzburg. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 191-198** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Lewin, J. 1977. Floodplain geomorphology. **Progress in Physical Geography** 1:408-437.
- Lewis, T. 1974. Heat production measurements in rocks using a gamma ray spectrometer with a solid state detector. **Canadian Journal of Earth Science** 11:526-532.
- Lewyckyj, N, C.M. Vandecastleele, and A. Cremers. 1996. Laboratory studies of the caesium migration in a podsolc sandy soil as a function of the ionic composition of the soil solution. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 51-60** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).

- Li, A., I.A. Ab Razak, F. Ni, M.F. Gin, and E.R. Christensen. 1998. Polycyclic aromatic hydrocarbons in the sediments of the Milwaukee Harbor Estuary, Wisconsin, USA. **Water, Air, and Soil Pollution** 101:417-434.
- Li, M., Z. Li, P. Liu, and W. Yao. 2005. Using Cesium-137 technique to study the characteristics of different aspect of soil erosion in the Wind-water Erosion Crisscross Region on Loess Plateau of China. **Applied Radiation and Isotopes** 62(1):109-113.
- Li, P., and Y. Yu. 1992. Investigations of natural and artificial radioactive isotopes in seawater and sediments in the Yellow Sea and adjacent southeast area. **Chinese Journal of Oceanography and Limnology** 10:325-330.
- Li, R.Y., H.T. Yang, X. Tang, and A. Zhao. 2004. Effects of geographical factors on the distribution of ^{137}Cs in the Loess Plateau. **Acta Pedologica Sinica** 41(4):628-631.
- Li, R.Y., H. Yang, X.Y. Tang, C.Y. Wu, and M.Y. Du. 2004. Distribution of Cs-137 and organic carbon in particle size fractions in an alumi-haplic Acrisol of Southern China. **Soil Science** 169(5):374-384.
- Li, Y., L. Burkhardt, M. Bucholtz, P. O'Hara, and P.H. Santschi. 1984. Partition of radiotracers between suspended particles and sea water. **Geochimica et Cosmochimica Acta** 48:2011-2020.
- Li, Y., M. Frielinghaus, and H.R. Bork. 1999. Determining the variability of soil erodibility for erosion prediction using cesium-137 technique. **Acta Nuclear Science in Agriculture** 3:1-8.
- Li, Y., M. Frielinghaus, and H.R. Bork. 1998. Using ^{137}Cs and ^{210}Pb to assess spatial soil erosion and sediment resources of the Loess Plateau of China. **Proceeding of the 16th World Congress of Soil Science**, Montpellier, France.
- Li, Y., and M.J. Lindstrom. 2001. Evaluating soil quality-Soil redistribution relationship on Terraces and steep hillslopes. **Soil Science Society of America Journal** 65(5):1500-1508.
- Li, Y., M.J. Lindstrom, J. Zhang, and J. Yang. 2000. Spatial variability of soil erosion and soil quality on hillslopes in the Chinese Loess Plateau. **Acta Geologica Hispanica** 35(3-4):261-270.
- Li, Y., J. Poesen, J.C. Yang, B. Fu and J.H. Zhang. 2003. Evaluating gully erosion using ^{137}Cs and $^{210}\text{Pb}/^{137}\text{Cs}$ ratio in a reservoir catchment. **Soil and Tillage Research** 69(1-2):107-115.

- Li, Y., G. Tian, M. J. Lindstrom, and H. R. Bork. 2004. Variation of surface soil quality parameters by intensive donkey-drawn tillage on steep slope. **Soil Science Society of America Journal** 68(4):907-913.
- Li, Y., J. Yang, Y. Zhui, Chen Jingjian, and Wu Shuxia. 1997. Using ^{137}Cs and ^{210}Pb to assess the sediment sources in a dam reservoir catchment on the loess plateau, China, **CNIC-01155; CSANS-0113**, China Nuclear Information Centre, Beijing. 15p
- Lieser, K.H., and Th. Steinkopff. 1989. Chemistry of radioactive cesium in the hydrosphere and in the geosphere. **Radiochimica Acta** 46:39-47.
- Ligero, R.A., M. Barrear, M., and M. Casas-Ruiz. 2005. Levels of ^{137}Cs in muddy sediments of the seabed of the Bay of Cadiz, Spain. Part I: Vertical and spatial distribution of activities. **Journal of Environmental Radioactivity** 80(1):75-86.
- Ligero, R.A., M. Barrear, M., and M. Casas-Ruiz. 2005. Levels of ^{137}Cs in muddy sediments of the seabed of the Bay of Cadiz, Spain. Part II: Model of vertical migration of ^{137}Cs . **Journal of Environmental Radioactivity** 80(1):87-103.
- Ligero, R.A., M. Barrear, M., and M. Casas-Ruiz. 2005. Modelling the long-term behaviour of radiocaesium and radiostrontium in two Italian lakes. **Journal of Environmental Radioactivity** 80(1):105-123.
- Ligero, R.A., M. Barrera, M. Casas-Ruiz, D. Sales, and F. Lopez-Aguayo. 2002. Dating of marine sediments and time evolution of heavy metal concentrations in the Bay of Cadiz, Spain. **Environmental Pollution** 118(1):97-108.
- Ligero, R.A., I. Ramos-Lerate, M.; Barrera, and M. Casas-Ruiz. 2001. Relationships between sea-bed radionuclide activities and some sedimentological variables. **Journal of Environmental Radioactivity** 57(1):7-19.
- Likar, A., G. Omahen, M. Lipoglavsek, and T. Vidmar. 2001. A theoretical description of diffusion and migration of Cs-137 in soil. **Journal of Environmental Radioactivity** 57(3):191-201.
- Likar, A., G. Omahen, T. Vidmar, and R. Martincic. 2000. Method to determine the depth of Cs-137 in soil from in-situ gamma-ray spectrometry. *Journal of Physics D-Applied Physics* 33(21):2825-2830.
- Likar, A., T. Vidmar, M. Lipoglavsek, and G. Omahen. 2004. Monte Carlo calculation of entire in situ gamma-ray spectra. **Journal of Environmental Radioactivity** 72(1-2):163-168.

- Lin, Z.C. K.G.W. Inn, and J.J. Filliben. 2001. An alternative statistical approach for interlaboratory comparison data evaluation. **Journal of Radioanalytical and Nuclear Chemistry** 248(1):163-173.
- Lindner, G., M. Becker, R. Eckmann, P. Frenzel, J. Kleiner, D. Petermann-Seyboldt, W. Pfeiffer, U. Wahl, and E. Recknagel. 1990. Biological transfer and sedimentation of Chernobyl radionuclides in Lake Constance, pp. 265-287. *In*: M.M. Tilzer and C. Serruya (eds.), **Large lakes: ecological structure and function**, Springer-Verlag, Berlin.
- Lindner, G., W. Pfeiffer, J.A. Robbins, and E. Recknagel. 1989. Long-lived Chernobyl radionuclides in Lake Constance: speciation, sedimentation and biological transfer, pp. 295-300. *In*: W. Feld (ed.), **The radioecology of Natural and Artificial Radionuclides**, TUV, Rheinland, Köhn, Germany.
- Lindner, G., W. Pfeiffer, U. Wahl, J. Kleiner, H.H. Stabel, P. Frenzel, J.A. Robbins, F. Giovanoli, A. Lenhard, and E. Recknagel. 1989. Sedimentation of long-lived radionuclides in Lake Constance, pp. 449-452. *In*: J.P. Vernet (ed.), **Heavy metals in the environment**, CEP Consultants, Edinburgh, UK.
- Linkeš, V., M. Lehotský, and M Stankoviansky. 1992. Contribution to the knowledge on development of water erosion in Danube hilly land with the use of caesium-137. **Vedecké práce VÚPÚ 17**, VÚPÚ, Bratislava. (In Slovak)
- Linnik, V.G., J.E. Brown, M. Dowdall, V.N. Potapov, V.V. Surkov, E.M. Korobova, A.G. Volosov, S.M. Vakulovsky, and E.G. Tertyshnik. 2005. Radioactive contamination of the Balchug (Upper Yenisey) floodplain, Russia in relation to sedimentation processes and geomorphology. **Science of the Total Environment** 339(1/3):233-251.
- Linsalata, P., H.J. Simpson, C.R. Olsen, N. Cohen, and R.M. Trier. 1985. Plutonium and radiocaesium in the water column of the Hudson River estuary. **Environmental Geology Water Science** 7:193-204.
- Lithner, G., H. Borg, J. Ek, E. Fröberg, K. Holm, A. Johansson, P. Kärrhage, G. Rosén, and M. Söderström. 2000. The Turnover of Metals in a Eutrophic and an Oligotrophic Lake in Sweden. **AMBIO: A Journal of the Human Environment** 29(4):217-229.
- Litvin, L.F., V.N. Golosov, N.N. Ivanova, N.G. Dobrovol'skyay, and S.F. Krasnov. 1996. Redistribution of Cs-137 by water erosion processes. **Vodnye Resourcy** 23(3):314-319 (in Russian).
- Liu, C.L., S.G. Luo, Y.X. Zhang, Z.M. Wang, S.S. Li, Y.J. Zhao, S.W. Ni, and L. Jiang. 1999. Migration of radionuclides Sr-85, Cs-137 and Co-60 in unsaturated Chinese loess - A laboratory simulation experiment. **Radiochimica Acta** 84(2):101-105.

- Liu, C.X., J.M. Zachara, and S.C. Smith. 2004. A cation exchange model to describe Cs⁺ sorption at high ionic strength in subsurface sediments at Hanford site, USA. **Journal of Contaminant Hydrology** 68(3-4):217-238.
- Liu, C.X., J.M. Zachara, S.C. Smith, J.P. McKinley, and C.C. Ainsworth. 2003. Desorption kinetics of radiocesium from subsurface sediments at Hanford Site, USA. **Geochimica et Cosmochimica Acta** 67(16):2893-2912.
- Liu, P., J. Tiana, P. Zhoua, M. Yanga and H. Shib. 2004. Stable rare earth element tracers to evaluate soil erosion. **Soil and Tillage Research** 76(2):147-155.
- Liu, X.Q. 2004. Application of the Weibull extrapolation to Cs-137 geochronology in Tokyo Bay and Ise Bay, Japan. **Journal of Environmental Radioactivity** 73(2):169-181.
- Livens, F.R., and M.S. Baxter. 1988. Particle size and radionuclide levels in some west Cumbrian soils. **Science of the Total Environment** 70:1-17.
- Livens, F.R., and M.S. Baxter. 1988. Chemical associations of artificial radionuclides in Cumbrian soils. **Journal of Environmental Radioactivity** 9:75-86.
- Livens, F.R., D. Fowler, and A.D. Horrill. 1992. Wet and dry deposition of I-131, Cs-134 and Cs-137 at an upland site in Northern England. **Journal of Environmental Radioactivity** 16:243-254.
- Livens, F.R., A.D. Horrill, and D.L. Singleton. 1991. Distribution of radiocaesium in soil plant systems of upland areas of Europe. **Health Physics** 60:539-545.
- Livens, F.R., M.T. Howe, J.D. Hemingway, K.W.T. Goulding, and B.J. Howard. 1996. Forms and rates of release of ¹³⁷Cs in two peat soils. **European Journal of Soil Science** 47(1):105-112.
- Livens, F.R., and P.J. Loveland. 1988. The influence of soil properties on the environmental mobility of caesium in Cumbria. **Soil Use Management** 4:69-75.
- Livens, F.R., and D. Rimmer. 1988. Physico-chemical controls on artificial radionuclides in soil. **Soil Use Management** 4:63-69.
- Livingston, D. 1984. The preservation of algal remains in recent lake sediment, pp. 191-202. *In*: E.Y. Haworth and J.W.G. Lund (eds.), **Lake sediment and environmental history**, University of Minnesota Press, Minneapolis, MN.
- Livingston, H.D., and T. Bowen. 1979. Pu and ¹³⁷Cs in coastal sediments. **Earth and Planetary Science Letters** 43:29-45.

- Livingston, H.D., and R.S. Cambrey. 1978. Confirmation of ^{137}Cs dating by algal stratigraphy in Rostherne Mere. **Nature** 276:259-261.
- Livingston, H.D. and P.P. Povinec. 2002. A millennium perspective on the contribution of global fallout radionuclides to ocean science. **Health Physics** 82(5):656-668.
- Llaurado, M., J.M. Torres, J. Tent, A. Sahuquillo, H. Muntau, and G. Rauret. 2001. Preparation of a soil reference material for the determination of radionuclides. **Analytica Chimica Acta** 445(1):99-106
- Llaurado, M., M. Vidal, G. Rauret, C. Roca, J. Fons, and V.R. Vallejo. 1994. Radiocesium behaviour in Mediterranean conditions. **Journal of Environmental Radioactivity** 23:81-100.
- Lobb, D.A., and R.G. Kachanoski. 1999. Modelling tillage erosion in the topographically complex landscapes of southwestern Ontario, Canada. **Soil and Tillage Research** 51(3-4):261-277.
- Lobb, D.A., and R.G. Kachanoski. 1997a. Prediction of soil erosion by tillage in topographically complex landscapes of southern Ontario. **Journal of Soil and Water Conservation** 52(4):306 (Abstract)
- Lobb, D.A., and R.G. Kachanoski. 1997b. Impact of tillage translocation and tillage erosion on the estimation of soil loss using ^{137}Cs . **Journal of Soil and Water Conservation** 52(4):306-307. (Abstract)
- Lobb, D.A., R.G. Kachanoski, and M.H. Miller. 1995. Tillage translocation and tillage erosion on shoulder slopes landscape positions measured using ^{137}Cs as a tracer. **Canadian Journal of Soil Science** 75:211-218.
- Lobb, D.A., M.J. Lindstrom, and T.E. Schumacher. 2004. Soil erosion processes and their interactions: Implications for environmental indicators, p. 325-337. In: Francaviglia, F. (ed.) **Agricultural impacts of soil erosion and biodiversity: Developing indicators for policy analysis**, Proceeding from an OECD Expert Meeting, Rome, Italy, March 2003.
- Lobb, D.A., T.A. Quine, G. Govers, and G.J. Heckrath. 2001. Comparison of methods used to calculate tillage translocation using plot-tracers. **Journal of Soil and Water Conservation** 56(4):321-328.
- Lockhart, W.L., R.W. Macdonald, P.M.N. Outridge, P. Wilkinson, J.B. DeLaronde, and J.W.M. Rudd. 2000. Tests of the fidelity of lake sediment core records of mercury deposition to known histories of mercury contamination. **Science of the Total Environment** 260(1-3):171-180.

- Lofts, S., E.W. Tipping, A.L. Sanchez, and B.A. Dodd. 2002. Modelling the role of humic acid in radiocaesium distribution in a British upland peat soil. **Journal of Environmental Radioactivity** 61(2):133-147.
- Loizeau, J.L., S. Roze, C. Peytremann, F. Monna, and J. Dominik. 2003. Mapping sediment accumulation rate by using volume magnetic susceptibility core correlation in a contaminated bay (Lake Geneva, Switzerland). **Eclogae Geologicae Helvetiae** 96(Suppl. 1):S73-S79.
- Lomenick, T.F., and T. Tamura. 1965. Naturally occurring fixation of cesium-137 on sediments of lacustrine origin. **Soil Science Society of America Proceedings** 29:383-386.
- Longmore, M.E. 1982. The caesium-137 dating technique and associated applications in Australia— A review, pp. 310-321. *In*: W. Ambrose and P. Duerden (eds.), **Archaeometry: an Australasian perspective**, Australian National University Press, Canberra, Australia.
- Longmore, M.E., J.G. Luly, and B.M. O'Leary. 1986. Cesium-137 redistribution in the sediment of the Playa, Lake Tyrrell, Northwestern Victoria. II. Patterns of cesium-137 and pollen redistribution. **Palaeogeography, Palaeoclimatology, Palaeoecology** 54:197-218.
- Longmore, M.E., B.M. McCallan, C.W. O'Leary, C.W. Rose, and A.L. Chandica. 1983. Mapping erosion and accumulation with the fallout isotope caesium-137. **Australian Journal of Soil Research** 21:373-385.
- Longmore, M.E., B.M. O'Leary, and C.W. Rose. 1983. Caesium-137 in the sediments of a partial-meromictic lake on Great Sandy Island (Fraser Island), Queensland, Australia. **Hydrobiologia** 103:21-27.
- Longmore, M.E., B.M. O'Leary, C.W. Rose, and A.L. Chandica. 1983. Mapping soil erosion and accumulation with the fallout isotope ¹³⁷Cs. **Australian Journal of Soil Research** 21:373-385.
- Longmore, M.E., T. Torgersen, B.M. O'Leary, and J.G. Luly. 1986. Cesium-137 redistribution in the sediment of the Playa, Lake Tyrrell, Northwestern Victoria. I. Stratigraphy and Cesium-137 mobility in the Upper sediments. **Palaeogeography, Palaeoclimatology, Palaeoecology** 54:181-195.
- Lönsj, H. 1989. Depth distribution of radiocesium in agricultural soils in Chernobyl fallout areas of Sweden in 1987-1988, pp. 134-142. *In*: M.H. Gerzabek (ed.), **Proceedings of the XIXth ESNA Conference**, Austrian Research Center, Seibersdorf, Report No. 4489.
- Loria, L.G., A. Banichevich, and J. Cortes. 1998. Radionuclides in Costa-Rican corals. **Review of Biology Tropical** 46(Suppl. 5):81-90.

- Lorimer, M.S., R.J. Loughran, G.L. Elliott, G.B. Boyle, and M. Austin. 1996. **A national reconnaissance survey of soil erosion: Victoria**. A report for the Australian Land Care Program. The University of Newcastle, 85 p.
- Lotter, A.F., M. Sturm, J.L. Teranes, and B. Wehrli. 1997. Varve formation since 1885 and high-resolution varve analyses in hypertrophic Baldeggersee (Switzerland). **Aquatic Science** 59(4):304-325.
- Loughran, R.J. 1995. Soils: two current issues in Australia. **New Zealand Geographer** 51(1):35-37.
- Loughran, R.J. 1994. The use of the environmental isotope caesium-137 for soil erosion and sedimentation studies. **Trends in Hydrology** 1:149-167.
- Loughran, R.J. 1992. A positive side to radioactive fallout. **Australian Grain** 2:51-52.
- Loughran, R.J. 1989. The measurement of soil erosion. **Progress in Physical Geography** 13:216-233.
- Loughran, R.J., and B.L. Campbell. 1995. The identification of catchment sediment sources, pp.189-205. In: I.D.L. Foster, A.M. Gurnell, and B.W. Webb, (eds.), **Sediment and Water Quality in River Catchments**, Wiley, Chichester, UK.
- Loughran, R.J., and B.L. Campbell. 1983a. The determination of sedimentation depth by caesium-137. **Search** 14:157-158.
- Loughran, R.J., and B.L. Campbell. 1983b. The identification of catchment sediment sources, p. 189-205. In: I.L. Foster (ed.), **Sediment and water quality in catchments**, John Wiley and Sons, Chichester.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1990. The calculation of net soil loss using caesium-137, pp. 119-126. In: J. Broadman, I.D.I. Foster, and J.A. Dearing (eds.), **Soil erosion on agricultural land**, Wiley, New York.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1988. Determination of erosion and accretion rates using caesium-137, pp. 87-103. In: R.F. Warner (ed.), **Fluvial geomorphology of Australia**, Academic Press, Sidney, Australia.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1986a. A nuclear technique measures soil erosion. **Nuclear Spectrum** 2:2-4.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1986b. Sediment dynamics in a partially cultivated catchment in New South Wales, Australia. **Journal of Hydrology** 83:282-297.

- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1986c. The use of tracer caesium-137 for studying sediment movement in drainage basins, pp. 151-160. *In*: E. Frankel, J.B. Keene, and A.E. Waltho (eds.), **Recent sediments in Eastern Australia - Marine through terrestrial**. Geological Society of Australia, University of Sidney, Sydney, Australia.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1981. Sediment erosion, storage and transport in a small steep drainage basin at Pokolbin, NSW, Australia. **International Association of Hydrological Sciences Publication No. 132**:252-268.
- Loughran, R.J., B.L. Campbell, and G.L. Elliott. 1980. Sediment dynamics in Maluna Creek catchment at Pokolbin, N.S.W. **Papers of the Newcastle (16th) Conference of the Institute of Australian Geographers**, pp. 245-254.
- Loughran, R.J., B.L. Campbell, G.L. Elliott, D. Cummings, and D.J. Shelly. 1989. A cesium-137 sediment hillslope model with test from south-eastern Australia. **Z. Geomorph. N.F.** 33:235-250.
- Loughran, R.J., B.L. Campbell, G.L. Elliott, and D.J. Shelly. 1990. Determination of the rate of sheet erosion on grazing land using caesium-137. **Applied Geography** 10:125-133.
- Loughran, R.J., B.L. Campbell, A.T. Pilgrim, and A.J. Conacher. 1987. Caesium-137 in soils in relation to the nine unit land surface model in a semi-arid environment of Western Australia, pp. 398-406. *In*: A. Conacher (ed.), **Readings in Australian Geography, Proceedings of the 21st Institute of Australian Geographer's Conference**, University of Western Australia, Perth, Australia.
- Loughran, R.J., B.L. Campbell, D.J. Shelly, and G.L. Elliott. 1992. Developing a sediment budget for a small drainage basin in Australia. **Hydrological Processes** 6:145-158.
- Loughran, R.J., B.L. Campbell, and D.E. Walling. 1987. Soil erosion and sedimentation indicated by caesium 137: Jackmoor Brooke catchment Devon, England. **Catena** 14:201-212.
- Loughran, R.J., B.L. Campbell, D.E. Walling, and G.L. Elliott. 1985. Caesium redistribution and sediment movement in two catchments in England and Australia. **First international conference on geomorphology**, Manchester, UK.
- Loughran, R.J., S.J. Curtis, G.L. Elliott, B.L. Campbell, K. Kiernan, and M.G. Temple-Smith. 1992. A reconnaissance survey of soil erosion in Australia. **7th. International Soil Conservation Organization Conference Proceedings**, Vol. 2.1, pp. 52-63.

- Loughran, R.J., and G.L. Elliott. 1996. Rates of soil erosion in Australia determined by the caesium-137 technique: a national reconnaissance survey. **International Association of Hydrological Sciences Publication No. 236**:275-282.
- Loughran, R.J., G.L. Elliott, B.L. Campbell, S.J. Curtis, D. Cummings, and D.J. Shelly. 1993. Estimation of erosion using radionuclide caesium-137 in three diverse areas in eastern Australia. **Applied Geography** 13:169-188.
- Loughran, R.J., G.L. Elliott, B.L. Campbell, and D.J. Shelly. 1988. Estimation of soil erosion from caesium-137 measurements in a small cultivated catchment in Australia. **Journal of Applied Radiation and Isotopes** 39:1153-1157.
- Loughran, R.J., G.L. Elliott, L.T. Maliszewski, and B.L. Campbell. 2000. Soil loss and viticulture at Pokobin, New South Wales, Australia. **International Association of Hydrological Sciences Publication No. 261**:
- Loughran, R.J., G.L. Elliott, D.J. McFarlane, and B.L. Campbell. 2004. A survey of soil erosion in Australia using caesium-137. **Australian Geographical Studies** 42:221-233.
- Loughran, R.J., D.J. McFarlane, B.L. Campbell, and R. Shephard. 1993. The distribution of caesium-137 in rangeland soils at three sites in Western Australia. **Rangeland Journal** 15:24-38.
- Loughran, R.J., D.J. Pennock, and D.E. Walling. 2002. Spatial distribution of caesium-137, p.97-110. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Loughran, R.J., P.J. Wallbrink, D.E. Walling, and P.G. Appleby. 2002. Sampling methods, p. 41-58. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Löw, K., and K. Edvarson. 1960. Content of caesium-137 and (zirconium + niobium)-95 in Swedish soils. *Nature* 187:736-738.
- Lowrance, R., S. McIntyre, and C. Lance. 1988. Erosion and deposition in a field/forest system estimated using cesium-137 activity. **Journal of Soil and Water Conservation** 43:195-199.
- Lu, N., C.F.V. Mason, and W.R.J. Turney. 1996a. Characterization and immobilization of cesium-137 in soil at Los Alamos National Laboratory. **Report No.: LA-UR-96-1322; CONF-9606219-1**, 16p. Department of Energy, Washington, DC.

- Lu, N., C.F.V. Mason, and W.R.J. Turney. 1996b. Characterization and immobilization of cesium-137 in soil at Los Alamos National Laboratory (USA), p.245-255. *In*: Editors: Robert, P.C., R.H. Rust, and W.E. Larson, (eds.) **Precision agriculture. Proceedings of the 3rd International Conference**, Minneapolis, Minnesota, USA, 23-26 June 1996. American Society of Agronomy Madison, USA.
- Lu, X.X. and D.L. Higgitt. 2001. Sediment delivery to the Three Gorges 2: Local response. **Geomorphology** 41(2-3):157-169.
- Lu, X.X., and D.L. Higgitt. 2000. Estimating erosion rates on sloping agricultural land in the Yangtze Three Gorges, China, from caesium-137 measurements. **Catena** 39(1):33-51.
- Lu, X.X., and D.L. Higgitt. 1998. Recent changes of sediment yield in the Upper Yangtze river. **Environmental Management** 22:697-709.
- Lucot, E., D. Klein, M.G. Sokolovska, and P. Badot. 1998. Process of cesium-137 transfers along toposequences in mountain ecosystems: The case study of the Levi Iskar valleys of Rila Mountains (Bulgaria). **Ecologie (Brunoy)** 29(1-2):393-398 (French)
- Ludlam, S.D. 1984. Fayetteville Green Lake, New York, U.S.A. VII. Varve chronology and sediment focusing. **Chemical Geology** 44:85-100.
- Lujaniene, G., V. Lujanas, A. Mastauskas, R. Ladygiene, B.I. Ogorodnikov, and K. Stelingis. 1998. Influence of physico-chemical forms of radionuclides on their migration in the environment. **Radiochimica Acta** 82:305-310.
- Lujaniene, G., A. Plukis, E. Kimtys, V. Remeikis, D. Jankunaite, and B.I. Ogorodnikov. 2002. Study of Cs-137, Sr-90, Pu-239, Pu-240, Pu-238 and Am-241 behavior in the Chernobyl soil. **Journal of Radioanalytical and Nuclear Chemistry** 251(1):59-68.
- Lund, J.W.G. 1984. Winifred Tutin - a personal note, pp. 1-10. *In*: E.Y. Haworth and J.W.G. Lund (eds.), **Lake sediment and environmental history**, University of Minnesota Press, Minneapolis, MN.
- Lunden, B., et al. 1991. An evaluation of soil erosion intensity mapping from SPOT satellite imagery by studies of colour air-photos and top-soil content of 137-cesium, p. xx-xx. *In*: L. Stomquist (ed.), **Monitoring soil loss at different observational levels: Case studies of soil erosion in Lesotho lowlands**. UNGI Rept. No. 74, Naturgeografiska Institutionen, Uppsala Universitet.
- Luque, J.A. and R. Julia. 2002. Lake sediment response to land-use and climate change during the last 1000 years in the oligotrophic Lake Sanabria (northwest of Iberian Peninsula). **Sedimentary Geology** 148(1-2):343-355.

- Lynch, D.R., and C.B. Officer. 1984. Nonlinear parameters estimation for sediment cores. **Chemical Geology** 44:203-225.
- Lynch, J.C., J.R. Meriwether, B.A. McKee, F. Vera-Herrera, and R.R. Twilley. 1989. Recent accretion in mangrove ecosystems based on ^{137}Cs and ^{210}Pb . **Estuaries** 12:284-299.
- Lyons, W.B., P.B. Armstrong, and H.E. Gaudette. 1983. Trace metal concentrations and fluxes in Bermuda sediments. **Marine Pollution Bulletin** 14:65-68.
- Mabit, L., M.C. Bélanger, M.R. Laverdière, C. Bernard, and M. Duchemin. 2002. Selectivity study of water erosion processes to improve its modelling for an agro-environmental evaluation. **Agrosol** 13(1):4-13. (French)
- Mabit, L., and C. Bernard. 1998. Relationship between soil Cs-137 inventories and chemical properties in a small intensively cropped watershed. **Comptes Rendus Acad. Science Ser II-A** 327(8):527-532.
- Mabit, L., C. Bernard, and M.R. Laverdière. 2002. Quantification of soil redistribution and sediment budget in a Canadian watershed from fallout caesium-137 (^{137}Cs) data. **Canadian Journal of Soil Science** 82(4):423-431.
- Mabit, L., C. Bernard, and M.R. Laverdière. 2002. Influence of the sampling strategy on soil loss assessments from ^{137}Cs measurements. p. 2083-2090(2). In : J.L Rubio, R.P.C. Morgan, S. Asins and V. Andreu (ed.), **Man and Soil at the third Millenium**. Geoforma Ediciones, Logroño, Spain.
- Mabit, L., C. Bernard, and M.R. Laverdière. 2000. Water erosion studies in Quebec. **Vecteur Environnement** 33(6):34-43. (French)
- Mabit, L., C. Bernard, M.R. Laverdière, and S. Wicherek. 1999. Assessment of soil erosion in a small agricultural basin of the St. Lawrence River watershed. **Hydrobiologia** 410:263-268.
- Mabit, L., C. Bernard, M.R. Laverdière, and S. Wicherek. 1998. Spatialsation et cartographie des risques érosifs à l'échelle d'un bassin versant agricole par un radio-isotope (^{137}Cs). **Étude et Gestion des Sols** 5(3):171-180.
- Mabit, L., C. Bernard, S. Wicherek., and M.R. Laverdière. 2002. Vertical redistribution of radio-caesium (^{137}Cs) in an undisturbed organic soil of northeastern France. In : R.J. Allison, ed. John Wiley & Sons (UK). **Applied Geomorphology, Theory and Practice**. Chapter XII: 197-203.
- Mabit, L., M.R. Laverdière, and C. Bernard. 2002. Water erosion: methods and case studies in Northern France. **Cahiers Agricultures** 11(3):195-206. (French)

- Macasek, F. and P. Bartos. 2000. A magnetic sorbent for radiocesium and radiostrontium removal from clay and soil suspensions. **Journal of Radioanalytical and Nuclear Chemistry** 246(3):565-569.
- Mackenzie, A.B. 2000. Environmental radioactivity: experience from the 20th century - trends and issues for the 21st century. **Science of the Total Environment** 249(2000):313-329.
- Mackenzie, A.B., M.S. Baxter, I.G. McKinley, D.S. Swan, and W. Jack. 1979. The determination of ¹³⁴Cs, ¹³⁷Cs, ²¹⁰Pb, ²²⁶Ra, and ²²⁸Ra concentrations in nearshore marine sediments and seawater. **Journal of Radioanalytical Chemistry** 48:29-47.
- MacKenzie, A.B., G.T. Cook, P. McDonald, and S.R. Jones. 1998. The influence of mixing timescales and re-dissolution processes on the distribution of radionuclides in northeast Irish Sea sediments. **Journal of Environmental Radioactivity** 39(1):35-53.
- MacKenzie, A.B., J.G. Farmer, and C.L. Sugden. 1997. Isotopic evidence of the relative retention and mobility of lead and radiocaesium in Scottish ombrotrophic peats. **Science of the Total Environment** 203(2):115-127.
- MacKenzie, A.B., R.D. Scott, R.L. Allan, Y.A. Ben Shaban, G.T. Cook, and I.D. Pilford. 1994. Sediment radionuclide profiles: implications of mechanisms of Sellafield waste dispersal in the Irish Sea. **Journal of Environmental Radioactivity** 23:39-69.
- Madruga, M.J., and A. Cremers. 1997. Effect of ionic composition and temperature on the radiocaesium fixation in freshwater sediments. **Water Air Soil Pollution** 99(1-4):201-208.
- Maes, E., B. Delvaux, and Y. Thiry. 1998. Fixation of radiocaesium in an acid brown forest soil. **European Journal of Soil Science** 49(1):133-140.
- Maes, E., A. Iserentant, J. Herbauts, and D. Delvaux. 1999. Influence of the nature of clay minerals on the fixation of radiocaesium traces in an acid brown earth-podzol weathering sequence. **European Journal of Soil Science** 50(1):117-125.
- Maes, E., L. Vielvoye, W. Stone, and B. Delvaux. 1999. Fixation of radiocaesium traces in a weathering sequence mica leads to vermiculite leads to hydroxy interlayered vermiculite. **European Journal of Soil Science** 50(1):107-115.
- Maguire, S., I.D. Pulford, G.T. Cook, and A.B. Mackenzie. 1992. Caesium sorption-desorption in clay-humic acid systems. **Journal of Soil Science** 43:689-696.
- Mahara, Y. 1993. Storage and migration of fallout strontium-90 and cesium-137 for over 40 years in surface soil of Nagasaki. **Journal of Environmental Quality** 22:722-730.

- Mahara, Y., A. Kudo, T. Kauri, D. Santry, and S. Miyahara. 1988. Mobile Pu in reservoir sediment of Nagasaki, Japan. **Health Physics** 54:107-111.
- Mahara, Y., and H. Matsuzuru. 1989. Mobile and immobile plutonium in a ground water environment. **Water Research** 23:43-50.
- Mahara, Y., and S. Miyahara. 1984. Residual plutonium migration in soil of Nagasaki. **Journal of Geophysical Research** 89:7931-7936.
- Majracharya, R.M., R. Lal, and J.M. Kimble. 1998. Use of radioactive fallout cesium-137 to estimate soil erosion on three farms in west central Ohio. **Soil Science** 163(2):133-142.
- Makhon'ko, K.P., T.I. Bobovnikova, A.S. Avramenko, A.V. Dibtseva, and A.A. Volokitin. 1975. Vertical distribution of Sr⁹⁰ and Cs¹³⁷ in bottom deposits of lakes and rivers. **Ékologiya** 3:90-93.
- Makhon'ko, K.P., and V.I. Medvedev. 2000. Cs-137 vertical migration and contamination density in the soil of southern Transbaikale. **Atomic Energy** 88(3):210-216.
- Makhon'ko, K.P., F.A. Rabotnova, and A.A. Volokitin. 1990. Analysis of soil contamination by ¹³⁷Cs in USSR in 1988. **Atomnaya Energiya** 68:262-264.
- Malanca, A. V. Pessina, and G. Dallara. 1966. Consequences of the Chernobyl fallout on some Italian underbrush produces: A ten-year study. **Journal of Environmental Science Health Part A Environmental Science and Engineering and Toxic and Hazardous Substance Control** 31(10):2583-2593.
- Malczewski, D., L. Teper, and J. Dorda. 2004. Assessment of natural and anthropogenic radioactivity levels in rocks and soils in the environs of Swieradow Zdroj in Sudetes, Poland, by in situ gamma-ray spectrometry. **Journal of Environmental Radioactivity** 73(3):233-245.
- Malmgren, L., and M. Jansson. 1995. The fate of Chernobyl radiocesium in the River Öre catchment, northern Sweden. **Aquatic Science** 57:144-160.
- Mamas, C.J.V., L.G. Earwaker, R.S. Sohki, K. Randle, P.R. Bereeesford-Hartwell, and J.R. West. 1995. An estimation of sedimentation rates along the Ribble Estuary, Lancashire, UK, based on radiocaesium profiles preserved in intertidal sediments. **Environmental International** 21:151-165.
- Mamikhin, S.V. 1995. Mathematical model of ¹³⁷Cs vertical migration in forest soils. **Journal of Environmental Radioactivity** 28:161-170.

- Mamikhin, S.V., F.A. Tikhomirov, A.I. Shcheglov. 1997. Dynamics of ^{137}Cs in the forests of the 30-km zone around the Chernobyl nuclear power plant. **Science of the Total Environment** 193(3):169-177.
- Mamikhin, S.V., F.A. Tikhomirov, and A.I. Shcheglov. 1994. Dynamics of Cs-137 content in forest biogeocenoses subjected to radioactive contamination as a result of the Chernobyl accident. **Russian Journal of Ecology** 25:106-110.
- Man, C.K., and Y.P. Cheung. 2004. Modeling of the sorption behavior of Cs-137 in soils. **Journal of Radioanalytical and Nuclear Chemistry** 260(3):665-671.
- Man, C.K. and Y.P. Cheung. 2002. Determination and analysis of sorption of ^{137}Cs to soils in Hong Kong reservoir. **Environmental Pollution** 117(2):357-364.
- Manchester-Neesvig, J.B., A.W., andren, and D.N. Edgington. 1996. Patterns of mass sedimentation and of deposition of sediment contaminated by PCBs in Green Bay. **Journal of Great Lakes Research** 22(2):444-462.
- Mangini, A., U. Christian, M. Barth, W. Schmitz, and H.H. Stabel. 1990. Pathways and residence times of radiotracers in Lake Constance, pp. 245-264. *In*: M.M. Tilzer and C. Serruya (eds.), **Large lakes: ecological structure and function**, Springer-Verlag, New York.
- Mann, D.R., and S.A. Casso. 1984. In-situ chemisorption of radiocesium from seawater. **Marine Chemistry** 14:307-318.
- Margineanu, R., I. Ionita, D. Breban and D. Gheorghiu. 2000. Inventory of Cs-137 from Chernobyl accident in the Moldavian tableland of Romania, p. 742-748. *In*: **Proceeding of Radioactivity after Nuclear Explosions and Accident**, Saint-Petersburg, Russia.
- Margvelashvily, N., V. Maderich, and M. Zheleznyak. Simulation of radionuclide fluxes from the Dnieper-Bug Estuary into the Black Sea. **Journal of Environmental Radioactivity** 43(2):157-171.
- Marsh, P., L.F.W. Lesack, and A. Roberts. 1999. Lake sedimentation in the Mackenzie Delta, NWT. **Hydrological Processes** 13(16):2519-2536.
- Maringer, F.J., and P. Jachs. 1996 On the radioecology of the River Danube: A new approach for dating solid particles. **Archiv fuer Hydrobiologie Supplement** 113(1-4):389-395.
- Maringer, F.J., R. Tesch, M. Hrachowitz, and V. Gruber. 2004. Long-term environmental monitoring and application of low-level H-3, Be-7, Cs-137 and Pb-210 activity concentrations in the non-biotic compartments of the Danube in Austria. **Applied Radiation and Isotopes** 61(2-3):313-317.

- Martin, D.B. 1985. Accumulation of sediment, nutrients, and cesium-137 in prairie potholes in cultivated and noncultivated watersheds, pp. 274-275. *In: Perspectives in nonpoint source pollution*, USEPA, Washington, DC.
- Martin, D.B., and W. Hartman. 1987. The effect of cultivation on sediment composition and deposition in prairie pothole wetlands. **Water Air Soil Pollution** 34:45-53.
- Martin, J. 1985. The Pavin Crater lake, pp. 169-188. *In: W. Strumm, (ed.), Chemical processes in lakes*, Wiley, New York.
- Martin, R.E., S.P. Hippensteel, D. Nikitina, and J.E. Pizzuto. 2002. Artificial time-averaging of marsh foraminiferal assemblages: linking the temporal scales of ecology and paleoecology. **Paleobiology** 28(2):263-277.
- Martynenko, V.P., V.G. Linnik, A.P. Govorun, and V.N. Potapov. 2003. Comparison of the results of field radiometry and sampling in the investigation of Cs-137 soil content in Bryansk oblast. **Atomic Energy** 95(4):727-733.
- Martyushov, V.V., D.A. Spirin, V.V. Bazylev, V.I. Polyakova, V.P. Medvedev, L.N. Martyushova, L.A. Panova, and I.G. Teplyakov. 1997. Radioecological aspects of the behavior of long-living radionuclides in floodplain landscapes in the upper reaches of the Techa River. **Russian J. Ecology** 28(5):321-327. (translated from **Ékologiya** (1997) 5:361-368. (Russian))
- Martz, L.W. 1992. The variation of soil erodability with slope position in a cultivated Canadian prairie landscape. **Earth Surface Process and Landform** 17:543-556.
- Martz, L.W., and E. de Jong. 1991. Using cesium-137 and landform classification to develop a net soil erosion budget for a small Canadian prairie watershed. **Catena** 18:289-308.
- Martz, L.W., and E. de Jong. 1987. Using cesium-137 to assess the variability of net soil erosion and its association with topography in a Canadian prairie landscape. **Catena** 14:439-451.
- Martz, L.W., and E. de Jong. 1985. The relationship between land surface morphology and soil erosion and deposition in a small Saskatchewan basin, pp. 1-19. *In: Proceedings of the seventh hydrotechnical conference*, Canadian Society for Civil Engineering Annual Conference 1985.
- Marzano, F.N., C. Triulzi, A. Casoli, A. Mori, and M. Vaghi. 1998. Marine and lacustrine radioecological researches in Antarctica. 1992-1994. **International Journal of Environmental Anal. Chemistry** 71(3-4): 311-319.

- Masero, R. and F. Villate. 2004. Composition, vertical distribution and age of zooplankton benthic eggs in the sediments of two contrasting estuaries of the Bay of Biscay. **Hydrobiologia** 518(1-3):201-212.
- Masque, P., J. Fabres, M. Canals, J.A. Sanchez-Cabeza, A. Sanchez-Vidal, I. Cacho, A.M. Calafat, and J.M. Bruach. 2003. Accumulation rates of major constituents of hemipelagic sediments in the deep Alboran Sea: a centennial perspective of sedimentary dynamics. **Marine Geology** 193(3-4):207-233.
- Mathewes, R.W., and J.M. D'Auria. 1982. Historic changes in an urban watershed determined by pollen and geochemical analyses of lake sediment. **Canadian Journal of Earth Science** 19:2114-2125.
- Matishov, D.G., G.G. Matishov, N.E. Kasatkina, and I.S. Usyagina. 2004. Dynamics of the Barents and the Azov Sea bottom sediments radioactive contamination. **Doklady Akademii Nauk** 396(3):394-396.
- Matishov, G.G., D.G. Matishov, A.A. Namjatov, J. Carroll, and S. Dahle. 2002. Artificial radionuclides in sediments of the Don River Estuary and Azov Sea. **Journal of Environmental Radioactivity** 59(3):309-327.
- Matishov, G.G., D.G. Matishov, A.A. Namjatov, J. Carroll, and S. Dahle. 2000. Discharges of nuclear waste into the Kola Bay and its impact on human radiological doses. **Journal of Environmental Radioactivity** 48(1):5-21.
- Matishov, G.G., D.G. Matishov, A.A. Namjatov, J. Carroll, and S. Dahle. 1999. Anthropogenic radionuclides in Kola and Motovsky Bays of the Barents Sea, Russia. **Journal of Environmental Radioactivity** 43(1):77-88
- Matisoff, G., E.C. Bonniwell, and P.J. Whiting. 2002. Soil erosion and sediment sources in an Ohio watershed using Beryllium-7, Cesium-137, and Lead-210. **Journal of Environmental Quality** 31(1):54-61.
- Matisoff, G., E.C. Bonniwell, and P.J. Whiting. 2002. Radionuclides as indicators of sediment transport in agricultural watersheds that drain to Lake Erie. **Journal of Environmental Quality** 31(1):62-72.
- Matisoff, G. 1984. Mathematical models of bioturbation, pp. 289-330. *In*: P.L. McCall and M.J.S. Tevesz (eds.), **Animal sediment relations: the biotic alteration of sediment**, Plenum Press, New York.
- Matisoff, G., and J.A. Robbins. 1987. A model for biological mixing of sediments. **Journal of Geology Education** 35:144-149.

- Matisoff, G., and X. Wang. 2000. Particle mixing by freshwater infaunal bioirrigators: Midges (Chironomidae : Diptera) and mayflies (Ephemeroidea : Ephemeroptera). **Journal of Great Lakes Research** 26(2):174-182.
- Matisoff, G., X.S. Wang, and P.L. McCall. 1999. Biological redistribution of lake sediments by tubificid oligochaetes: *Branchiura sowerbyi* and *Limnodrilus hoffmeisteri*/Tubifex tubifex. **Journal of Great Lakes Research** 25(1):205-219.
- Matschullat, V.J., H. Heinrichs, J. Schneider, and M. Strum. 1987. Schwermetallgehalte in Seesedimenten des Westharzes (BRD). **Chemistry Erde** 47:181-194. (German)
- Matsunaga, T., T. Ueno, H. Amano, Y. Tkatchenko, A. Kovalyov, M. Watanabe, and Y. Onuma. 1998. Characteristics of Chernobyl-derived radionuclides in particulate form in surface waters in the exclusion zone around the Chernobyl Nuclear Power Plant. **Journal of Contamination Hydrology** 35(1-3):101-113.
- Matsunaga, T., T. Ueno, R.L.R. Chandradjith, H. Amano, M. Okumura, and H. Hashitani. 1999. Cesium-137 and mercury contamination in lake sediments. **Chemosphere** 39(2):269-283.
- Matsunami, T., A. Mizohata, and T. Mamuro. 1979. Observations of deposition and atmospheric concentration of ^{210}Pb , ^7Be , and ^{137}Cs in Osaka. **Annual Report of the Radiation Center Osaka Perfect**. 20:1-4.
- Matsuoka, K. 1999. Eutrophication process recorded in dinoflagellate cyst assemblages - a case of Yokohama Port, Tokyo Bay, Japan. **Science of the Total Environment** 231(1):17-35.
- Matthai, C., G.F. Birch, A. Jenkinson, and H. Heijnis. 2001. Physical resuspension and vertical mixing of sediments on a high energy continental margin (Sydney, Australia). **Journal of Environmental Radioactivity** 52(1):67-89.
- Matthews, K.M. 1995. Measurements of residual traces of Cs-137 in the atmosphere in New Zealand. **Journal of Environmental Radioactivity** 27:221-229.
- Matthews, K.M. 1989. Radioactive fallout in the South Pacific: A history. Part 1. Deposition in New Zealand. National Radiation Laboratory, Christchurch, **Report NRL 1989/2**, 78pp.
- Matthews, K.W., and K. Potipin. 1985. Extraction of fallout ^{210}Pb from soils and its distribution in soil profiles. **Journal of Environmental Radioactivity** 2:319-331.
- Maulé, C.P., and M.J. Dudas. 1989. Preliminary identification of soil separates associated with fallout ^{137}Cs . **Canadian Journal of Soil Science** 69:171-175.

- McCabe, W.J., and W.J. Mason. 1982. A falls dam, Otago, sedimentation rates measured by caesium-137 profiles. **Institute of Nuclear Studies INS-R-309**, Lower Hutt, New Zealand.
- McCabe, D.C., R. Protz, and A.D. Tomlin. 1991. Faunal effects on the distribution of gamma emitting radionuclides in four forested soils. **Water, Soil and Air Pollution** 57-58:521-532.
- McCall, P.L., J.A. Robbins, and G. Matisoff. 1984. ¹³⁷Cs and ²¹⁰Pb transport and geochronologies in urbanized reservoirs with rapidly increasing sedimentation rates. **Chemical Geology** 44:33-65.
- McCall, P.L., M.J.S. Tevesz, X.S. Wang, and J.R. Jackson. 1995. Particle mixing rates of freshwater bivalves: *Anodonta grandis* (Unionidae) and *Sphaerium striatinum* (Pisidiidae). **Journal of Great Lakes Research** 21:333-339
- McCallan, M.E., B.M. O'Leary, and C.W. Rose. 1980. Redistribution of caesium-137 by erosion and deposition on an Australian soil. **Australian Journal of Soil Science** 18:119-128.
- McCallan, M.E., and C.W. Rose. 1977. The construction of a geochronology for alluvial deposits in the Condamine Plain and the estimation of the areal variation in erosion intensity in the Upper Condamine drainage basin. **Technical Report 2/77**, Griffith Univ., Australia, 16 pp.
- McCartney, M., P.J. Kershaw, D.S. Woodhead, and D.C. Denoon. 1994. Artificial radionuclides in the sediments of the Irish Sea. **Science of the Total Environment** 141:103-138.
- McCarty, G.W. and J.C. Ritchie. 2002. Impact of soil movement on carbon sequestration in agricultural ecosystems. **Environmental Pollution** 116(3):423-430.
- McClimans, T.A., D.R. Johnson, M. Krosshavn, S.E. King, J. Carroll, and O. Grenness. 2000. Transport processes in the Kara Sea. **Journal of Geophysical Research-Oceans** 105(C6):14121-14139.
- McCraith, B.J., L.R. Gardner, D.S. Wethey, and W.S. Moore. 2003. The effect of fiddler crab burrowing on sediment mixing and radionuclide profiles along a topographic gradient in a southeastern salt marsh. **Journal of Marine Research** 61(3):359-390.
- McCubbin, D., K.S. Leonard, J. Brown, P.J. Kershaw, R.A. Bonfield, and T. Peak. 2002. Further studies of the distribution of technetium-99 and caesium-137 in UK and European coastal waters. **Continental Shelf Research** 22(10):1417-1445.
- McDougall, S., J. Hilton, and A. Jenkins. 1991. A dynamic model of cesium transport in lakes and their catchment. **Water Research** 25:437-445.

- McFarlane, D.J., R.J. George, R.J. Loughran, G.L. Elliott, A.T. Ryder, D. Bennett, and P.J. Tille. 2000. A national reconnaissance survey of soil erosion in Australia: Western Australia. Report prepared for the Australian Landcare Program, Agriculture, Fisheries, and Forest - Australia. **Project No. 1989-90 No. 8**, The University of Newcastle, New South Wales 2308, Australia, 264pp.
- McFarlane, D.J., R.J. Loughran, and B.L. Campbell. 1992. Soil erosion of agricultural land in western Australia estimated by caesium-137. **Australian Journal of Soil Research** 30:533-546.
- McGee, E.J., H.J. Synnott, K.J. Johanson, B.H. Fawaris, S.P. Nielsen, A.D. Horrill, V.H. Kennedy, N. Barbayiannis, D.S. Veresoglou, D.E. Dawson, P.A. Colgan, and A.T. McGarry. 2000. Chernobyl fallout in a Swedish spruce forest ecosystem. **Journal of Environmental Radioactivity** 48(1):59-78.
- McGee, E.J., M.J. Keatinge, H.J. Synnott, and P.A. Colgan. 1995. The variability in fallout content of soil and plants and the design of optimum field sampling strategies. **Health Physics** 68:320-327.
- McGee, E.J., H.J. Synnott, and P.A. Colgan. 1993. A new method for prediction of radiocesium levels in vegetation: evidence from Irish upland. **Journal of Environmental Radioactivity** 18:53-70.
- McGee, E.J., H.J. Synnott, M. Keatinge, and P.A. Colgan. 1993. Persistence and prediction of radiocaesium levels in animals grazing in semi-natural environments. **Science of the Total Environment** 138:91-99.
- McHenry, J.R. 1975. Reservoir sedimentation. **Water Resources Bulletin** 10:329-337.
- McHenry, J.R. 1968. Use of tracer techniques in soil erosion research. **Transaction of the American Society of Agricultural Engineers** 11:619-625.
- McHenry, J.R., and G.D. Bubenzer. 1985a. Estimating erosion from ^{137}Cs activity measurements. **American Society of Agricultural Engineers** Paper No. 82-2034.
- McHenry, J.R., and G.D. Bubenzer. 1985b. Field erosion estimated from ^{137}Cs activity measurements. **Transactions of American Society of Agricultural Engineers** 28:480-483.
- McHenry, J.R., C.M. Cooper, and J.C. Ritchie. 1982. Sedimentation in Wolf Lake, Lower Yazoo River Basin, Mississippi. **Journal of Freshwater Ecology** 1:547-558.

- McHenry, J.R., and S.C. McIntyre. 1984. Recent sedimentation rates in two North America impoundments with watershed predominantly in cropland, pp. 205-211. *In*: R.J. Loughran (ed.), **Drainage basin erosion and sedimentation**, University of Newcastle, New South Wales, Australia.
- McHenry, J.R., and J.C. Ritchie. 1980. Dating recent sediments in impoundments. **Symposium on surface water impoundments**. American Society of Civil Engineers, New York. pp. 1279-1289.
- McHenry, J.R., and J.C. Ritchie. 1977a. Estimating field erosion losses from fallout Cs-137 measurements. **International Association of Hydrological Sciences Publication No. 122: 26-33**.
- McHenry, J.R., and J.C. Ritchie. 1977b. Physical and chemical parameters affecting transport of ¹³⁷Cs in arid watersheds. **Water Resources Research** 13:923-925.
- McHenry, J.R., and J.C. Ritchie. 1975. Redistribution of Cs-137 in southeastern watersheds, pp. 452-461. *In*: F. G. Howell, J.B. Gentry, and M. H. Smith (eds.), **Mineral cycling in southeastern ecosystems**, Symposium Series CONF-740513, Environmental Research and Development Administration, Washington, DC.
- McHenry, J.R., J.C. Ritchie, and G.B. Bubenzer. 1978. Redistribution of Cs-137 due to erosional processes in a Wisconsin watershed. pp. 495-503. *In*: D.C. Adriano and I.L. Brisbin Jr. (eds.), **Environmental Chemistry and cycling processes**. USDOE CONF-760429, US Department of Energy, Washington, DC.
- McHenry, J.R., J.C. Ritchie, and C.M. Cooper. 1980. Rate of recent sedimentation in Lake Pepin. **Water Resources Bulletin** 16:1049-1056.
- McHenry, J.R., J.C. Ritchie, C.M. Cooper, and J. Verdon. 1984. Recent rates of sedimentation in the Mississippi River, pp. 99-117. *In*: J.G. Wiener, R.V., Anderson, and D.R. McConville (eds.), **Contaminants in the upper Mississippi River**, Butterworth Publishers, Boston, MA.
- McHenry, J.R., J.C. Ritchie, and A.C. Gill. 1973a. Nitrogen, phosphorus, and other chemicals in sediments from reservoirs in North Mississippi. **Mississippi Water Resources Conference Proceedings**, pp. 1-13.
- McHenry, J.R., J.C. Ritchie, and A.C. Gill. 1973b. Accumulation of fallout cesium 137 in soils and sediments in selected watersheds. **Water Resources Research** 9:676-686.
- McHenry, J.R., J.C. Ritchie, and J. May. 1975. Recent sedimentation rates in the lower Mississippi River Valley: Lake Verret-Lake Palourde, Louisiana. **Mississippi Water Resources Conference Proceedings**, pp. 13-23.

- McHenry, J.R., J.C. Ritchie, and J. Verdon. 1976. Sedimentation rates in the Upper Mississippi River, pp. 1339-1349. *In: River '76 symposium on inland waterways for navigation, flood control and water diversion*. American Society of Civil Engineers, New York.
- McHenry, J.R., F.R. Schiebe, J.C. Ritchie, and C.M. Cooper. 1984. Deposited sediments in Lake Chicot, pp. 18-47. *In: J.F. Nix and F.R. Schiebe (eds.), Limnological studies of Lake Chicot, Arkansas*. Quachita Baptist College, Arkadelphia, AR.
- McIntyre, S.C. 1995. Linking land use and reservoir sedimentation by two approaches utilizing ¹³⁷Cs. **IAEA-TECHDOC-828**, pp. 99-110.
- McIntyre, S.C. 1993. Reservoir sedimentation rates linked to long-term changes in agricultural land use. **Water Resources Bulletin** 29:487-495.
- McIntyre, S.C., J.C. Lance, B.L. Campbell, and R.L. Miller. 1987. Using cesium-137 to estimate soil erosion on a clearcut hillside. **Journal of Soil and Water Conservation** 42:117-120.
- McIntyre, S.C., and J.W. Naney. 1991. Sediment deposition in a forested inland wetland with a steep-farmed watershed. **Journal of Soil and Water Conservation** 46:64-66.
- McIntyre, S.C., and J.W. Naney. 1990. Reelfoot Lake sedimentation rates and sources. **Water Resources Bulletin** 26:227-232.
- McIntyre, S.C., J.W. Naney, and W.R. Berkas. 1988. Measurement of recent sediment deposition in Lake Taneycomo using cesium-137. **Abstracts of Papers for the 1988 Annual Meeting of the American Society of Limnology and Oceanography**, Boulder, CO.
- McIntyre, S.C., J.W. Naney, and J.R. Cooper. 1991. Long-term Cs-137 and soil loss from field plots. **Proceedings of the Fifth Federal Interagency Sedimentation Conference**, pp. 5-33 - 5-39.
- McIntyre, S.C., J.W. Naney, and J.R. McHenry. 1989. Quantification of lake sedimentation rates utilizing radioisotopes present in the environment, pp. 1-5. *In: Offsite assessment*, EPA Publication 440/5-89-001, USEPA, Washington, DC.
- McKay, W.A., and M.S. Baxter. 1985. The partitioning of Sellafield derived radiocaesium in Scottish coastal sediments. **Journal of Environmental Radioactivity** 2:93-114.
- McKinley, I.G., M.S. Baxter, D.J. Ellett, and W. Jack. 1981a. Tracer applications of radiocesium in the sea of the Herbies. **Estuaries and Coastal Shelf Science** 13:69-82.
- McKinley, I.G., M.S. Baxter, and W. Jack. 1981b. A simple model of radiocesium transport from Windscale to the Clyde Sea area. **Estuaries and Coastal Shelf Science** 13:59-67.

- McKinley, J.P., J.M. Zachara, S.M. Heald, A. Dohnalkova, M.G. Newville, and S.R. Sutton. 2004. Microscale distribution of cesium sorbed to biotite and muscovite. **Environmental Science and Technology** 38(4):1017 -1023.
- McKinley, J.P., C.J. Zeissler, J.M. Zachara, R.J. Serne, R.M. Lindstrom, H.T. Schaeff, and R.D. Orr. 2001. Distribution and retention of Cs-137 in sediments at the Hanford Site, Washington. **Environmental Science & Technology** 35(17):3433-3441.
- McLean, R.I., J.K. Summers, R.S. Olsen, S.C. Domotor, I.L. Larson, and H. Wilson. 1991. Sediment accumulation rates in Conowingo Reservoir as determined by man-made and natural radionuclides. **Estuaries** 14:148-156.
- McLin, S. 2004. Background radioactivity in sediments near Los Alamos, New Mexico. **Science of the Total Environment** 328(1-3):143-159.
- McMinn, A., G.M. Hallegraef, P. Thomson, A.V. Jenkinson, and H. Heijnen. 1997. Cyst and radionuclide evidence for the recent introduction of the toxic dinoflagellate *Gymnodinium catenatum* into Tasmanian waters. **Marine Ecology Progress Series** 161(0):165-172.
- McMurtry, G.M., A. Snidvongs, and C.R. Glenn. 1995. Modeling sediment accumulation and soil erosion with ¹³⁷Cs and ²¹⁰Pb in the Ala Wai Canal and Central Honolulu watershed, Hawaii. **Pacific Science** 49:412-451.
- Mecray, E.L., J.W. King, P.G. Appleby, and A.S. Hunt. 2001. Historical trace metal accumulation in the sediments of an urbanized region of the Lake Champlain watershed, Burlington, Vermont. **Water Air and Soil Pollution** 125(1-4):201-230.
- Meddi, M., Y. Boukhari, and B. Morsli. 2005. Etude du ruissellement et du transport solide dans les Monts de Beni-Chougrane, Algérie: utilisation de la simulation de pluie, p. 21-28. In: D.E. Walling and A.J. Horowitz(eds.). *Sediment Budgets 1*. **International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Meehan, A.R., and M.E. Phillips. 1998. Site characterization by in site gamma-ray spectrometry. **Radioactivity and Radiochemistry** 9(4):15-21.
- Meili, M. 1994. Radiocaesium as ecological tracer in aquatic systems- A review, pp. 127-139. In: H. Dahlgard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.

- Meisel, S., M.H. Gerzabek, and H.K. Müller. 1991. Influence of plowing on the depth distribution of different radionuclides in soil. **Zeitschrift für Pflanzenernährung und Bodenkunde** 154:211-215.
- Mélières, M.A., M. Pourchet, J.F. Pinglot, R. Bouchez, and M. Piboule. 1988. Chernobyl ^{134}Cs , ^{137}Cs and ^{210}Pb in high mountain lake sediment: measurements and modeling of mixing process. **Journal of Geophysical Research** 93:7055-7061.
- Melin, J., L. Wallberg, J. Suomela. 1994. Distribution and retention of cesium and strontium in Swedish boreal forest ecosystems. **Science of the Total Environment** 157:93-105.
- MeLin, S.G. 2004. Background radioactivity in sediments near Los Alamos, New Mexico. **Science of the Total Environment** 328(1-3):143-159.
- Menzel, R.G. 1974. Land surface erosion and rainfall as sources of strontium-90 in streams. **Journal of Environmental Quality** 3:219-223.
- Menzel, R.G. 1965. Soil plant relationships of radioactive elements. **Health Physics** 11:1325-1332.
- Menzel, R.G. 1960. Transport of strontium-90 in runoff. **Science** 131:499-500.
- Menzel, R.G., P. Jung, K. Ryu, and K. Um. 1987. Estimating soil erosion losses in Korea with fallout cesium-137. **Journal of Applied Radiation and Isotopes** 38:451-454.
- Merefield, J.R. 1986. Alkali metals in the permo-triassic as geochemical indicators of surficial processes. **Chemical Geology** 56:143-158.
- Merefield, J.R. 1981. Caesium in up-estuary transport of sediment. **Marine Geology** 39:M45-M55.
- Meriwether, J.R., J.N. Beck, D.F. Keeley, M.P. Langley, R.H. Thompson, and J.C. Young. 1988. Radionuclides in Louisiana soils. **Journal of Environmental Quality** 17:562-568.
- Michel, H., G. Barci-Funel, J. Dalmasso, G. Ardisson, P.G. Appleby, E. Haworth, and F. El-Daoushy. 2001. Plutonium, americium and cesium records in sediment cores from Blelham Tarn, Cumbria (UK). **Journal of Radioanalytical and Nuclear Chemistry** 247(1):107-110.
- Middelkoop, H. and M. van der Perk. 1998. Modelling spatial patterns of overbank sedimentation on embanked floodplains. **Geografiska Annaler Series A: Physical Geography** 80(A):95-109.

- Miguel, S., J.P. Bolivar, and R. Garcia-Tenorio. 2003. Mixing, sediment accumulation and focusing using Pb-210 and Cs-137. **Journal of Paleolimnology** 29(1):1-11.
- Mihai, S.A. 2003. Concentration distributions of radionuclides in sediments along the Romanian sector of the Danube River and the Black Sea coast. **Radiochimica Acta** 91(3):179-183.
- Mihai, S.A. and J.D. Mather. 2003. Role of mineralogical structure of sediments in accumulation of radionuclides and trace elements. **Journal of Radioanalytical and Nuclear Chemistry** 256(3):425-430.
- Mihelcic, G., B. Suriya, M. Juracic, D. Barisic, and M. Branica. 1996. History of the accumulation of trace metals in sediments of the saline Rogoznica Lake (Croatia). **Science of the Total Environment** 182:105-115.
- Mikhailovskaya, L.N., I.V. Molchanova, V.N. Pozolotina, and E.N. Karavaeva. 2002. Experimental assessment of the water migration of radionuclides in floodplain soils of the Techa River. **Eurasian Soil Science** 35(9):1003-1006.
- Milan, C.S., E.M. Swenson, R.E. Turner, and J.M. Lee. 1995. Assessment of the ¹³⁷Cs method for estimating sediment accumulation rates: Louisiana salt marshes. **Journal of Coastal Research** 11:296-307.
- Miller, J.R., and R.F. Reitemeier. 1963. The leaching of radiostrontium and radiocesium through soils. **Soil Science Society of America Proceedings** 27:141-144.
- Miller, K.M., and M. Heit. 1986. A time resolution methodology for assessing the quality of lake sediment cores that are dated by ¹³⁷Cs. **Limnology and Oceanography** 31:1292-1300.
- Miller, K.M., J.L. Kniper, and I.K. Helfer. 1990. ¹³⁷Cs fallout depth distributions in forest versus field sites: implications for external gamma dose rates. **Journal of Environmental Radioactivity** 12:23-47.
- Miller, K.M., P. Shebell, M.A. Monetti, G.A. Klemic, R. Venkataraman, E. Fisher, D.G. Scoggings, S.H. Faller, B. Moore, T. Reiman, D.G. Keefer, and R.T. Reiman. 1998. An intercomparison on in situ gamma-ray spectrometers. **Radioactivity and Radiochemistry** 9(4):27-40.
- Milton, G.M., S.J. Kramer, W.L. Watson, and T.G. Kotzer. 2001. Qualitative estimates of soil disturbance in the vicinity of CANDU stations, utilizing measurements of Cs-137 and Pb-210 in soil cores. **Journal of Environmental Radioactivity** 55(2):195-205.
- Mincher, B.J., R.V. Fox, C.L. Riddle, D.C. Cooper, and G.S. Groenewold. 2004. Strontium and cesium sorption to snake river plain, Idaho soil. **Radiochimica Acta** 92(1):55-61.

- Miralles, J., O. Radakovitch, J.K. Cochran, A. Veron, and P. Masque. 2004. Multitracer study of anthropogenic contamination records in the Camargue, Southern France. **Science of the Total Environment** 320(1):63-72.
- Mironov, V., V. Kudrjashov, F. Yiou, and G.M. Raisbeck. 2002. Use of I-129 and Cs-137 in soils for the estimation of I-131 deposition in Belarus as a result of the Chernobyl accident. **Journal of Environmental Radioactivity** 59(3):293-307.
- Mishra, U.C., and S. Sadasivan. 1972. Fallout radioactivity in Indian soils. **Health Physics** 23:55-62.
- Missik, J., L. Puskeiler, J.L. Miklas, and J.L. Comendeiro. 1995. The vertical distribution of radiocaesium and some natural radionuclides in soils of the transect line. **Acta Fytotechnica** 50:79-81.
- Mitasova, H., J. Hofierka, M. Zlocha, and L.R. Iverson. 1996. Modeling topographic potential for erosion and deposition using GIS. **International Journal of Geographical Information Systems** 10:629-641.
- Mitas, L., and H. Mitasova. 1998. Distributed soil erosion simulation for effective erosion prevention. **Water Resources Research** 34:505-516.
- Mitchell, J.K., G.D. Bubenzer, J.R. McHenry, and J.C. Ritchie. 1980. Soil loss estimation from fallout cesium-137 measurements, pp. 393-401. *In*: M. DeBoodt and D. Gabriels (eds.), **Assessment of erosion**, Wiley, London.
- Mitchell, J.K., S. Mostaghimi, D.S. Freeny, and J.R. McHenry. 1983. Sediment deposition estimation from cesium-137 measurements. **Water Resources Bulletin** 19:549-555.
- Mitchell, P.I., O.M. Condren, L.L. Vintro, and C.A. McMahon. 1999. Trends in plutonium, americium and radiocaesium accumulation and long-term bioavailability in the western Irish Sea mud basin. **Journal of Environmental Radioactivity** 44(2-3):223-251.
- Mitchell, P.I., W.R. Schell, A. McGarry, T.P. Ryan, J.A. Sanchez-Cabaza, and A. Vidal-Quadras. 1992. Studies of the vertical distribution of ^{134}Cs , ^{137}Cs , ^{238}Pu , ^{240}Pu , ^{241}Pu , ^{241}Am , and ^{210}Pb in ombrogenous mires at midlatitudes. **Journal of Radiation and Nuclear Articles** 156:361-387.
- Moeller, R.E., F. Oldfield, and P.G. Appleby. 1984. Biological mixing and its stratigraphic implications in Mirror Lake (New Hampshire, U.S.A.). **Verhalt International Verein. Limnology** 22:567-572.
- Móesy, I.S. Sălăgean, and I. Uray. 1989. Urmărirea acumulării unor radionuclizi in sediment și ses ton. **Igiena, Medicina Muncii și Medicină Socială** 38:49-52. (Romanian)

- Mohamad, D.B. 1982. Application of Cs-137 techniques to problems of sediment redistribution in Sungai Lui representative basin, Selangor, Malaysia: Part I. Regional Cooperative Agreement Report **MAL 2623/RI/AG**, 5 pp. International Atomic Energy Agency, Vienna, Austria.
- Mohler, H.J., F.W. Whicker, and T.G. Hinton. 1997. Temporal trends of ^{137}Cs in an abandoned reactor cooling reservoir. **Journal of Environmental Radioactivity** 37(3):251-268.
- Mokrov, Y.G. 2004. External radiation exposure of residents living close to the Mayak facility: main sources, dose estimates, and comparison with earlier assessments. **Radiation and Environmental Biophysics** 43(2):127-139.
- Molchanova, I.V., E.N. Karavaeva, L.N. Mikhailovskaya, V.N. Pozolotina, and L.V. Lobanova. 2003. The role of floodplain soils as a barrier to radionuclide migration: An example of the Techa-Iset' river system. **Russian Journal of Ecology** 34(4):236-241.
- Molchanova, I.V., E.N. Karavaeva, V.N. Pozolotina, A. Aarkrog, G. Dalgaard, and S.P. Nelsen. 1998. Radionuclides in soils of East Urals radioactive trace. **Defektoskopiya** 4:87-92. (Russian)
- Molchanova, I.V., E.N. Karavaeva, V.N. Pozolotina, P.I. Yushkov, and L.N. Mikhailovskaya. 1994. Behavior patterns of radionuclides in floodplain landscapes of the Techa river in the Urals. **Russian Journal of Ecology** 25:181-186. (Translated from **Ékologiya** 3:43-49, 1994)
- Molero, J., J.A. Sanchez-Cabeza, J. Merino, L. Pujol, P.I. Mitchell, and A. Vidal-Quadras. 1995. Vertical distribution of radiocaesium, plutonium and americium in the Catalan Sea (Northwestern Mediterranean). **Journal of Environmental Radioactivity** 26(3):205-216.
- Mollah, A.S., and S.M. Ullah. 1998. Determination of distribution coefficient of Cs-137 and Sr-90 in soil from AERE, Savar. **Waste Management** 18(4):287-291.
- Momoshima, N., and E.A. Bondietti. 1994. The radial distribution of Sr-90 and Cs-137 in trees. **Journal of Environmental Radioactivity** 22:93-109.
- Monetti, M.A. and R.J. Larsen. 1991. Worldwide fallout of Sr-90 through 1986. USDOE Rep. **EML-533**, Environmental Monitoring Laboratory, New York.
- Monte, L. 2002. A general methodology for structuring models to predict the long-term migration of radionuclides from catchments. **Journal of Environmental Radioactivity** 59(2):153-168.
- Monte, L. 1996. Analysis of models assessing the radionuclide migration from catchments to water bodies. **Health Physics** 70:227-237.

- Monte, L. 1995. Evaluation of radionuclide transfer functions from a drainage basin of fresh water systems. **Journal of Environmental Radioactivity** 26:71-82.
- Monte, L., E. Baldini, C. Battella, S. Fratarcangeli, and F. Pompei. 1997. Modelling the radionuclide balance in some water bodies of central Italy. **Journal of Environmental Radioactivity** 37(3):269-285.
- Monte, L., C. Grimani, D. Desideri, and G. Angeli. 2005. Modelling the long-term behaviour of radiocaesium and radiostrontium in two Italian lakes. **Journal of Environmental Radioactivity** 80(1):105-123.
- Montgomery, J.A. A.J. Busacca, B.E. Frazier, and D.K. McCool. 1997. Evaluating soil movement using cesium-137 and the Revised Soil Loss Equation. **Soil Science Society of America Journal** 61(2):571-579.
- Moore, P.D. 1974. Lead accretion in alluvial deposits. **Nature** 250:288-289.
- Moore, W.S. and S.E. Poet. 1976. ^{210}Pb fluxes determined from ^{210}Pb and ^{226}Ra soil profiles. **Journal of Geophysical Research** 81(6):1056-1058.
- Moreira, R.M., C.V.S. Sabino, and W. Magalhaes. 1995. Studies on the adsorption of cesium by soil. **Anaia do III Encontro Nacional de Aplicacoes Nucleares 3, Aguas de Lindoia**, 1995 vol.1:330-331.
- Morgan, I.J., P. Tytler, and M.V. Bell. 1993. The accumulation of 137-caesium from fresh water by alevins and fry of Atlantic salmon and brown trout. **Journal Fisheries Biology** 43:877-888.
- Moroney, J.R. 1979. Radioactive fallout in the southern hemisphere from nuclear weapons test. , ARL/TR13, ISSNO 157-1400
- Morris, C.D., and R.J. Loughran. 1994. Distribution of caesium-137 in soils across a hillslope hollow. **Hydrological Processes** 8:531-541.
- Morris, J.D. 1991. Application of cosmogenic ^{10}Be to problems in the earth sciences. **Annual Review of Earth Planetary Science** 19:313-350.
- Morris, K., J.C. Butterworth, and F.R. Livens. 2000. Evidence for the remobilization of Sellafield waste radionuclides in an intertidal salt marsh, West Cumbria, UK. **Estuarine Coastal and Shelf Science** 51(5):613-625.

- Motha, J.A., P.J. Wallbrink, P.B. Hairsine, and R.B. Grayson. 2003. Determining the sources of suspended sediment in a forested catchment in southeastern Australia. **Water Resources Research** 39(3):
- Motha, J.A., P.J. Wallbrink, P.B. Hairsine, and R.B. Grayson. 2002. Tracer properties of eroded sediment and source material. **Hydrological Processes** 16(10):1983-2000.
- Moulin, A.P., D.W., Anderson, and M. Mellinger. 1994. Spatial variability of wheat yield, soil properties and erosion in hummocky terrain. **Canadian Journal of Soil Science** 74:219-228.
- Mudge, S.M., D.J. Assinder, and G.S. Bourne. 1997a. Radiological assessment of the Ribble Estuary: II. Beta- and gamma dose rates and doses to critical groups. **Journal of Environmental Radioactivity** 36(1):21-41.
- Mudge, S.M., D.J. Assinder, and G.S. Bourne. 1997b. Radiological assessment of the Ribble Estuary: III. Redistribution of radionuclides. **Journal of Environmental Radioactivity** 36(1):43-67.
- Muir, D.C.G., A. Omelchenko, N.P. Grift, D.A. Savoie, W.L. Lockhart, P. Wilkinson, and G.J. Brunskill. 1996. Spatial trends and historical deposition of polychlorinated biphenyls in Canadian midlatitude and Arctic lake sediments. **Environmental Science and Technology** 30(12):3609-3617.
- Mulle-Lemans, H. And F. Van Dorp. 1996. Bioturbation as a mechanism for radionuclide transport in soil: relevance of earthworms. **Journal of Environmental Radioactivity** 31(1):7-20.
- Muller, J., H. Ruppert, Y. Muramatsu, and J. Schneider. 2000. Reservoir sediments - a witness of mining and industrial development (Malter Reservoir, eastern Erzgebirge, Germany). **Environmental Geology** 39(12):1341-1351.
- Muller, R.N., D.G. Spurgel, and B. Kohn. 1978. Erosional transport and deposition of plutonium and cesium in two small midwestern watersheds. **Journal of Environmental Quality** 7:171-174.
- Muller, R.N., D.G. Spurgel, and B. Kohn. 1977. Behavior and transport of industrially deprived plutonium in the Great Miami River, Ohio. **Health Physics** 33:411-416.
- Müller, V.J., R. Winkler, and C. Sossau. 1991. Untersuchungen zur ^{137}Cs -aktivität von schwebstoffen und zum partikularen ^{137}Cs -flux im Ammersee (Oberbayern). **Zeit. Wasser Abwasser Forschung** 24:165-171. (German)

- Müller-Lemans, H. And F van Dorp. 1996. Bioturbation as a mechanism for radionuclide transport in soils: Relevance of earthworms. **Journal of Environmental Radioactivity** 31:7-20.
- Mulsow, S., P.F. Landrum, and J.A. Robbins. 2002. Biological mixing responses to sublethal concentrations of DDT in sediments by *Heteromastus filiformis* using a Cs-137 marker layer technique. **Marine Ecology-Progress Series** 239:181-191.
- Mundschenk, H. 1996a. Occurrence and behavior of radionuclides in the Moselle River. Part I. Entry of natural and artificial radionuclides. **Journal of Environmental Radioactivity** 30:199-213.
- Mundschenk, H. 1996b. Occurrence and behavior of radionuclides in the Moselle River. Part II. Distribution of radionuclides between aqueous phase and suspended matter. **Journal of Environmental Radioactivity** 30:215-232.
- Mundschenk, H. 1996c. Occurrence and behaviour of radionuclides in the Moselle River: Part IV: Deposition of radioactive particulate matter in high-sedimentation areas. **Journal of Environmental Radioactivity** 32(3):193-212.
- Mundschenk, H. 1983. Zur sorption cäsium von schwebstoff an sediment des Rheins am beispiel der nuklide ^{133}Cs , ^{134}Cs und ^{137}Cs . **Deutsche Gewasserkundliche Mitteilungen** 27:62-68. (German)
- Munita, C.S., I.I.L. Cunha, R.P. Paiva, and R.C.L. Figueira. 1995. Trace elements and artificial radionuclides in Brazilian environmental samples. **Fresenius Environmental Bulletin** 4:97-102.
- Muramatsu, Y., T. Hamilton, S. Uchida, K. Tagami, S. Yoshida, and W. Robison. 2001. Measurement of Pu-240/Pu-239 isotopic ratios in soils from the Marshall Islands using ICP-MS. **Science of the Total Environment** 278(1-3):151-159.
- Murdock, R.N. M.S. Johnson, J.D. Hemingway, and S.R. Jones. 1995. The distribution of radionuclides between the dissolved and particulate phases of a contaminated freshwater stream. **Environmental Technology** 16:1-12.
- Murdock, R.N., M.S. Johnson, J.D. Hemingway, and S.R. Jones. 1993. Physicochemical characteristics of radionuclides associated with sediment from a contaminated fresh water stream. **Environmental Technology** 14:639-648.
- Murith, C., and A. Gurthner. 1996. In situ spectrometry to follow the behaviour of the Chernobyl radionuclides in the soil. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 19-126** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).

- Murray, A.S., G. Caitcheon, J.M. Olley, and H. Crockford. 1990. Methods of determining the source of sediments reaching reservoirs: targeting soil conservation. **ANCOLD Bulletin** 85:61-70.
- Murray, A.S., R. Marten, A. Johnston, and P. Martin. 1987. Analysis of naturally occurring radionuclides at environmental levels with gamma spectrometry. **Journal of Radiation Nuclear Chemistry** 115:263-288.
- Murray, A.S., L.J. Olive, J.M. Olley, G.G. Caitcheon, R.J. Wasson, and P.J. Wallbrink. 1993. Tracing the source of suspended sediment in the Murrumbidgee River, Australia. **International Association of Hydrological Sciences Publication No. 215**:293-302.
- Murray, A.S., J.M. Olley, and P.J. Wallbrink. 1992. Natural radionuclide behavior in fluvial environments. **Radiation Protection Dosimetry** 45:285-288.
- Murray, A.S., R. Stanton, J.M. Olley, and R. Morton. 1993. Determining the origins and history of sedimentation in an underground river system using natural and fallout radionuclides. **Journal of Hydrology** 146:341-359.
- Murray, J.W. 1987. Mechanisms controlling the distribution of trace elements in oceans, pp. 153-183. *In*: R.A. Hites and S.J. Eisenreich (eds), **Sources and fates of aquatic pollutants, Advances Chemistry Series** 216:153-183.
- Murray, T.E., and J.F. Gottgens. 1997. Historical changes in phosphorus accumulation in a small lake. **Hydrobiologia** 345(1):39-44.
- Myttenaere, C., W.R. Schell, Y. Thiry, L. Sombre, C. Ronneau, and J.V. Deschrieck. 1993. Modelling of Cs-137 cycling in forests - recent developments and research needed. **Science of the Total Environment** 136:77-91.
- Nabyvanets, Y.B., T.F. Gesell, M.H. Jen, and W.P. Chang. 2001. Distribution of Cs-137 in soil along Ta-han River Valley in Tau-Yuan County in Taiwan. **Journal of Environmental Radioactivity** 54(3):391-400.
- Nagaya, Y., and M. Saiki. 1967. Accumulation of radionuclides in coastal sediments of Japan (I) fallout radionuclides in some coastal sediments in 1964-1965. **Journal of Radiation Research** 8:37-43.
- Nagao, S., T. Matsunaga, and S. Muraoka. 1998. Geochemical association of Cs-137 and Pu-239, Pu-240 in the oligotrophic and mesotrophic lake sediments. **Journal of Radioanalytical Nuclear Chemistry** 239(3):555-559.

- Nagle, G.N. 2002. The contribution of agricultural erosion to reservoir sedimentation in the Dominican Republic. **Water Policy** 3(6):491-505.
- Nagle, G.N., J.P. Lassoie T.J. Fahey, and S.C. McIntyre. 2000. The use of cesium-137 to estimate agricultural erosion on steep slopes in a tropical watershed. **Hydrological Processes** 14:957-969.
- Nagle, G. and J.C. Ritchie. 2004. Wheat field erosion rates and channel bottom sediment sources in an intensively cropped northeastern Oregon drainage basin. **Land Degradation and Development** 15(1):15-26.
- Nagle, G.N. and J.C. Ritchie. 1999. The use of tracers to study sediment sources in three streams in northeastern Oregon. **Physical Geography** 20(4):348-366.
- Nagy, N.M., J. Konya, M. Foldvari, and P. Kovacs-Palfy. 2003. The adsorption of caesium-137 on bentonites from the Carpathian basin. **Czechoslovak Journal of Physics** 53(Pt. 1, Suppl. A):A103-A111.
- Nair, S.K., F.O. Hoffman, and K.M. Thiessen, and A.V. Konoplev. 1996 Modeling the washoff of ⁹⁰Sr and ¹³⁷Cs from an experimental plot established in the vicinity of the Chernobyl reactor. **Health Physics** 71(6):896-909.
- Nakamura, F., M. Jitsu, S. Kameyama, and S. Mizugaki. 2002. Changes in riparian forests in the Kushiro Mire, Japan, associated with stream channelization. **River Research and Applications** 18(1):65-79.
- Nakamura, K., and Y. Nagaya. 1975a. Accumulation of radionuclides in coastal sediments of Japan (II) Content of fission products in some coastal sediments collected in 1966-1972. **Journal of Radiation Research** 16:184-192.
- Nakamura, K., and Y. Nagaya. 1975b. Dispersion and accumulation of radionuclides in sediments of Urazoko Bay (I). **Journal of Oceanographical Society of Japan** 31:145-153.
- Nakamura, K., and Y. Nagaya. 1985. Accumulation of cesium-137 and plutonium-239, 240 in sediments of the coastal sea and the north Pacific, pp. 171-180. *In*: A. Hattori (ed.), **Marine estuarine geochemistry**, Lewis Publishers., Chelsea, MI.
- Namiotko, T., B. Wiśniewka, and A. Miłosek. 1993. Changes of Lake Hańcza (NE Poland) ecological state in the last fifty years with particular attention being paid to the profundal Ostracoda fauna. **Polskie Archiwum Hydrobiologii** 40:267-290.

- Naney, J.W., S.C. McIntyre, and J.R. Cooper. 1988. Determining the impact of sediment using cesium-137. **Report of U.S. Dept. Agriculture, Agriculture Research Service** 20:105-108.
- Nascimento Filho, V.F., M.F. Guimarães, O. Freire, E.S.B. Ferraz, L.C.R. Pessenda, and E.A. De Nadai. 1988. Perfis de Césio-137 e de radionuclídeos naturais em um Latossolo Vermelho Amarelo do Município de Piracicaba-SP. In: **Congresso Geral de Energia Nuclear 2**, Rio de Janeiro.
- National Academy of Science. 1971. **Radioactivity in the marine environment**. National Academy of Science, Washington, DC.
- Natural Environmental Research Council (UK). 1993. Radiocaesium in natural systems - a UK coordinated study. **Journal of Environmental Radioactivity** 18:133-149.
- Navas, A., J.M. Garcia-Ruiz, J. Machin, T. Lasanta, B. Valero, D.E. Walling, and T.A. Quine. 1997. Soil erosion on dry farming land in two changing environments of the central Ebro Valley, Spain. **International Association of Hydrological Sciences Publication No. 245**:13-20
- Navas, A., and J. Machin. 1991. A preliminary research on the use of cesium-137 to investigate soil erosion in semiarid landscapes in central Ebro river valley, pp.191-202. In: M. Sala, L. Rubio, and J.M. Carcia-Ruiz (eds.), **Soil erosion studies in Spain**, Geofoma Ediciones Logrono.
- Navas, A., J. Machin, and J. Soto. 2005. Assessing soil erosion in a Pyrenean mountain catchment using GIS and Fallout ¹³⁷Cs. **Agriculture, Ecosystems and Environment** 105(3-4):493-506.
- Navas, A., and D.E. Walling. 1992. Using caesium-137 to assess sediment movement on slopes in a semiarid upland environment in Spain. **International Association of Hydrological Sciences Publication No. 209**:129-138.
- Navas, A., D.E. Walling, T.A. Quine, J. Machin, and J. Soto. 2005. The pattern of soil redistribution along a transect in the central Ebro basin (NE Spain) and its controls, p. 70-77. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Navosha, Y.Y., S.G. Prokhorov, V.P. Strigutskiy, and A.E. Tomson. 1992. Interaction of humic substances with metal ions. **Eurasian Soil Science** 24:1-6. (Translated from **Pochvovedeniye** 1:109-113, 1992)
- Neil, D.T., and R.K. Mazori. 1993. Sediment yield mapping using small dam sedimentation surveys, Southern Tablelands, New South Wales. **Catena** 20:13-25.

- Nelin, P., and T. Nylen. 1994. Factors influencing the changes in Cs-137 levels with time in boreal-forest plants in Sweden. **Science of the Total Environment** 157:73-81.
- Nelson, J.L., R.W. Perkins, J.M. Neilsen, and W.L. Hausheld. 1966. Reaction of radionuclides from Hanford reactors with Columbia River sediments, pp. 139-161. *In: Disposal of radioactive waste in seas, oceans, and surface waters*. STI/PUB/126-139-161, International Atomic Energy Agency, Vienna, Austria.
- Neubauer, S.C., I.C. Anderson, J.A., Constantine, and S.A. Kuehl. 2002. Sediment deposition and accretion in a mid-Atlantic (USA) tidal freshwater marsh. **Estuarine Coastal and Shelf Science** 54(4):713-727.
- Neumann, T, A. Stogbauer, E. Walpersdorf, D. Stuben, and H. Kunzendorf. 2002. Stable isotopes in recent sediments of Lake Arendsee, NE Germany: response to eutrophication and remediation measures. **Palaeogeography Palaeoclimatology Palaeoecology** 178(1-2):75-90.
- Nicholas, A.P., and D.E. Walling. 1998. Numerical modelling of floodplain hydraulics and suspended sediment transport and deposition. **Hydrological Processes** 12:1339-1355.
- Nicholas, A.P., and D.E. Walling. 1997. Investigating spatial patterns of medium-term overband sedimentation on floodplains: a combined numerical modelling and radiocaesium-based approach. **Geomorphology** 19:133-150.
- Nicholas, A.P., and D.E. Walling. 1995. Modelling contemporary overbank sedimentation on floodplains: Some preliminary results, pp. 131-153. *In: E.J. Hickin (ed.), River Geomorphology*, John Wiley and Sons, Chichester, UK.
- Nie, Y.H., I.B. Suayah, L.K. Benninger, and M.J. Alperin. 2001. Modeling detailed sedimentary Pb-210 and fallout Pu-239, Pu-240 profiles to allow episodic events: An application in Chesapeake Bay. **Limnology and Oceanography** 46(6):1425-1437.
- Nies, H., I.H. Harms, M.J. Karcher, D. Dethleff, and C. Bahe. 1999. Anthropogenic radioactivity in the Arctic Ocean - review of the results from the joint German project. **Science of the Total Environment** 238(Special issue SI):181-191.
- Niesiobedzka, K. 2000. Mobile forms of radionuclide Cs-137 in sandy soils in northeastern Poland. **Polish Journal of Environmental Studies** 9(2):133-136.
- Nifontova, M.G., and V.N. Alexashenko. 1992. Content of Sr-90 and Cs-134, Cs-137 in fungi, lichens, and mosses in the vicinity of the Chernobyl Nuclear Power Plant. **Soviet Journal of Ecology** 23:152-155.

- Nifontova, M.G., and V.I. Makovskii. 1995. Content of radionuclides in the peat deposit of swamps. **Russian Journal of Ecology** 26:418-424. (Translated from **Ékologiya** 26:448-454.)
- Nijampurkar, V.N., and D.K. Rao. 1990. Evidence of Chernobyl fallout on a temperate Himalayan glacier. **Current Science** 59:1239-1241.
- Nikitina, D.L., J.E. Pizzuto, R.A. Schwimmer, and K.W. Ramsey. 2000. An updated Holocene sea-level curve for the Delaware coast. **Marine Geology** 171(1-4):7-20.
- Nikolova, I., K.J. Johanson, and S. Clegg. 2000. The accumulation of Cs-137 in the biological compartment of forest soils. **Journal of Environmental Radioactivity** 47(3):319-326.
- Nilsson, P., M. Jansson, and L. Brydsten. 2003. Retention and long term accumulation of EOC1 from pulp mill effluents in a Baltic Sea recipient. **Water Air and Soil Pollution** 143(1-4):225-243.
- Nisbet, A.F., B. Salbu, and S. Shaw. 1993. Association of radionuclides with different molecular size fractions in soil solution: implications for plant uptake. **Journal of Environmental Radioactivity** 18:71-84.
- Nisbet, A.F., and S. Shaw. 1994. Summary of a 5-year lysimeter study on the time-dependent transfer of Cs-137, Sr-90, Pu-239, Pu-240 and Am-241 to crops from three contrasting soil types. 1. Transfer to the edible portion. **Journal of Environmental Radioactivity** 23:1-17.
- Nisbet, A.F., and S. Shaw. 1994. Summary of a 5-year lysimeter study on the time dependent transfer of Cs-137, Sr-90, Pu-239, Pu-240 and Am-241 to crops from three contrasting soil types. 2. Distribution between different plant parts. **Journal of Environmental Radioactivity** 23:171-187.
- Nishita, H., and E.H. Essington. 1967. Effects of chelating agents on the movement of fission products in soils. **Soil Science** 40:1-7.
- Nishita, H., B.W. Kowalewsky, A.J. Steen, and K.H. Larson. 1956. Fixation and extractibility of fission products contaminating various soils and clays: 1. ^{90}Sr , ^{91}Y , ^{106}Ru , ^{137}Cs , and ^{144}Ce . **Soil Science** 81:317-326.
- Nishita, H., A.J. Steen, and K.H. Larson. 1958. Release of Sr^{90} and Cs^{137} from Vina Loam upon prolonged cropping. **Soil Science** 86:195-201.
- Nittrouer, C.A., D.J. DeMaster, B.A. McKee, N.H. Cutshall, and I.L. Larsen. 1983/1984. The effect of sediment mixing on ^{210}Pb accumulation rates for the Washington Continental Shelf. **Marine Geology** 54:201-221.

- Nolch, G. 2000. The legacy of European settlement. **Australasian Science** 21(4):19-22.
- Nolin, M.C., Y.Z. Cao, D.R. Coote, and C. Wang. 1993. Short-range variability of fallout ^{137}Cs in an uneroded forest soil. **Canadian Journal of Soil Science** 73:381-385.
- Nord, G. and J. Nord. 1998. Sediment in Lake Coeur d'Alene, Idaho. **The Mathematics Teacher** 91(4): 292-296.
- Nordlinder, S., U. Bergstrom, and J.E. Brittain. 1997. A generic dynamic model of Cs-137 turnover in Nordic Lakes. **Journal of Environmental Radioactivity** 37(2):175-191.
- Nordlinder, S., U. Bergström, J. Hammar, and M. Notter. 1993. Modelling turnover of Cs-137 in two subarctic salmonid ecosystems. **Nordic Journal of Freshwater Research** 68:21-33.
- Norris, V., and S.J. Perrens. 1990. Analysis of variability of caesium-137 in soils in northern N.S.W., pp. 187-191. *In: Proceedings of conference on agricultural engineering*, Hawkesbury Agricultural College, Australia.
- Norton, S.A. 1986. A review of the chemical record in lake sediment of energy related air pollution and its effects on lakes. **Water Air Soil Pollution** 30:331-345.
- Nosov, A.V. 2002. Use of a two-dimensional stationary radionuclide migration model for predicting the Cs-137 content in the Enisei River system. **Atomic Energy** 93(2):681-688.
- Nouira, A., E.H. Sayouty, and M Benmansour. 2003. Use of Cs-137 technique for soil erosion study in agricultural region of Casablanca in Morocco. **Journal of Environmental Radioactivity** 68(1):11-26.
- Noureddine, A., and B. Baggoura. 1997. Plutonium isotopes, ^{137}Cs , ^{90}Sr and natural radioactivity in marine sediments from Ghazaouet (Algeria). **Journal Environmental Radioactivity** 34(2):127-138.
- Noureddine, A., B. Baggoura, J.J. Larosa, and N. Vajda. 1997. Gamma and alpha emitting radionuclides in some Algerian soil samples. **Applied Radiation and Isotopes** 48(8):1145-1148.
- Noureddine, A., B. Baggoura, N. Hocini, and M. Boulahdid. 1998. Uptake of radioactivity by marine surface sediments collected in Ghazaouet, west coast of Algeria. **Applied Radiation and Isotopes** 49(12):1745-1748.
- Nozaki, Y., D.J. DeMaster, D.M. Lewis, and K.K. Turekain. 1978. Atmospheric ^{210}Pb fluxes determined from soil profiles. **Journal of Geophysical Research** 83(C8):4047-4051.

- Nriagu, J.O. 1984. Role of inland water sediments as sinks for anthropogenic sulfur. **Science of the Total Environment** 38:7-13.
- Nriagu, J.O., A.L.W. Kemp, H.K.T. Wong, and N. Harper. 1979. Sedimentary record of heavy metal pollution in Lake Erie. **Geochimica et Cosmochimica Acta** 43:247-258.
- Nyffeler, U.P., Y.H. Li, and P.H. Santschi. 1984. A kinetic approach to describe trace element distribution between particles and solution in natural aquatic systems. **Geochimica et Cosmochimica Acta** 48:1513-1522.
- Nygren, P., P. Hari, T. Raunemaa, M. Kulmala, S. Luokkanen, M. Holmberg, and E. Nikinmaa. 1994. Behaviour of Cs-137 from Chernobyl fallout in a scot pine canopy in Southern Finland. **Canadian Journal of Forest Research - Journal of Canadian de La Recherche Forestiere** 24:1210-1215.
- Nyhan, J.W., G.C. White, T.G. Schonfeld, and G. Trujillo. 1983. An evaluation of soil sampling for ¹³⁷Cs using various field-sampling volumes. **Health Physics** 44:541-552.
- Nyman, J.A., R.D. DeLaune, S.R. Pezeshki, and W.H. Patrick, Jr. 1995. Organic matter fluxes and marsh stability in a rapidly submerging estuarine marsh. **Estuaries** 18:207-218.
- Nylén, T. 1996. Uptake, turnover and transport of radiocaesium in boreal forest ecosystems. **National Defence Research Establishment, Department of NBC Defence S-901 82**, Umea, Sweden, 41 pp. Department of Radioecology, Swedish University of Agricultural Sciences, Uppsala
- Nylén, T., and H. Grip. 1997. The origin and dynamics of ¹³⁷Cs discharge from a coniferous forest catchment. **Journal of Hydrology** 192(1-4):338-354.
- Oenema, O., and R.D. DeLaune. 1988. Accretion rates in salt marshes in Eastern Scheldt, South-west Netherlands. **Estuaries and Coastal Shelf Science** 26:379-394.
- Oertel, C.P., J.R. Giles, K.C. Thompson, and R.P. Wells. 2004. In situ depth profiling of ¹³⁷Cs contamination in soils at the Idaho National Engineering and Environmental Laboratory. **Health Physics** 87(6):664-669.
- Officer, C.B. 1982. Mixing, sedimentation rates and age dating for sediment cores. **Marine Geology** 46:261-278.
- Officer, C.B., and D.R. Lynch. 1982. Interpretation procedures for the determination of sediment parameters from time-dependent flux inputs. **Earth and Planetary Science Letters** 61:55-62.

- Officer, C.B., D.R. Lynch, G.H. Setlock, and G.R. Helz. 1984. Recent sedimentation rates in Chesapeake Bay, pp. 131-157. *In*: V.S. Kennedy (ed.), **The Estuary as a Filter**.
- O'Hara, S.L., F.A. Street-Perrott, and T.P. Burt. 1993. Accelerated soil erosion around a Mexican highland lake caused by prehistoric agriculture. **Nature** 362:48-51.
- Ohno, T., and C.T. Hess. 1994. Levels of Cs-137 and K-40 in wood ash-amended soils. **Science of the Total Environment** 152:119-123.
- Ohnuki, T. 1994. Sorption characteristics of cesium on sandy soils and their components. **Radiochimica Acta** 65:75-80.
- Ohnuki, T., and T. Tanaka. 1989. Migration of radionuclides controlled by several different mechanisms through a sandy soil layer. **Health Physics** 56(1):47-53.
- Ohtsuka, Y., T. Iyogi, H. Kakiuchi, Y. Takaku, S. Hisamatsu, and J. Inaba. 2004. Evaluation of Pu239+240, Cs-137 and natural Pb-210 fallout in agricultural upland fields in Rokkasho, Japan. **Journal of Radioanalytical and Nuclear Chemistry** 261(3):625-630.
- Oktaý, S.D., D.J. Brabander, J.P. Smith, j. Kada, T. Bullen and C.R. Olsen. 2003. WTC Geochemical fingerprint recorded in New York Harbor. **EOS, Transaction, American Geophysical Union** 84(3):21,24, and 25.
- Oktaý, S.D., P.H. Santschi, J.E. Moran, and P. Sharma. 2000. The (129)Iodine bomb pulse recorded in Mississippi River Delta sediments: Results from isotopes of I, Pu, Cs, Pb, and C. **Geochimica et Cosmochimica Acta** 64(6):989-996.
- Okuda, S. 1982. Sedimentary environments in Lake Biwa. Estimates of recent sedimentation rates. **Kankyo Gijutsu** 11:401-403. (Japanese)
- Oldfield, F. 1981. Peats and lake sediments: formation, stratigraphy, description and nomenclature. *In*: A. Gourdie (ed.), **Geomorphological techniques**, George Allen and Unwin, London.
- Oldfield, F. 1977. Lakes and their drainage basins as units of sediment-based ecological studies. **Progress in Physical Geography** 1:460-504.
- Oldfield, F., and P.G. Appleby. 1984. A combined radiometric and mineral magnetic approach to recent geochronology in lakes affected by catchment disturbance and sediment redistribution. **Chemical Geology** 44:67-83.
- Oldfield, F., P.G. Appleby, and R.W. Battarbee. 1978. Alternative ²¹⁰Pb dating: results from New Guinea Highlands and Lough Erne. **Nature** 271:339-342.

- Oldfield, F., P.G. Appleby, R.S. Cambray, J.D. Eakins, K.E. Barber, R.W. Battarbee, G.R. Pearson, and J.M. Williams. 1979. ^{210}Pb , ^{137}Cs , and ^{239}Pu profiles in ombrotrophic peat. **Oikos** 33:40-45.
- Oldfield, F., P.G. Appleby, and D. Petit. 1980. A re-evaluation of lead-210 chronology and the history of the total influx in a small South Belgium pond. **Ambio** 9:97-99.
- Oldfield, F., P.G. Appleby, and R. Thompson. 1980. Palaeoecological studies of lakes in the highland of Papua New Guinea. I. The chronology of sedimentation. **Journal of Ecology** 68:457-477.
- Oldfield, F., R.W. Battarbee, and J.A. Dearing. 1983. New approaches to recent environmental change. **Geographical Journal** 149:167-181.
- Oldfield, F., and B. Maher. 1984. A mineral magnetic approach to erosion studies, pp. 161-168. *In*: R.J. Loughran (ed.), **Drainage basin erosion and sedimentation**, University of Newcastle, New South Wales, Australia.
- Oldfield, F., B. Maher, and P.G. Appleby. 1989. Sediment source variation and lead-210 inventories in recent Potomac Estuary sediment cores. **Journal of Quaternary Science** 3:189-200.
- Oldfield, F., N. Richardson, and P.G. Appleby. 1995. Radiometric dating (^{210}Pb , ^{137}Cs , ^{241}Am) of recent ombrotrophic peat accumulation and evidence for changes in mass balance. **Holocene** 5:141-148.
- Oldfield, F., N. Richardson, P.G. Appleby, and L. Yu. 1993. Am-241 and Cs-137 activity in fine grained saltmarsh sediments from parts of the Near Irish Sea Shoreline. **Journal of Environmental Radioactivity** 19:1-24.
- Oldfield, F., T.A. Rummey, R. Thompson, and D.E. Walling. 1979. Identification of suspended sediment sources by means of mineral magnetic measurements: some preliminary results. **Water Resources Research** 15:211-219.
- Oldfield, F., R. Wake, J. Boyle, R. Jones, S. Nolan, Z. Gibbs, P. Appleby, E. Fisher, and G. Wolff. 2003. The late-Holocene history of Gormire Lake (NE England) and its catchment: a multiproxy reconstruction of past human impact. **Holocene** 13(5):677-690.
- Oldfield, F., A.T. Worsley, and P.G. Appleby. 1985. Evidence from lake sediments for recent erosion rates in the highlands of Papua New Guinea, pp. 185-196. *In*: I. Douglas and T. Spencer (eds.), **Environmental change and tropical geomorphology**, Allen and Unwin, London.

- Olive, L.J., J.M. Olley, A.S. Murray, and P.J. Wallbrink. 1995. Variations in sediment transport at a variety of temporal scales in the Murrumbidgee River, NSW, Australia. **International Association of Hydrological Sciences Publication 226**:275-284.
- Olive, L.J., J.M. Olley, A.S. Murray, and P.J. Wallbrink. 1994. Spatial variation in suspended sediment transport in the Murrumbidgee River, New South Wales, Australia. **International Association of Hydrological Sciences Publication 224**:241-249.
- Olive, L.J., J.M. Olley, P.J. Wallbrink, and A.S. Murray. 1996. Downstream patterns of sediment transport during floods in the Murrumbidgee River, NSW, Australia. **Z. Geomorph. N.F., Suppl.-Bd.** 105:129-140.
- Olley, J.M., A.S. Murray, D.H. Mackenzie, and K. Edwards. 1993. Identifying sediment sources in a gullied catchment using natural and anthropogenic radioactivity. **Water Resources Research** 29:1037-1043.
- Olley, J.M., A.S. Murray, and P. Wallbrink. 1996. Identifying sediment in a partially logged catchment using natural and anthropogenic radioactivity. **Z. Geomorphol. Suppl.** 105:111-127.
- Olley, J.M., A.S. Murray, P. Wallbrink, G. Caitcheon, and R. Stanton. 1991. The use of fallout nuclides as chronometers, pp. 51-55. *In: Workshop on quaternary dating*, Australian National Univ., Canberra.
- Olley, J.M., R.G. Roberts, and A.S. Murray. 1997. A novel method for determining residence times of river and lake sediments based on disequilibrium in the thorium decay series. **Water Resources Research** 33:1319-1326.
- Olsen, C.R. 1979. **Radionuclides, sedimentation and the accumulation of pollutants in the Hudson estuary**. Ph.D. Thesis, New York University, New York.
- Olsen, C.R., N.H. Cutshall, and I.L. Larsen. 1982. Pollutant-particle associations and dynamics in coastal marine environments: a review. **Marine Chemistry** 11:501-533.
- Olsen, C.R., N.H. Cutshall, I.L. Larsen, H.J. Simpson, R.M. Trier, and R.F. Bopp. 1985. An estuarine fine-particle budget determined from radionuclide tracers. **Geo-Marine Letters** 4:157-160.
- Olsen, C.R., I.L. Larsen, N.H. Cutshall, J.F. Donoghue, O.P. Bricker, and H.J. Simpson. 1981. Reactor-released radionuclides in Susquehanna River sediments. **Nature** 294:242-245.
- Olsen, C.R., I.L. Larsen, P.D. Lowry, and N.H. Cutshall. 1986. Geochemistry and deposition of ⁷Be in river-estuarine and coastal water. **Journal of Geophysical Research** 91:896-908.

- Olsen, C.R., I.L. Larsen, P.D. Lowery, N.H. Cutshall, and M.M. Nichols. 1986. Geochemistry and deposition of ^7Be in river-estuarine and coastal waters. **Journal of Geophysical Research** 91(C1):896-908.
- Olsen, C.R., I.L. Larsen, P.D. Lowry, N.H. Cutshall, J.F. Todd, G.T.F. Wong, and W.H. Casey. 1985. Atmospheric fluxes and marsh-soil inventories of ^7Be and ^{210}Pb . **Journal of Geophysical Research** 90:10487-10495.
- Olsen, C.R., I.L. Larson, P.D. Lowry, C.R. Moriones, C.J. Ford, K.C. Dearstone, R.R. Turner, B.L. Kimmel, and C.C. Brandt. 1992. **Transport and accumulation of cesium-137 and mercury in the Clinch River and Watts Bar Reservoir system**. Oak Ridge National Laboratory Technical Publication ORNL/ER-7, Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA.
- Olsen, C.R., I.L. Larsen, P.J. Mulholland, K.L. Von Damme, J.M. Grebmeier, L.C. Schaffner, R.J. Diaz, and M.M. Nichols. 1993. The concept of an equilibrium surface applied to particle source and contaminant distributions in estuarine sediments. **Estuaries** 16:683-696.
- Olsen, C.R., H.J. Simpson, and R.E. Good. 1990. Rates of sediment accumulation in a tidal freshwater marsh. **Journal of Sediment Petrology** 19:849-869.
- Olsen, C.R., H.J. Simpson, T.H. Peng, R.F. Bopp, and R.M. Trier. 1981. Sediment mixing and accumulation rates effects on radionuclide depth profiles in Hudson estuary sediments. **Journal of Geological Resources** 86:11020-11028.
- Olsen, C.R., H.J. Simpson, and R.M. Trier. 1981. Plutonium, radiocesium and radiocobalt in sediments of the Hudson river estuary. **Earth and Planetary Science Letters** 55:377-392.
- Olson, K.R., R.L. Jones, A.N. Gennadiyev, S. Chernyanskii, W.I. Woods, and J.M. Lang. 2002. Accelerated soil erosion of a Mississippian Mound at Cahokia Site in Illinois. **Soil Science Society of America Journal** 66:1911-1921.
- Olson, K.R., A.N. Gennadiyev, R.L. Jones, and S. Chernyanskii. 2002. Erosion patterns on cultivated and reforested hillslopes in Moscow Region, Russia. **Soil Science Society of America Journal** 66:193-201.
- Olson, K.R., L.D. Norton, T.E. Fenton, and R. Lal. 1994. Quantification of soil loss from eroded soil phases. **Journal of the Soil and Water Conservation** 49:591-596.
- Olsson, I.U. 1986. Radiometric dating, pp. 273-312. *In*: B.E. Berglund (ed.) **Handbook of Holocene paleoecology and paleohydrology**, Wiley, London.

- Onda, Y., C. Takenaka, Y. Kamiya, Y. Hamajima, and T. Nonoda. 1997. An experimental study identifying sediment sources using radionuclides. **Journal of Japan Society of Erosion Control Engineers** 50(4):19-24. (In Japanese)
- Ormerod, L.M. 1998. Estimating sedimentation rates and sources in a partially urbanized catchment using Caesium-137. **Hydrological Processes** 12(7):1009-1020.
- Osborne, P.L., and B. Moss. 1977. Paleolimnology and trends in phosphorus and iron budgets of an old man-made lake, Barton Broad Norfolk. **Freshwater Biology** 7:213-233.
- Oscarson, B.W., H.B. Hume, and F. King. 1994. Sorption of cesium on compacted bentonite. **Clays and Clay Minerals** 42:731-736.
- Ostlund, P., and R.O. Hallberg. 1991. Plutonium in sediments apparent half-lives. **Environmental Geology and Water** 17:195-200.
- Ostrova, I.V., A.N. Silant'ev, L.F. Litvin, V.N. Golosov, and I.G. Shkuratova. 1990. Assessing the intensity of erosional accumulation processes by the content of caesium-137 in soils. **Geografiya** 5:79-85. (Russian)
- Osvath, I. and P.P. Povinec. 2001. Seabed gamma-ray spectrometry: applications at IAEA-MEL. **Journal of Environmental Radioactivity** 53(3):335-349.
- Osvath, I., P.P. Povinec, M.S. Baxter, and L. Huynh-Ngoc. 2001. Mapping of the distribution of Cs-137 in Irish Sea sediments. **Journal of Radioanalytical and Nuclear Chemistry** 248(3):735-739.
- Oughton, D.H., P. Borretzen, B. Salbu, and E. Tronstad. 1997. Mobilisation of ¹³⁷Cs and ⁹⁰Sr from sediments: Potential sources to arctic waters. **Science of the Total Environment** 202(1-3):155-165.
- Oughton, D.H., and B. Salbu. 1994. Influence of physio-chemical forms on transfer, pp. 165-184. *In*: H. Dahlgard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Outola, I., R. Pehrman, and T. R.; Jaakkola. 2003. Effect of industrial pollution on the distribution of (CS)-C-137 in soil and the soil-to-plant transfer in a pine forest in SW Finland. **Science of the Total Environment** 303(3):221-230.
- Overeem, I., S.B. Kroonenberg, A. Veldkamp, K. Groenesteijn, G.V. Rusakov, and A.A. Svitoch. 2003. Small-scale stratigraphy in a large ramp delta: recent and Holocene sedimentation in the Volga delta, Caspian Sea. **Sedimentary Geology** 159(3-4):133-157.

- Owens, P.N. 1994. Towards improved interpretation of caesium-137 measurements in soil erosion studies. **Ph.D. Thesis**, University of Exeter, United Kingdom.
- Owens, P.N., 1990. Valley sedimentation at Slapton, South Devon, and its implications for the estimation of sediment-based erosion rates, pp. 193-200. *In*: J. Boardman, I.D.L. Foster, and J.A. Dearing (eds.), **Soil erosion on agricultural land**, Wiley, Chichester, UK.
- Owens, P.N., and O. Slaymaker. 1993. Lacustrine sediment budgets in the Coast Mountains of British Columbia, Canada, pp. 105-123. *In*: J. McManus and R.W. Duck (ed.) **Geomorphology and sedimentology of lakes and reservoirs**, Wiley, Chichester, UK.
- Owens, P.N. and O. Slaymaker. 1997. Contemporary and postglacial rates of aeolian deposition in small alpine and subalpine catchments in the Coast Mountains of British Columbia. **Gegrafiska Annaler** 79A:267-276.
- Owens, P.N. and O. Slaymaker. 1992. Lake-sediment based sediment yields and erosion rates in the Coast Mountains, pp. 147-154. *In*: Walling, D.E., T.R. Davies, and B. Hasholt (Eds.), **Erosion, Debris Flows, and Environment in Mountain Regions**, **International Association of Hydrological Sciences Publication # 209**, Wallingford, United Kingdom.
- Owens, P.N. and D.E. Walling. 2003. Temporal changes in the metal and phosphorus content of suspended sediment transported by Yorkshire rivers, U.K. over the last 100 years, as recorded by overbank floodplain deposits. **Hydrobiologia** 454:185-191.
- Owens, P.N. and D.E. Walling. 2002. Changes in sediment sources and floodplain deposition rates in the catchment of the River Tweed, Scotland, over the last 100 years: The impact of climate and land use change. **Earth Surface Processes and Landforms** 27(4):403-423.
- Owens, P.N., and D.E. Walling. 1998. The use of a numerical mass-balance model to estimate rates of soil redistribution on uncultivated land from ¹³⁷Cs measurements. **Journal of Environmental Radioactivity** 40(2):185-203.
- Owens, P.N., and D.E. Walling. 1996. Spatial variability of caesium-137 inventories at reference sites: an example from two contrasting sites in England and Zimbabwe. **Applied Radiation and Isotopes** 47(7):699-707.
- Owens, P.N., D.E. Walling, and Q. He. 1996. The behaviour of bomb-derived caesium-137 fallout in catchment soils. **Journal of Environmental Radioactivity** 32(3):169-191.
- Owens, P.N., D.E. Walling, Q. He., J. Shanahan, and I.D.L. Foster. 1997. The use of caesium-137 measurements to establish a sediment budget for the Start catchment, Devon, UK. **Hydrological Sciences Journal** 42:405-423.

- Owens, P.N., D.E. Walling, and G.J.L. Leeks. 2000. Tracing fluvial suspended sediments sources in catchments of the river Tweed, Scotland, using composite fingerprinting and a numerical mixing model, pp. 291-308. In: I.D.L Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Owens, P.N., D.E. Walling, and G.J.L. Leeks. 1999. Use of floodplain sediment cores to investigate recent historical changes in overbank sedimentation rates and sediment sources in the catchment of the River Ouse, Yorkshire, UK. **Catena** 36(1-2):21-47.
- Owens, P.N., D.E. Walling, and J.J.L. Leeks. 1999. Deposition and storage of fine-grained sediment within the main channel system of the River Tweed, Scotland. **Earth Surface Processes and Landforms** 24(12):1061-1076.
- Owens, P.N., D.E. Walling, Q. He, J. Shanahan, and I.D.L. Foster. 1997. The use of caesium-137 measurements to establish a sediment budget for the Start catchment, Devon, UK. **Hydrological Science Journal** 42(3):405-423.
- Page, M.J., N.A. Trustrum, and R.C. Derose. 1994. A high resolution record of storm-induced erosion from lake sediment. **Journal of Paleolimnology** 11:333-348.
- Palacios, D., D. Castro, M. Perez, F. Urbani, L. Sajo-Bohus, and J.J. LaBrecque. 1999. Environmental radioactivity near the central coast of Venezuela and its radiological impact. **Journal of Radioanalytical and Nuclear Chemistry** 241(1):69-73.
- Palagyi, S. and J. Palagyiova. 2003. Vertical migration of Sr-85, Cs-137 and I-131 in various arable and undisturbed soils. **Journal of Radioanalytical and Nuclear Chemistry** 257(2):353-359.
- Palagyi, S., and J. Palagyiova. 1999. Migration of Sr-85 and Cs-137 in vertical soil profiles. **Journal of Radioanalytical and Nuclear Chemistry** 241(3): 475-481.
- Paliouris, G., H.W. Taylor, R.W. Wein, J. Svoboda, and B. Mierzynski. 1995. Fire as an agent in redistributing fallout ¹³⁷Cs in the Canadian boreal forest. **Science of the Total Environment** 160/161:153-166.
- Paller, M.H., D.E. Fletcher, T. Jones, S.A. Dyer, J.J. Isely and J.W. Littrell. 2005. Potential of largemouth bass as vectors of ¹³⁷Cs dispersal. **Journal of Environmental Radioactivity** 80(1):27-43.
- Panin, A.V. V.N. Golosov, and N.N. Ivanova. 1997. River network and erosion-deposition processes in the Don River basin. **Vodnye Resoury** 24(6):663-671 (in Russian).

- Panin, A.V., D.E. Walling, and V.N. Golosov. 2001. The role of soil erosion and fluvial processes in the post-fallout redistribution of Chernobyl-derived caesium-137: a case study of the Lapki catchment, Central Russia. **Geomorphology** 40(3-4):185-204.
- Pantelic, G., I. Tanaskovic, L. Javorina, G. Vitorovic, and V. Vuletic. 2004. ¹³⁷Cs activity in samples taken from the environment of the Uzice Region. **Veterinarski Glasnik** 58(3-4):233-239.
- Papastefanou, C., A. Ioannidou, S. Stoulos, and M. Manolopoulou. 1995. Atmospheric deposition of cosmogenic Be-7 and Cs-137 from fallout of the Chernobyl accident. **Science of the Total Environment** 170:151-156.
- Papastefanou, C., M. Manolopoulou, and S. Charalamnous. 1988. Cesium-137 in soil from Chernobyl fallout. **Health Physics** 55:985-987.
- Papastefanou, C., M. Manolopoulou, S. Stoulos, A. Ioannidou and E. Gerasopoulos. 2001. Coloured rain dust from Sahara Desert is still radioactive. **Journal of Environmental Radioactivity** 55:(1):109-112.
- Papastefanou, C., M. Manolopoulou, and T. Sawidis. 1992. Residence time and uptake rates of Cs-137 in lichens and mosses at temperature Latitude (40-Degrees-N). **Environmental International** 18:397-401.
- Pardue, J.H., R.D. DeLaune, W.H. Patrick, and J.H. Whitcomb. 1989. Effect of redox potential on fixation of ¹³⁷Cs in lake sediment. **Health Physics** 47:781-789.
- Parise, G., G. Paleologo, G. Premazzi, P. Pulici, A. Riva, T. Ruaro, R. Bugini, L. De Capitani, and A. Maccagni. 1981. Lake Como (Northern Italy): mineralogical, chemical and biological characteristics of the sediments. **European Applied Research Rept. Environmental and Nat. Research Sect.** 1(3):385-416.
- Parise, G., and G. Premazzi. 1986. I fenomeni di compattazione nella geocronologia dei sedimenti lacustri. **Acqua-Aria** 8:783-790. (Italian)
- Park, G., X.J. Lin, W. Kim, H.D. Kang, H.L. Lee, Y. Kim, S.H. Doh, D.S. Kim, S.G. Yun, and C.K. Kim. 2004. Properties of ¹³⁷Cs in marine sediments off Yangnam, Korea. **Journal of Environmental Radioactivity** 77(3):285-299.
- Parker J.I., and D.N. Edgington. 1976. Concentration of diatom frustules in Lake Michigan sediment cores. **Limnology and Oceanography** 21:887-893.
- Parkinson, R.W., R.D. DeLaune, and J.R. White. 1994. Holocene sea-level rise and the fate of mangrove forest within the wider Caribbean region. **Journal of Coastal Research** 10:1077-1086.

- Passeck, U., G. Lindner, and W. Zech. 1995. Distribution of Cs-137 in water leachates of forest humus. **Journal of Environmental Radioactivity** 28:223-238.
- Potapov, V.N., S.M. Ignatov, V.M. Chirkin, and V.G. Linnik. 2001. Radiometric method for measuring Cs-137 activity in bottom deposits using a submersible water detector. **Atomic Energy** 91(3):749-756.
- Patel, B., C.D. Mulay, and A.K. Ganguly. 1975. Radioecology of Bombay Harbour- A tidal estuary. **Estuaries and Coastal Marine Science** 3:13-42.
- Patel, B., S. Patel, and S. Pawar. 1978. Desorption of radioactivity from nearshore sediment. **Estuaries and Coastal Marine Science** 7:49-58.
- Patrick, W.H. Jr and R.D. DeLaune. 1990. Subsidence, accretion, and sea level rise in south San Francisco Bay marshes. **Limnology and Oceanography** 35:1389-1395.
- Pattenden, N., and W.A. McKay. 1994. Studies of artificial radioactivity in the coastal environment of northern Scotland: A review. **Journal of Environmental Radioactivity** 24:1-51.
- Paul, B., D.L. Deb, M.S. Sachdev, and P. Sachdev. 1996. Effect of cations and anions on ¹³⁷Cs and ⁶⁵Zn adsorption in soils. **Journal of Nuclear Agriculture Biology** 25(3):144-150.
- Pausch, G., P. Bossew, W. Hofmann, and F. Steger. 1998. Multifractal analysis of the ¹³⁷Cs fallout pattern in Austria resulting from the Chernobyl accident. **Health Physics** 74(6):673-676.
- Pavlotskaya, F.I., A.P. Novikov, T.A. Goryachenkova, I.E. Kazinskaya, V.V. Emel'yanov, E.V. Kuzovkina, K.V. Barsukova, E.A. Lavrinovich, P.A. Korovaikov, and B.F. Myasoedov. 1998. Speciation of radionuclides in water and bottom sediments of some industrial basins at the Mayak Production Association. **Radiochemistry** 40(5):477-483.
- Pavlovic, G., D. Barisic, I. Lovrencic, V. Orescanin, and E. Prohic. 2005. Use of fallout ¹³⁷Cs for documenting the chronology of overbank sediments from the river Sava, Croatia, and interpreting their geochemical patterns. **Environmental Geology** 47(4):475-481.
- Pawlyta, J., A. Pazdur, T. Goslar, and S. Halas. 2001. Influence of the bomb-produced C-14 on the radiocarbon concentration in the youngest sediments of Lake Gosciaz, Central Poland. **Radiocarbon** 43(2B, Pt. 2):831-841.
- Payne, B.R. 1985. Measurement of rates of accumulation of sediments from radionuclide data, pp. 219-224. *In: Methods of computing sedimentation in lakes and reservoirs.* UNESCO Technological Reports in Hydrology, UNESCO, Paris.

- Payne, T.E. and J.R. Harries. 2000. Adsorption of Cs and U(VI) on soils of the Australian arid zone. **Radiochimica Acta** 88(9-11):799-802.
- Payne, T.E., V. Hatje, T. Itakura, G.D. McOrist, and R. Russell. 2004. Radionuclide applications in laboratory studies of environmental surface reactions. **Journal of Environmental Radioactivity** 76(1-2):237-251.
- Pearson, S.M. and K.A. Rose. 2001. The effects of sampling design on estimating the magnitude and distribution of contaminated sediments in a large reservoir. **Environmetrics** 12(1):81-102.
- Peart, M.R. 1993. Using Sediment Properties as Natural Tracers for Sediment Source: Two Case Studies from Hong Kong. **International Association of Hydrological Sciences Publication No. 215** :313-318
- Peart, M.R. 1995. Fingerprinting Sediment Sources: An Example from Hong Kong. *In: Sediment and Water Quality in River Catchments*. I. Foster, A. Gurnell and B. Webb (Eds.) John Wiley and Sons. pp. 179-186
- Peart, M.R., J.P. King, and M.E. Ruse. 2005. Sediment production by landslides in Hong Kong: two case studies, p. 29-36. *In: D.E. Walling and A.J. Horowitz(eds.). Sediment Budgets 1. International Association of Hydrological Sciences Publication 291*, Wallingford, UK, IAHS Press.
- Peart, M.R., and D.E. Walling. 1988. Techniques for establishing suspended sediment sources in two drainage basins in Devon, UK: a comparative assessment. **International Association of Hydrological Sciences Publication No. 174**:269-279.
- Peart, M.R., and D.E. Walling. 1986. Fingerprinting sediment source: the example of a drainage basin in Devon, UK. **International Association of Hydrological Sciences Publication No. 159**:41-55.
- Pease, P.P., B. Gomez, and V.A. Schmidt. 1994. Magnetostratigraphy of cave sediments, Wyandotte Ridge, Crawford County, Indiana: towards a regional correlation. **Geomorphology** 11(1):75-81.
- Pegoyev, A.N., and S.D. Fridman. 1978. Vertical profiles of cesium-137 in soils. **Pochvovedeiye** 8:77-82.
- Peirson, D.H. 1975. The passage of nuclear weapon debris through the atmosphere, p 81-88. *In: M.J. Chadwick and G.T. Goodman (eds.), The ecology of resource degradation and renewal*, John Wiley and Sons, New York.

- Peirson, D.H., R.S. Cambray, P.A. Cawse, J.D. Eakins, and N.J. Patterden. 1982. Environmental radioactivity in Cumbria. **Nature** 300:27-31.
- Peirson, D.H., R.N. Crookes, and E.M.R. Fisher. 1960. Radioactive fallout in air and rain. **AERE-R 3358**. HMSO, London.
- Peirson, D.H., and L. Salmon. 1959. Gamma radiation from deposited fallout. **Nature** 184:1678-1679.
- Peles, J.D., A.L. Bryan, Jr., C.T. Garten, Jr., D.O. Ribble, and M.H. Smith. 2000. Ecological half-life of ^{137}Cs in fish from streams contaminated by nuclear reactor effluent. **Science of the Total Environment** 263:255-262.
- Pempkowiak, J. 1991. Enrichment factors of heavy metals in the southern Baltic surface sediments dated with ^{210}Pb and ^{137}Cs . **Environmental International** 17:421-428.
- Pempkowiak, J., J. Beldowski, K. Pazdro, A. Staniszewski, T. Leipe, and K.C. Emeis. 2002. The contribution of the fine sediment fraction to the Fluffy Layer Suspended Matter (FLSM). **Oceanologia** 44(4):513-527.
- Pempkowiak, J., J. Kozuch, and M. Szymelfenig. 1996. Meiobenthic organisms as indicators of mixing processes in the Baltic surface sediments. **Marine Ecology** 17(1-3):175-179.
- Pempkowiak, J. And H. Obarska-Pernpkowiak. 2002. Long-term changes in sewage sludge stored in a reed bed. **Science of the Total Environment** 297(1-3):59-65.
- Pempkowiak, J., and D. Skiba. 1988. The determination of accumulation rates in the recent Baltic Sea sediments on the basis of ^{210}Pb and ^{137}Cs profiles, pp. 824-832. *In*: **Proceedings. XVI Conference Baltic Oceanographers Vol. 2**. Institute of Marine Research, Kiel, Russia.
- Pendleton, R.C., and W.C. Hanson. 1958. Absorption of cesium-137 by components of an aquatic community, pp. 419-422. *In*: **Proceedings of the international conference on the peaceful use of atomic energy** 18. United Nations, Geneva, Switzerland.
- Peng, T.H., W.S. Broecker, and W.H. Berger. 1979. Rates of benthic mixing of deep-sea sediments as determined by radioactive tracers. **Quaternary Research** 11:141-149.
- Pennington, W. 1981. Records of a lake's life time: the sediments. **Hydrobiologia** 79:197-219.
- Pennington, W. 1979. The origins of pollen in lake sediment: an enclosed lake compared with one receiving inflow streams. **New Phytologist** 83:189-213.

- Pennington, W. 1978. Responses of some British lakes to past changes in land use on their catchments. **Verh. International Verein. Limnology** 20:636-641.
- Pennington, W. 1974. Ses ton and sediment formation in Five Lake District lakes. **Journal of Ecology** 62:215-251.
- Pennington, W. 1972. The recent sediments of Windermere. **Freshwater Biology** 3:363-382.
- Pennington, W., R.S. Cambray, J.D. Eakins, and D.D. Harkness. 1976. Radionuclide dating of the recent sediment in Blelham Tarn. **Freshwater Biology** 6:317-331.
- Pennington, W., R.S. Cambray, and E.M. Fisher. 1973. Observations of lake sediment using fallout ^{137}Cs as a tracer. **Nature** 242:324-326.
- Pennock, D.J. 2004. Designing field studies in soil science. **Canadian Journal of Soil Science** 84(1):1-10.
- Pennock, D.J. 2003. Terrain attributes, landform segmentation, and soil redistribution. **Soil and Tillage Research** 69(1-2)15-26.
- Pennock, D.J. 2000. Suitability of ^{137}Cs redistribution as an indicator of soil quality. **Acta Geologica Hispanica** 35(3-4):213-217.
- Pennock, D.J. 1998. Soil redistribution, pp. 54-60. *In*: D.S. Lemmem, R.E. Vance, I.A. Campbell, P.P. David, D.J. Pennock, D.J. Sauchyn, and S.A. Wolfe (eds.), Geomorphic systems on the Palliser Triangle, southern Canadian prairies: description and response to changing climates. Geological Survey of Canada, Ottawa, ON, **Bulletin 521**.
- Pennock, D.J. 1998. New perspectives on the soil erosion-quality relationship, p. 13-26. *In*: International Atomic Energy Agency (ed), *Use of ^{137}Cs in the Study of Soil Erosion and Sedimentation*, **IAEA-TECDOC-1028**, Vienna, Austria.
- Pennock, D.J. 1997. Effects of soil redistribution on Soil Quality: Pedon, landscape, and regional scale, pp. 167-185. *In*: E.G. Gregorich and M.R. Carter (eds.), *Soil Quality for Crop Production and Ecosystem Health*, Elsevier, Amsterdam.
- Pennock, D.J. 1990. Redistribution of cesium-137 as an example of a chemical indicator of environmental stress. **Environmental Monitoring and Assessment** 15:265-271.
- Pennock, D.J., D.W., Anderson, and E. de Jong. 1994. Landscape-scale changes in indicators of soil quality due to cultivation in Saskatchewan, Canada. **Geoderma** 64:1-9.

- Pennock, D.J., D.W., Anderson, and E. de Jong. 1994. Distribution of cesium-137 in uncultivated black chernozemic landscapes. **Canadian Journal of Soil Science** 74:115-117.
- Pennock, D.J., D.W., Anderson, and E. de Jong. 1994. Landscape-scale changes in indicators of soil quality due to cultivation in Saskatchewan, Canada. **Geoderma** 64:1-19.
- Pennock, D.J. and P.G. Appleby. 2002. Site selection and sampling design, p. 15-40. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Pennock, D.J. and P.G. Appleby. 2002. Sample processing, p. 59-66. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Pennock, D.J. and M.D. Corre. 2001. Development and application of landform segmentation procedures. **Soil and Tillage Research** 58:151-162.
- Pennock, D.J., and E. de Jong. 1991. Spatial pattern of soil redistribution in Boroll landscapes, southern Saskatchewan, Canada. **Soil Science** 150:867-873.
- Pennock, D.J., and E. de Jong. 1990a. Regional and catenary variations in properties of Borolls of Southern Saskatchewan, Canada. **Soil Science Society of America Journal** 54:1697-1701.
- Pennock, D.J., and E. de Jong. 1990b. Rates of soil redistribution associated with soil zones and slope classes in southern Saskatchewan. **Canadian Journal of Soil Science** 70:325-334.
- Pennock, D.J., and E. de Jong. 1987. The influence of slope curvature on soil erosion and deposition in hummock terrain. **Soil Science** 144:209-217.
- Pennock, D.J., and A.H. Frick. 2001. The role of field studies in landscape-scale applications of process models: an example of soil redistribution and soil organic carbon modelling using CENTURY. **Soil and Tillage Research** 58(3-4):183-191.
- Pennock, D.J., D.S. Lemmon, and E. de Jong. 1995. Cesium-137 measured erosion rates for five parent-material groups in southwestern Saskatchewan. **Canadian Journal of Soil Science** 75:205-210.
- Pennock, D.J., B.L. McCann, E. de Jong, and D.S. Lemmen. 1999. Effects of soil redistribution on soil properties in a cultivated Solonchic-Chernozemic landscape of southwestern Saskatchewan. **Canadian Journal of Soil Science** 79(4):593-601.

- Pennock, D.J., and F. Zapata. 1995. Report of the FAO/IAEA Consultants' Meeting on "The Use of Isotopes in Studies of Soil Erosion". **IAEA Report CT-2665**, IAEA, Vienna, Austria.
- Pennock, D.J., B.J. Zebarth, and E. de Jong. 1987. Landform classification and soil distribution in hummocky terrain, Saskatchewan, Canada. **Geoderma** 40:1-19.
- Penttila, S., T. Kairesalo, and A. Uusirauva. 1993. The occurrence and bioavailability of radioactive Cs- 137 in small forest lakes in Southern Finland. **Environmental Pollution** 82:47-55.
- Periáñez, R. 2005. Modelling the transport of suspended particulate matter by the Rhone River plume (France). Implications for pollutant dispersion. **Environmental Pollution** 133(2):351-364.
- Periáñez, R. 2004. The dispersion of ^{137}Cs and $^{239,240}\text{Pu}$ in the Rhone River plume: a numerical model. **Journal of Environmental Radioactivity** 77(3):301-324.
- Perianez, R. 2004. On the sensitivity of a marine dispersion model to parameters describing the transfers of radionuclides between the liquid and solid phases. **Journal of Environmental Radioactivity** 73(1):101-115.
- Perianez, R. 2004. Testing the behaviour of different kinetic models for uptake/release of radionuclides between water and sediments when implemented in a marine dispersion model. **Journal of Environmental Radioactivity** 71(3):243-259.
- Perianez, R. 2003. Redissolution and long-term transport of radionuclides released from a contaminated sediment: a numerical modelling study. **Estuarine Coastal and Shelf Science** 56(1):5-14.
- Perianez, R. and A.J. Elliott. 2002. A particle-tracking method for simulating the dispersion of non-conservative radionuclides in coastal waters. **Journal of Environmental Radioactivity** 58(1):13-33.
- Perkins, R.W., and C.W. Thomas. 1980. Worldwide fallout, pp. 53-82. *In*: W.C. Hanson (ed.), **Transuranic elements in the environment**. DOE/TIC-22800. Department of Energy, Washington, DC.
- Perry, R., and J.W. Lucas. 1972. Caesium-137 in plant produce II. Distribution of ^{137}Cs in the soil and produce of an experimental farm. **Pl. Fds hum Nutr.** 2:193-199.
- Persicani, D. 1995. Analysis of potential radiocaesium soil contamination: A case study using two different simulation models. **Journal of Environmental Radioactivity** 27(2):161-180.

- Persson, C., R. Henning, and L.E. de Geer. 1987. The Chernobyl accident-A meteorological analysis of how radionuclides reached and were deposited in Sweden. **Ambio** 16:20-31.
- Petersen, R.C. Jr, L. Lander, and H. Blanck. 1986. Assessment of the impact of the Chernobyl reactor accident on the biota of Swedish streams and lakes. **Ambio** 15:327-331.
- Peterson, S.A. 1982. Lake restoration by sediment removal. **Water Resources Bulletin** 18:423-435.
- Peterson, W., H.D. Knauth, and R. Pepelnick. 1990. Vertical distribution of Chernobyl isotopes and their correlation with heavy metals and organic carbon in sediment cores of the Elbe estuary. **Science of the Total Environment** 97/98:531-547.
- Pettersson, H.B.L., H. Amano, V.I. Berezhnov, E. Chaykovskaya, V.B. Chumichev, C.S. Chung, J. Gastaud, K. Hirose, G.H. Hong, C.K. Kim, S.H. Kim, S.H., Lee, T. Morimoto, A. Nikitin, K. Oda, P.P. Povinec, E. Suzuki, A. Tkalin, O. Togawa, N.K. Veletova, Y. Volkov, and K. Yoshida. 1999. Anthropogenic radionuclides in sediments in the NW Pacific Ocean and its marginal seas: results of the 1994-1995 Japanese-Korean-Russian expeditions. **Science of the Total Environment** 238(Special issue SI):213-224.
- Petit, D., M. Thomas, and L. Lamberts. 1987. Origin of heavy metal fluxes to the Meuse river in Southern Belgium using ^{210}Pb -dated water-meadow sediments. **Journal of Environmental Radioactivity** 5:303-316.
- Petropoulos, N.P., M.J. Anagnostakis, E.P. Hinis, and S.E. Simopoulos. 2001. Geographical mapping and associated fractal analysis of the long-lived Chernobyl fallout radionuclides in Greece. **Journal of Environmental Radioactivity** 53(1):59-66.
- Pfitzner, J., G. Brunskill, and I. Zagorskis. 2004. Cs-137 and excess Pb-210 deposition patterns in estuarine and marine sediment in the central region of the Great Barrier Reef Lagoon, north-eastern Australia. **Journal of Environmental Radioactivity** 76(1-2):81-102.
- Phillips, F.M., G.I. Smith, H.W. Bentley, D. El, and H.E. Gove. 1983. Chlorine-36 dating of saline sediments: preliminary results from Searles Lake, California. **Science** 222:925-927.
- Pickering, R.J. 1969. Distribution of radionuclides in bottom sediment of the Clinch River Eastern Tennessee. **USGS Professional Paper 433-H**, 25 pp, Washington, DC.
- Pickering, R.J., P.H. Carrigan Jr., and F.L. Parker. 1965. The Clinch River Study - an investigation of the fate of the radionuclides released to the surface streams. **USGS, Circular 497**, 12 pp, Washington, DC.

Pickering, R.J., P.H. Carrigan Jr., T. Tamura, H.H. Abee, J.W. Beverage, and R.W., andrews, Jr. 1966. Radioactivity in the bottom sediments of the Clinch and Tennessee Rivers, pp. 57-86. *In: Disposal of radioactive waste in seas, oceans and surface waters*, International Atomic Energy Agency, Vienna, Austria.

- Piégay, H., D.E. Walling, N. Landon, Q. He, F. Liébault and R. Petiot. 2004. Contemporary changes in sediment yield in an alpine mountain basin due to afforestation (the upper Drôme in France). **Catena** 55(2):183-212.
- Pietilainen, O.P., and P. Ekholm. 1993. Origin of eroded material in a small agricultural drainage basin in southwestern Finland. **Aqua Fenn** 22:105-110.
- Pinder, J.E. III, J.W. Bowling, R.F. Lide, and L.M. Beatty. 1995. The distribution of ^{137}Cs in sediments of the littoral zone of a former reactor cooling pond. **Journal of Environmental Radioactivity** 28:57-71.
- Pinder, J.E. III, C.T. Garten Jr., and D. Paine. 1980. Factors affecting radiocesium uptake by plants inhabiting a contaminated floodplain. **Acta Oecologica** 1:3-10.
- Pinder III, J.E., T.G. Hinton, and F.W. Whicker. 2005. The influence of a whole-lake addition of stable cesium on the remobilization of aged ^{137}Cs in a contaminated reservoir. **Journal of Environmental Radioactivity** 80(2):225-243.
- Pinglot, J.F., and M. Pourchet. 1995. Radioactivity measurements applied to glaciers and lake sediments. **Science of the Total Environment** 173/174:211-223.
- Pioch, M., and C. Madozescande. 1995. Effect of rainwater on the remobilization and dissolution of Cs-134 and Sr-85 contained in aerosols similar to those discharged in a nuclear accident and deposited in an urban environment. **Journal of Environmental Radioactivity** 26:51-61.
- Pisarev, V.V., I.A. Koloskov, V.M. Kuznetsova, and I.S. Tsybizov. 1972a. Leaching of strontium-90 from soil by surface water. **Pochvovedeniye** 3:66-75. (Russian)
- Pisarev, V.V., I.A. Koloskov, V.M. Kuznetsova, and I.S. Tsybizov. 1972b. Leaching of strontium-90 from soil by surface water. **Soviet Soil Science** 3:193-201.
- Pitkänen, H., J. Lehtoranta, and A. Räike. 2001. Internal nutrient fluxes counteract decreases in external load: the case of the estuarial eastern Gulf of Finland, Baltic Sea. **AMBIO: A Journal of the Human Environment** 30(4):195-201.
- Pittillo, J.D., and G.L. Plummer. 1965. Accumulation of radioisotopes in *Juniperus virginiana* L. **Bulletin of the Georgia Academy of Science** 23:7-20.
- Plater, A.J, and P.G. Appleby. 2004. Tidal sedimentation in the Tees estuary during the 20th century: radionuclide and magnetic evidence of pollution and sedimentary response. **Estuarine Coastal and Shelf Science** 60(2):179-192.

- Plato, P.A. 1975. Reply "Use of rivers to predict accumulation in sediment of radionuclides discharged from nuclear power plants". **Health Physics** 28:635-636.
- Plato, P.A. 1974. Use of rivers to predict accumulation in sediment of radionuclides discharged from nuclear power plants. **Health Physics** 26:489-496.
- Plato, P.A. 1972. Distribution of cesium-137 and naturally occurring radionuclides in sediments of Lake Michigan. **Radiation Health Data Reports** 13:181-188.
- Plato, P.A., and G.C. Goldman. 1972. Use of fallout cesium-137 as a tracer to define the recent deltaic facies of a river. **Radiation Health Data Reports** 13:635-657.
- Plato, P.A., and A.P. Jacobson. 1976. Cesium-137 in Lake Michigan sediment: areal distribution and correlation with other man-made materials. **Environmental Pollution** 10:19-34.
- Playford, K., G.N.J. Lewis, and R.C. Carpenter. 1992. Radioactive fallout in air and rain: results to the end of 1990. **AEA-EE-0362**, 27 pp. United Kingdom Atomic Energy Authority, Harwell, UK.
- Playford, K. J. Toole, and I. Adsley. 1993. Radioactive fallout in air and rain: results to the end of 1991. **AEA-EE-0498**, 30 pp. United Kingdom Atomic Energy Authority, Harwell, UK.
- Playford, K., J. Toole and T. Sanders. 1995. Radioactive fallout in air and rain: results to the end of 1993. **DOE Report DOE/RAS/94.004**. Department of the Environment , UK.
- Plummer, G.L., and F. Helseth. 1965. Movement and distribution of radionuclides on granitic outcrops within the Georgia Piedmont. **Health Physics** 11:1423-1428.
- Podolyak, A.G., S.F. Timofeev, and T.F. Persikova. 2004. Cesium-137 and strontium-90 transfer to grass stands on peat-bog soils of lowland meadows. **Agrokhimiya** 11:63-70.
- Podvorko, G.A., N.I. Sanzharova, S.I. Spiridonov, and I.V. Konopleva. 2004. Isotope ^{137}Cs vertical migration in boggy soils in the long term after the Chernobyl accident. **Radioekologiya** 44(4):458-465. (In Russian)
- Poinsot, C., B. Baeyens, and M.H. Bradbury. 1999. Experimental and modelling studies of caesium sorption on illite. **Geochimica et Cosmochimica Acta** 63(19-20):3217-3227.
- Pokarzhevskii, A.D., E.Y. Uspenskaya, and Z.B. Filimonova. 2003. Global radioactive contamination background in terrestrial ecosystems 13 years after the Chernobyl accident. **Russian Journal of Ecology** 34(2):73-79.

- Polikarpov, G.G., G.E. Lazorenko, A.A. Korotkov, A. Mirzoeva, and A.O. Yu. 1995. Role of suspended matter and bottom sediments of the aquatic ecosystem of the Northern-Crimean Canal in migration of ^{90}Sr , ^{137}Cs , ^{238}Pu , $^{239+240}\text{Pu}$. **Dopovidi Natsional'noyi Akademiyi Nauk Ukraying** 7:148-152.(Russian)
- Pollanen, R., S. Klemola, T.K. Ikaheimonen, K. Rissanen, J. Juhanaja, S. Paavolainen, and J. Likonen. 2001. Analysis of radioactive particles from the Kola Bay area. **Analyst** 126(5):724-730.
- Polyakov, V.O. and M. A. Nearing. 2004. Rare earth element oxides for tracing sediment movement. **Catena** 55(3):255-276.
- Ponikarova, T.M., V.N. Yefimov, V.F. Drichko, and Ye, V. F., Ryabtseva. 1996. Role of organic matter and the mineral part of peats in the sorption of radioactive cesium. **Eurasian Soil Science** 28(11):75-81. Translated from **Pochvovedenie** 9:1096-1100 (1995)
- Popov, V.Ye., I.V. Kutnyakov, V.G. Zhirnov, Ye.P. Virchenko, A.A. Siverina, and Ts.I. Bonovnikova. 1995. Vertical distribution of ^{90}Sr and ^{137}Cs in alluvial sod soils in the near zone of the Chernobyl nuclear power station. **Eurasian Soil Science** 27:65-73. (Translated from **Pochvovedeniye** 27:40-44)
- Popp, C.J., J.W. Hawley, D.W. Love, and M. Dehn. 1988. Use of radiometric (Cs-137, Pb-210), geomorphic, and stratigraphic techniques to date recent oxbow sediments in the Rio Puerco drainage Grants Uranium Region, New Mexico. **Environmental Geology and Water Science** 11:253-269.
- Porter, C.R., C.R. Phillips, M.W. Carter, and B. Kahn. 1967. The cause of relatively high ^{137}Cs concentrations in Tampa, Florida milk, pp. 95-101. *In*: B. Aberg and J.R. Hungate (eds.), **Radioecological concentration processes**. Pergamon Press, New York.
- Porto, P., D.E. Walling, and G. Callegari. 2005. Investigating sediment sources within a small catchment in southern Italy, p. 113-122. *In*: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Porto, P., D.E. Walling, and G. Callegari. 2004. Validating the use of caesium-137 measurements to estimate erosion rates in three small catchments in Southern Italy. **International Association of Hydrological Sciences Publication** 288:75-83.
- Porto, P., D.E. Walling, and V. Ferro. 2001. Validating the use of caesium-137 measurements to estimate soil erosion rates in a small drainage basin in Calabria, Southern Italy. **Journal of Hydrology** 248(1-4):93-108.

- Porto, P., D.E. Walling, V. Ferro, and C.D.I. Stefano. 2003. Validating erosion rate estimates provide by caesium-137 measurements for two small forested catchments in Calabria, Southern, Italy. **Land Degradation and Development** 14(4):389-408
- Porto, P., D.E. Walling, V. Tamburino, and G. Callegari. 2003. Relating caesium-137 and soil loss from cultivated land. **Catena** 53(4):303-326.
- Potapov, V.N., O.P. Ivanov, V.M. Chirkin, and S.M. Ignatov. 2001. A dip detector for in situ measuring of Cs-137 specific soil activity profiles. **IEEE Transactions on Nuclear Science** 48(4, Pt. 1):1194-1197.
- Pourcelot, L., D. Louvat, F. Gauthier-Lafaye, and P. Stille. 2003. Formation of radioactivity enriched soils in mountain areas. **Journal of Environmental** 68(3):215-233.
- Pourchet, M., P. Mourguiart, J.-F. Pinglot, N. Preiss, J. Argollo, and D. Wirmann. 1995. Évaluation des vitesses de sédimentation dan les hautes vallées des Andes boliviennes. Son intérêt dan l'estimation des paléo-pollutions atmosphérique. **Comptes Rendus de L'academie des Science s Paris T. 320 Serie II A Science s de la Terre et des Planetes** 320:477-482. (French)
- Pourchet, M., P. Mourguiart, J.-F. Pinglot, N. Preiss, J. Argollo, and D. Wirmann. 1994. Sédimentation récente dans le lac Titicaca (Bolivie). **Comptes Rendus de L'academie des Science s Paris T. 319 Serie II A Science s de la Terre et des Planetes** 319:477-482. (French)
- Pourchet, M., J.F. Pinglot, and M.A. Melieres. 1989. Cesium-137 and lead-210 in Alpine sediments: measurements and modeling of mixing processes. **Journal of Geophysical Research** 94:12761-12770.
- Pourchet, M., J.F. Pinglot, L. Reynaud, and G. Holdsworth. 1988. Identification of Chernobyl fallout as a new reference level in Northern Hemisphere glaciers. **Journal of Glaciology** 34:183-187.
- Povinec, P.P., K. Froehlich, J. Gastaud, B. Oregioni, S.V. Pagava, M.K. Pham, and V. Rusetski. 2003. Distribution of Sr-90, Cs-137 and Pu-239,Pu-240 in Caspian Sea water and biota. **Deep-Sea Research Part II-Topical Studies in Oceanography** 50(17-21):2835-2846.
- Povinec, P.P., K. Hirose, T. Honda, T. Ito, E.M. Scott, and O. Togawa. 2004. Spatial distribution of H-3, Sr-90, Cs-137 and Pu-239,Pu-240 in surface waters of the Pacific and Indian Oceans - GLOMARD database. **Journal of Environmental Radioactivity** 76(1-2):113-137.
- Powers, F., F.S. Stay, and W.D. Sanville. 1975. Aquatic sediments. **Journal of the Water Pollution Control Federation** 47:1611-1617.

- Prandle, D. 1984. A modelling study of the mixing of ^{137}Cs in the seas of the European continental shelf. **Philosophical Transaction of the Royal Society of London A** 310:407-436.
- Premazzi, G. 1979. The Cs-137 technique to evaluate recent sedimentation rates, pp. 181-196. *In: R. Marchetti (ed.), **Convegno Sulla Eutrofizzazione in Italia**. AC/2/45-70, Roma, Italy.*
- Premazzi, G. 1978. Metodo di valutazione della rate di sedimentazione. Atti del Convegno sulla "Eutrofizzazione in Italia", Roma, 3-4 Ottobre 1978. **AC/2/55** pp. 181-195. (Italian)
- Premazzi, G., and G. Marengo. 1982. Sedimentation rates in a Swiss-Italian lake measured with sediment traps. **Hydrobiologia** 92:603-610.
- Premazzi, G., A. Provini, G.F. Gaggino, and G. Parise. 1986. Geochemical trends in sediments from 13 Italian subalpine lakes, pp. 157-165. *In: P.G. Sly, (ed.), **Sediment and water interactions**, Springer-Verlag, New York.*
- Premazzi, G., and O. Ravera. 1977. Chemical characteristics of Lake Lugano sediments, pp. 121-124. *In: H.L. Golterman (ed.), **Interaction between sediment and fresh water**, W. Junk B.V. Publishers, Wageningen, The Netherlands.*
- Preston, A. 1968. The control of radioactive pollution in a North Sea oyster fishery. **Helgoländer wiss. Meeresunters.** 17:269-279.
- Prete, L., C. Lubello, and I. Becchi. 1993. Joint monitoring of hydrosedimentological events and transport of caesium-137 in a small basin. **Water Science Technology** 28:707-711.
- Price, K.R. 1991. The depth distribution of ^{90}Sr , ^{137}Cs , and $^{239,240}\text{Pu}$ in soil profile samples. **Radiochimica Acta** 54:145-147.
- Prokhorov, V.M. 1975. Forecasting Cs^{137} migration in soils. **Pochvovedeniye** 11:60-67.
- Prokhorov, V.M., M.V. Ryzhinskiy, R.M. Aleksakhin, and V.F. Gol'tsev. 1974. Forecast of the vertical migration of Sr^{90} in the soil using a mathematical model. **Soil Chemistry** 1:47-54. (translated from **Pochvovedeniye** 1:52-60.
- Prosser, I.P., H. Lu, and C.J. Moran. 2004. Assessing soil erosion and its off-site effects at regional to continental scales, p. 33-58. *In: Francaviglia, F. (ed.) **Agricultural impacts of soil erosion and biodiversity: Developing indicators for policy analysis**, Proceeding from an OECD Expert Meeting, Rome, Italy, March 2003.*

- Prosser, I.D., I.D. Rutherford, J.M. Olley, W.J. Young, P.J. Wallbrink, and C.J. Moran. 2001. Large scale patterns of erosion and sediment transport in river networks, with examples from Australia. *Marine and Freshwater Research* 52:81-99.
- Provini, A., and G.F. Gaggino. 1985. Sediment as a record of copper pollution in Lake Orta. **Verh. International Verein. Limnology** 22:2390-2393.
- Provini, A., G. Premazzi, and G.F. Gaggino. 1987. Valutazione del rischio potenziale da metalli pesanti nei laghi mediante l'analisi dei sedimenti. **Ingegneria Ambientale** 16:68-76. (Italian)
- Provini, A., and G.F. Gaggino. 1986. Depth profiles of Cu, Cr, and Zn in Lake Orta sediments (Northern Italy), pp.167-174. *In*: P.G. Sly (ed.), **Sediment and water interactions**, Springer-Verlag, New York.
- Provini, A., and G.F. Gaggino. 1984. Metal contamination and historical records in Lake Orta sediments (Northern Italy), pp. 318-321. *In*: **Proceedings 3rd international symposium on the interactions between sediments and water**, Geneva, Switzerland.
- Provini A., G. Premazzi, S. Galassi, and G.F. Gaggino. 1987. Distribution of nutrients, PAHs, and radionuclides in sediment cores from Lake of Varese (N. Italy). **Proceedings of 4th international symposium in interaction between sediment and water**, Melbourne Australia.
- Prozorov, L.B., M.Y. Shcheglov, V.B. Nikolaevsky, E.V. Shevtsova, and S.A. Korneva. 2000. The influence of electric parameters on the dynamics of the electrokinetic decontamination of soils. **Journal of Radioanalytical and Nuclear Chemistry** 246(3):571-574.
- Pu, L.J., H.S. Bao, B.Z. Peng et al. 1998. Preliminary study of the potential of using ^{137}Cs to estimate soil erosion rates in wind-eroded area, China: a case study on the Korla, Xinjiang Uygur Autonomous Region. **Acta Pedologica Sinica** 35:441-449. (In Chinese)
- Puhakainen, M., I. Riekkinen, T. Heikkinen, T. Jaakkola, E. Steinnes, K. Rissanen, M. Suomela, and H. Thoring. 2001. Effect of chemical pollution on forms of Cs-137, Sr-90 and Pu-239, Pu-240 in Arctic soil studied by sequential extraction. **Journal of Environmental Radioactivity** 52(1):17-29.
- Puigdomènech, I., and U. Bergström. 1995. Calculation of distribution coefficients for radionuclides in soils and sediments. **Nuclear Safety** 36:142-154.
- Pulford, I.D., R.L. Allan, G.T. Cook, and A.B. MacKenzie. 1998. Geochemical associations of Sellafield-derived radionuclides in saltmarsh deposits of the Solway firth. **Environmental Geochemistry and Health** 20(2): 95-101.

- Purtymum, W.D. 1974. Storm runoff and transport of radionuclides in DP Canyon, Los Alamos County, New Mexico. Los Alamos Scientific Laboratory, **LA-5744**, 9pp
- Puhakainen, M., T. Heikkinen, E. Steinnes, H. Thorrning, and I. Outola. 2005. Distribution of ^{90}Sr and ^{137}Cs in Arctic soil profiles polluted by heavy. **Journal of Environmental Radioactivity** 81(2-3):295-306.
- Pushkarev, A.V., V.M. Priimachenko, Yu Ya Sushchik, N.V. Aleksandrova, and R.A. Pushkareva. 1997. An integral characteristic of the distribution of technogenous radiocesium stocks in the soil horizon (Ukrainian Polesje). **Dopovidi Natsional'noyi Akademiyi Nauk Ukrayiny** 0 (6):187-192. (Russian)
- Quang, N.H., N.Q. Long, D.B. Lieu, T.T. Mai, N.T. Ha, D.D. Nhan, and P.D. Hien. 2004. Pu239+240, Sr-90 and Cs-137 inventories in surface soils of Vietnam. **Journal of Environmental Radioactivity** 75(3):329-337.
- Queralt, I., F. Zapata, and E. García Agudo. 2000. Assessment of soil erosion and sedimentation through the use of the ^{137}Cs and related techniques. **Acta Geologica Hispanica** 35(3-4):195-196.
- Quine, T.A. 1999. Tillage erosion, water erosion and soil quality on cultivated terraces near Xifeng in the Loess Plateau, China. **Land Degradation and Development** 10(3):251-274.
- Quine, T.A. 1999. Use of caesium-137 data for validation of spatially distributed erosion models: the implications of tillage erosion. **Catena** 37(3-4):415-430.
- Quine, T.A. 1995. Estimation of erosion rates from caesium-137 data: the calibration question, pp: 307-329. *In*: I.D.L. Foster, A.M. Gurnell, and B.W. Webb (eds.), **Sediment and Water Quality in River Catchments**, John Wiley, London.
- Quine, T.A. 1989. Use of a simple model to estimate rates of soil erosion from caesium-137 data. **Journal of Water Resources** 8:54-81.
- Quine, T.A., L.R. Basher, and A.P. Nicholas. 2003. Tillage erosion intensity in the South Canterbury Downlands, New Zealand. **Australian Journal of Soil Research** 41(4):789-807.
- Quine, T.A., P.J.J. Desmet, G. Govers, K. Vandaele, and D.E. Walling. 1994. A comparison of the role of tillage and water erosion in landform development and sediment export on agricultural land near Leuven, Belgium. **International Association of Hydrological Sciences Publication** 224:77-86.

- Quine, T.A., G. Gover, J. Posen, D. Walling, and J. Martinez-Fernandez. 1997. Tillage translocation of fine earth in stony soils: A case study from Guadalentin, SE Spain. **Journal of Soil and Water Conservation** 52(4): 303. (Abstract)
- Quine, T.A., G. Govers, J. Poesen, D. Walling, B. van Wesemael, and J. Martinez-Fernandez. 1999. Fine-earth translocation by tillage in stony soils in the Guadalentin, south-east Spain: an investigation using caesium-134. **Soil and Tillage Research** 51(3-4):279-301.
- Quine, T.A., G. Gover, D. Walling, X. Zhang, P.J.J. Desmet, Y. Zhang, and K. Vandaele. 1997. Erosion processes and landform evolution on agricultural land-a new perspective from caesium-137 data and topographic-based erosion modelling. **Earth Surface Process. Landf.** 22:799-816.
- Quine, T.A., A. Navas, D.E. Walling, and J. Machin. 1994. Soil erosion and distribution on cultivated land near Las Barenas in the central Ebro River basin, Spain. **Land Degradation and Rehabilitation** 5:41-55.
- Quine, T.A., and D.E. Walling. 1993a. Use of caesium-137 measurements to investigate relationships between erosion rates and topography, pp. 31-48. *In*: D.S.G. Thomas and R.J. Allison (eds.) **Landscape sensitivity**, J. Wiley and Sons, Chichester, UK.
- Quine, T.A., and D.E. Walling. 1993b. Assessing recent rates of soil loss from areas of arable cultivation in the UK, pp. 357-371. *In*: S. Wicherek (ed.), **Farm land erosion in temperate plains environment and hills**, Elsevier, London.
- Quine, T.A., and D.E. Walling. 1992a. Use of caesium-137 measurements to investigate the relationships between erosion rates and topography, pp. 31-48. *In*: R.J. Allison and D.S.G. Thomas (eds.), **Environmental sensitivity**, Wiley, Chichester, UK.
- Quine, T.A., and D.E. Walling. 1992b. Patterns and rates of contemporary soil erosion derived using caesium-137, pp. 185-196. *In*: M. Bell and J. Boardman (eds.), **Past and present soil erosion: archeological and geographical perspectives**, Oxbow Books, Oxford, England.
- Quine, T.A., and D.E. Walling. 1991. Rates of soil erosion on arable fields in Britain: quantitative data from caesium-137 measurements. **Soil Use Management** 7:169-176.
- Quine, T.A., D.E. Walling, and Q. Chakela. 1997. Rates and patterns of tillage erosion on contour strips in Lesotho and Zimbabwe: Data from cesium-137. **Journal of Soil and Water Conservation** 52(4):305. (Abstract)
- Quine, T.A., D.E. Walling, Q.K. Chakela, O.T. Mandiringana, and X. Zhang. 1999. Rates and patterns of tillage and water erosion on terraces and contour strips: evidence from caesium-137 measurements. **Catena** 36(1-2):115-142.

- Quine, T.A., D.E. Walling, and G. Govers. 1996. Simulation of radiocaesium redistribution on cultivated hillslopes using mass-balance models: An aid to process interpretation and erosion rate estimation, pp. 561-588. *In*: M.G., Anderson and S.M. Brooks (eds.), **Advances in Hillslope Processes**, John Wiley, Chichester, UK
- Quine, T.A., D.E. Walling, and O.T. Mandiringana. 1993. An investigation of the edaphic, topographic, and land-use controls on soil erosion on agricultural land in the Borrowdale and Chinamora areas, Zimbabwe, based on caesium-137 measurements. **International Association of Hydrological Sciences Publication No. 217**:185-196.
- Quine, T.A., D.E. Walling, and X. Zhang. 1999. Tillage erosion, water erosion and soil quality on cultivated terraces near Xifeng in the Loess Plateau, China. **Land Degradation and Development** 10(3):251-274.
- Quine, T.A., D.E. Walling, and X. Zhang. 1999. Slope and gully response to agricultural activity in the Rolling Loess Plateau, China, p. 71-90. *In*: A.G. Brown and T.A. Quine (eds.), **Fluvial Processes and Environmental Change**, Wiley, Chichester.
- Quine, T.A., D.E. Walling, and X. Zhang. 1993. The role of tillage in soil redistribution within terraced fields of the Loess Plateau, China: An investigation using caesium-137, pp. 149-155. *In*: K. Banasik and A. Zbikowski (eds.), **Runoff and sediment yield modelling**. Warsaw Agricultural University Press, Warsaw, Poland.
- Quine, T.A., D.E. Walling, X. Zhang, and Y. Wang. 1992. Investigation of soil erosion on terraced fields near Yanting, Sichuan Province, China, using caesium-137. **International Association of Hydrological Sciences Publication No. 209**:155-168.
- Quine, T.A., and Y. Zhang. 2004. Re-defining tillage erosion: quantifying intensity-direction relationships for complex terrain. I. Derivation of an adirectional soil transport coefficient. **Soil Use and Management** 20(2):114-123.
- Quine, T.A. and Y. Zhang. 2004. Re-defining tillage erosion: quantifying intensity-direction relationships for complex terrain. 2. Revised mouldboard erosion model. **Soil Use and Management** 20(2):124-135.
- Quine, T.A. and Y. Zhang. 2002. An investigation of spatial variation in soil erosion, soil properties, and crop production within an agricultural field in Devon, United Kingdom. **Journal of Soil and Water Conservation** 57(1):55-65.
- Quinton, J.N., M. Kotova, and L. Street. 2001. Development of a windows based interface for the European Soil Erosion Model, pp. 346-349. *In*: J.C. Ascough II and D.C. Flanagan (eds), **Soil Erosion Research for the 21st Century**, Honolulu, HI, USA, American Society of Agricultural Engineers, St. Joseph, MI.

- Radakovitch, O., S. Charmasson, M. Arnaud, and P. Bouisset. 1999. Pb-210 and caesium accumulation in the Rhone delta sediments. **Estuaries and Coastal Shelf Science** 48:(1):77-92.
- Rafferty, B., D.E. Dawson, and P.A. Colgan. 1994a. Seasonal variations in the transfer of Cs-137 and K- 40 to pasture grass and its ingestion by grazing animals. **Science of the Total Environment** 145:125-134.
- Rafferty, B., D.E. Dawson, and P.A. Colgan. 1994b. Assessment of the role of soil adhesion in the transfer of Cs-137 and K-40 to pasture grass. **Science of the Total Environment** 145:135-141.
- Rafferty, B., D.E. Dawson, and P.A. Colgan. 1994c. Soil and radiocaesium contamination of winter fodders. **Science of the Total Environment** 153:69-76.
- Rafferty, B., D. Dawson, and A. Kliashtorin. 1997. Decomposition in two pine forests: The mobilisation of ¹³⁷Cs and K from forest litter. **Soil Biology and Biochemistry** 29(11-12):1673-1681.
- Rahman, M.M. and G. Voigt. 2004. Radiocaesium soil-to-plant transfer in tropical environments. **Journal of Environmental Radioactivity** 71(2):127-138.
- Rajot, J.L. and C. Valentin. 2001. Wind eroded versus deposited mineral dust: A mass budget for a Sahelian village land unit in Niger, pp. 404-407. In: J.C. Ascough II and D.C. Flanagan (eds.), **Soil Erosion Research for the 21st Century**, Proceedings of the International Symposium, Honolulu, HI, St. Joseph, MI: American Society of Agricultural Engineers.
- Rapiejko, A., R. Rosson, J. Lahr, R. Garcia, and B. Kahn. 2001. Radionuclides in Peconic river fish, mussels, and sediments. **Health Physics** 81(6):698-703.
- Rapin, F. 1981. Chronologie et evolution de la contamination par les meteux lourds des sediment de la Baie des Anges (Mediterranee, France). **Environmental Technology Letters** 2:253-262. (French)
- Ratnikov, A.N., R.M. Aleksakhin, T.L. Zhigareva, N.I. Sanzharova, and G.I. Popova. 1993. Effectiveness of meliorative measures in decreasing levels of Cs-137 in harvests after the accident at the Chernobyl Nuclear Power Plant - Data from Bryansk Province, Russia. **Eurasian Soil Science** 25:123-127.
- Ravera, O. 1961. Sediment, pp. 31-37. *In: Accumulation of fission products from fall-out in lake biota (Lake Maggiore)*. Contract 59, Report CNI-109, International Atomic Energy Agency, Vienna, Austria.

- Ravera, O., and G. Premazzi. 1971a. A method to study the history of any persistent pollution in a lake by the concentration of ^{137}Cs from fall-out. **Publication Biology Directorate, Communications of the European Communities** 679:1-16.
- Ravera, O., and G. Premazzi. 1971b. A method to study the history of any persistent pollution in a lake by the concentration of ^{137}Cs from fall-out, pp. 703-719. *In: Radioecology applied to the protection of man and his environment.* EUR 4800.
- Ravera, O., and M. Viola. 1977. Sedimentation rate in a basin (Agno) of Lake Lugano, pp. 174-178. *In: H.L. Golterman (ed.), Interaction between sediment and fresh water,* W. Junk B.V. Publishers, Wageningen, The Netherlands.
- Ravera, O., and S. Zarini. 1987. A century of variations in some zooplankton and zoobenthos organisms in Lake Comabbio (Northern Italy) 'read' from their remains in the lake sediment. **Schweiz. Z. Hydrology** 49:93-101.
- Ravichadran, M., M. Baskaran, P. Santschi, and T.S. Bianchi. 1995. History of trace metal pollution in Sabine-Neches Estuary, Texas. **Environmental Science and Technology** 29:1495-1503.
- Ravichadran, M., M. Baskaran, P. Santschi, and T.S. Bianchi. 1995. Geochronology of sediments in the Sabine-Neches estuary, Texas USA. **Chemical Geology** 125:291-306.
- Ravila, A. And E. Holm. 2000. A survey of present levels of radiocesium in Swedish pulp mill liquors and the implications for wood radiocesium transfer factors: Using Kraft mill liquors as an indicator of wood radiocesium contamination. **Journal of Radioanalytical and Nuclear Chemistry** 243(2):573-577
- Rea, D.K., R.A. Bourbonniere, and P.A. Meyers. 1980. Southern Lake Michigan sediments: changes in accumulation rates, mineralogy, and organic content. **Journal of Great Lakes Research** 6:321-330.
- Realo, E., J. Jogi, R. Koch, and K. Realo., 1995. Studies on radiocaesium in Estonian soils. **Journal of Environmental Radioactivity** 29(2):111-119.
- Reddy, K.R., R.D. DeLaune, W.F. DeBusk, and M.S. Koch. 1993. Long-term nutrient accumulation rates in the Everglades. **Soil Science Society of America Journal** 57:1147-1155.
- Reinhardt, C.H., C.A. Cole, and R.P. Brooks. 1988. Assessing historical wetland seed banks using Cs^{137} : A pilot study. **Journal of the Pennsylvania Academy of Science** 71(3):125-134.

- Reinhardt, C.H., C.A. Cole, and L.R. Stover. 2000. A method for coring inland, freshwater wetland soils. **Wetlands** 20(2): 422-426.
- Rember, W.C., T.W. Erdman, M.L. Hoffmann, V.E. Chamberlain, and K.F. Sprenke. 1993. Dating of mine waste in lacustrine sediments using cesium-137. **Environmental Geology** 22:242-245.
- Renaud, P., L. Pourcelot, J.M. Metivier, and M. Morello. 2003. Mapping of Cs-137 deposition over eastern France 16 years after the Chernobyl accident. **Science of the Total Environment** 309(1-3):257-264.
- Reynolds, W.D., R.W. Gillham, and J.A. Cherry. 1982. Evaluation of distribution coefficients for the prediction of strontium and cesium migration in uniform sand. **Canadian Geotechnology Journal** 19:92-103.
- Ribeiro Guevara, S., M. Arribere, D. Bubach, P. Vigliano, A. Rizzo, M. Alonso, and R. Sanchez. 2005. Silver contamination on abiotic and biotic compartments of Nahuel Huapi National Park lakes, Patagonia, Argentina. **Science of the Total Environment** 336(1/3):119-134.
- Richley, L., R.J. Loughran, G.L. Elliott, and M.J. Saynor. 1997. **A national reconnaissance survey of soil erosion - Australia: Tasmania**. A report for the Australian Land Care Program. The University of Newcastle, 155 p.
- Richter, T., G. Schroeder, S. Kaminski, and G. Linder. 1993. Transport of particles contaminated with cesium radionuclides into the sediment of Lake Constance. **Water Science Technology** 28:117-121.
- Rickard, W.H. 1966a. Cesium-137 in litter and understory vegetation. **Northwest Science** 40:25-30.
- Rickard, W.H. 1966b. Accumulation of ¹³⁷Cs in litter and understory plants of forest stands from various climatic zones of Washington, p. 527-531. *In*: B. Aberg and F.P. Hungate (eds.) **Radioecological concentration processes**, Pergamon Press, London
- Ridgeway, I.M., and N.B. Price. 1987. Geochemical associations and post-depositional mobility of heavy metals in coastal sediments: Loch Etive, Scotland. **Marine Chemistry** 21:229-248.
- Rieger, E.M., B. Claus, E. Peters, M. Schirmer, and I. Schmitz-Feuerhake. 1993. Cesium isotope-activity in the Weser ecosystem three years after the disaster at Chernobyl. **Netherlands Journal of Aquatic Ecology** 27:197-203.
- Riekstina, D., O. Veveris, and P. Zalitis. 1998. Forest litter as an indicator of radioactive pollution. **Baltic Forestry** 3(2):35-40.

- Riel, G.K. 1970. Radioactive cesium in estuaries. **Radiation Health Data Reports** 11:659-665.
- Rigol, A., M. Roig, M. Vidal, and G. Rauret. 1999. Sequential extractions for the study of radiocesium and radiostrontium dynamics in mineral and organic soils from Western Europe and Chernobyl areas. **Environmental Science and Technology** 33:887-895.
- Rigol, A., M. Vidal, and G. Rauret. 2002. An overview of the effect of organic matter on soil-radiocesium interaction: implications in root uptake. **Journal of Environmental Radioactivity** 58(2-3 Special Issue SI):191-216
- Rigol, A., M. Vidal, and G. Rauret. 2000. Laboratory experiments to study radiocesium interaction in organic soils. **International Journal of Environmental Analytical Chemistry** 78(3-4):441-454.
- Rigol, A., M. Vidal, and G. Rauret. 1999. Effect of the ionic status and drying on radiocesium adsorption and desorption in organic soils. **Environmental Science and Technology** 33(21): 3788-3794.
- Rigol, A., M. Vidal, G. Rauret, C.A. Shand, and M.V. Cheshire. 1998. Competition of organic and mineral phases in radiocesium partitioning in organic soils of Scotland and the area near Chernobyl. **Environmental Science and Technology** 32(5): 663-669
- Ritchie, C.A., J.C. Ritchie, and G.L. Plummer. 1971. Distribution of fallout cesium-137 in Cladonia mounds. **Bryologist** 74:359-362.
- Ritchie, J.C. Comparing erosion and redeposition rates and patterns upslope of a grass hedge determined using ¹³⁷Cesium and field survey techniques, p. 1039-1043. In: Stott, D.E., Mohtar, R.H., and Steinhardt, G.C. (Eds.), **Sustaining the Global Farm, Selected papers from the 10th International Soil Conservation Organization Meeting**, International Soil Conservation Organization, West Lafayette, Indiana USA. 2001.
- Ritchie, J.C. Cesium-137 - An under-used tool for estimating soil erosion rates and patterns, pp.219-222. In: J.C. Ascough II and D.C. Flanagan (eds.) **Soil Erosion Research for the 21st Century**, American Society of Agricultural Engineers, St. Joseph, MI., 2001.
- Ritchie, J.C. 2001. Cesium-137 for measuring soil erosion and redeposition: Application for understanding soil carbon, pp. 403-415. In: Lal, R., J.M. Kimble, R.F. Follett, and B.A. Stewart, **Assessment Methods for Soil Carbon**, Lewis Publishers, Boca Raton, FL.
- Ritchie, J.C. 2000. Combining ¹³⁷Cesium and topographic surveys for measuring soil erosion/deposition patterns in a rapidly accreting area. **Acta Geologica Hispanica** 35(3-4):207-212.

- Ritchie, J.C. 1998. ^{137}Cs use in estimating soil erosion: 30 years of research, p. 5-12. In: International Atomic Energy Agency (ed), *Use of ^{137}Cs in the Study of Soil Erosion and Sedimentation*, **IAEA-TECDOC-1028**, Vienna, Austria.
- Ritchie, J.C. 1996. Measuring sediment deposition and erosion rates using environmentally distributed fallout $^{137}\text{Cesium}$. **International Conference on Reservoir Sedimentation 1996** pp. 233-246
- Ritchie, J.C. 1995. Application of caesium-137 for measuring soil erosion in a sustainable agriculture test field. In: **Report of the First Coordination Meeting of the Coordinated Research Projects on Soil Erosion and Sedimentation**, November 1996, Vienna. IAEA, Vienna, Austria
- Ritchie, J.C. 1989. Carbon content of sediments in agricultural reservoirs. **Water Resources Bulletin** 25:301-308.
- Ritchie, J.C. 1988. Organic matter content in sediments of three navigation pools along the upper Mississippi River. **Journal of Freshwater Ecology** 4:343-349.
- Ritchie, J.C. 1962. Distribution of cesium-137 in the Great Smoky Mountains National Park. **The ASB Bulletin** 9:31.
- Ritchie, J.C., E.E.C. Clebsch, and W.K. Rudolph. 1970. Distribution of fallout and natural gamma radionuclides in litter, humus, and surface mineral soils under natural vegetation in the Great Smoky Mountains, North Carolina-Tennessee. **Health Physics** 18:479-491.
- Ritchie, J.C., C.M. Cooper, and J.R. McHenry. 1986. Sediment accumulation rates in lakes and reservoirs in the Mississippi River valley, pp. 1357-1365. In: S.Y. Wang, H.W. Shen, and L.Z. Ding (eds.), **River sedimentation**, Vol. III, University of Mississippi, Oxford, MS.
- Ritchie, J.C., C.M. Cooper, and J.R. McHenry. 1979. Recent sediment accumulation in natural lakes in Bear Creek watershed in the Mississippi Delta. **Southeastern Geology** 20:173-180.
- Ritchie, J.C., C.M. Cooper, J.R. McHenry, and F.R. Schiebe. 1983. Sediment accumulation in Lake Chicot, Arkansas. **Environmental Geology** 5:79-82.
- Ritchie, J.C., V.L. Finney, K.J. Oster, and C.A. Ritchie. 2004. Sediment deposition in the flood plain of Stemple Creek watershed, northern California. **Geomorphology** 61:347-360.
- Ritchie, J.C., V.L. Finney, K.J. Oster, and C.A. Ritchie. 2004. Floodplain sediment deposition in northern California, USA, 6 pp. In: S.R. Raine, A.J.W. Biggs, N.W. Menzies, D.M. Freebairn, and P.E. Tolmie, P.E. (eds.), Conserving Soil and Water for Society: Sharing

Solutions, ISCO 2004-13th International Soil Conservation Organisation Conference, Brisbane, July 2004, Paper 138, 6 pages, 2004. (On CD ROM)

- Ritchie, J.C., A.C. Gill, and J.R. McHenry. 1975. A comparison of nitrogen, phosphorus, and carbon in sediments and soils of cultivated and noncultivated watershed of the North Central States. **Journal of Environmental Quality** 4:339-341.
- Ritchie, J.C., and P.H. Hawks. 1979. Natural gamma radioactivity in the soils of North Mississippi. **Journal of the Mississippi Academy Science** 24:92-103.
- Ritchie, J.C., P.H. Hawks, and J.R. McHenry. 1975. Deposition rates in valleys determined using fallout Cs-137. **Geology Society of America Bulletin** 86:1128-1130.
- Ritchie, J.C., P.H. Hawks, and J.R. McHenry. 1972. Thorium, uranium, and potassium in the Upper Cretaceous, Paleocene, and Eocene sediments of the Little Tallahatchie River Watershed in northern Mississippi. **Southeastern Geology** 14:221-232.
- Ritchie, J.C. and J.E. Herrick. 2001. Using cesium-137 to understand landscape stability in the northern Chihuahuan Desert. **Bulletin of the Ecological Society of America** 82 **Abstracts of Annual Meeting**: 336.
- Ritchie, J.C., J.E. Herrick, and C.A. Ritchie. 2003. Measuring in semiarid grass and shrub communities using ¹³⁷Cesium, CD Rom of poster papers 4 pages. In: E. Servat, W. Najem, C. Leduc and A. Shakeel (eds.), *Hydrology of Mediterranean and Semiarid Regions. International Association of Hydrological Sciences Publication No. 278* (CD Rom of Poster Papers).
- Ritchie, J.C., J.E. Herrick, and C.A. Ritchie. 2003. Variability in soil redistribution in the northern Chihuahuan desert based on ¹³⁷Cesium measurements. **Journal of Arid Environments** 55(4):737-746.
- Ritchie, J.C., J.M. Kimble, S. Samson-Liebig, and R.F. Follett. 2000. Evaluating soil carbon pools using fallout cesium-137. **2000 Annual Meeting American Society of Agronomy Abstracts** p. 311.
- Ritchie, J.C. and G.W. McCarty. 2003. ¹³⁷Cesium and soil carbon in a small agricultural watershed. **Soil and Tillage Research** 69(1-2):45-51.
- Ritchie, J.C. and G.W. McCarty. 2001. Sediment deposition rates and carbon content in the soils of an agricultural riparian ecosystem. **Seventh Federal Interagency Sedimentation Conference Proceedings** IX:41-46.
- Ritchie, J.C., G.W. McCarty, E.R. Venteris, and T.C. Kaspar. 2005. Using soil redistribution to understand soil organic carbon redistribution and budgets, p. 3-8. In: A.J. Horowitz, and

D.E. Walling (eds.). Sediment Budgets 2. **International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.

- Ritchie, J.C., G.W. McCarty, E.R. Venteris, T.C. Kaspar, L.B. Owens, and M. Nearing. 2004. Assessing soil organic carbon redistribution with fallout ¹³⁷Cesium, 4 pp. In: S.R. Raine, A.J.W. Biggs, N.W. Menzies, D.M. Freebairn, and P.E. Tolmie, P.E. (eds.), Conserving Soil and Water for Society: Sharing Solutions, ISCO 2004-13th International Soil Conservation Organisation Conference, Brisbane, July 2004, Paper 613, 4 pages, 2004. (On CD Rom).
- Ritchie, J.C., and J.R. McHenry. 1990. Application of radioactive fallout cesium-137 for measuring soil erosion and sediment accumulation rates and patterns: a review. **Journal of Environmental Quality** 19:215-233.
- Ritchie, J.C., and J.R. McHenry. 1989. Application of radioactive fallout cesium-137 for measuring soil erosion and sediment accumulation rates and patterns: a review and bibliography. **Hydrology Laboratory Technical Report No. 15**, 67 pp, US Department of Agriculture, Agriculture Research Service, Beltsville, MD.
- Ritchie, J.C., and J.R. McHenry. 1985. A comparison of three methods for measuring recent rates of sediment accumulation. **Water Resources Bulletin** 21:99-103.
- Ritchie, J.C., and J.R. McHenry. 1984. Cesium-137 and sediment deposition, pp. 183-188. In: R.J. Loughran (ed.), **Drainage basin erosion and sedimentation**, University of Newcastle, Newcastle, Australia.
- Ritchie, J.C., and J.R. McHenry. 1982. Redistribution of fallout cesium-137 in small watersheds in the United States, pp. 809-810. In: **Environmental migration of long-lived radionuclides**, Proceeding Series STI/PUB/597, International Atomic Energy Agency, Vienna, Austria.
- Ritchie, J.C., and J.R. McHenry. 1981. Distribution of fallout cesium-137 in small watersheds in the United States, pp. 104-105. In: **International symposium on migration in the terrestrial environments of long-lived radionuclides from the nuclear fuel cycle**. International Atomic Energy Agency, Vienna, Austria.
- Ritchie, J.C., and J.R. McHenry. 1978. Fallout Cs-137 in cultivated and noncultivated North Central United States watersheds. **Journal of Environmental Quality** 7:40-44.
- Ritchie, J.C., and J.R. McHenry. 1977a. The distribution of Cs-137 in some watersheds in the eastern United States. **Health Physics** 32:101-105.

- Ritchie, J.C., and J.R. McHenry. 1977b. A rapid method for determining recent deposition rates of freshwater sediments. pp. 203-207. *In*: H.L. Golterman (ed.), **Interaction between sediment and fresh water**, W. Junk B. V. Publishers, The Hague, The Netherlands.
- Ritchie, J.C., and J.R. McHenry. 1977c. Nitrogen, carbon and phosphorus in soil and sediments of some small watersheds in the eastern United States. **Journal of the Mississippi Academy of Science** 22:7-14.
- Ritchie, J.C., and J.R. McHenry. 1976. Fallout Cs-137 in soils and sediments of some Texas watershed ecosystems, pp. 299-303. *In*: C.E. Cushing (ed.), **Radioecology and energy resources**. The Ecological Society of America Special Publication No. 1, Dowden, Hutchinson and Ross, Stroudsburg, PA.
- Ritchie, J.C., and J.R. McHenry. 1975a. Fallout Cs-137: a tool in conservation research. **Journal of Soil and Water Conservation** 30:283-286.
- Ritchie, J.C., and J.R. McHenry. 1975b. Fallout cesium-137 in estuarine sediments. **Journal of the Mississippi Academy of Science** 20:34-39.
- Ritchie, J.C., and J.R. McHenry. 1973a. Determination of fallout Cs-137 and natural gamma-ray emitting radionuclides in sediments. **International Journal of Applied Radiation and Isotopes** 24:575-578.
- Ritchie, J.C., and J.R. McHenry. 1973b. Vertical distribution of fallout cesium-137 in cultivated soils. **Radiation Health Data Reports** 14:727-728.
- Ritchie, J.C., J.R. McHenry, and G.B. Bubenzer. 1982. Distribution of fallout Cs-137 in Brunner Creek watershed in Wisconsin. **Transactions of the Wisconsin Academy of Science, Arts, Letters** 70:161-167.
- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1974. Fallout Cs-137 in the soils and sediments of three small watersheds. **Ecology** 55:887-890.
- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1973. Dating recent reservoir sediments. **Limnology and Oceanography** 18:255-264.
- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1972a. Dating recent reservoir sediment using radioactive fallout. **ASB Bulletin** 19:95.
- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1972b. The distribution of Cs-137 in litter and the upper 10 centimeters of soil under different vegetation types in northern Mississippi. **Health Physics** 22:197-198.

- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1972c. Dose rates over reservoirs due to fallout Cs-137. **Health Physics** 23:406-407.
- Ritchie, J.C., J.R. McHenry, and A.C. Gill. 1970. Distribution of cesium-137 in the upper 4 inches of soil in relation to vegetation type. **ASB Bulletin** 17:60.
- Ritchie, J.C., J.R. McHenry, A.C. Gill, and P.H. Hawks. 1973. Distribution of Cs-137 in a small watershed in northern Mississippi, pp. 129-133. *In*: D.J. Nelson (ed.), **Proceedings of the third national symposium on radioecology**. USAEC CONF-710501-p1, US Atomic Energy Commission, Washington, DC.
- Ritchie, J.C., J.R. McHenry, A.C. Gill, and P.H. Hawks. 1972. Fallout Cs-137 in reservoir sediments. **Health Physics** 22:97-98.
- Ritchie, J.C., J.R. McHenry, A.C. Gill, and P.H. Hawks. 1970a. The use of fallout cesium-137 as a tracer of sediment movement and deposition. **Mississippi Water Resources Conference Proceedings** pp. 149-163.
- Ritchie, J.C., J.R. McHenry, A.C. Gill, and P.H. Hawks. 1970b. Distribution of fallout cesium-137 in sediment profiles. **Health Physics** 19:334.
- Ritchie, J.C., M. Nearing, M. Nichols, and C.A. Ritchie. 2005. Patterns of soil movement on Lucky Hills Watershed, Walnut Gulch Arizona. **Catena** 61(2-3):122-130, 2005.
- Ritchie, J.C., and G.L. Plummer. 1969. Natural gamma radiation in northeast and east-central Georgia. **Bulletin of the Georgia Academy of Science** 27:173-194.
- Ritchie, J.C., and Plummer, G.L. 1966. Thorium, uranium, and potassium in certain Georgia soils and their biological implications. **The ASB Bulletin** 13:45.
- Ritchie, J.C., and P.E. Rasmussen. 2000. Application of Cesium-137 to estimate erosion rates for understanding soil carbon loss on long-term experiments at Pendleton, Oregon. **Land Rehabilitation and Development** 11:75-81.
- Ritchie, J.C., and C.A. Ritchie. 1998. Bibliography of publications of ¹³⁷Cs studies related to soil erosion and sediment deposition, p. 63-116. *In*: International Atomic Energy Agency (ed), Use of ¹³⁷Cs in the Study of Soil Erosion and Sedimentation, **IAEA-TECDOC-1028**, Vienna, Austria.
- Ritchie, J.C., and C.A. Ritchie. 1995a. ¹³⁷Cs use in erosion and sediment deposition studies: Promises and problems. **IAEA-TECHDOC-828**, pp. 111-124.
- Ritchie, J.C., and C.A. Ritchie. 1995b. Bibliography of publications of ¹³⁷Cesium studies related to erosion and sediment deposition. **IAEA-TECHDOC-828**, pp. 125-201.

- Ritchie, J.C., J.A. Spraberry, and J.R. McHenry. 1974. Estimating soil erosion from the redistribution of fallout Cs-137. **Soil Science Society of America Proceedings** 38:137-139.
- Ritchie, J.C., J.A. Spraberry, and J.R. McHenry. 1973. Estimating soil erosion from the redistribution of Cs-137 fallout. **Agronomy Abstracts 1973 Annual Meeting**, p. 129.
- Robbe, D., P. Marchandise, and A. Thomas. 1983. Détermination de l'origine des pollutions métalliques par datation des carottes de sédiments. **Bulletin Liaison Lab Ponts Chaussees** 127:81-92. (French)
- Robbins, J.A. 1986a. Sediment in Saginaw Bay, Lake Huron: elemental composition and accumulation rates. **Great Lakes and Marine Waters Center, Special Report No. 102** of the Great Lakes Research Division, University of Michigan, Ann Arbor, MI.
- Robbins, J.A. 1986b. A model for particle-selective transport of tracers in sediment with conveyors belt deposit feeders. **Journal of Geophysical Research** 91:8542-8558.
- Robbins, J.A. 1985a. Great Lakes regional fallout source functions. **NOAA Technical Memorandum ERL GLERL-56**, Ann Arbor, MI.
- Robbins, J.A. 1985b. The coupled lake model for estimating the long-term response of the Great Lakes to time-dependent loadings of particle-associated contaminants. **NOAA Technical Memorandum ERL GLERL-57**, Ann Arbor, MI.
- Robbins, J.A. 1982. Stratigraphic and dynamic effects of sediment reworking by Great Lake zoobenthos. **Hydrobiologia** 92:611-622.
- Robbins, J.A. 1980. Sediments of southern Lake Huron: elemental composition and accumulation rate. USEPA, **Ecological Research Series, EPA-600/3-80-080**, August 1980, 309 pp. (Plus Appendix, 198 pp.)
- Robbins, J.A. 1978. Geochemistry and geophysical application of radioactive lead, pp. 285-393. *In*: J.O. Nriagu (ed.) **The Biochemistry of lead in the environment**. Elsevier, Amsterdam.
- Robbins, J.A., E. Callendar, and N.R. Morehead. 1988. Records of fallout Cs-137 in Lake Oahe Reservoir South Dakota. **EOS Transactions** 69:68.
- Robbins, J.A., and B.J. Eadie. 1991. Seasonal cycling of trace elements ^{137}Cs , ^7Be , and $^{239+240}\text{Pu}$ in Lake Michigan. **Journal of Geophysical Research** 96:17081-17104.

- Robbins, J.A., and D.N. Edgington. 1976. Depositional processes and determination of recent sedimentation rates in Lake Michigan, pp. 378-390. **In: Proceedings second federal conference on the Great Lakes**, Ann Arbor, MI.
- Robbins, J.A., and D.N. Edgington. 1975. Determination of recent sedimentation rates in Lake Michigan using Pb-210 and Cs-137. **Geochimica et Cosmochimica Acta** 39:285-304.
- Robbins, J.A., and D.N. Edgington. 1974. The distribution of trace elements in the clay silt sediments of Grand Haven, pp. 78-85. **In: Radiological and environmental research division annual report, ecology**, January-December 1973. Argonne National Laboratory, Argonne, IL.
- Robbins, J.A., and D.N. Edgington. 1973. Stable lead geochronology of fine-grained sediments in southern Lake Michigan, pp. 32-39. **In: Radiological and environmental research division annual report, ecology**, January-December 1973, Argonne National Laboratory, Argonne, IL.
- Robbins, J.A., and D.N. Edgington. 1972. The use of natural and fallout radionuclides to measure recent sedimentation rates in Southern Lake Michigan, pp. 31-53. **In: Argonne National Lab. Rep. ANL-7960**, Part 3., Argonne National Laboratory, Argonne, IL.
- Robbins, J.A., D.N. Edgington, J. Gustinis, and J.O. Karttune. 1974. Geochronology of Lake Michigan sediments: anomalies in lead-210 distribution, pp. 40-50. **In: Radiological and environmental research division annual report, ecology**, January-December 1974. Argonne National Laboratory, Argonne, IL.
- Robbins, J.A., D.N. Edgington, and L.W. Kemp. 1978. Comparative ^{210}Pb , ^{137}Cs , and pollen geochronologies of sediments from Lake Ontario and Erie. **Quaternary Research** 10:256-278.
- Robbins, J.A., D.N. Edgington, and L.W. Kemp. 1977. Comparative lead-210, cesium-137 and pollen geochronologies of recent sediments from Lake Erie and Ontario, pp. 87-92. **In: Radiological and environmental research division annual report, ecology**, January-December 1976. Argonne National Laboratory, Argonne, IL.
- Robbins, J.A., and L.R. Herche. 1993. Models and uncertainty in ^{210}Pb dating of sediment. **Verh. Int. Ver. Theor. Angew. Limnology** 25:217-222.
- Robbins, J.A., C. Holmes, R. Halley, M. Bothner, E. Shinn, J. Graney, G. Keeler, M. tenBrink, K.A. Orlandini, and D. Rudnick. 2000. Time-averaged fluxes of lead and fallout radionuclides to sediments in Florida Bay. **Journal of Geophysical Research-Oceans** 105(C12):28805-28821.

- Robbins, J.A., K. Husby-Coupland, and D.S. White. 1984. Precise radiotracer measurements of the rate of sediment reworking by *Stylodrilus heringianus* and the effects of variable dissolved oxygen concentration. **Journal of Great Lakes Research** 10:335-347.
- Robbins, J.A., T. Keilty, D.S. White, and D.N. Edgington. 1989. Relationship among Tubificid abundances, sediment composition, and accumulation rates in Lake Erie. **Canadian Journal of Fisheries and Aquatic Science** 46:223-231.
- Robbins, J.A., J.R. Krezoski, and S.C. Mozley. 1977. Radioactivity in sediments of the Great Lakes: post-depositional redistribution by deposit-feeding organism. **Earth and Planetary Science Letters** 36:325-333.
- Robbins, J.A., G. Lindner, W. Pfeiffer, J. Kleiner, H.H. Stabel, and P. Frenzel. 1992. Eplimnetic scavenging of Chernobyl radionuclides in Lake Constance. **Geochimica et Cosmochimica Acta** 56:2339-2361.
- Robbins, J.A., P.L. McCall, J.B. Fisher, and J.R. Krezoski. 1979. Effect of deposit feeders on migration of ^{137}Cs in lake sediment. **Earth and Planetary Letters** 42:277-287.
- Robbins, J.A., A. Murdock, and B.G. Oliver. 1990. Transport and storage of ^{137}Cs and ^{210}Pb in sediments of Lake St. Clair. **Canadian Journal of Fisheries and Aquatic Science** 47:572-587.
- Robbins, J.A., and C.L. Schelske. 1988. Biogenic silica deposition in Lake Erie since 1800. **EOS Transactions** 69:1143.
- Robison, W.L., C.L. Conrado, K.T. Bogen, and A.C. Stoker. 2003. The effective and environmental half-life of Cs-137 at Coral Islands at the former US nuclear test site. **Journal of Environmental Radioactivity** 69(3):207-223.
- Robison, W.L., C.L. Conrado, T.F. Hamilton, and A.C. Stoker. 2000. The effect of carbonate soil on transport and dose estimates for long-lived radionuclides at a US Pacific Test Site. **Journal of Radioanalytical and Nuclear Chemistry** 243(2):459-465.
- Roca, M.C., V.R. Vallejo, M. Roig, J. Tent, M. Vidal, and G. Rauret. 1997. Prediction of cesium-134 and strontium-85 crop uptake based on soil properties. **Journal of Environmental Quality** 26(5):1354-1562.
- Rodriguez-Alvarez, M.J. and E. Sanchez. 2000. Modelling of U, Th, Ra and Cs-137 radionuclides behaviour in rivers. Comparison with field observations. **Applied Mathematical Modelling** 25(1):57-77.

- Roed, J., K.G., Andersson, C.L. Fog, A.N. Barkovski, B.F. Vorobiev, V.N. Potapov, and A.V. Chesnokov. 1999. Triple digging - a simple method for restoration of radioactively contaminated urban soil areas. **Journal of Environmental Radioactivity** 45(2):173-183.
- Rogowski, A.S., and E.R. Eastwood. 1967. Differential movement of ^{137}Cs and ^{134}Cs on runoff plots. Health Physics Division Annual Report for Period Ending July 31, 1967, **ORNL-4168**:3-7
- Rogowski, A.S., and T. Tamura. 1970a. Environmental mobility of cesium-137. **Radiation Botany** 10:35-45.
- Rogowski, A.S., and T. Tamura. 1970b. Erosional behavior of cesium-137. **Health Physics** 18:467-477.
- Rogowski, A.S., and T. Tamura. 1965. Movement of ^{137}Cs by runoff, erosion and infiltration on the alluvial Captina silt loam. **Health Physics** 11:1333-1340.
- Rood, B.E., J.F. Gottgens, J.J. Delfino, C.D. Earle, and T.L. Crisman. 1995. Mercury accumulation in Florida Everglades and Savannas and Marsh flooded soils. **Water Air Soil Pollution** 80:981-990.
- Roque, M.L., F.S. Tagiaferro, and E.A.D.N. Fernandes. 1998. Comportamento de ^{137}Cs e elementos terrígenos em solos e respectivas frações finas. **Congresso Geral de Energia Nuclear** 7, Belo Horizonte, Brazil.
- Rosales-Hoz, L., A.B. Cundy, and J.L. Bahena-Manjarrez. 2003. Heavy metals in sediment cores from a tropical estuary affected by anthropogenic discharges: Coatzacoalcos estuary, Mexico. **Estuarine Coastal and Shelf Science** 58(1):117-126.
- Rose, C. 1993. Erosion and sedimentation, pp. 301-343. In: M. Bonnel, M.M. Hufschmidt, and J.S. Gladewll (eds.), **Hydrology and Water Management in the Humid Tropics**, Cambridge University Press, Cambridge, UK.
- Rose, C.W., M.E. McCallan, B.M. O'Leary, and G. Sander. 1980. Testing a model of field-scale soil erosion and deposition on a plane land element using the fallout isotope ^{137}Cs . **Conference on agricultural engineering**, Geelong, Australia.
- Rose, K.A., A.L. Brenkert, G.A. Schohl, Y. Onishi, J.S. Hayworth, F. Holly, W. Perkins, L. Beard, R.B. Cook, and W. Waldrop. 1993. Multiple model analysis of sediment transport and contaminant distribution in the Clinch River Watts Bar Reservoir, Tennessee, USA. **Water Science Technology** 28:65-78.

- Rose, N.L., P.G. Appleby, J.F. Boyle, A.W. Mackay, et al. 1998. The spatial and temporal distribution of fossil-fuel derived pollutants in the sediment record of Lake Baikal, eastern Siberia. **Journal of Paleolimnology** 20(2):151-162.
- Rose, N.L., S. Harlock, P.G. Appleby, and R.W. Battarbee. 1995 Dating of recent lake sediment in the United Kingdom and Ireland using spheroidal carbonaceous particles (SCP) concentration profiles. **The Holocene** 5: 328-335.
- Rose, N.L., C.L. Rose, J.F. Boyle, and P.G. Appleby. 2004. Lake-sediment evidence for local and remote sources of atmospherically deposited pollutants on Svalbard. **Journal of Paleolimnology** 31(4):499-513.
- Rosen, K. 1996. Transfer of radiocaesium in sensitive agricultural environments after the Chernobyl fallout in Sweden II. Marginal and semi-natural areas in the country of Jamtland. **The Science of the Total Environment** 182(1-3):135-146.
- Rosen, K. 1996. Field studies on the behaviour of radiocaesium in agricultural environments after the Chernobyl accident. **Rapport - Institutionen for Radioekologi, Sveriges Lantbruksuniversitet** (No. 78): 65 pp.
- Rosen, K., E. Haak, and A. Eriksson. 1998 Transfer of radiocaesium in sensitive agricultural environments after the Chernobyl fallout in Sweden: III. County of Vasternorrland. **Science of the Total Environment** 209(2-3):91-105.
- Rosen, K., L. Oborn, and H. Lonsjo. 1999. Migration of radiocaesium in Swedish soil profiles after the Chernobyl accident, 1987-1995. **Journal of Environmental Radioactivity** 46(1):45-66.
- Rostan, J.C., J. Juget, and A.M. Brun. 1997 Sedimentation rates measurements in former channels of the upper Rhone river using Chernobyl ^{137}Cs and ^{134}Cs as tracers. **Science of the Total Environment** 193(3):251-262.
- Rowan, J.S. 1995. The erosional transport of radiocaesium in catchment Systems: A case study of the Exe basin, Devon, p. 331-351. In: I.D.L. Foster, A.M. Gurnell, and B.W. Webb (eds.), **Sediment and Water Quality in River Catchments**, John Wiley and Sons, Chichester, UK.
- Rowan, D.J., R.J. Cornett, K. King, and B. Risto. 1995. Sediment focusing and ^{210}Pb dating: a new approach. **Journal of Paleolimnology** 13:107-118.
- Rowan, J.S., S.B. Bradley, and D.E. Walling. 1992. Fluvial redistribution of Chernobyl fallout - reservoir evidence in the Severn Basin. **Journal of the Institute of Water Environmental Management** 6:659-666.

- Rowan, J.S., D.L. Higgitt, and D.L. Walling. 1993. Incorporation of Chernobyl-derived radiocaesium in reservoir sedimentary sequences, pp. 55-71. *In*: J. McManus and R. Duck (eds.), **Geomorphology and sedimentology of lakes and reservoirs**, Wiley, London.
- Rowan, J.S., L.E. Price, C.P. Fawcett, and P.C. Young. 2001. Reconstructing historic reservoir sedimentation rates using data-based mechanistic modelling. **Physics and Chemistry of the Earth Part B-Hydrology Oceans and Atmosphere** 26(1):77-82.
- Rowan, J.S., and D.E. Walling. 1992. The transport and fluvial redistribution of Chernobyl-derived radiocaesium within the River Wye Basin, UK. **Science of the Total Environment** 121:109-131.
- Royall, D. 2001. Use of mineral magnetic measurements to investigate soil erosion and sediment delivery in a small agricultural catchment in limestone terrain. **Catena** 46(1):15-34.
- Rubio, L., A. Linares-Rueda, C. Duenas, M.C. Fernandez, V. Clavero, F.X. Niell, and J.A. Fernandez. 2003. Sediment accumulation rate and radiological characterisation of the sediment of Palmones River estuary (southern of Spain). **Journal of Environmental Radioactivity** 65(3):267-280.
- Rudin, M.J., W.H. Johnson, and A.M. Meyers. 1997. Radionuclide content of Las Vegas Wash sediments. **Chemosphere** 35(12):3039-3046.
- Rühm, W., L. Kammerer, L. Hiersche, and E. Wirth. 1996. Migration of ^{137}Cs and ^{134}Cs in different forest soil layers. **Journal of Environmental Radioactivity** 33(1):63-75.
- Rühm, W. M. Steiner, L. Kammerer, L. Hiersche, and E. Wirth. 1998. Estimating future radiocaesium contamination of fungi on the basis of behaviour patterns derived from past instances of contamination. **Journal of Environmental Radioactivity** 39(2): 129-147.
- Rühm, W., S. Yoshida, Y. Muramatsu, M. Steiner, and E. Wirth. 1999. Distribution patterns for stable Cs-133 and their implications with respect to the long-term fate of radioactive Cs-134 and Cs-137 in a semi-natural ecosystem. **Journal of Environmental Radioactivity** 45(3):253-270.
- Ruiz-Fernandez, A.C., C. Hillaire-Marcel, B. Ghaleb, F. Paez-Osuna, and M. Soto-Jimenez. 2001. Isotopic constraints (Pb-210, Th-228) on the sedimentary dynamics of contaminated sediments from a subtropical coastal lagoon (NW Mexico). **Environmental Geology** 41(1-2):74-89.
- Ruiz-Fernandez, A.C., C. Hillaire-Marcel, F. Paez-Osuna, B. Ghaleb, and M. Soto-Jimenez. 2003. Historical trends of metal pollution recorded in the sediments of the Culiacan River Estuary, Northwestern Mexico. **Applied Geochemistry** 18(4):577-588.

- Rummery, T.A., J. Bloemendal, J. Dearing, F. Oldfield, and R. Thompson. 1979. The persistence of fire-induced magnetic oxides in soils and lake sediments. **Annals of Geophysics** 35:103-107.
- Ruse, M.E., and M.R. Peart. 2000. Intrasite sampling of Hong Kong soils contaminated by Caesium-137. **Chemosphere** 41(1/2):45-51.
- Ruse, M.E., and M.R. Peart. 1999. Cs-137 reference site characteristics in Hong Kong - Some considerations. **Physics and Chemistry of the Earth Part A-Solid Earth and Geodesy** 24(10): 887-891.
- Russell, M.A., D.E. Walling, and R.A. Hodgkinson. 2001. Suspended sediment sources in two small lowland agricultural catchments in UK. **Journal of Hydrology** 252:1-24.
- Russell, M.A., D.E. Walling, and R.A. Hodgkinson. 2000. Appraisal of simple sampling device for collecting time-integrated fluvial suspended sediment samples. **International Association of Hydrological Publication No.** 263:119-127.
- Russell, M.A., D.E. Walling, B.W. Webb, and R. Bearne. 1998. The comparison of nutrient fluxes from contrasting UK river basins. **Hydrological Processes** 12:1461-1482.
- Russell, R.A., P.J. Holden, T.E. Payne, and G.D. McOrist. 2004. The effect of sulfate-reducing bacteria on adsorption of Cs-137 by soils from arid and tropical regions. **Journal of Environmental Radioactivity** 74(1-3):151-158.
- Rybalka, I.E., V.N. Kirsenko, and Yu. A. Kutlakhmedov. 1997a. Behaviour of radiocesium in a turf weakly podzolic loam soil: Critical evaluation of the sequential extraction results. **Dopovidi Natsional'noyi Akademiyi Nauk Ukrayiny** 0(10):187-191. (Ukrainian)
- Rybalka, I.E., V.N. Kirsenko, and Yu. A. Kutlakhmedov. 1997b. Behavior of radioactive cesium in soddy weakly podzolic sandy loam soil. **Agrokhimiya** 0(10):52-58.
- Ryabinin, A.I., V.P. Popov, B.F., andryushchenko, N.A. Konovalenko, and S.A. Shibaeva. 1995. Caesium-137 content in Dnieper drowned area sediments in 1993. **Dopovidi Natsional'noyi Akademiyi Nauk Ukraying** 4:133-136. (Russian)
- Rysgaard, S., K. Finster, and H. Dahlgaard. 1996. Primary production, nutrient dynamics and mineralisation in a northeastern Greenland fjord during the summer thaw. **Polar Biology** 16(7):497-506.
- Sabater, S., and E.Y. Haworth. 1995. An assessment of recent trophic changes in Windermere South Basin (England) based on diatom remains and fossil pigment. **Journal of Paleolimnology** 14:151-163.

- Sachdev, P., M.S. Sachdev, and D.L. Deb. 1995. Adsorption-desorption of radiocaesium (^{137}Cs) in semi-arid and tropical soils. **Journal of Nuclear Agriculture and Biology** 24(4):201-209.
- Sadaaki, M., M. Misako, O. Takashi, N. Kiyooki, and I. Yoshiro. 1998. Radioecological studies of ^{137}Cs in limnological ecosystems: ^{137}Cs concentrations in water, sediment and fishes at the pond in Saitama Prefecture, Japan. **Radioisotopes** 47(8):628-633.
- Sadasivan, S., V.K. Shukla, S. Chinnaesakki, and S.J. Sartandel. 2003. Natural and fallout radioactivity measurement in Indian soils. **Journal of Radioanalytical and Nuclear Chemistry** 256(3):603-607.
- Sadolko, I., G. Arapis, and V. Davydchuk. 1995. Migration of ^{137}Cs in the soil of the Chernobyl area. **Journal of Radioecology** 3(2):7-13.
- Saiers, J.E. and G.M. Hornberger. 1999. The influence of ionic strength on the facilitated transport of cesium by kaolinite colloids. **Water Resources Research** 35(6):1713-1727.
- Saiers, J.E., and G.M. Hornberger. 1996a. The role of colloidal kaolinite in the transport of cesium through laboratory sand columns. **Water Resources Research** 32:33-41.
- Saiers, J.E., and G.M. Hornberger. 1996b. Migration of ^{137}Cs through quartz sand: Experimental results and modeling approaches. **Journal of Contaminant Hydrology** 22 (3-4):255-270.
- Saito, R.T., R.C.L. Figueira, M.G. Tessler, and I.L.L. Cunha. 2001. Geochronology of sediments in the Cananeia-Iguape estuary and in southern continental shelf of Sao Paulo State, Brazil. **Journal of Radioanalytical and Nuclear Chemistry** 250(1):109-115.
- Saito, R.T., R.C.L. Figueira, M.G. Tessler, and I.L.L. Cunha. 2001. Pb-210 and Cs-137 geochronologies in the Cananeia-Iguape Estuary (Sao Paulo, Brazil). **Journal of Radioanalytical and Nuclear Chemistry** 249(1):257-261.
- Sakaguchi, A., M. Yamamoto, M. Hoshi, Y.N. Apsalikov, and B.I. Gusev. 2004. Plutonium isotopes and Cs-137 in Dolon settlement near the Semipalatinsk Nuclear Test Site: About 50 years after the first nuclear weapon testing. **Journal of Radioanalytical and Nuclear Chemistry** 260(3):543-555.
- Sakai, T. 1977. **Distribuição do ^{137}Cs nos solos do Estado da Bahia, Salvador**. Masters thesis. Universidade Estadual da Bahia, Brazil, 63p.
- Salazar, A., and P. Mora. 1996 The distribution of fallout ^{137}Cs in Costa Rica. **Health Physics** 71 (2):215-218.

- Salbu, B., A.I. Nikitin, P. Strand, G.C. Christensen, V.B. Chumichev, B. Lind, H. Fjelldal, T.D.S. Bergan, A.L. Rudjord, M. Sickel, N.K. Valetova, and L. Foyn. 1997. Radioactive contamination from dumped nuclear waste in the Kara Sea. Results from the joint Russian-Norwegian expeditions in 1992-1994. **Science of the Total Environment** 202(1-3):185-198.
- Salbu, B., D.H. Oughton, A.V. Ratnikov, T. Zhigareva, S.V. Kruglov, K.V. Petrov, N.V. Grebenshakikova, S.K. Firsakova, N.P. Astasheva, N.A. Lashchilov, K. Hove, and P. Strand. 1994. The mobility of ^{137}Cs and ^{90}Sr in agricultural soils in the Ukraine, Belarus, and Russia, 1991. **Health Physics** 67:518-528.
- Salo, A., R. Saxén, and M. Puhakainen. 1984. Transport of airborne ^{90}Sr and ^{137}Cs deposited in the basins of the five largest rivers in Finland. **Aqua Fennica** 14:21-31.
- Salo, A., K. Tuomainen, and A. Voipio. 1986. Inventories of some long-lived radionuclides in the Baltic Sea. **Science of the Total Environment** 54:247-260.
- Salt, C.A., and J.W. Kay. 1999. The seasonal pattern of radiocaesium partitioning within swards of *Agrostis capillaris* at two defoliation intensities. **Journal of Environmental Radioactivity** 45(3):219-234.
- Salt, C.A., and R.W. Mayes. 1991. Seasonal variations in radiocaesium uptake by reseeded hill pasture grazed at different intensities by sheep. **Journal of Applied Ecology** 28:947-962.
- Salt, C.A., and R.W. Mayes. 1993. Plant uptake of radiocaesium on heather moorland grazed by sheep. **Journal of Applied Ecology** 30:235-246.
- Salt, C.A., R.W. Mayes, and D.A. Elston. 1992. Effects of season, grazing intensity and diet composition on the radiocaesium intake by sheep on reseeded hill pasture. **Journal of Applied Ecology** 29:378-387.
- Salt, C.A. and B. Rafferty. 2001. Assessing potential secondary effects of countermeasures in agricultural systems: a review. **Journal of Environmental Radioactivity** 56(1-2):99-114.
- Salvadori, G., S.P. Ratti, and G. Belli. 1996. Modelling the Chernobyl radioactive fallout (II): Multifractal approach in some European countries. **Chemosphere** 33(12):2359-2371.
- Salzano R., and M. Angelone. 2004. Fate of heavy metals related to vehicular traffic emissions in Rome since the last 50 years. **Proceedings of 32nd International Geological Congress**, Florence - 20-28 Agosto 2004, Italy.

- Sam, A.K., M.N.O. Ahamed, F. Khang, and P. Roos. 2000. Plutonium isotopes in sediments from the Sudanese coast of the Red Sea. **Journal of Radioanalytical and Nuclear Chemistry** 245(2):411-414.
- Sam, A.K., M.M.O. Ahamed, F.A. El Khang, Y.O. El Nigumi, and E. Holm. 1998. Radioactivity levels in the Red Sea coastal environment of Sudan. **Marine Pollution Bulletin** 36(1):19-26.
- Sam, A.K., A.A. ElGanawi, M.M.O. Ahamed, and F.A. ElKhang. 1998. Distribution of some natural and anthropogenic radionuclides in Sudanese harbour sediments. **Journal of Radioanalytical Nuclear Chemistry** 237(1-2):103-107.
- San Miguel, E.G., J.P. Bolivar, and R. Garcia-Tenorio. 2004. Vertical distribution of Th-isotope ratios, Pb-210, Ra-226 and Cs-137 in sediment cores from an estuary affected by anthropogenic releases. **Science of the Total Environment** 318(1-3):143-157.
- San Miguel, E.G., J.P. Perez-Moreno, J.L. Aguado, J.P. Bolivar, and R. Garcia-Tenorio. 2003. Sedimentological study of a lagoon through natural radioactivity and Cs-137 determinations. **Czechoslovak Journal of Physics** 53(Pt. 1, Suppl. A):A67-A73.
- San Miguel, E.G., J.P. Perez-Moreno, J.P. Bolivar, and R. Garcia-Tenorio. 2003. Validation of isotope signatures in sediments affected by anthropogenic inputs from uranium series radionuclides. **Environmental Pollution** 123(1):125-130.
- Sanada, Y., T. Matsunaga, N. Yanase, S. Nagao, H. Amano, H. Takada, and Y. Tkachenko. 2002. Accumulation and potential dissolution of Chernobyl-derived radionuclides in river bottom sediment. **Applied Radiation and Isotopes** 56(5):751-760.
- Sanchez, A.L., N.R. Parekh, B.A. Dodd, and P. Ineson. 2000. Microbial component of radiocaesium retention in highly organic soils. **Soil Biology and Biochemistry** 32(14):2091-2094.
- Sanchez, A.L., E. Smolders, K. Van den Brande, R. Merckx, S.M. Wright, and C. Naylor. 2002. Predictions of in situ solid/liquid distribution of radiocaesium in soils. **Journal of Environmental Radioactivity** 63(1):35-47.
- Sanchez, A.L., S.M. Wright, E. Smolders, C. Naylor, P.A. Stevens, V.H. Kennedy, B.A. Dodd, D.L. Singleton, and C.L. Barnett. 1999. High plant uptake of radiocaesium from organic soils due to Cs mobility and low soil K content. **Environmental Science and Technology** 33(16):2752-2757.
- Sanchez, C.I., R. Garcia-tenorio, M. Garcia-Leon, J.M. Abril, and F. El-Daoushy. 1992. The use of ¹³⁷Cs in marine and lacustrine sediment dating. **Nuclear Geophysics** 6:395-403.

- Sanchez-Cabeza, J.A., P. Masque, I. Ani-Ragolta, J. Merino, M. Frignani, F. Alvisi, A. Palanques, and P. Puig. 1999. Sediment accumulation rates in the southern Barcelona continental margin (NW Mediterranean Sea) derived from Pb-210 and Cs-137 chronology. **Progress in Oceanography** 44 (1-3):313-332.
- Sanchez-Cabeza, J.A., J. Molero, J. Merino, L. Pujol, and P.I. Mitchell. 1995. Cs-137 as a tracer of the Catalan current. **Oceanologica Acta** 18:221-226.
- Sanchez-Cabeza, J.A., L. Pujol, J. Merino, J.A. Brauach, and J. Molero. 2000. Artificial radionuclides in waters of the lower section of the River Ebro (Northeast Spain). **Water, Air, and Soil Pollution** 118:339-356.
- Sánchez-Carrillo, S., M. Álvarez-Cobelas, and D.G. Angeler. 2001. Sedimentation in the semi-arid freshwater wetland Las Tablas de Daimiel (Spain). **Wetlands** 21(1):112-124.
- Sanders, G., K.C. Jones, J. Hamilton, and H. Dörr. 1992. Historical input of polychlorinated-biphenyls and other organochlorides to a dated lacustrine sediment core in rural England. **Environmental Science and Technology** 26:1815-1821.
- Sanders, J.G., and G.F. Riedel. 1993. Trace-element transformation during the development of an estuarine algal bloom. **Estuaries** 16:521-532.
- Sandman, O., A. Lichu, and H. Simola. 1990. Drainage ditch erosion history as recorded in the varved sediment of a small lake in East Finland. **Journal of Paleolimnology** 3:161-169.
- Sanei, H., Goodarzi, L.R. Snowdon, L.D. Stasiuk, and E. Van Der Flier-Keller. 2000. Characterizing the recent sediments from Pigeon Lake, Alberta as related to anthropogenic and natural fluxes. **Environmental Geosciences** 7(4):177-189.
- Sanford, W.E., I.L. Larsen, J.W. McConnell, Jr, and R.D. Rogers. 1998. Upward migration of radio-cesium and strontium in a sand-filled lysimeter. **Journal of Environmental Radioactivity** 41(2):147-162.
- Sansone, U., M. Belli, Z. Jeran, V.V. Kanivets, J. Radojko, M. Riccardi, and O.V. Voitsekhovitch. 2002. Suspended particle adhesion on aquatic plant surfaces: implications for Cs-137 and (CS)-C-133 uptake rates and water-to-plant concentration ratios. **Journal of Environmental Radioactivity** 59(3):257-271.
- Santschi, P.H. 1989. Use of radionuclides in the study of contaminant cycling processes. **Hydrobiologia** 176/177:307-320.
- Santschi, P.H. 1987. Chernobyl radionuclides in the environment: tracers for the tight coupling between atmospheric, terrestrial and aquatic geochemical processes. **EAWAG News** 22/23:1-6.

- Santschi, P. 1984a. Particle flux and trace metal residence times in natural waters. **Limnology and Oceanography** 29:1100-1108.
- Santschi, P. 1984b. Radionuclides as tracers for sedimentation and remobilization processes in the ocean and in lakes, pp. 437-449. *In*: P.G. Sly (ed.), **Sediment and water interactions**, Springer-Verlag, London.
- Santschi, P.H., M.A. Allison, S. Asbill, A.B. Perlet, S. Cappellino, C. Dobs, and L. McShea. 1999. Sediment transport and Hg recovery in Lavaca Bay, as evaluated from radionuclide and Hg distributions. **Environmental Science and Technology** 33(3):378-391.
- Santschi, P.H., S. Bollhalder, K. Farrenkothen, A. Lueck, S. Zingg, and M. Strum. 1988. Chernobyl radionuclides in the environment: tracers for the tight coupling between atmospheric, terrestrial, and aquatic geochemical processes. **Environmental Science and Technology** 22:510-516.
- Santschi, P.H., S. Bollhalder, S. Zingg, A. Lueck, and K. Farrenkothen. 1990. The self-cleaning capacity of surface waters after radioactive fallout. Evidence from European waters after Chernobyl. **Environmental Science and Technology** 24:519-527.
- Santschi, P.H., L.D. Guo, S. Asbill, M. Allison, A.B. Kepple, and L.S. Wen. 2001. Accumulation rates and sources of sediments and organic carbon on the Palos Verdes shelf based on radioisotopic tracers (Cs-137, Pu-239, Pu-240, Pb-210, Th-234, U-238 and C-14). **Marine Chemistry** 73(2):125-152.
- Santschi, P.H., and B.D. Honeyman. 1989. Radionuclides in aquatic environments. **Radiation Physics Chemistry** 34:213-240.
- Santschi, P.H., Y.H. Li, D.M. Adler, M. Amdurer, J. Bell, U.P. Nyffeler. 1983. The relative mobility of natural (Th, Pb, Po) and fallout (Pu, Am, Cs) radionuclides in the coastal marine environments: results from model ecosystems (MERL) and Narragansett Bay. **Geochimica et Cosmochimica Acta** 47:201-210.
- Santschi, P.H., Y.H. Li, and S. Carson. 1980. The fate of trace metals in Narragansett Bay, Rhode Island: radiotracer experiments in microcosms. **Estuaries and Coastal Marine Science** 10:635-654.
- Santschi, P.H., Y.H. Li, P. O'Hara, M. Amdurer, D. Adler, and P. Doering. 1987. The relative mobility of radioactive trace elements across the sediment-water interface of the MERL model ecosystem of Narragansett Bay. **Journal of Marine Research** 45:1007-1048.

- Santschi, P.H., S. Nixon, M. Pilson, and C. Hunt. 1984. Accumulation of sediment, trace metals (Pb, Cu) and hydrocarbons in Narragansett Bay, Rhode Island. **Estuaries and Coastal Shelf Science** 19:427-450.
- Santschi, P.H., U.P. Nyffeler, R.F., Anderson, S.L. Schiff, and P. O'Hara. 1986. Response of radioactive trace metals to acid-base titration in controlled experimental ecosystems: evaluation of transport parameters for application to whole lake experiments. **Canadian Journal of Fisheries and Aquatic Science** 43:60-77.
- Santschi, P.H., and P.W. Schindler. 1977. Chemical and geochemical studies of Lake Biel. I. A mass balance for Lake Biel and its implications for the rates of erosion in the drainage area. **Journal of Hydrology** 39:181-200.
- Santschi, P.H., C. Schuller, and M. Strum. 1987. Natural and Chernobyl radionuclides as tracers of particle settling and resuspension in Lake Zurich, Switzerland. **Terra Cognita** 7:185.
- Santschi, P.H., C. Schuller, M. Strum, A. Lueck, K. Farrenkothen, S. Bollhalder, and E. Wieland. 1988. Natural radionuclides in Lake Zurich: tracers for particle and tracer element dynamics. **EOS Transactions** 69:1085.
- Sanzharova, N.I., V.A. Kotik, A.N. Arkhipov, G.A. Sokolik, Yu.A. Ivanov, S.V. Fesenko and S.E. Levchuk. 1996. Quantitative parameters of radionuclide vertical migration in the soils on different meadow types. **Radiatsionnaya Biologiya Radioekologiya** 36(4): 488-497. (RUSSIAN)
- Sarkka, J., A. Jamsa, and A. Luukko. 1995. Chernobyl-derived radiocaesium in fish as dependent on water quality and lake morphometry. **Journal of Fisheries Biology** 46:227-240.
- Sarkka, J., A. Keskitalo and A. Luukko. 1996. A temporal changes in concentration of radiocaesium in lake sediment and fish of southern Finland as related to environmental factors. **Science of the Total Environment** 191(1-2):125-136.
- Sarkka, J., A. Luukko, and P. Horpilla. 1993. Factors influencing the concentration of Chernobyl cesium in bottom sediment of lakes in Finland. **Verh. -International Verein.** Limnology 25:223-225.
- Sarmiento, J.L., and E. Gwinn. 1986. Strontium-90 fallout prediction. **Journal of Geophysical Research** 91:7631-7646.
- Sauras, T. M.C. Roca, J. Tent, M. Llaurodo, M. Vidal, G. Rauret, and V.R. Vallejo. 1994. Migration study of radionuclides in a mediterranean forest soil using synthetic aerosols. **Science of the Total Environment** 157:231-238.

- Sawhney, B.L. 1972. Selective sorption and fixation of cations by clay minerals: a review. **Clays and Clay Minerals** 20:93-100.
- Sawhney, B.L. 1970. Potassium and caesium ion electivity in relation to clay mineral structure. **Clays and Clay Minerals** 18:47-52.
- Sawhney, B.L. 1966. Kinetics of cesium sorption by clay minerals. **Soil Science Society of America Proceedings** 30:565-569.
- Sawhney, B.L. 1964. Sorption of cesium from dilute solutions. **Soil Science Society of America Proceedings** 28:25-28.
- Saxén, R. 1994. Transport of ^{137}Cs in large Finnish drainage basin, pp. 63-78. *In*: H. Dahlgard (ed.), **Studies in Environmental Science 62. Nordic Radioecology: The transfer of radionuclides through nordic ecosystems to man**, Elsevier, New York.
- Saxén, R., T. Jaakkola, and A. Rantavaara. 1998. Cs-137 and Sr-90 in the southern part of Lake Paijanne and its catchments. **Radiochemistry** 40(6):522-528.
- Saxen, R., and E. Ilus. 2001. Discharge of Cs-137 and Sr-90 by Finnish rivers to the Baltic Sea in 1986-1996. **Journal of Environmental Radioactivity** 54(2):275-291.
- Saxena, D.P., P. Joos, R. Van Grieken, and V. Subramanian. 2002. Sedimentation rate of the floodplain sediments of the Yamuna river basin (tributary of the river Ganges, India) by using Pb-210 and Cs-137 techniques. **Journal of Radioanalytical and Nuclear** 251(3):399-408.
- Saynor, M.J. 1994. A review of caesium-137 technique and its application for measuring soil erosion on six grazed hillslopes in south-east Australia. Master Thesis, Department of Geography, The University of Newcastle, Newcastle, New South Wales, Australia
- Saynor, M.J., R.J. Loughran, W.D. Erskine, and P.F. Scott. 1994. Sediment movement on hillslopes measured by caesium-137 and erosion pins. **International Association of Hydrological Sciences Publication No. 224**:87-93.
- Sbrignadello, G., S. Degetto, G.A. Battiston, and R. Gerbasi. 1994. Distribution of Pb-210 and Cs-137 in snow and soil samples from Antarctica. **International Journal of Environmental Analytical Chemistry** 55:235-242.
- Schaffner, L.C., R.J. Diaz, C.R. Olsen, and I.L. Larsen. 1987. Faunal characteristics and sediment accumulation processes in the James River estuary, Virginia. **Estuaries and Coastal Shelf Science** 25:211-226.

- Schelske, C.L., J.A. Robbins, W.D. Gardner, D.J. Conley, and R.A. Bourbonniere. 1988. Sediment record of biogeochemical responses to anthropogenic perturbations of nutrient cycles in Lake Ontario. **Canadian Journal of Fisheries and Aquatic Science** 45:1291-1303.
- Schimmack, W., and K. Auerswald. 2004. The radiocaesium interception potential (RIP) at an agricultural site in Germany. **Journal of Environmental Radioactivity** 77(1):143-157.
- Schimmack, W., and K. Auerswald. 1994. Erosion messungen mit radiotracer in Scheyern. **Mitteilgn. Dtsch. Bodenkundl Gesellsch.** 74:131-132. (In German).
- Schimmack, W., K. Auerswald, and K. Bunzl. 2002. Estimation of soil erosion and deposition rates at an agricultural site in Bavaria, Germany, as derived from fallout radiocesium and plutonium as tracers. **Naturwissenschaften** 89(1):43-46.
- ack, W., K. Auerswald, and K. Bunzl. 2001. Can Pu239+240 replace Cs-137 as an erosion tracer in agricultural landscapes contaminated with Chernobyl fallout? **Journal of Environmental Radioactivity** 53(1):41-57.
- Schimmack, W., and K. Bunzl. 1996. Mobility of Chernobyl-derived radiocesium in the soil. **Mitt. d. Österr. Bodenkundl. Ges. H.** 53. S. 11-18 (Proceeding of International Symposium on Radioecology 1996, Austrain Soil Science Society, Vienna).
- Schimmack, W., and K. Bunzl. 1992a. Migration of radiocesium in two forest soils as obtained from field and column investigations. **Science of the Total Environment** 116:93-107.
- Schimmack, W., and K. Bunzl. 1992b. Transport of ⁸⁵Sr, ⁶⁰Co, ⁶⁵Zn and ¹⁰⁹Cd in two forest soils, as observed in undisturbed soil columns. **Radiochimica Acta** 58/59:297-303.
- Schimmack, W., and K. Bunzl. 1986. Migration of solutes in a cultivated soil: effects of ploughing. **Geoderma** 38:155-163.
- Schimmack, W., K. Bunzl, F. Dietl, and D. Klotz. 1994. Infiltration of radionuclides with low mobility (¹³⁷Cs and ⁶⁰Co) into a forest soil. Effect of irrigation intensity. **Journal of Environmental Radioactivity** 24:53-63.
- Schimmack, W., K. Bunzl, and H. Flessa. 1994. Short-term and long-term effects of ploughing on the vertical distribution of radiocesium in two Bavarian soils. **Soil Use and Management** 10:165-168.
- Schimmack, W., K. Bunzl, and K.A. Kreutzer. 1997. long-term field study on the effect of acid irrigation and compensatory liming on the transport of Chernobyl-derived radiocesium in a forest soil. **Science of the Total Environment** 198(3):271-285.

- Schimmack, W., K. Bunzl, and L. Zelles. 1989. Initial rates of migration of radionuclides from the Chernobyl fallout in undisturbed soils. **Geoderma** 44:211-218.
- Schimmack, W., H. Flessa, and K. Bunzl. 1997. Vertical migration of Chernobyl-derived radiocesium in Bavarian grassland soils. **Naturwissenschaften** 84(5):204-207.
- Schimmack, W., H. Foerster, K. Bunzl, and K. Kreutzer. 1993. Deposition of radiocesium to the soil by stemflow through fall and leaf-fall from beech trees. **Radiation Environmental Biophysics** 32:137-150.
- Schimmack, W., H. Steindl, and K. Bunzl. 1998. Variability of water content and of depth profiles of global fallout ^{137}Cs in grassland soils and the resulting external gamma-dose rates. **Radiation Environmental Biophysics** 37(1):27-33.
- Schlesinger, W.H., P.J. Fonteyn, and W.A. Reiners. 1989. Effects of overland flow on plant water relations, erosion, and soil water percolation on a Mojave Desert landscape. **Soil Science Society of America Journal** 53:1567-1572.
- Schleich, N., D. Degering, and S. Unterricker. 2000. Natural and artificial radionuclides in forest and bog soils: Tracers for migration processes and soil development. **Radiochimica Acta** 88(9-11):803-808.
- Schmidt, R., H. Hollerer, and G. Wallner. 1995. A vacuum sampler for subsampling freeze-dried laminated sediments with the application to in situ frozen varves of Mondsee, Austria. **J. Paleolimnology** 14:93-96.
- Schell, W.R. 1987. A historical perspective of atmospheric chemicals deposited on a mountain top peat bog in Pennsylvania. **International Journal of Coal Geology** 8:147-173.
- Schell, W.R., A.L. Sanchez, C. Granlund. 1986. New data from peat bogs may give a historical perspective of acid deposition. **Water Air Soil Pollution** 30:393-409.
- Schell, W.R., M.J. Tobin, M.J.V. Novak, R.K. Wieder, and P.I. Mitchell. 1997. Deposition history of trace metals and fallout radionuclides in wetland ecosystems using ^{210}Pb chronology. **Water Air Soil Pollution** 100(3-4):233-239.
- Schoenburg, M. 1987. **Radiometric dating and quantitative analysis of elements in depth profiles of sediments by means of nuclear physical as well as x-ray fluorescence and atomic emission spectroscopic methods.** Fachbereich 12-Physik., Rep. GKSS-87/E/54, Hamburg Univ., Germany. (German)
- Schoer, J. 1988. Investigation of transport processes along the Elbe River using Chernobyl radionuclides as tracers. **Environmental Technology Letters** 9:317-324.

- Schoorl, J.M., C.B. Fayos, R.J. de Meijer, E.R. van der Graaf, and A. Veldkamp. 2004. The Cs-137 technique applied to steep Mediterranean slopes (Part I): the effects of lithology, slope morphology and land use. **Catena** 57(1):15-34.
- Schoorl, J.M., C.B. Fayos, R.J. de Meijere, E.R. van der Graaf, and A. Veldkamp. 2004. The Cs-137 technique applied to steep Mediterranean slopes (Part II): landscape evolution and model calibration. **Catena** 57(1):35-54.
- Schreiber, B. 1974. Plankton and sediment: First and last step of the radioactivity diffusion in the area. **Ciencia e Cultura** 27:197-206.
- Schreiber, B. 1969. Significance of sediments in evaluating the radioactive contamination of the sea. **Fourth International Colloquium Medical Oceanography**, Naples, Italy, October 1969.
- Schreiber, B. 1968. Essay of a method of absolute dating of the coastal marine sediments by means of the vertical distribution of the fallout radionuclides. **Accademia Nazionale Dei Lincei** 45:251-257.
- Schreiber, B. 1967a. Ecology of Acantharia in relation of Sr circulation in the sea. **Final Report Contract US/62**, International Atomic Energy Agency, Vienna, Austria.
- Schreiber, B. 1967b. Radionuclides in marine plankton and in coastal sediments, pp. 753-770. *In*: B. Aberg and F.P. Hungate (eds.) **Radioecological concentration processes**, Pergamon Press, London.
- Schreiber, B., E. Cerrai, C. Triulzi, L.T. Pelati, and M.G. Mezzadri. 1969. Ricerche sulla distribuzione verticale della radioattivit  nei sedimenti del Mar Ligure. **Giornale di Fisica Sanitaria e Protezione Contro le Radiazioni** 13:1-19. (Italian)
- Schreiber, B., L.T. Pelati, E. Cerrai, and C. Triulzi. 1964. Gross beta radioactivity of littoral sediments of the Ligurian Sea. **Energ. Nuclear (Milan)** 11:616-624.
- Schreiber, B., L.T. Pelati, M.G. Mezzadri, and G. Motta. 1968. Gross beta radioactivity in sediments of the North Adriatic Sea: a possibility of evaluating the sedimentation rate. **Archives of Oceanography and Limnology** 16:45-62.
- Schroeder, R.A. 1985. Sediment accumulation rates in Irondequoit Bay, New York based on lead-210 and cesium-137 chronology. **Northeastern Environmental Science** 1:23-29.
- Schuller, C., E. Wieland, P.H. Santschi, M. Sturm, A. Lueck, S. Bollhalder, J. Beer, G. Bonani, H.J. Hofmann, M. Suter, and W. Wolfi. 1991. A multitracer study of radionuclides in Lake Zurich, Switzerland 1. Comparison of atmospheric and sedimentary fluxes of ⁷Be, ¹⁰Be, ²¹⁰Pb, ²¹⁰Po, and ¹³⁷Cs. **Journal of Geophysical Research** 96:17051-170965.

- Schuller, P., K. Bunzl, G. Voigt, A. Ellies, and A. Castillo. 2004. Global fallout Cs-137 accumulation and vertical migration in selected soils from South Patagonia. **Journal of Environmental Radioactivity** 71(1):43-60.
- Schuller, P., K. Bunzl, G. Voigt, J. Handl, A. Ellies, and A. Castillo. 2002. Fallout radiocesium in an Antarctic region: Deposition history, activity densities and vertical transport in soils. **Radiation and Environmental Biophysics** 41(4):295-302.
- Schuller, P., and Ellies. 1996. Influence of soil properties and climatic conditions on ^{137}Cs vertical distribution in some Chilean soils. **Mitt. d. Österr. Bodenkundl. Ges., H. 53**. S. 215-222 (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Schuller, P., and A. Ellies. 1994. Einfluß des Jahresniederschlags und der Bodenart auf die ^{137}Cs tiefenverteilung in Böden Südchiles (The influence of mean annual rainfall and soil texture on the ^{137}Cs vertical distribution in soils from southern Chile). **Zeitschrift fuer Pflanzenernaehrung und Bodenkunde** 157:429-432. (German)
- Schuller, P., A. Ellies, A. Castillo and I. Salazar. 2003. Use of ^{137}Cs to estimate tillage- and water-induced soil redistribution rates under different use and management in central-south Chile. **Soil and Tillage Research** 69(1-2):69-83.
- Schuller, P., A. Ellies, and J. Handl. 1997. Influence of climatic conditions and soil properties on ^{137}Cs vertical distribution in selected Chilean soils. **Zeitschrift fuer Pflanzenernaehrung und Bodenkunde** 160 (4):423-426.
- Schuller, P., A. Ellies, J. Handl, and A. Castillo. 1998. ^{137}Cs concentration in Chilean soils and its time dependency in the soil-prairie plant-milk pathways in Central-South Chile, pp.214-218. In: Wan der Stricht, E. (ed.), **IUR Tropical Meetings Proceedings**, Mol, Belgium
- Schuller, P., A. Ellies, and G. Kirchner. 1997. Vertical migration of fallout ^{137}Cs in agricultural soils from Southern Chile. **Science of the Total Environment** 193(3):197-205.
- Schuller, P., J. Handl, and A. Ellies. 1998. Long-term decrease of atmospheric test ^{137}Cs in the soil-prairie plant-milk pathway in southern Chile. **Health Physics** 75(1):86-88.
- Schuller, P., C. Lovengreen, and J. Handl. 1993. ^{137}Cs concentration in soil, prairie plants, and milk in Southern Chile. **Health Physics** 64:157-161.
- Schuller, P., A. Sepúlveda, A. Ellies, and A. Castillo. 1999. Utilización de ^{137}Cs en cuantificación de erosión y sedimentación en un Palehumult de la IX Región. **Agro Sur** 27:29-36.

- Schuller, P., A. Sepúlveda, R.E. Trumper and A. Castillo. 2000. Application of the ^{137}Cs technique to quantify soil redistribution rates in paleohumults from Central-South Chile. **Acta Geologica Hispanica** 35(3-4):285-290.
- Schuller, P., G. Voigt, J. Handl, A. Ellies, and L. Oliva. 2002. Global weapons' fallout Cs-137 in soils and transfer to vegetation in south-central Chile. **Journal of Environmental Radioactivity** 62(2):181-193.
- Schuller, P., D.E. Walling, A. Sepulveda, R.E. Trumper, J.L. Rouanet, I. Pino, and A. Castillo. 2004. Use of Cs-137 measurements to estimate changes in soil erosion rates associated with changes in soil management practices on cultivated land. **Applied Radiation and Isotopes** 60(5):759-766.
- Schultz, R.K. 1965. Soil Chemistry of radionuclides. **Health Physics** 11:1317-1324.
- Schultz, R.K., R. Overstreet, and I. Barshad. 1960. On the soil Chemistry of cesium-137. **Soil Science** 89:19-27.
- Schulze, W.W.F., and K. Haberer. 1965. The behaviour of radionuclides in soil. **Vom Wasser** 32:69-127. (German)
- Serne, R.J., J.M. Zachara, and D.S. Burke. 1998. Chemical information on tank supernatants, Cs adsorption from tank liquids onto Hanford sediments, and field observations of Cs migration from past tank leaks. Pacific Northwest Lab., Richland, WA (United States), **Report No.: PNNL-11495**, Jan 98 96p
- Shalhevet, J. 1973. Effect of mineral type and soil moisture content on plant uptake of ^{137}Cs . **Radiation Botany** 13:165-171.
- Shand, C.A., M.V. Cheshire, S. Smith, C.D. Campbell, P., Anderson, C.M. Davidson, D. Littlejohn, and N. Jamieson. 1995. Radiocaesium in an organic soil and the effect of treatment with the fungicide 'Captan'. **Plant and Soil** 170:315-322.
- Shand, C.A., M.V. Cheshire, S. Smith, M. Vidal, and G. Rauret. 1994. Distribution of radiocaesium in organic soils. **Journal of Environmental Radioactivity** 23:285-302.
- Sharma, P., L.R. Gardner, W.S. Moore, and M.S. Bollinger. 1987. Sedimentation and bioturbation in a salt marsh as revealed by ^{210}Pb , ^{137}Cs and ^7Be studies. **Limnology and Oceanography** 32:313-326.
- Shaw, G. and J. N. B. Bell. 1989. Competitive effects of potassium and ammonium on caesium uptake kinetics in wheat. **Journal of Environmental Radioactivity** 13:283-296.

- Shaw, G., and X. Wang. 1996. Caesium and Plutonium migration in forest soils of the Chernobyl 20 km Zone. **Mitt. d. Österr. Bodenkundl. Ges., H. 53.** S. 27-34 (Proceeding of International Symposium on Radioecology 1996, Austrain Soil Science Society, Vienna).
- Shawky, S., and M. El-Tahawy. 1999. Distribution pattern of Sr-90 and Cs-137 in the Nile delta and the adjacent regions after Chernobyl accident. **Applied Radiation and Isotopes** 50(2):435-443.
- Shenber, M.A. 2001. Fallout Cs-137 in soils from North Western Libya. **Journal of Radioanalytical and Nuclear Chemistry** 250(1):193-194.
- Shenber, M.A., and Å. Eriksson. 1993a. Sorption behavior of caesium in various soils. **Journal of Environmental Radioactivity** 19:41-51.
- Shenber, M.A., and Å. Eriksson. 1993b. Exchangeability of caesium un various soils. **Science of the Total Environment** 138:271-279.
- Sheppard, M.I., D.E. Elrick, and S.R. Peterson. 1997. Review and performance of four models to assess the fate of radionuclides and heavy metals in surface soil. **Canadian Journal of Soil Science** 77(3):333-344.
- Sheppard, M.I., and D.H. Thibault. 1992. Desorption and extraction of selected heavy metals fro soils. **Soil Science Society of America Journal** 56:415-423.
- Sheppard, S.C. W.G. Evenden, and T.C. Cornwell. 1997. Depuration and uptake kinetics of I, Cs, Mn, Zn and Cd by the earthworm (*Lumbricus terrestris*) in radiotracer-spiked litter. **Environmental Toxicological Chemistry** 16(10):2106-2112.
- Shi, H. P.L. Lui, and J.L. Tain. 1997. Application of nuclear tracers in soil erosion studies. **Bulletin of Soil and Water Conservation** 17:44 (In Chinese)
- Shimada, Y., S. Morisawa, and Y. Inoue. 1996. A numerical model for the analysis and evaluation of global Cs-137 fallout. **Health Physics** 70(2):171-179.
- Shinonaga, T., W. Schimmack, and M.H. Gerzabek. 2005. Vertical migration of ^{60}Co , ^{137}Cs and ^{226}Ra in agricultural soils as observed in lysimeters under crop rotation. **Journal of Environmental Radioactivity** 79(2):93-106.
- Sholkovitz, E.R. 1985. Redox-related geochemistry in lakes: alkali metals, alkaline-earth elements, and ^{137}Cs , pp. 119-142. *In*: W. Strumm (ed.), **Chemical processes in lakes**, Wiley, New York.

- Sholkovitz, E.R., J.K. Cochran, and A.E. Carey. 1983. Laboratory studies of the diagenesis and mobility of $^{239, 240}\text{Pu}$ and ^{137}Cs in nearshore sediments. **Geochimica et Cosmochimica Acta** 47:1369-1379.
- Sholkovitz, E.R., and D.R. Mann. 1984. The pore water Chemistry of $^{239, 240}\text{Pu}$ and ^{137}Cs in sediments of Buzzards Bay, Massachusetts. **Geochimica et Cosmochimica Acta** 48:1107-1114.
- Shukla, B.S. 1997. **Addendum to Sedimentation rate through environmental radioactivity. Part I: ^{210}Pb dating of sediments.** Environmental Research and Publications, Inc., Hamilton, Ontario, Canada. 6pp.
- Shukla, B.S. 2003. **Sedimentation rate through environmental radioactivity. Models and applications.** Environmental Research and Publications, Inc., Hamilton, Ontario, Canada.
- Shukla, B.S. 1996. **Sedimentation rate through environmental radioactivity. Part I: ^{210}Pb dating of sediments.** Environmental Research and Publications, Inc., Hamilton, Ontario, Canada. 22pp.
- Shukla, B.S. 1993. **Watershed, river and lake modeling through environmental radioactivity.** Environmental Research and Publications, Inc., Hamilton, Ontario, Canada. 227pp.
- Shutov, V.N., T.A. Bekyasheva, L.N. Basalaeva, G.Y. Bruk, and I.Y. Pavlov. 1993. Influence of soil properties on cesium-137 and strontium-90 radionuclides uptake by natural grasses. **Pochvovedeniye** 8:67-71. (Russian)
- Shutov, V.N., I.G. Travnikova, G.Y. Bruk, V.Y.; Golikov, M.I. Balonov, B.J. Howard, J. Brown, P. Strand, E.M. Kravtsova, A.P. Gavrilov, O.S. Kravtsova, and A.A. Mubasarov. 2002. Current contamination by Cs-137 and Sr-90 of the inhabited part of the Techa river basin in the Urals. **Journal of Environmental Radioactivity** 61(1):91-109.
- Sibley, T.H., A.L. Sanchez, E.A. Wurtz, and W.R. Schell. 1982. Distribution coefficients for radionuclides in aquatic environments. U.S. Nuclear Reg. Comm., **NUREG/CR-1853.4**, 52 pp.
- Sidorchuk, A. Yu., and V.N. Golosov. 1996. Calibrating of soil erosion models by studies of radioactive atmospheric fall out. **Eurasian Soil Science** 28(10):383-395.
- Sidorchuk, A. Yu., and V.N. Golosov. 1995. Calibrating of soil erosion models by studies of radioactive atmospheric fall out. **Pochvovedenie (ПОЧВОВЕДЕНИЕ)** 7:862-869.(in Russian)

- Siegel, L.S., A.N. Alshawabkeh, C.D. Palmer, and M.A. Hamilton. 2003. Modeling cesium partitioning in the rhizosphere: A focus on the role of root exudates. **Soil & Sediment Contamination** 12(1):47-68.
- Siegel, L.S., A.N. Alshawabkeh, and M.A. Hamilton. 2002. Modeling cesium partitioning in the rhizosphere. **Wetlands and Remediation II Columbus : Battelle Press**. 2002:73-81.
- Sigg, L., M. Strum, and D. Kistler. 1987. Vertical transport of heavy metals by settling particles in Lake Zurich. **Limnology and Oceanography** 32:112-130.
- Siggers, G.B., P.D. Bates, M.G., Anderson, D.E. Walling, and Q. He. 1999. A preliminary investigation of the integration of modelled floodplain hydraulics with estimates of overbank floodplain sedimentation derived from Pb-210 and Cs-137 measurements. **Earth Surface Processes and Landforms** 24(3):211-231.
- Sigurgeirsson, M.A., O. Arnalds, S.E. Palsson, B.J. Howard, and K. Gudnason. 2004. Radiocaesium fallout behaviour in volcanic soils in Iceland. **Journal of Environmental Radioactivity** 79(1):39-53.
- Silant'ev, A.N., and I.G. Shkuratova. 1988. Changes in ^{137}Cs migration parameters in soil. **Soviet Atomic Energy (USA)** 165:687-691.
- Silant'ev, A.N., K.A. Silant'ev, and I.G. Shkuratova. 1998. Determination of radionuclide soil fallouts against the background of previous contaminations. **Atomnaya Energiya** 84(6):551-555. (Russian)
- Silant'ev, K.A., and N.A. Silant'ev. 1997. Analysis of radionuclide contamination of territory using ^{137}Cs spatial distribution in the soil. **Atomic Energia** 82(4):323-325. (In Russian)
- Simm, D.J., and D.E. Walling. 1999. Lateral variability of overbank sedimentation on a Devon flood plain. **Hydrological Science Journal** 43(5):715-732.
- Simm, D.J., D.E. Walling, P.D. Bates, and M.G., Anderson. 1997. The potential application of finite element modelling of flood plain inundation to predict patterns of overbank deposit. **Hydrological Science Journal** 42(6):859-875.
- Simon, S.L., and J.C. Graham. 1998. A comparison of aerial and ground level measurement of ^{137}Cs in the Marshall Islands. **Environmental Monitoring and Assessment** 53(2):363-377.
- Simopoulos, S.E. 1989. Soil sampling and ^{137}Cs analysis of the Chernobyl fallout in Greece. **Applied Radiation and Isotopes** 40(7):607-613.

- Simpson, H.J., R.F. Bopp, B.L. Deck, and R.J. Larsen. 1986. Regional accumulation amounts per unit area of persistent pollutants derived from analysis of recent sediments. **Mem. Soc. Geology Ital.** 27:423-445.
- Simpson, H.J., C.R. Olsen, R. Bopp, R.M. Trier, and S.C. Williams. 1978. Cesium-137 as a tracer for reactive pollutants in estuarine sediments. First American-Soviet Symposium on Chemical Pollution of Marine Environment, **EPA-600/9-78-038**, EPA, Gulf Breeze, FL.
- Simpson, H.J., C.R. Olsen, R.M. Trier, and S.C. Williams. 1976. Man-made radionuclides and sedimentation in the Hudson river estuary. **Estuary Science** 194:179-183.
- Simpson, J.H., and T.P. Rippeth. 1998. Non-conservative nutrient fluxes from budgets for the Irish Sea. **Estuaries and Coastal Shelf Science** 47(6):707-714.
- Simpson, H.J., R.M. Trier, and C.R. Olson. 1980. Transport of plutonium by rivers, pp. 684-690. In: W.C. Hanson (ed.), **Transuranic elements in the environment**. US Department of Energy, Washington, DC.
- Simpson, H.J., S.C. Williams, C.R. Olsen, and D.E. Hammond. 1977. Nutrient and particle matter budgets in urban estuary, pp. 94-103. In: **Estuaries, Geophysics and the environment**, National Academy of Science, Washington, DC.
- Singh, B., and R.J. Gilkes. 1990. Sorption-desorption behavior of caesium in some Western Australian Soils. **Australian Journal of Soil Research** 28:929-946.
- Skagius, K., and I. Neretnieks. 1988. Measurements of cesium and strontium diffusion in biotite gneiss. **Water Resources Research** 24:75-84.
- Slattery, M.C., P.A. Gares, and J.D. Phillips. 2002. Slope-channel linkage and sediment delivery on North Carolina coastal plain cropland. **Earth Surface Processes and Landforms** 27(13):1377-1387.
- Small, I.F., J.S. Rowan, and R.W. Duck. 2003. Long-term sediment yield in Crombie Reservoir catchment, Angus; and its regional significance within the Midland Valley of Scotland. **Hydrological Sciences Journal—Journal des Sciences Hydrologiques** 48(4):619-635.
- Small, S. 1960. Wet and dry deposition of fallout material at Kjeller. **Tellus** 12:308-314.
- Small, I.F., J.S. Rowan, and R.W. Duck. 2003. Long-term sediment yield in Crombie Reservoir catchment, Angus; and its regional significance within the Midland Valley of Scotland. **Hydrological Sciences—Journal—des Sciences Hydrologiques** 48(4):619-636.

- Small, I.F., J.S. Rowan, R.W. Duck, T.D. Dyer, S.W. Franks, and A. Wyatt. 2005. Can reservoir bottom sediments be used in the estimation of long-term catchment sediment budgets?, p. 231-238. In: A.J. Horowitz, and D.E. Walling (eds.). *Sediment Budgets 2*. **International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.
- Smith, C.J., R.D. DeLaune, and W.H. Patrick Jr. 1983. Carbon dioxide emissions and carbon accumulation in coastal wetlands. **Estuaries and Coastal Shelf Science** 17:21-29.
- Smith, C.N., S. Clarke, P. McDonald, J.A. Goshawk, and S.R. Jones. 2000. Reconstructing historical radionuclide concentrations along the east coast of Ireland using a compartmental model. **Science of the Total Environment** 254(1):17-30.
- Smith, C.N., J.A. Goshawk, K. Charles, P. McDonald, K.S. Leonard, and D. McCubbin. 2003. MEAD (part II) - Predictions of radioactivity concentrations in the Irish Sea. **Journal of Environmental Radioactivity** 68(3):193-214.
- Smith, J.N. 2001. Why should we believe ^{210}Pb sediment geochronology? **Journal of Environmental Radioactivity** 55:121-123.
- Smith, J.N., and K.M. Ellis. 1988. Transport mechanism for fallout ^{137}Cs to estuarine sediments. **SM-248**, pp. 119-130, International Atomic Energy Agency, Vienna, Austria.
- Smith, J.N., and K.M. Ellis. 1982. Transport mechanism for Pb-210, Cs-137 and Pu fallout radionuclides through fluvial-marine systems. **Geochimica et Cosmochimica Acta** 46:941-954.
- Smith, J.N., K.M. Ellis, K. Maes, S. Dahle, and D. Matishov. 1995. Sedimentation and mixing rates of radionuclides in Barents Sea sediment off Novaya Zemlya. **Deep Sea Research Part II Topical Studies in Oceanography** 42:1471-1493.
- Smith, J.N., K.M. Ellis, and D.M. Nelson. 1987. Time-dependent modeling of fallout radionuclide transport in drainage basin: significance of "slow" erosional and "fast" hydrological components. **Chemical Geology** 63:157-180.
- Smith, J.N., K.M. Ellis, L. Polyak, G. Ivanov, S.L. Forman, and S.B. Moran. 2000. (PU)-P-239,240 transport into the Arctic Ocean from underwater nuclear tests in Chernaya Bay, Novaya Zemlya. **Continental Shelf Research** 20(3):255-279.
- Smith, J.N., and C.T. Schafer. 1999. Sedimentation, bioturbation, and Hg uptake in the sediments of the estuary and Gulf of St. Lawrence. **Limnology and Oceanography** 44(1):207-219.
- Smith, J.N., and C.T. Schafer. 1987. A 20th-century record of climatologically modulated sediment accumulation rates in a Canadian fjord. **Quaternary Research** 27:232-247.

- Smith, J.N., and A. Walton. 1980. Sediment accumulation rates and geochronologies measured in the Saguenay Fjord using Pb-210 dating method. **Geochimica et Cosmochimica Acta** 44:225-240.
- Smith, J.T., P.G. Appleby, J. Hilton, and N. Richardson. 1997. Inventories and fluxes of ^{210}Pb , ^{137}Cs and ^{241}Am determined from the soils of three small catchments in Cumbria, UK. **Journal of Environmental Radioactivity** 37(2):127-142.
- Smith, J.T., R.T. Clarke, and R.T. Saxen. 2000. Time-dependent behaviour of radiocaesium: a new method to compare the mobility of weapon test and Chernobyl derived fallout. **Journal of Environmental Radioactivity** 49:65-83.
- Smith, J.T., and R.N.J. Comans. 1996. Modelling the diffusive transport and remobilisation of ^{137}Cs in sediments: The effects of sorption kinetics and reversibility. **Geochimica et Cosmochimica Acta** 60(6):995-1004.
- Smith, J.T., R.N.J. Comans, and D.G. Elder. 1999. Radiocaesium removal from European lakes and reservoirs: Key processes determined from 16 Chernobyl-contaminated lakes. **Water Research** 33(18):3762-3774.
- Smith, J.T., and D.G. Elder. 1999. A comparison of models for characterizing the distribution of radionuclides with depth in soils. **European Journal of Soil Science** 50(2):295-307.
- Smith, J.T., S.V. Fesenko, B.J. Howard, A.D. Horrill, N.I. Sanzharova, R.M. Alexakhin, D.G. Elder, and C. Naylor. 1999. Temporal change in fallout Cs-137 in terrestrial and aquatic systems: A whole ecosystem approach. **Environmental Science and Technology** 33(1):49-54.
- Smith, J.T., J. Hilton, and R.N.J. Comans. 1995. Application of two simple models to the transport of ^{137}Cs in an upland organic catchment. **Science of the Total Environment** 168:57-61.
- Smith, J.T., D.C. Howard, S.M. Wright, C. Naylor, A.M. Brookes, J. Hilton, and B.J. Howard. 1998. Use of a satellite derived land cover map to estimate transport of radiocaesium to surface waters. **Science of the Total Environment** 209(1):1-15.
- Smith, J.T., D.R.P. Leonard, J. Hilton, and P.G. Appleby. 1997. Towards a generalised model for the primary and secondary contamination of lakes by Chernobyl - derived caesium-137. **Health Physics** 72:880-892.
- Smith, J.T., S.M. Wright, M.A. Cross, L. Monte, A.V. Kudelsky, R. Saxen, S.M. Vakulovsky, and D.N. Timms. 2004. Global analysis of the riverine transport of Sr-90 and Cs-137. **Environmental Science & Technology** 38(3):850-857.

- Smith, J.Y., and D.G. Elder. 1999. A comparison of models for characterizing the distribution of radionuclides with depth in soils. **European Journal of Soil Science** 50:295-307.
- Smith, L.M., C. Alexander, and A.E. Jennings. 2002. Accumulation in East Greenland fjords and on the continental shelves adjacent to the Denmark strait over the last century based on Pb-210 geochronology. **Arctic** 55(2):109-122.
- Smith, M.L., H.W. Taylor, and H.D. Sharma. 1993. Comparison of the post-Chernobyl Cs-137 contamination of mushrooms from Eastern Europe, Sweden, and North America. **Applied Environmental Microbiology** 59:134-139.
- Smith, P. 1993. Colloid-facilitated transport of radionuclides through fractured media. **Journal of Contaminant Hydrology** 13:143-166.
- Smith, R.A., R.B. Alexander, and M.G. Wolman. 1987. Water-quality trends in the nation's rivers. **Science** 235:1607-1615.
- Smith, S.J., J.R. McHenry, R.G. Menzel, and N.H. Welsh. 1986. Agricultural chemicals and heavy metals in upland soils and valley alluviums of the Little Washita River basin. **Journal of Soil and Water Conservation** 41:333-336.
- Smolders, E., and G. Shaw. 1995. Changes in radiocesium uptake and distribution in wheat during plant development: A solution culture study. **Plant and Soil** 176:1-6.
- Smolders, E., L. Sweeck, J. Buysse, K. Van den Brande, and R. Merckx. 1993. Analysis of the genotypic variation in radiocaesium uptake from soil. **Plant and Soil** 155/156:431-434.
- Smolders, E., K. Van Den Brande, and R. Merckx. 1997. Concentrations of ^{137}Cs and K in soil solution predict the plant availability of ^{137}Cs in soils. **Environmental Science and Technology** 31(12):3432-3438.
- Sobocinski, R.W., T.E. Cerling, and S.J. Morrison. 1990. Sediment transport in a small stream based on ^{137}Cs inventories of the bed load fraction. **Water Resources Research** 26:1177-1187.
- Sobotovich, E.V. 1992. Geochemistry of radionuclides in the region of the Chernobyl NPP, pp. 170-175. *In: Scientific conference on problems of Chernobyl*, Kiev, Ukraine, Dokl. Akad. Naul. UKR. (Russian)
- Sogon S., P. Bonté, M.J. Penven, and T. Muxart. 1998. Utilisation des traceurs radioactifs dans l'approche du cheminement de l'eau et des particules solides dans les sols agricoles drainés. "Milieux poreux et transferts hydriques", **Bulletin du G. F. H. N.** 42:135-139.

- Sogon, S., M.J. Penven, P. Bonte, and T. Muxart. 1999. Estimation of sediment yield and soil loss using suspended sediment load and Cs-137 measurements on agricultural land, Brie Plateau, France. **Hydrobiologia** 410:251-261.
- Soileau, J.M., B.F. Hajek, and J.T. Touchton. 1990. Soil erosion and deposition evidence in a small watershed using fallout cesium-137. **Soil Science Society of America Journal** 54:1712-1719.
- Sokolik, G.A., T.G. Ivanova, S.L. Leinova, S.V. Ovsyannikova, and I.M. Kimlenko. 2001. Migration ability of radionuclides in soil-vegetation cover of Belarus after Chernobyl accident. **Environment International** 26(3):183-187.
- Sokolick, G.A., S.V. Ovsyannikova, S.L. Kilchitskaya, E.E. Eismont, N.V. Zhukovich, I.M. Kimlenko, V.V. Duksina, and S.Y. Rubincick. 1999. Migration of Cs-37, Sr-90, Pu-239, Pu-240 and Am-241 in the chain soil-soil solution-plant. The soil-soil solution link. **Doklady Akademii Nauk Belarusi** 43(2):103-109
- Solecki, J. and S. Chibowski. 2002. Determination of transfer factors for Cs-137 and Sr-90 isotopes in soil-plant system. **Journal of Radioanalytical and Nuclear Chemistry** 252(1):89-93.
- Solomon, S., P.J. Mudie, R. Cranston, T. Hamilton, S.A. Thibaudeau, and E.S. Collins. 2000. Characterisation of marine and lacustrine sediments in a drowned thermokarst embayment, Richards Island, Beaufort Sea, Canada. **International Journal of Earth Sciences** 89(3):503-521.
- Somayajulu, B.L.K., R. Bhushan, A. Sarkar, G.S. Burr, and A.J.T. Jull. 1999. Sediment deposition rates on the continental margins of the eastern Arabian Sea using Pb-210, Cs-137 and C-14. **Science of the Total Environment** 238(Special issue SI):429-439.
- Sommerfield, C.K., and C.A. Nittrouer. 1999. Modern accumulation rates and a sediment budget for the Eel shelf: a flood-dominated depositional environment. **Marine Geology** 154(1-4):227-241.
- Sonesten, L. 2001. Land use influence on Cs-137 levels in perch (*Perca fluviatilis* L.) and roach (*Rutilus rutilus* L.). **Journal of Environmental Radioactivity** 55(2):125-143.
- Sonke, J.E., W.C. Burnett, J.A. Hoogewerff, S.R. van der Laan, J. Vangrosveld, and D.R. Corbett. 2003. Reconstructing 20th century lead pollution and sediment focusing in a peat land pool (Kempen, Belgium), via Pb-210 dating. **Journal of Paleolimnology** 29(1):95-107.
- Sonneveld, B. G. J. S. 2003. Formalizing expert judgements in land degradation assessment: a case study for Ethiopia. **Land Degradation and Development** 14(4):347-361.

- Soszka, G.J. D. Grzybowska, J. Rostek, A. Pietruszewski, T. Wardaszko, A. Kalinowska, and J. Tomczak. 1986. IX Radioecological characteristics of Lake Żarnowieckie. **Polish Ecological Studies** 12:363-381.
- Soto, J., and A. Navas. 2004. A model of ^{137}Cs activity profile for soil erosion studies in uncultivated soils of Mediterranean environments. **Journal of Arid Environments** 59(4):719-730.
- Southard, R.E., and R.C. Graham. 1992. Cesium-137 distribution in a California Pelloxerert: evidence of pedoturbation. **Soil Science Society of America Journal** 56:202-207.
- Spalding, B.P. 1994. Volatilization of cesium-137 from soil with chloride amendments during heating and vitrification. **Environmental Science and Technology** 28:1116-1123.
- Sparovek, G., O.O.S. Bacchi, S.B.L. Ranieri, and D.C. Flannagan. 2001. Performance of ^{137}Cs fallout redistribution, USLE, and WEPP as erosion prediction technology in a complex landscape watershed under sugarcane cultivation, pp. 367-370. In: J.C. Ascough, II and D.C. Flanagan (eds.) **Soil Erosion Research for the 21st Century**, American Society of Agricultural Engineers, St. Joseph, MI.
- Sparovek, G., O.O.S. Bacchi, M. Cooper, J. Filippe, V. Correchel, and C.E.P. Juhasz. 2005. Sediment deposition in riparian ecosystems evaluated by different methods, p. 285-293. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Sparovek, G., O.O.S. Bacchi, S.B.L. Ranieri, E. Schnug, and I.C. de Maria. 2002. Comparison of ^{137}Cs fallout redistribution analysis and conventional erosion-prediction models (WEPP, USLE), p. 302-207. In: **Nuclear techniques in integrated plant nutrient, water and soil management**. Proceedings of an International Symposium held in Vienna, Austria, 16-20 October 2000. International Atomic Energy Agency, Vienna, Austria.
- Sparovek, G., O.O.S. Bacchi, E. Schnug, S,B.L Ranieri, and I.C. De Maria. 2000. Comparison of three water erosion prediction methods (Cs-137, WEPP, USLE) in south-east Brazilian sugarcane production. **Tropenlandwirt** 101(2):107-118.
- Sparovek, G., E. Schnug, O.O.S. Bacchi, S,B.L Ranieri, and I.C. De Maria. 2000. Comparison of ^{137}Cs redistribution analysis and conventional erosion prediction models (WEPP, USLE), pp 7-68, In: **FAO/IAEA International Symposium on Nuclear Techniques in Integrated Plant, Nutrient, Water and Soil Management**, Vienna, Austria.

- Spencer, K.L., A.B. Cundy, and I.W. Croudace. 2003. Heavy metal distribution and early-diagenesis in salt marsh sediments from the Medway Estuary, Kent, UK. **Estuarine Coastal and Shelf Science** 57(1-2):43-54.
- Spezzano, P., S. Bortoluzzi, R. Giacomelli, and L. Massironi. 1994. Seasonal variations of Cs-137 activities in the Dora Baltea River (Northwest Italy) after the Chernobyl accident. **Journal of Environmental Radioactivity** 22:77-88.
- Spezzano P., E. Cerea, I. Massironi, A. Olivetta, S. Bortoluzzi, M. Nocente, and G. Berton. 1998. Long-term behaviour of ¹³⁷Cs in the lacustrine ecosystem of Viverone lake (in Italian). **Report RT/AMB/98/7**, ENEA, Rome, Italy.
- Spezzano, P., and R. Giacomelli. 1990. Radionuclide concentrations in air and their deposition at Saluggia (Northwest Italy) following the Chernobyl nuclear accident. **Journal of Environmental Radioactivity** 12:79-91.
- Spezzano, P., J. Hilton, J.P. Lishman, and T.R. Carrick. 1993. The variability of Chernobyl Cs retention in the water column of lakes in the English Lake District two years and four years after deposition. **Journal of Environmental Radioactivity** 19:213-232.
- Spomer, R.G., J.R. McHenry, and R.F. Piest. 1985. Sediment movement and deposition using cesium-137 tracer. **Transaction of the American Society of Agricultural Engineers** 28:767-772.
- Spurgel, D.G., and G.E. Bartelt. 1978. Erosional removal of fallout plutonium from a large midwestern watershed. **Journal of Environmental Quality** 7:175-177.
- Squire, H.M., and L.J. Middleton. 1966. Behavior of ¹³⁷Cs in soils and pastures - a long term experiment. **Radiation Botany** 6:413-423.
- Sreekumaran, C. K.C. Pillai, and T.R. Folsom. 1968. The concentration of lithium, potassium, rubidium and cesium in some western American rivers and marine sediments. **Geochimica et Cosmochimica Acta** 32:1229-1234.
- Stam, M.H. 1999. The dating of fluvial deposits with heavy metals, Pb-210 Cs-137 in the Geul catchment (The Netherlands). **Physics and Chemistry of the Earth Part B-Hydrology Oceans and Atmosphere** 24(1-2):155-160.
- Stamberg, K., D. Vopalka, P. Benes, and O. Slavik. 1997. A simplified approach to modelling underground migration of radionuclides from contaminated river sediments. **Journal of Contaminant Hydrology** 26(1-4):301-307.

- Standring, W.J.F., D.H., and B. Salbu. 2002. Potential remobilization of Cs-137, Co-60, Tc-99 and Sr-90 from contaminated Mayak sediments river and estuary environments. **Environmental Science & Technology** 36(11):2330-2337.
- Stanners, D.A., and S.R. Aston. 1984. The use of reprocessing effluent radionuclides in the geochronology of recent sediments. **Chemical Geology** 44:19-32.
- Stanners, D.A., and S.R. Aston. 1982. Desorption of Ru-106, Cs-134, Cs-137 and Am-241 from intertidal sediments contaminated by nuclear fuel reprocessing effluents. **Estuaries and Coastal Shelf Science** 14:687-692.
- Stanners, D.A., and S.R. Aston. 1981. An improved method for determining sedimentation rates by use of artificial radionuclides. **Estuaries and Coastal Shelf Science** 13:101-106.
- Stanners, D.A., and S.R. Aston. 1981. ^{134}Cs , ^{137}Cs and ^{106}Ru : ^{137}Cs ratios in intertidal sediments from the Cumbria and Lancashire Coasts, England. **Estuaries and Coastal Shelf Science** 13:409-417.
- Stanners, D.A., and S.R. Aston. 1981c. Factors controlling the interaction of Cs-137 with suspended and deposited sediments in estuarine and coastal environments, pp. 131-141. *In: Impacts of radionuclide releases to the marine environment*, International Atomic Energy Agency, Vienna, Austria.
- Stanton, R.K., A.S. Murray, and J.M. Olley. 1992. Tracing the source of recent sediment using environment magnetism and radionuclides in the karst of the Jenolan Caves, Australia. **International Association of Hydrological Sciences Pub. No. 210**:125-133.
- Staunton, S. 1994. Adsorption of radiocaesium on various soils: Interpretation and consequences of the effects of soil: Solution ratio and solution composition on the distribution coefficient. **European Journal of Soil Science** 45:409-418.
- Staunton, S., and R. Darrah. 1996. Application and limitations of mathematical model in radioecology with particular emphasis on radiocaesium in soil. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 35-42** (Proceeding of International Symposium on Radioecology 1996, Austrain Soil Science Society, Vienna).
- Staunton, S., C. Dumat, and A. Zsolnay. 2002. Possible role of organic matter in radiocaesium adsorption in soils. **Journal of Environmental Radioactivity** 58(2-3, Special issue SI):163-173.
- Staunton, S., and P. Levacic. 1999. Cs adsorption on the clay-sized fraction of various soils: effect of organic matter destruction and charge compensating cation. **Journal of Environmental Radioactivity** 45(2):161-172.

- Staunton, S., and M. Roubaud. 1997. Adsorption of ^{137}Cs on montmorillonite and illite: effect of charge compensating cation, ionic strength, concentration of Cs, K and fulvic acid. **Clays and Clay Minerals** 45(2):251-260.
- Steeffel, C.I., S. Carroll, P.H. Zhao, and S. Roberts. 2003. Cesium migration in Hanford sediment: a multisite cation exchange model based on laboratory transport experiments. **Journal of Contaminant Hydrology** 67(1-4):219-246.
- Steegeen, A., G. Gover, L. Beuselick, and R. Merckx. 1998. Sediment and phosphorus delivery from agricultural catchments in Central Belgium, p. 170-171. In: R.H. Foy and R. Dils (eds.), **Practical and innovative measures for the control of agricultural phosphorus losses in water**, Department of Agriculture for Northern Ireland, Belfast, Northern Ireland.
- Steegeen, A., G. Govers, L. Beuselick, K. Van Oost, T.A. Quine, A. Rombaut. 2000. The use of phosphorus as a tracer in erosion/sedimentation studies. **International Association of Hydrological Sciences Publication No. 263**:59-66.
- Steenbergen, C.L.M., G.W. Berger, H.J. Korthals, and H. Verdouw. 1989. Pigment stratigraphy and trophic status: an evaluation of radionuclide-dated lacustrine sediment. **Geomicrobiology J.** 7:207-222.
- Steiger, J., A.M. Gurnell, P. Ergenzinger, and D. Snelder. 2001. Sedimentation in the riparian zone of an incising river. **Earth Surface Processes and Landforms** 26(1):91-108.
- Steiger, J., A.M. Gurnell, and J.M. Goodson. 2003. Quantifying and characterizing contemporary riparian sedimentation. **River Research and Applications** 19(4):335-352.
- Steinberg, C., E. Hammerle, and J. Meihamm. 1983. Changes in sedimentary fluxes in Lake Walchensee by anthropogenically caused alterations in its catchment area. **Z. Wasser A.B.** 16:48-54.
- Steinberg, C.E.W., A. Hoppe, I. Juttner, B. Bruckmeier, and N. Hertkorn. 2001. Changes of humic substance constituents in Grosser Arbersee during acidification. **Acta Hydrochimica et Hydrobiologica** 29(2-3):78-87.
- Steinnes, E., and D. Njastad. 1993. Use of mosses and lichens for regional mapping of ^{137}Cs fallout from the Chernobyl accident. **Journal of Environmental Radioactivity** 21:65-73.
- Steiner, B., K.W. Hanselmann, and U. Krahenbuhl. 2001. Dating and heavy metal contents of sediment cores of a high-alpine, remote lake: Jorisee (Switzerland). **International Journal of Environmental Analytical Chemistry** 78(2):131-148.

- Stemmer, M., A. Hromatka, H Lettner, and F. Strebl. 2005. Radiocesium storage in soil microbial biomass of undisturbed alpine meadow soils and its relation to ^{137}Cs soil-plant transfer. **Journal of Environmental Radioactivity** 79(2):107-118.
- Stepanets, O.V., A.P. Borisov, A.N. Ligaev, and E.M. Galimov. 2001. Estimation of the sedimentation rate for modern sediments of the Kara Sea: Evidence from radioactive tracers. **Geochemistry International** 39(7):683-691.
- Stephens, J.A., F.W. Whicker, and S.A. Ibrahim. 1998. Sorption of Cs and Sr to profundal sediments of a Savannah River Site reservoir. **Journal of Environmental Radioactivity** 38(3):293-315.
- Stephenson, M., J. Klaverkamp, M. Motycka, C. Baron, and W. Schwartz. 1996. Coring artifacts and contaminant inventories in lakes. **Journal of Paleolimnology** 15:99-106.
- Stewart, W.D.P., T. Preston, H.G. Peterson, and N. Christofi. 1982. Nitrogen cycling in eutrophic freshwaters. **Philosophical Transaction of the Royal Society of London B** 296:491-509.
- Stihler, S.D., D.B. Stone, and J.E. Beget. 1992. Varve counting vs tephrochronology and Cs-137 and Pb-210 dating - A comparative test at Skilok Lake, Alaska. **Geology** 20:1019-1022.
- Stiller, M. 1979. Sedimentation patterns in Lake Kinneret (Tiberias), pp. 273-285. *In: Isotopes in lake studies*, Advisory Group Meeting, 29 Aug. - 2 Sept. 1977, International Atomic Energy Agency, Vienna, Austria.
- Stiller, M., and G. Assaf. 1973. Sedimentation and transport of particles in Lake Kinneret traced by ^{137}Cs . **International Association of Hydrological Sciences Publication No. 109**:383-396.
- Stiller, M., and D.M. Imboden. 1986. ^{210}Pb in Lake Kinneret waters and sediments: residence times and fluxes, pp. 501-511. *In: P.G. Sly, (ed.), Sediment and water interactions*, Springer-Verlag, New York.
- Stiller, M., N.E. Yanaki, and J. Kronfeld. 1985. Comparative isotope study of two short sediment cores from the Dead Sea. **Chemical Geology** 58:107-109.
- Stott, A.P. 1987. Medium-term effects of afforestation on sediment dynamics in a water supply catchment: a mineral magnetic interpretation of reservoir deposits in the Macclesfield Forest, N.W. England. **Earth Surface Processes and Landforms** 12:619-630.
- Stone, P.M. and D.E. Walling. 1997. Particle size selectivity considerations in sediment budget investigations. **Water, Soil and Air Pollution** 99:63-70.

- Stow, C.A., R.D. DeLaune, and W.H. Patrick Jr. 1985. Nutrient fluxes in a eutrophic coastal Louisiana freshwater lake. **Environmental Management** 9:243-252.
- Stradomskiy. 1970. Study of the form of long-lived radionuclides found in Don River water. **Soviet Hydrology** 6:567-569.
- Strandberg, M. 2004. Long-term trends in the uptake of radiocesium in *Rozites caperatus*. **Science of the Total Environment** 327(1/3):315-321.
- Strandberg, M. 1997. Distribution of ^{137}Cs in a low arctic ecosystem in west Greenland. **Arctic** 50(3):216-223.
- Strandberg, M., and H. Knudsen. 1994. Mushroom spores and Cs-137 in faeces of the roe deer. **Journal of Environmental Radioactivity** 23:189-203.
- Strebl, F., M.H. Gerzabek, P. Bossew, and K. Kienzl. 1999. Distribution of radiocaesium in an Austrian forest stand. **Science of the Total Environment** 226(1):75-83.
- Strebl, F., M. Gerzabek, and V. Karg. 1996. Time dependent vertical distribution of ^{137}Cs in an acid forest soil. **Mitt. d. Österr. Bodenkundl. Ges., H. 53. S. 77-84** (Proceeding of International Symposium on Radioecology 1996, Austrian Soil Science Society, Vienna).
- Strebl, F., M. Gerzabek, V. Karg, and F. Tataruck. 1996. ^{137}Cs -migration in soils and its transfer to roe deer in an Austrian forest stand. **The Science of the Total Environment** 181:237-247.
- Strebl, F., W. Ringer, and M.H. Gerzabek. 2002. Radiocaesium contamination of meadow vegetation - time-dependent variability and influence of soil characteristics at grassland sites in Austria. **Journal of Environmental Radioactivity** 58(2-3, Special issue SI 2002):143-161.
- Strezov, A. T. Stoilova, A. Jordanova, M. Ayranov, and N. Petkov. 1999. Determination of caesium and natural radionuclide concentrations in sediments, algae and water on the Bulgarian Black Sea coast. **Water Science Technology** 39(8):21-26.
- Strömquist, L., C. Jonasson, and C. Robinson. 1989. Testing ^{137}Cs as an indicator of slope process activity in periglacial environments. **Carpatho-Balcania** 23:93-104.
- Su, C.C. and C.A. Huh. 2002. Pb-210, Cs-137 and Pu-231, Pu-240 in East China Sea sediments: sources, pathways and budgets of sediments and radionuclides. **Marine Geology** 183(1-4):163-178.

- Su, C.-C., C.-A. Huh, and F.-J. Lin. 2003. Factors controlling atmospheric fluxes of ^7Be and ^{210}Pb in northern Taiwan. **Geophysical Research Letters** 30(19):2018, doi:10.1029/2003GL018221.
- Suckow, A., U. Morgenstern, and H.R. Kudrass. 2001. Absolute dating of recent sediments in the cyclone-influenced shelf area off Bangladesh: Comparison of gamma spectrometric (Cs-137, Pb-201, Ra-228), radiocarbon, and Si-32 ages. **Radiocarbon** 43(2B, Pt. 2):917-927.
- Sugai, S.F. 1990. Transport and sediment accumulation of ^{210}Pb and ^{137}Cs in two southeast Alaskan fjords. **Estuaries** 13:380-392.
- Sugai, S.F., M.J. Alperin, and W.S. Reeburgh. 1994. Episodic deposition and ^{137}Cs immobility in Skan Bay sediments: A 10 year ^{210}Pb and ^{137}Cs time series. **Marine Geology** 116:351-372.
- Sukhorukov, F.V., V.M. Gavishin, I.N. Malikova, S.I. Kovalev, Y.I. Malikov, and P.A. Romashkin. 2000. Cesium-137 in the environment of the Altay Region (Russia). **Water Air Soil Pollution** 118(3/4):395-406.
- Summer, W., and D.E. Walling (eds.). 2002. Modelling erosion, sediment transport and sediment yield. A contribution to International Hydrological Programme IHP-V Projects 2.1 and 6.2 IHP-VI. **UNESCO Technical Documents in Hydrology . No. 60**, 263pp. UNESCO, Paris.
- Sun, L., Z. Xie, J. Zhao, and L. Xiang. 2001. ^{210}Pb , ^{137}Cs Dating of lake sediments from Ardley Island (Maritime Antarctic) and their environmental implications. **Journal of Lake Sciences** 13(1):96-99.
- Sun, T., K. Seff, N.H. Heo, and V.P. Petranovskii. 1993. A cationic cesium continuum in Zeolite-X. **Science** 259:495-497.
- Sundblad, B., U. Bergström, and S. Evans. 1991. Longterm transfer of fallout nuclides from the terrestrial to aquatic environment, pp. 207-238. *In*: L. Moberg (ed.), **The Chernobyl fallout in Sweden**, Swedish Radiation Protection Institute, Stockholm.
- Sundblad, B., and L. Mathiasson. 1994. The turnover of Cesium-137 within a forest ecosystem described by a compartment modelling approach - Gidea study site, Sweden. **Science of the Total Environment** 157:139-146.
- Suominen, K.P., T. Jaakkola, E. Elomaa, R., Hakulinen, and M. Salkinoja-Salonen. 1997. Sediment accumulation of organic halogens in pristine forest lakes. **Environmental Science Pollution Research International** 4(1):21-30.

- Suplinska, M.M. 2002. Vertical distribution of Cs-137, Pb-210, Ra-226 and Pu-239, Pu-240 in bottom sediments from the Southern Baltic Sea in the years 1998-2000. **Nukleonika** 47(2):45-52.
- Sutherland, R.A. 1998. Potential for reference site resampling in estimating sediment redistribution and assessing landscape stability by the caesium-137 method. **Hydrological Processes** 12(7):995-1007.
- Sutherland, R.A. 1996. Caesium-137 soil sampling and inventory variability in reference samples; literature survey. **Hydrological Processes** 10:34-54.
- Sutherland, R.A. 1994. Spatial variability of ¹³⁷Cs and the influence of sampling on estimates of sediment redistribution. **Catena** 21:57-71.
- Sutherland, R.A. 1992. Caesium-137 estimates of erosion in agricultural areas. **Hydrological Processes** 6:215-225.
- Sutherland, R.A. 1991a. Examination of caesium-137 areal activities in control (uneroded) locations. **Soil Technology** 4:33-50.
- Sutherland, R.A. 1991b. Caesium-137 and sediment budgeting within a partiality closed drainage basin. **Zeitschrift für Geomorphol.** 35:47-63.
- Sutherland, R.A. 1991c. Selective erosion and sediment source identification, Baringo, Kenya. **Zeitschrift für Geomorphol.** 35:293-304.
- Sutherland, R.A. 1989. Quantification of accelerated soil erosion using the environmental tracer caesium-137. **Land Degradation and Rehabilitation** 1:199-208.
- Sutherland, R.A., and R.B. Bryan. 1991. Sediment budgeting - a case study in Katioren drainage basin, Kenya. **Earth Surface Processes and Landforms.** 16:383-398.
- Sutherland, R.A., and R.B. Bryan. 1988. Estimation of colluvial reservoir life from sediment budgeting, Katioren experimental basin, Kenya. **International Association of Hydrological Sciences Publication no. 174**:549-560.
- Sutherland, R.A., and E. de Jong. 1990a. Estimation of sediment redistribution within agricultural fields using caesium-137, Crystal Springs, Saskatchewan, Canada. **Applied Geography** 10:205-221.
- Sutherland, R.A., and E. de Jong. 1990b. Quantification of soil redistribution using caesium-137, Outlook, Saskatchewan, Canada, pp. 177-193. *In*: R.B. Bryan (ed.), **Soil erosion - experiments and models. Catena Supplement** 17.

- Sutherland, R.A., and E. de Jong. 1990c. Statistical analysis of gamma emitting radionuclide concentrations for three fields, Southern Saskatchewan, Canada. **Health Physics** 58:417-428.
- Sutherland, R.A., T. Kowalchuk, and E. de Jong. 1991. Cesium-137 estimates of sediment redistribution by wind. **Soil Science** 151:387-396.
- Suzuki, E. 1993. ^{207}Bi and ^{137}Cs in nearshore marine sediments. I. Distribution of ^{207}Bi and ^{137}Cs in coastal marine sediments collected from the Japan Sea. **Radioisotopes** 42:511-516.
- Svoboda, J., and H.W. Taylor. 1979. Persistence of cesium-137 in Arctic lichens, *Dryas integrifolia*, and lake sediment. **Arctic and Alpine Research** 11:95-108.
- Swales, A., R.B. Williamson, L.F. Van Dam, M.J. Stroud, and M.S. McGlone. 2002. Reconstruction of urban stormwater contamination of an estuary using catchment history and sediment profile dating. **Estuaries** 25(1):43-56.
- Swan, D.S., M.S. Baxter, I.G. McKinley, and W. Jack. 1982. Radiocesium and ^{210}Pb in Clyde Sea Loch sediment. **Estuaries and Coastal Shelf Science** 15:515-536.
- Sweeck, L., J. Wauters, E. Valcke, and A. Cremers. 1990. The sensitivity of upland soils to radiocesium contamination (The specific interception potential of soils for radiocaesium), pp. 249-258. *In*: G. Desment, P. Nassimbeni, and M. Belli (eds.), **Transfer of radionuclides in natural and semi-natural environments**, Proceedings of a CEC workshop, Udine, Italy.
- Sweet, R.J., A.P. Nicholas, D.E. Walling, and X. Fang. 2003. Morphological controls on medium-term sedimentation rates on British lowland river floodplains. **Hydrobiologia** 494(1-3):177-183.
- Swiechowicz, J. 2002. Linkage of slope wash and sediment and solute export from a foothill catchment in the Carpathian foothills of South Poland. **Earth Surface Processes and Landforms** 27(13):1389-1413.
- Swiechowicz, J. 2002. The influence of plant cover and land use on slope-channel decoupling in a foothill catchment: A case study from the Carpathian Foothills, southern Poland. **Earth Surface Processes and Landforms** 27(5):463-479.
- Syversen, N, L. Oygarden, and B. Salbu. 2001. Cesium-134 as a tracer to study particle transport processes within a small catchment with a buffer zone. **Journal of Environmental Quality** 30(5):1771-1783.
- Szefer, P., K. Szefer, G.P. Glasby, J. Pempkowiak, and R. Kaliszan. 1966. Heavy-metal pollution in surficial sediments from the Southern Baltic sea off Poland. **Journal of**

Environmental Science Health Part A Environmental Science and Engineering and Toxic and Hazardous Substance Control 31(10):2723-2754.

- Szerbin, P., E. Koblinger-Bokori, L. Koblinger, I. Vegvari, and A. Ugron. 1999. Caesium-137 migration in Hungarian soils. **Science of the Total Environment** 227(2-3):215-227.
- Takada, J. and M. Yamamoto. 2002. Radiological status of Rongelap Island in 1999. **Journal of Radioanalytical and Nuclear Chemistry** 252(2):261-266.
- Takenaka, C., Y. Onda, and Y. Hamajima. 1998. Distribution of cesium-137 in Japanese forest soils: Correlation with the contents of organic carbon. **Science of the Total Environment** 222:193-199.
- Talibudeen, O. 1964. Natural radioactivity in soils. **Soils and Fertilizer** 27:347-359.
- Tamura, T. 1964. Consequences of activity release: selective sorption reactions of cesium with soil minerals. **Nuclear Safety** 5:262-268.
- Tamura, T. 1964. Reaction of cesium-137 and strontium-90 with soil minerals and sesquioxides, pp. 465-478. *In*: **8th. International Congress of Soil Science**, Bucharest, Romania.
- Tamura, T. and D.G. Jacobs. 1960. Structural implications in cesium sorption. **Health Physics** 2:391-398.
- Tanaka, T. and T. Yamamoto. 1991. Influence of drying period on migration behaviour of radionuclides in aerated soil layers. **Journal of Nuclear Science and Technology** 28(3):239-247.
- Tanbay, A.U. and G. Yener. 2001. Accumulation rates and sediment deposition in the Gokova Bay in Aegean Sea Turkish Coast. **Applied Radiation and Isotopes** 55(4):581-588.
- Tang, X.Y., H. Yang, M.Y. Do, Q.G. Zhao, and R.Y. Li. 2003. Soil redistribution investigations by combined use of soil Cs-137 and selected chemical properties. **Soil Science and Plant Nutrition** 49(4):557-566.
- Tang, X.Y., H. Yang, Q.G. Zhao, R.Y. Li, and M.Y. Du. 2002. Cs-137 depth distribution in Haplic-Udic ferrosols of Southern China and its implication for soil erosion. **Soil Science** 167(2):147-163.
- Tarariko, O.G., V.A. Vergunov, and V.M. Zaplatinskii. 1996. Redistribution of caesium-137 in agricultural landscapes of the Northern forest steppe with reference to terracing, trenching and contour ridging associated with erosion control. **Visnik Agrarnoi Nauki** 4:10-15. (Ukrainian)

- Tayasu, I., T. Nakamura, H. Oda, F. Hyodo, Y. Takematsu, and T. Abe. 2002. Termite ecology in a dry evergreen forest in Thailand in terms of stable ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) and radio (^{14}C , ^{137}Cs and ^{210}Pb) isotopes. **Ecological Research** 17(2):195-206.
- Tarasjuk, S.V., A.A. Shmigel'skij, I.D. Shmigel'skaya, and V.A. Dovnar. 2002. Vertical migration of radionuclides in profile of arable and fallow land. **Pochvovedenie i Agrokhimiya** 32:27-34, 305-306, 320. (In Russian).
- Talerko, N. 2005. Mesoscale modelling of radioactive contamination formation in Ukraine caused by the Chernobyl accident. **Journal of Environmental Radioactivity** 78(3):311-329.
- Taylor, S.E., G.F. Birch. and F. Links. 2004. Historical catchment changes and temporal impact on sediment of the receiving basin, Port Jackson, New South Wales. **Australian Journal of Earth Sciences** 51(2):233-246.
- Taylor, H.W., J. Svoboda, G.H.R. Henry, and R.W. Wein. 1988. Post-Chernobyl ^{134}Cs and ^{137}Cs levels at some localities in northern Canada. **Arctic** 41:293-296.
- Tegen, I., and H. Doerr. 1996. Mobilization of cesium in organic rich soils: Correlation with production of dissolved organic carbon. **Water Air Soil Pollution** 88:133-144.
- Teksoz, G.V. Yetis, G. Tuncel, and T.I. Balkas. 1991. Pollution chronologies of Golden Horn sediments. **Marine Pollution Bulletin** 22:447-451.
- Telfair, D., and J. Luetzelschwab. 1962. Penetration of fallout fission products into Indiana soil. **Science** 138:829-830.
- Tenberg, A., M. Da Veiga, S.C.F. Dechen, and M.A. Stocking. 1998. Modelling the impact of erosion on soil productivity: A comparative evaluation of approaches on data from southern Brazil. **Expl. Agriculture** 34:55-71.
- Tenbrinke, W.B.M., P.G.E.F. Augustinus, and G.W. Berger. 1995. Fine-grained sediment deposition on mussel beds in the Oosterschelde (the Netherlands), determined from echosoundings, radio-isotopes and biodeposition field experiments. **Estuaries and Coastal Shelf Science** 40:195-217.
- Terry, J.P., S. Garimella, and R.A. Kostaschuk. 2002. Rates of floodplain accretion in a tropical island river system impacted by cyclones and large floods. **Geomorphology** 42(3-4):171-182.
- Testa, C., D. Desideri, F. Guerra, M.A. Meli, C. Roselli, and S. Degetto. 1999. Concentration and speciation of plutonium, americium, uranium, thorium, potassium and ^{137}Cs in a

- Venice canal sediment sample. **Czechoslovakian Journal of Physics** 49(2, Suppl. 1):649-656.
- Theocharopoulos, S.P., H. Florou, P. Kritidis, D. Belis, F. Tsouloucha, M. Christou, P. Kouloumbis, and T. Nikolaou. 2000. Use of ^{137}Cs isotopic technique in soil erosion studies in Central Greece. **Acta Geologica Hispanica** 35(3-4):301-310.
- Theocharopoulos, S.P., H. Florou, D.E. Walling, P. Kouloumbis, M. Christou, P. Tountas, and T. Nikolaou. 2003. Soil erosion and deposition rates in a cultivated catchment area in central Greece, estimated using the ^{137}Cs technique. **Soil and Tillage Research** 69(1-2):153-162.
- Thiry, Y., N. Kruyts, and B. Delvaux. 2000. Respective horizon contribution of cesium-137 soil-to-plant transfer: A pot experiment approach. **Journal of Environmental Quality** 29(4):1194-1199.
- Thiry, Y., and C. Myttenaere. 1993. Behavior of radiocaesium in forest multilayered soils. **Journal Environmental Radioactivity** 18:247-257.
- Thiry, Y., M. Vanhouche, P. Van Der Vaeren, S. de Brouwer, and C. Myttenaere. 1994. Determination of the physio-chemical parameters which influence the Cs availability in forest soils. **Science of the Total Environment** 157:267-273.
- Thomas, M., D. Petit, and L. Lamberts. 1984. Pond sediment as historical record of heavy metals fallout. **Water Air Soil Pollution** 23:51-59.
- Thomson, J., L. Brown, S. Nixon, G.T. Cook, and A.B. MacKenzie. 2000. Bioturbation and Holocene sediment accumulation fluxes in the north-east Atlantic Ocean (Benthic Boundary Layer experiment sites). **Marine Geology** 169(1-2):21-39.
- Thomson, J., F.M. Dyer, and I.W. Croudace. 2002. Records of radionuclide deposition in two salt marshes in the United Kingdom with contrasting redox and accumulation conditions. **Geochimica et Cosmochimica Acta** 66(6):1011-1023.
- Thorbjarnarson, K.W., C.A. Nittrouer, and D.J. DeMaster. 1986. Accumulation of modern sediment in Quinault Submarine Canyon. **Marine Geology** 71:107-124.
- Thorndycraft, V.R., G. Benito, D.E. Walling, A. Sopeña, Y. Sánchez-Moya, M. Rico and A. Casas. 2005. Caesium-137 dating applied to slackwater flood deposits of the Llobregat River, NE Spain. **Catena** 59(3):305-318.
- Tikhomirov, F.A., A.L. Klyashtorin, and A.I. Shcheglov. 1992. Radionuclides in vertical soil runoff in forest near the Chernobyl nuclear power station. **Eurasian Soil Science** 24:42-49.

- Timms, D.N., J.T. Smith, M.A. Cross, A.V. Kudelsky, G. Horton, and R. Mortlock. 2004. A new method to account for the depth distribution of Cs-137 in soils in the calculation of external radiation dose-rate. **Journal of Environmental Radioactivity** 72(3):323-334.
- Tipping, E. 1996. Hydrochemical modelling of the retention and transport of metallic radionuclides in the soils of an upland catchment. **Environmental Pollution** 94(2):105-116.
- Toal, M.E., D. Copplestone, M.S. Johnson, D. Jackson, and S.R. Jones. 2002. Quantifying Cs-137 aggregated transfer coefficients in a semi-natural woodland ecosystem adjacent to a nuclear reprocessing facility. **Journal of Environmental Radioactivity** 63(1):85-103.
- Tobler, L., S. Bajo, and A. Wytenbach. 1988. Deposition of $^{134,137}\text{Cs}$ from Chernobyl fallout on Norway spruce and forest soil and its incorporation into spruce twigs. **Journal of Environmental Radioactivity** 6:225-245.
- Tomlin, A.D., D. McCabe, and R. Protz. 1992. Species composition and seasonal variation of earthworms and their effect on soil properties in southern Ontario, Canada. **Soil Biology and Biochemistry** 24:1451-1457.
- Toonen, K., V. Ilmavirta, P. Uimonen-Simola, H. Hartikainen, and J. Suksi. 1994. Eutrophication history of a small, pelotrophic lake Rusutjarvi, southern Finland. **Aqua Fennica** 24:141-162.
- Topcuoglu, S., H.A. Ergul, A. Baysal, E. Olmez, and D. Kut. 2003. Determination of radionuclide and heavy metal concentrations in biota and sediment samples from pazar and Rize stations in the eastern Black Sea. **Fresenius Environmental Bulletin** 12(7):695-699.
- Topcuoglu, S., N. Gungor, and C. Kirbasoglu. 2002. Distribution coefficients (K-d) and desorption rates of Cs-137 and Am-241 in Black Sea sediments. **Chemosphere** 49(10):1367-1373.
- Topcuoglu, S., D. Kut, N. Esen, N. Gungor, E. Olmez, and C. Kirbasoglu. 2001. Cs-137 in biota and sediment samples from Turkish coast of the Black Sea, 1997-1998. **Journal of Radioanalytical and Nuclear Chemistry** 250(2):381-384.
- Torgersen, T., A.R. Chivas, and A. Chapman. 1983. Chemical and isotopic characterization and sedimentation rates in Princess Charlotte Bay, Queensland. **Journal of Australian Geology Geophysics** 8:191-200.

- Torgersen, T., and M.E. Longmore. 1984. ^{137}Cs diffusion in the highly organic sediment of Hidden Lake, Fraser Island, Queensland. **Australian Journal of Marine Freshwater Research** 35:537-548.
- Torri, A. and L. Borselli. 2002. Clod movement and tillage tool characteristics for modeling tillage erosion. **Journal of Soil and Water Conservation** 57(1):24-28.
- Toscano-Jimenez, M., and R. Garcia-Tenorio. 2004. A three-dimensional model for the dispersion of radioactive substances in marine ecosystems. Application to the Baltic Sea after the Chernobyl disaster. **Ocean Engineering** 31(8-9):999-1018.
- Toso, J.P. and R.H. Velasco. 2001. Describing the observed vertical transport of radiocesium in specific soils with three time-dependent models. **Journal of Environmental Radioactivity** 53(2):133-144.
- Touzani, A. and P. Giresse. 2002. The Rhone River Prodelta: Short-term (10(0)-10(3) year) sedimentation patterns and human impact. **Journal of Coastal Research** 18(1):102-117.
- Tracy, B.L., and F.A. Prantl. 1983. 25 years of fission product input to Lakes Superior and Huron. **Water Air Soil Pollution** 19:15-27.
- Trapeznikov, A.V., P.I. Yushkov, V.N. Nikolkin, V.N. Trapeznikova, M.Y. Chebotina, and A.A. Ekin. 2003. Radionuclides in the ecosystem of Lake Tygish in the zone of the Eastern Ural Radioactive Trace. **Russian Journal of Ecology** 34(3):166-174.
- Trzcinka, B.W., R.J. Loughran, and B.L. Campbell. 1993. The geomorphology of a field tunnel system: a case study from Australia. **Zeitschrift fur Geomorphologie** 27:237-247.
- Tsukada, H., H. Hasegawa, S. Hisamatsu, and S. Yamasaki. 2002. Transfer of Cs-137 and stable Cs from paddy soil to polished rice in Aomori, Japan. **Journal of Environmental Radioactivity** 59(3):351-363.
- Tsvetnova, O.B., and A.I. Shcheglov. 1996. The accumulation of ^{137}Cs by higher fungi and their role in biogeochemical migration of nuclides in forest ecosystems. **Moscow University Soil Science Bulletin** 51(4):40-48 (translated from **Vestnik Moskovskogo Universiteta. Pochvovedenie** (1996) 51(4):59-67 (Ru))
- Tsybul'ka, N.N., A.F. Chernysh, L.A. Tishuk, and I.I. Zhukova. 2004. Horizontal migration of ^{137}Cs with water erosion of soils. **Radioekologiya** 44(4):473-477. (In Russian)
- Tuccimei P., M.C. Delitala, A. Taddeucci, R. Salzano, and M. Soligo. 2001. Lead contamination in soils and sediments from Villa Pamphilj (Rome, Italy). **Proceedings of 10th Water-Rock Interaction International**, Villasimius (CA) - June 10-15, 2001, Italy.

- Turnage, K.M., S.Y. Lee, J.E. Foss, K.H. Kim, and I.L. Larsen. 1997. Comparison of soil erosion and deposition rates using radiocesium, RUSLE, and buried soils in dolines in East Tennessee. **Environmental Geology** 29(1-2):1-10.
- Turner, A., G.E. Millward, and A.O. Tyler. 1994. The distribution and chemical composition of particles in a macrotidal estuary. **Estuaries Shelf Science** 38:1-17.
- Turner, J. 2000. Report of the Advisory Group Meeting on "Sediment tracing (fingerprinting) by nuclear techniques and their application to the planning and design of erosion and sedimentation remediation strategies and the assessment of their effectiveness with emphasis on dam stability". **IAEA Report AG-1090**, Vienna, Austria.
- Turner, L.J., and L.D. Delorme. 1996. Assessment of Pb-210 data from Canadian lakes using the CIC and CRS. **Environmental Geology** 28(2):78-87.
- Turner, M., M. Rudin, J. Cizdziel, and V. Hodge. 2003. Excess plutonium in soil near the Nevada Test Site, USA. **Environmental Pollution** 125(2):193-203.
- Turner, R.R., and S.E. Lindberg. 1978. Behavior and transport of mercury in river-reservoir systems downstream of inactive chloralkali plant. **Environmental Science and Technology** 12:918-923.
- Twining, J.R., T.E. Payne, and T. Itakura. 2004. Soil-water distribution coefficients and plant transfer factors for Cs-134, Sr-85 and Zn-65 under field conditions in tropical Australia. **Journal of Environmental Radioactivity** 71(1):71-87.
- Twining J.R., M. Zaw, R. Russell, and K. Wilde. 2004. Seasonal changes of redox potential and microbial activity in two agricultural soils of tropical Australia: some implications for soil-to-plant transfer of radionuclides. **Journal of Environmental Radioactivity** 76(1-2):265-272.
- Twiss, M.R., and P.G.C. Campbell. 1998. Scavenging of Cs-137, Cd-109, Zn-65, and Gd-153 by plankton of the microbial food web in pelagic Lake Erie surface waters. **Journal of Great Lakes Research** 24(4):776-790.
- Tyler, A.N. 2004. High accuracy in situ radiometric mapping. **Journal of Environmental Radioactivity** 72(1-2):195-202.
- Tyler, A.N. 1999. Monitoring anthropogenic radioactivity in salt marsh environments through in situ gamma-ray spectrometry. **Journal of Environmental Radioactivity** 45(3):235-252.
- Tyler, A.N., S. Carter, D.A. Davidson, D.J. Long and R. Tipping. 2001. The extent and significance of bioturbation on Cs-137 distributions in upland soils. **Catena** 43(2):81-99.

- Tyler, A.N., D.A. Davidson, and I.C. Grieve. 2001. In situ radiometric mapping of soil erosion and field-moist bulk density on cultivated fields. **Soil Use and Management** 17(2):88-96.
- Tyler, A.N., and K.V. Heal. 2000. Predicting areas of Cs-137 loss and accumulation in upland catchments. **Water Air Soil Pollution** 121(1-4):271-288.
- Tyler, A.N., D.C.W. Sanderson, and E.M. Scott. 1996a. Estimating and accounting for ^{137}Cs source burial through in-situ gamma spectrometry in salt marsh environments. **Journal of Environmental Radioactivity** 33(3):195-212.
- Tyler, A.N., D.C.W. Sanderson, E.M. Scott, and J.D. Allyson. 1996b. Accounting for spatial variability and fields of view in environmental gamma ray spectrometry. **Journal of Environmental Radioactivity** 33(3):213-235
- Tyler, G. 2004. Ionic charge, radius, and potential control root/soil concentration ratios of fifty cationic elements in the organic horizon of a beech (*Fagus sylvatica*) forest podzol. **Science of the Total Environment** 329(1-3):231-239.
- Uchida, T., T. Mizuayma, A. Kimoto, Y. Asano, and L. Changhua. 2002. The limitation of using Cesium-137 for investigating soil erosion in devastated hills in southeastern China. **12th ISCO Conference**, May 26-31, 2002. Beijing, China, Volume 4, pp. 21-26.
- Ueda, S., H. Kawabata, H. Hasegawa, S. Naoyuki, and K. Kondo. 1998. Horizontal distribution profiles of ^{238}U , ^{137}Cs and stable elements in the bottom sediments of the brackish Lake Obuchi in Aomori Prefecture. **Japanese Journal of Limnology** 59(2):159-173. (Japanese)
- Ueda, S., Y. Ohtsuka, and K. Kondo. 2004. Inventories of Pu239+240, Cs-137, and excess Pb-210 in sediment cores from brackish Lake Obuchi, Rokkasho Village, Japan. **Journal of Radioanalytical and Nuclear Chemistry** 261(2):277-282.
- Ugur, A., J.C. Miquel, S.W. Fowler, and P. Appleby. 2003. Radiometric dating of sediment cores from a hydrothermal vent zone off Milos Island in the Aegean Sea. **Science of the Total Environment** 307(1-3):203-214.
- Ugur, A., M.M. Saç, G. Yener, Ü. Altinba, Y. Kurucu, M. Bolca, and B. Özden. 2004. Vertical distribution of the natural and artificial radionuclides in various soil profiles to investigate soil erosion. **Journal of Radioanalytical and Nuclear Chemistry** 259(2):265-270.
- Ugur, A. and G. Yener. 2002. Plutonium isotopes, Am-241 and Cs-137 activity concentrations in marine sediments of Gokova Bay, Aegean Turkish Coast. **Journal of Radioanalytical and Nuclear Chemistry** 252(1):47-51.

- Ulsh, B., S. Rademacher, and F.W. Whicker. 2000. Variations of Cs-137 depositions and soil concentrations between alpine and montane soils in northern Colorado. **Journal of Environmental Radioactivity** 47(1):57-70.
- UNESCO. 1993. **Hydrological considerations in relation to nuclear power plants**, Proceeding of an International Workshop, UNESCO, Paris.
- Uusitalo, R., E. Turtola, T. Kauppila, and T. Lilja. 2001. Particulate phosphorus and sediment in surface runoff and drainflow from clayey soils. **Journal of Environmental Quality** 30(2):589-595.
- Uyttenhove, J., S. Pomme, B. Waeyenberge, F. van Hardeman, J. Buysse, J.-P. Culot. 1997. Survey of the ^{137}Cs contamination in Belgium by in-situ gamma spectrometry, a decade after the Chernobyl accident. **Health Physics** 73(4):644-646.
- Vaalgamaa, S. and A. Korhola. 2004. Searching for order in chaos: a sediment stratigraphical study of a multiple-impacted bay of the Baltic Sea. **Estuarine Coastal and Shelf Science** 59(2):319-332.
- Vaca, F., G. Manjon, and M. Garcia-Leon. 2001. The presence of some artificial and natural radionuclides in a Eucalyptus forest in the south of Spain. **Journal of Environmental Radioactivity** 56(3):309-325.
- Vaithyanathan, P., C.J. Richardson, R.G. Kavanaugh, C.B. Craft, and T. Barkay. 1996. Relationships of eutrophication to the distribution of mercury and to the potential for methylmercury production in the peat soils of the Everglades. **Environmental Science and Technology** 30(8):2591-2597.
- Vakulovski, S.M., Y.V. Krasnopevtsev, A.I. Nikitin, and V.B. Chumicev. 1982. Distribution of ^{137}Cs and ^{90}Sr between the water and bottom sediments in the Black Sea USSR in 1977. **Okeanologiya** 22:966-969. (Russian)
- Vakulovski, S.M., A.I. Nikitin, L.A. Bovun, V.B. Chumicev, Ya.I/ Gaziev, L.E. Nazarov, and I.I. Kryshev. 1996. Russian water objects contaminated by caesium-137 and strontium-90 in the zone exposed to the effect of release from the CNPP accident. **Russian Meteorology and Hydrology** 4:12-18.
- Vakulovski, S.M., A.I. Nikitin, and V.B. Chumicev. 1983. ^{137}Cs and ^{90}Sr in bottom sediments of the Baltic Sea. **Okeanologiya** 23:984-989. (Russian)
- Vakulovski, S.M., A.I. Nikitin, V.B. Chumichev, I.Y. Katrich, O.A. Voitsekhovich, V.I. Medinets, V.V. Pisarev, L.A. Bovkum, and E.S. Khersonsky. 1994. Cesium-137 and strontium-90 contamination of water bodies in the areas affected by releases from the

- Chernobyl Nuclear Power Plant accident - An overview. **Journal of Environmental Radioactivity** 23:103-122.
- Valcke, E., and A. Cremers. 1994. Sorption-desorption dynamics of radiocesium in organic-matter soils. **Science of the Total Environment** 157:275-283.
- Valero-Garces, B.L., A. Navas, J. Machin, and D. Walling. 1999. Sediment sources and siltation in mountain reservoirs: a case study from the Central Spanish Pyrenees. **Geomorphology** 28(1-2):23-41
- Valette-Silver, N., M.J. Hameedi, D.W. Efurud, A. Robertson. 1999. Status of the contamination in sediments and biota from the western Beaufort Sea (Alaska). **Marine Pollution Bulletin** 38(8):702-722.
- Vallius, H. 1999. Heavy metal deposition and variation in sedimentation rate within a sedimentary basin in central Gulf of Finland. **Chemosphere** 38(9):1959-1972.
- Vallius, H., and H. Kunzendorf. 2001. Sediment surface geochemistry of three baltic sea deep basins. **AMBIO: A Journal of the Human Environment** 30(3):135-141.
- Vandenhove, H., C. Bacquoy, M. Van Hees, N. Lewyckyj, and C. Vandecasteele. 1998. Will the application of ammonium-ferric-hexacyano-ferrate enhance the vertical migration of radiocaesium? **Journal of Environmental Radioactivity** 40(3):261-270.
- Vandenhove, H., F. Goor, S. Timofeyev, A. Grebenkov, and Y. Thiry. 2004. Short rotation coppice as alternative land use for Chernobyl-contaminated areas of Belarus. **International Journal of Phytoremediation** 6(2):139-156.
- Vanden Berghe, I., and H. Gulinck. 1987. Fallout ¹³⁷Cs as a tracer for soil mobility in the landscape framework of Belgian loamy region. **Pedologie** 37:5-20.
- VandenBygaart, A.J. 2001. Erosion and deposition history derived by depth-stratigraphy of Cs-137 and soil organic carbon. **Soil & Tillage Research** 61(3-4):187-192.
- VandenBygaart, A.J., D.J. King, P.H. Groenevelt, and R. Protz. 1999. Cautionary notes on the assumptions made in erosion studies using fallout Cs-137 as a marker. **Canadian Journal of Soil Science** 79(2):395-397.
- Vanden Bygaart, A.J. and R. Protz. 2001. Bomb-fallout Cs-137 as a marker of geomorphic stability in dune sands and soils, Pinery Provincial Park, Ontario, Canada. **Earth Surface Processes and Landforms** 26(6):689-700.
- VandenBygaart, A.J., and R. Protz. 1995. Gamma radioactivity on a chronosequence, Pinery Provcail Park, Ontario. **Canadian Journal of Soil Science** 75:73-84.

- VandenBygaart, A.J., R. Protz, and D.C. McCabe. 1999. Distribution of natural radionuclides and Cs-137 in soils of southwestern Ontario. **Canadian Journal of Soil Science** 79(1):161-171.
- VandenBygaart, A.J., R. Protz, A.D. Tomlin, and J.J. Miller. 1999. Tillage system effects on near-surface soil morphology: observations from the landscape to micro-scale in silt loam soils of southwestern Ontario. **Soil and Tillage Research** 51(1-2):139-149.
- VandenBygaart, A.J., R. Protz, A.D. Tomlin, and J.J. Miller. 1998. ¹³⁷Cs as an indication of earthworm activity in soils. **Applied Soil Ecology** 9:101-107.
- VandenBygaart, A.J., R. Protz, and V. Witt. 2001. Erosion and deposition history derived by depth-stratigraphy of ¹³⁷Cs and soil organic carbon, pp. 691-694. In: J.C. Ascough, II and D.C. Flanagan (eds.) **Soil Erosion Research for the 21st Century**, American Society of Agricultural Engineers, St. Joseph, MI.
- VandenBygaart, A.J., X.M. Yang, B.D. Kay, and J.D. Aspinall. 2002. Variability in carbon sequestration potential in no-till soil landscapes of southern Ontario. **Soil & Tillage** 65(2):231-241.
- Vandenhove, H., A. Cremers, E. Smolders, and M. Van Hees. 2005. Effect of K and bentonite additions on Cs-transfer to ryegrass. **Journal of Environmental Radioactivity** 81(2-3):233-253.
- Vandenhove, H., F. Goor, S. Timofeyev, A. Grebenkov, and Y. Thiry. 2004. Short rotation coppice as alternative land use for Chernobyl-contaminated areas of Belarus. **International Journal of Phytoremediation** 6(2):139-156.
- Vandenhove, H., Y. Thiry, A. Gommers, F. Goor, J.M. Jossart, E. Holm, T. Gaufert, J. Roed, A. Grebenkov, and S. Timofeyev. 2001. Short rotation coppice for revaluation of contaminated land. **Journal of Environmental Radioactivity** 56(1-2):157-184.
- van der Perk, M., J.R. Burema, P.A. Burrough, A.G. Gillett, and M.B. Van der Meer. 2001. A GIS-based environmental decision support system to assess the transfer of long-lived radiocaesium through food chains in areas contaminated by the Chernobyl accident. **International Journal of Geographical Information Science** 15(1):43-64.
- van der Perk, M., J. Burema, H. Vandenhove, F. Goor, and S. Timofeyev. 2004. Spatial assessment of the economic feasibility of short rotation coppice on radioactively contaminated land in Belarus, Ukraine, and Russia. I. Model description and scenario analysis. **Journal of Environmental Management** 72(4):217-232.

- van der Perk, M., J. Burema, H. Vandenhove, F. Goor, and S. Timofeyev. 2004. Spatial assessment of the economic feasibility of short rotation coppice on radioactively contaminated land in Belarus, Ukraine, and Russia. II. Monte Carlo analysis. **Journal of Environmental Management** 72(4):233-240.
- van der Perk, M., P.A. Burrough, A.S.C. Culling, G.V. Laptev, B. Prister, U. Sansone, and O.V. Voitsekhovitch. 1995. Source and fate of Chernobyl-derived radiocaesium on floodplains in the Ukraine, p. 61-67, In: S. Marriott, J. Alexander, and R. Hey (eds.), **Floodplains: Interdisciplinary approaches**, Geological Society Special Publication 163, London, UK.
- van der Perk, M., P.A. Burrough, and G. Voigt. 1998. GIS-based modelling to identify regions of Ukraine, Belarus and Russia affected by residues of the Chernobyl nuclear power plant accident. **Journal of Hazardous Materials** 61(1-3) 85-90.
- van der Perk, M., V.G. Jetten, D. Karssenberg, Q. He, D.E. Walling, G.V. Laptev, O.V. Voitsekhovitch, A.A. Svetlichnyi, O. Slavik, V.G. Linnik, E.M. Korobova, S. Vivva, and Zheleznyak. 2000. Assessment of spatial redistribution of Chernobyl-derived radiocaesium within catchments using GIS-embedded models. **International Association of Hydrological Sciences Publication No.** 263:277-284.
- van der Perk, M., T. Lev, A. Gillett, J.P. Absalom, P.A. Burrough, N.M.J. Crout, E.K. Garger, N. Semiochkina, Y.V. Stephanishin, and G. Voigt. 2000. Spatial modelling of transfer of long-lived radionuclides from soil to agricultural products in the Chernigov region, Ukraine. **Ecological Modelling** 128:35-50.
- van der Perk, M. and O. Slávik. 2003. Simulation of event-based and long-term spatial redistribution of Chernobyl-derived radiocaesium within catchments using geographical information system embedded models. **Hydrological Processes** 17(5):943-957.
- van der Perk, M., O. Salavik, and Emil Fulajtar. 2002. Assessment of spatial variation of Cesium-137 in small catchments. **Journal of Environmental Quality** 31(6):1930-1939.
- van der Post, K.D., F. Oldfield, E.Y. Haworth, P.R.J. Crooks, et al. 1997. A record of accelerated erosion in the recent sediments of Blelham Tarn in the English Lake District. **Journal of Paleolimnology** 18(2):103-120.
- van Geen, A., and S.N. Luoma. 1999. The impact of human activities on sediments of San Francisco Bay, California: an overview. **Marine Chemistry** 64(1-2):1-6.
- van Geen, A., N.J. Valette-Silver, S.N. Luoma, C.C. Fuller, M. Baskaran, F. Tera, and J. Klein. 1999. Constraints on the sedimentation history of San Francisco Bay from C-14 and Be-10. **Marine Chemistry** 64(1-2):29-38.

- Van Hoof, P.I. and A.W. Andren. 1989. Partitioning and transport of ²¹⁰Pb in Lake Michigan. **Journal of Great Lakes Research** 15:498-509.
- Van Metre and E. Callender. 1997. Water-quality trends in White Rock Creek Basin for 1912-1994 identified using sediment cores from White Rock Lake reservoir, Dallas, Texas. **Journal of Paleolimnology** 17:239-249.
- Van Metre, P.C., E. Callender, and C.C. Fuller. 1997. Historical trends in organochlorine compounds in river basins identified using sediment cores from reservoirs. **Environmental Science and Technology** 31:2339-2344.
- Van Metre, P.C., E. Callender, B. J. Mahler, J. T. Wilson, and M. E. Dorsey. 2001. Differences in lake and reservoir sedimentation – implications for sediment coring studies. **Seventh Federal Interagency Sedimentation Conference IX**:12-19.
- Van Metre, P.C., B.J. Mahler, and E. Callender. 1998. Trends in organochlorine and radionuclide concentrations in the upper Rio Grande based on sediment core analysis from Elephant Butte reservoir, New Mexico. **International Journal of Sediment Research** 13:1-11.
- Van Metre, P.C., J.T. Wilson, F. Callender, and C.C. Fuller. 1998. Similar rates of decrease of persistent, hydrophobic and particle-reactive contaminants in riverine systems. **Environmental Science and Technology** 32(21):3312-3317.
- Van Moort, J.C.P, R.J. George, P.J. Tille, and G.L. Elliott. 1994. Soil loss in the South-West of Western Australia as determined by caesium-137, pp. 199-206. R.J. Harper (Compiler), **Soils '94 Proceedings of the Third Triennial Western Australian Soil Science Conference**, Australia Society of Soil Science, Busselton, Australia.
- Van Oost, K., G. Govers, and P.J.J. Desmet. 2000. Evaluating the effects of change in landscape structure on soil erosion by water and tillage. **Landscape Ecology** 15:577-589.
- Van Oost, K., G. Govers, W. Van Muysen, G. Heckrath, and T.A. Quine. 2003. Simulation of the redistribution of soil by tillage on complex topographies. **European Journal of Soil Science** 54:1-54.
- Van Oost, K., G. Govers, W. Van Muysen and T.A. Quine. 2000. Modeling translocation and dispersion of soil constituents by tillage on sloping land. **Soil Science Society of America Journal** 64:1733-1739.
- Van Oost, K., G. Govers, and W. Van Muysen. 2003. A process-based conversion model for caesium-137 derived erosion rates on agricultural land: An integrated spatial approach. **Earth Surface Processes and Landforms** 28(2):187-207.

- Van Pelt, R.S., T.M. Zobeck, J.C. Ritchie, and T.E. Gill. 2002. Partitioning of ^{137}Cs (^{137}Cs) in wind eroded sediments: Implications for estimating soil loss. **Proceedings of the 17th World Congress of Soil Science** 59(835):1-10.
- van Sickle, J., W.C. Weimer, and D.P. Larsen. 1983. Mixing rates in Shagawa Lake, Minnesota sediments as determined from ^{106}Ru profiles. **Geochimica et Cosmochimica Acta** 47:2189-2197.
- Varekamp, J.C. 1991. Trace element geochemistry and pollution history of mudflat and marsh sediments from the Connecticut coastline. **Journal of Coastal Research** 11:105-123.
- Varskog, P., R. Næumann, and E. Steinnes. 1994. Mobility and plant availability of radioactive Cs in natural soil in relation to stable Cs, other alkali elements and soil fertility. **Journal of Environmental Radioactivity** 22:45-53.
- Vas Carreiro, M.C., and M.M. Sequeria. 1987. Cesium-137 in the Portuguese Rivers Douro and Tejo. **Journal of Environmental Radioactivity** 5:363-377.
- Vasconcelos, P.M. and M. Conroy. 2003. Geochronology of weathering and landscape evolution, Dugald River valley, NW Queensland, Australia. **Geochimica et Cosmochimica Acta** 67(16):2913-2930.
- Vassilaki, M., L. Salmon, and J.A.B. Gibson. 1966. Measurement of radioactivity in soil. **Geochimica et Cosmochimica Acta** 30:610-606.
- Vejsada, J., E. Jelínek, Z. Anda, D. Hradil, and R. Pikryl. 2005. Sorption of Cesium on smectite-rich clays from the Bohemian Massif (Czech Republic) and their mixtures with sand. **Applied Radiation and Isotopes** 62(1):91-96.
- Velasco, H., J.J. Ayub, M. Belli, and U. Sansone. 2004. Temporal trends of Cs-137 and K-40 activity flux from soil to plant in grassland ecosystems. **Journal of Environmental Radioactivity** 71(3):225-241.
- Velasco, R.H., M. Belli, U. Sansone, and S. Menegon. 1993. Vertical transport of radiocesium in surface soils: model implementation and dose-rate computations. **Health Physics** 64:37-44.
- Velasco, R.H., J.P. Toso, M. Belli, and U. Sansone. 1997. Radiocesium in the Northeastern part of Italy after the Chernobyl Accident: Vertical soil transport and soil-to-plant transfer. **Journal of Environmental Radioactivity** 37(1):73-83.
- Velde, B., and T. Church. 1999. Rapid clay transformations in Delaware salt marshes. **Applied Geochemistry** 14(5):559-568.

- Venteris, E.R., G.W. McCarty, J.C. Ritchie, and T. Gish. 2004. Influence of management history and landscape variables on soil organic carbon and soil redistribution. **Soil Science** 169(11):787-795.
- Verburg, K., and P. Baveye. 1994. Hysteresis in the binary exchange of cations on 2/1 clay minerals - A critical review. **Clays and Clay Minerals** 42:207-220.
- Vernet, J.P., E. Davaud, M. Cosandey, and J. Berlie. 1987. Analyse de la radioactivite gamma des sediments del Lac Lerman et de Morat. **Ecology Geology Helv.** 68:87-96. (French)
- Vernet, J.P., J. Dominik, and P.Y. Favarger. 1984. Texture and sedimentation rates in Lake Geneva. **Environmental Geology** 5:143-149.
- Vernet, J.P., and P.Y. Favarger. 1982. Climatic and anthropogenic effects on sedimentation and geochemistry of Lakes Bourget, Annecy, and Lemane. **Hydrobiologia** 92:643-650.
- Vernet, J.P., P.Y. Favarger, and C. Reynuad. 1978. Sedimentation rates in Lakes Morat, Joux, and Lemane computed by means of both ^{137}Cs and pollen-analysis methods. **Intercol, Second International Congress of Ecology**, Jerusalem, Israel.
- Verschuren, D., T.C. Johnson, H.J. Kling, D.N. Edgington, P.R. Leavitt, E.T. Brown, M.R. Talbot, and R.E. Hecky. 2002. History and timing of human impact on Lake Victoria, East Africa. **Proceedings of the Royal Society of London Series B-Biological Sciences** 269(1488):289-294.
- Verstraeten, G. and J. Poesen. 2001. Variability of dry sediment bulk density between and within retention ponds and its impact on the calculation of sediment yields. **Earth Surface Processes and Landforms** 26(4):375-394.
- Villar, H.P. 1982. Aplicacoes da distribuicao de ^{137}Cs no estudo da agentes fisicos do solo. **INIS-BR-133**, 6 pp. (Portuguese)
- Villar, H.P. 1981. Distribuicao de ^{137}Cs no solo como funcao de erosao e outros processos. Centro de Energia Nuclear, **Report No. INIS-MF-7374**, 115 pp. (Portuguese)
- Vinichuk, M.M. and K.J. Johanson. 2003. Accumulation of Cs-137 by fungal mycelium in forest ecosystems of Ukraine. **Journal of Environmental Radioactivity** 64(1):27-43.
- Visser, V.M. and G. Sterk. 2001. Techniques for simultaneous quantification of wind and water erosion in semi-arid zones, pp. 544-547. In: J.C. Ascough II and D.C. Flanagan (eds.), **Soil Erosion Research for the 21st Century**, Proceedings of the International Symposium, Honolulu, HI, St. Joseph, MI: American Society of Agricultural Engineers.

- Voitsekhovitch, O.V., V.V. Kanivets, G.V. Laptev, and I.Y. Biley. 1993. Hydrological processes and their influence on radionuclide behaviour and transport by surface water pathways as applied to water protection after the Chernobyl accident, pp. 83-105. *In: **Hydrological considerations in relation to nuclear power plants***, Proceeding of an International Workshop, UNESCO, Paris.
- Volchok, H.L., and N. Chieco (ed.). 1986. A compendium of the Environmental Measurement Laboratory's research projects related to Chernobyl nuclear accident. USDOE Rep. **EML-460**, Environmental Monitoring Laboratory, New York.
- Volkel, J., and M. Igl. 1995. Vertical distribution of radiocaesium in soils of the Bavarian forest and the northern limestone Alps (Germany) eight years after Chernobyl. (Vertikale Verteilung von Radiocaesium in Boden des Bayrischen Waldes und der nordlichen Kalkalpen acht Jahre nach Tschernobyl.) **Mitteilungen der Deutschen Bodenkundlichen Gesellschaft** 76(1):469-472.
- Volpe, A.M., B.B. Bandong, B.K. Esser, and M. Bianchini. 2002. Radiocesium in North San Francisco Bay and Baja California coastal surface waters. **Journal of Environmental Radioactivity** 60(3):365-380.
- von Damm, K.L., L.K. Benninger, and K.K. Turekian. 1979. The ^{210}Pb chronology of a core from Mirror Lake New Hampshire. **Limnology and Oceanography** 24:434-439.
- Von Guten, H.R., and R.N. Moser. 1993. How reliable is the ^{210}Pb dating method? Old and new results from Switzerland. **Journal of Paleolimnology** 9:161-178.
- von Gunten, H.R., M. Strum, H.N. Erten, E. Rössler, and F. Wegmüller. 1987. Sedimentation rates in the central Lake Constance determined with ^{210}Pb and ^{137}Cs . **Schweiz. Z. Hydrology** 49:275-283.
- Voronov, S.I., and R.M. Aleksakhi. 1992. Main laws governing the migration of Sr-90 and Cs-137 in natural and cultured framing centers in Uzbekistan (The radioecology of the Tashkent Oasis). **Atomic Energy** 73:652-657.
- Vray, F., C. Debayle, and D. Louvat. 2003. Long-term flux of Chernobyl-derived ^{137}Cs from soil to French rivers: a study on sediment and biological indicators. **Journal of Environmental Radioactivity** 68(2):93-114.
- Waber, U., H. von Gutern, and U. Krahenbuhl. 1987. The impact of the Chernobyl accident on a river/groundwater aquifer. **Radiochima Acta** 41:191-199.
- Waegeneers, N., E. Smolders, and R. Merckx. 2005. Modelling ^{137}Cs uptake in plants from undisturbed soil monoliths. **Journal of Environmental Radioactivity** 81(2-3):187-199.

- Waegeneers, N., E. Smolders, and R. Merckx. 1999. A statistical approach for estimating the radiocesium interception potential of soils. **Journal of Environmental Quality** 28(3):1005-1011.
- Wahlgen, M.A., and R.C. Thompson. 1980. Pollution records from sediments of three lakes in New York state. **Geochimica et Cosmochimica Acta** 44:333-339.
- Wahlgren, M.A., and D.M. Nelson. 1975. Plutonium in the Laurentian Great Lakes: comparison of surface waters. **Verh. International Verein. Limnology** 19:317-322.
- Wahlgren, M.A., and D.M. Nelson. 1974. Studies of plutonium cycling and sedimentation in Lake Michigan. **Proceedings of the 17th Conference on the Great Lakes** 1974:212-218.
- Walker, R., M. Wilder, and C.R. Valeri. 1978. Diatom and pollen studies of a sediment profile from Melynllyn, a mountain tarn in Snowdonea, North Wales. **New Phytologist** 8:791.
- Wallace, A., E.M. Romney, and R.A. Wood. 1982. The role of stable cesium on plant uptake of cesium-137. **Soil Science** 134:71-75.
- Wallbrink, P.J. 2004. Quantifying the erosion processes and land-uses which dominate fine sediment supply to Moreton Bay, Southeast Queensland, Australia. **Journal of Environmental Radioactivity** 76(1-2):67-80.
- Wallbrink, P.J. 1997. Quantifying the redistribution of soils and sediments within a post-harvested forest coupe near Bombala, New South Wales, Australia. **CSIRO Land and Water Report 7/97**.
- Wallbrink, P.J. 1993. Cosmogenic ^7Be in wet and dry precipitation and its distribution in soils: Some applications to soil erosion. **Technical Memorandum 93/8**, Division of Water Research, Canberra, Australia.
- Wallbrink, P.J. 1989. Fallout of cosmogenic radionuclide ^7Be and its subsequent distribution in the soil profile, pp. 30-89. **Honours Thesis**, Australian National Univ., Forestry Department, Australia.
- Wallbrink, P., W. Blake, S. Doerr, R. Shakesby, G. Humphreys, and P. English. 2005. Using tracer based sediment budgets to assess redistribution of soil and organic material after severe bush fires, p. 223-230. In: A.J. Horowitz, and D.E. Walling (eds.). **Sediment Budgets 2. International Association of Hydrological Sciences Publication 292**, Wallingford, UK, IAHS Press.
- Wallbrink, P.J. and J. Croke. 2002. A combined rainfall simulator and tracer approach to assess the role of Best Management Practices in minimising sediment redistribution and loss in forests after harvesting. **Forest Ecology and Management** 170(1-3):217-232.

- Wallbrink, P.J., C.E. Martin, and C.J. Wilson. 2003. Quantifying the contribution of sediment, sediment-P and fertiliser-P from forested, cultivated and pasture areas at the landuse and catchment scale using fallout radionuclides and geochemistry. **Soil and Tillage Research** 69(1-2):53-68.
- Wallbrink, P.J., and A.S. Murray. 1996a. Distribution of ^7Be in soils under different surface cover conditions and its potential for describing soil redistribution processes. **Water Resources Research** 32(2):467-476.
- Wallbrink, P.J., and A.S. Murray. 1996b. Measuring soil loss using the inventory ratio of excess lead-210 to cesium-137. **Soil Science Society of America Journal** 60 (4):1201-1208.
- Wallbrink, P.J., and A.S. Murray. 1996d. Distribution and variation of ^7Be in soils under different surface conditions and its potential for describing soil redistribution processes. **Water Resources Research** 32:467-476.
- Wallbrink, P.J., and A.S. Murray. 1994. Fallout of ^7Be over south eastern Australia, **Journal of Environmental Radioactivity** 25:213-228.
- Wallbrink, P.J., and A.S. Murray. 1993. The use of fallout radionuclide as indicators of erosion processes. **Hydrological Processes** 7:297-304.
- Wallbrink, P.J., A.S. Murray, and J.M. Olley. 1999. Relating suspended sediment to its original soil depth using fallout radionuclides. **Soil Science Society of America Journal** 63:369-378.
- Wallbrink, P.J., A.S. Murray, J.M. Olley, and L.J. Olive. 1998. Determining the sources and transit times of suspended sediment in the Murrumbidgee River, New South Wales, Australia using fallout Cs-137 and Pb-210. **Water Resources Research** 34:879-887.
- Wallbrink, P., and J. Olley. 2004. Sources of fine grained sediment in incised and un-incised channels, Jugiong Creek, NSW, Australia. **International Association of Hydrological Sciences Publication** 288:165-169.
- Wallbrink, P.J., J.M. Olley, and G. Hancock. 2003. Tracer assessment of catchment sediment contribution to Western Port, Australia. **CSIRO Technical Report 8/03**, January 2003, CSIRO Land and Water Conservation, Canberra, Australia, 53pp.
- Wallbrink, P.J., J.M. Olley, and G. Hancock. 2002. Estimating residence times for fine sediment in river channels using fallout Pb-210. **International Association for Hydrological Sciences Publication No. 276**:425-433.

- Wallbrink, P.J., J.M. Olley, and A.S. Murray. 1994. Measuring soil movement using ^{137}Cs : Implications of reference site variability. **International Association of Hydrological Sciences Publication No. 224**:95-105.
- Wallbrink, P.J., J.M. Olley, A.S. Murray, and L.J. Olive. 1998. Determining sediment sources and transit times of suspended sediment in the Murrumbidgee River, NSW, Australia using fallout ^{137}Cs and ^{210}Pb . **Water Resources Research** 34(4):879-887.
- Wallbrink, P.J., J.M. Olley, A.S. Murray, and L.J. Olive. 1996a. The contribution of channel banks and gully walls to total phosphorus loads in the Murrumbidgee River, pp. 1-6. *In*: I. Rutherford and M. Walker (Eds.), **National Conference on Stream Management**, Feb 19-23, Merrijig, Victoria, pp. 1-6.
- Wallbrink, P.J., J.M. Olley, A.S. Murray, and L.J. Olive. 1996b. The contribution of subsoil to sediment yield in the Murrumbidgee River basin, New South Wales, Australia. **International Association of Hydrological Sciences Publication No. 236**:347-355.
- Wallbrink, P.J., B.P. Roddy, and J.M. Olley. 2002. A tracer budget quantifying soil redistribution on hillslopes after forest harvesting. **Catena** 47(3):179-201.
- Wallbrink, P.J., B.P. Roddy, and J.M. Olley. 1997. Quantifying the redistribution of soils and sediments within a post-harvested forest coupe near Bombala, NSW, Australia, CSIRO, **Land and Water Technical report, 7/97**, Canberra, Australia
- Wallbrink, P.J., D.E. Walling, and Q. He. 2002. Radionuclide measurement using HpGe gamma spectrometry, p. 67-96. *In*: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Walling, D.E. 2004. Using environmental radionuclides to trace sediment mobilisation and delivery in river basins as an aid to catchment management, p. 120-135. *In*: **Proceedings 9th International Symposium on River Sedimentation** Vol. 1., Tsinghua University Press, Beijing, China.
- Walling, D.E. 2003. Using environmental radionuclides as tracers in sediment budget investigations. **International Association of Hydrological Sciences Publication No. 283**:57-78.
- Walling, D.E. 2002. Recent advances in the use of environmental radionuclides in soil erosion investigations, pp. 290-312. *In*: IAEA (ed.) Nuclear Techniques in Integrated plant, nutrient, water, and soil management, Proceedings of FAO/IAEA International Symposium, Vienna, Austria, Oct 16-20, 2000, **IAEA-CSP-11/C**.

- Walling, D.E. 2000. Linking land use, erosion and sediment yields in river basins. **Hydrobiologia** 410:223-240.
- Walling, D.E. 1999. Using fallout radionuclides in investigations of contemporary overbank sedimentation on the floodplains of British rivers. In: S.B. Marriott and J. Alexander (eds.), **Floodplains: Interdisciplinary Approaches**, Geological Society, London, Special Publication no. 163. 41-59.
- Walling, D.E. 1998. Use of ^{137}Cs and other fallout radionuclides in soil erosion investigations: Progress, problems and prospects, p. 39-62. In: International Atomic Energy Agency (ed), *Use of ^{137}Cs in the Study of Soil Erosion and Sedimentation*, **IAEA-TECDOC-1028**, Vienna, Austria.
- Walling, D.E. 1998. Opportunities for using environmental radionuclides in the study of watershed budgets. **Proceedings of the International Symposium on Comprehensive Watershed Management**, Beijing, September, 1998, pp. 3-16.
- Walling, D.E. 1995. Suspended sediment yields in a changing environment, pp. 149-176. In: A.M. Gurnell and G.E. Petts (eds.), **Changing river channels**, Wiley, Chichester, U.K.
- Walling, D.E. 1994. Measuring sediment yield from river basins, p. 39-80 In R. Lal (ed.) **Soil erosion research methods**. Soil and Water Conservation Society, Ankeny, Iowa.
- Walling, D.E. 1990. Linking the field to the river: sediment delivery from agricultural land, p. 129-152. In: J. Boardman, I.D.L. Foster, and J.A. Dearing (eds.) **Soil erosion on agricultural lands**. Wiley, New York, NY.
- Walling, D.E. 1989. Some applications of caesium-137 measurements in sediment budget investigations. **Journal of Water Resources** 8:50-77.
- Walling, D.E. 1989. The struggle against water erosion and a perspective on recent research, pp. 39-60. In: K. Ivanov and D. Pechinov (eds.), **Water Erosion**, UNESCO Technical Document in Hydrology, SC-89/WS-57, UNESCO, Paris, France.
- Walling, D.E. 1989. Physical and chemical properties of sediment, the quality dimension. **International Journal of Sediment Research** 4:27-39.
- Walling, D.E. 1988. Erosion and sediment yield research - some recent perspective. **Journal of Hydrology** 100:113-141.
- Walling, D.E. 1988. Measuring sediment yield from river basins, pp. 39-73. In: R. Lal (ed.), **Soil erosion research**, Soil Conservation Society of America, Ankeny, IA.

- Walling, D.E. 1988. Use of ^{137}Cs and other fallout radionuclides in soil erosion investigations: Progress, problems, and prospects. In: Use of ^{137}Cs in the study of soil erosion and sedimentation. Technical Report Series, **IAEA Technical Document-1028**, 39-62, Vienna
- Walling, D.E. 1984. Sediment delivery from drainage basins, pp. 71-80. In: R.J. Loughran (ed.), **Drainage basin erosion and sedimentation**, University of Newcastle, Newcastle, Australia.
- Walling, D.E. 1983. The sediment delivery problem. **Journal of Hydrology** 65:209-237.
- Walling, D.E., and S.B. Bradley. 1990. Some applications of caesium-137 measurements in the study of fluvial erosion, transport and deposition. **International Association of Hydrological Sciences Publication No. 189**:179-203.
- Walling, D.E., and S.B. Bradley. 1989. Rates and patterns of contemporary floodplain sedimentation: a case study of the River Culm, Devon, U.K. **Geojournal** 19:53-62.
- Walling, D.E., and S.B. Bradley. 1988. Transport and redistribution of Chernobyl fallout radionuclides by fluvial processes: some preliminary evidence. **Environmental Geochemistry and Health** 10:35-39.
- Walling, D.E., and S.B. Bradley. 1988b. The use of caesium-137 measurements to investigate sediment delivery from cultivated areas in Devon, UK. **International Association of Hydrological Sciences Publication No. 174**:325-335.
- Walling, D.E., S.B. Bradley, and C.J. Lambert. 1986. Conveyance losses of suspended sediment within a flood plain system. **International Association of Hydrological Sciences Publication No. 159**:119-131.
- Walling, D.E., S.B. Bradley, and C.J. Wilkinson. 1986. A caesium-137 budget approach to the investigation of sediment delivery from a small agricultural drainage basin in Devon, UK. **International Association of Hydrological Sciences Publication No. 159**:423-435.
- Walling, D.E., and A.L. Collins. 2005. Suspended sediment sources in British rivers, p. 123-132. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Walling, D.E. and A.L. Collins. 2000. **Integrated assessment of catchment budgets: A technical manual**. University of Exeter, Exeter, United Kingdom.
- Walling, D.E., A.L. Collins, and H.M. Sickingabula. 2003. Using unsupported lead-210 measurements to investigate soil erosion and sediment delivery in a small Zambian catchment. **Geomorphology** 52(3-4):193-213.

- Walling, D.E., A.L. Collins, H.M. Sickingabula, and G.I.L. Leeks. 2001. Integrated assessment of catchment suspended sediment budgets: A Zambian example. **Land Degradation & Development** 12(5):387-415.
- Walling, D.E. and D. Fang. 2003. Recent trends in the suspended sediment loads of the world's rivers. **Global and Planetary Change** 39(1-2):111-126.
- Walling, D.E., V.N. Golosov, E.V. Kvasnikova, and C. Vandecasteele. 2000. Radioecological aspects of soil pollution in small catchments. **Pochvovedeniye** 7:888-897 (in Russian).
- Walling, D.E., V.N. Golosov, E.V. Kvasnikova, and C. Vandecasteele. 2000. Radioecological aspects of soil pollution in small catchments. **Eurasian Soil Science** 33(7):776-784.
- Walling, D.E., V.N. Golosov, A.V. Panin, and Q. He. 2000. Use of radiocaesium to investigate erosion and sedimentation in areas with high levels of Chernobyl fallout, pp. 183-200. In: I.D.L Foster, (ed.) **Tracers in Geomorphology**, John Wiley and Sons, Chichester, UK.
- Walling, D.E., and Q. He. 2002. Using ^{137}Cs measurements to test distributed soil erosion and sediment delivery models, p. 242-263. In: Summer, W., and D.E. Walling (eds.). Modelling erosion, sediment transport and sediment yield. A contribution to International Hydrological Programme IHP-V Projects 2.1 and 6.2 IHP-VI . **UNESCO Technical Documents in Hydrology . No. 60**, UNESCO, Paris.
- Walling, D.E. and Q. He. 2001. Model for converting ^{137}Cs measurements to estimates of soil redistribution on cultivated and uncultivated soils, and estimating bomb-derived ^{137}Cs reference inventory (Including Software for Model Implementation). **A contribution to the International Atomic Energy Agency Coordinated Research Programmes on Soil Erosion (D1.50.05) and Sedimentation (F3.10.01)**, Department of Geography, Exeter, UK
- Walling, D.E. and Q. He. 2000. The global distribution of bomb-derived ^{137}Cs reference inventories. **Final Report on IAEA Technical Contract 10361/RO-R1**. University of Exeter.
- Walling, D.E., and Q. He. 1999. Changing rates of overbank sedimentation on the floodplains of British rivers over the past 100 years, pp. 71-90. In: Brown, A.G. and T.A. Quine (Eds.), **Fluvial Processes and Environmental Change**. Wiley, London.
- Walling, D.E., and Q. He. 1999. Improved models for estimating soil erosion rates from cesium-137 measurements. **Journal of Environmental Quality** 28:611-622.
- Walling, D.E., and Q. He. 1999. Using fallout Lead-210 measurements to estimate soil erosion on cultivated land. **Soil Science Society of America Journal** 63:1404-1412.

- Walling, D.E. and Q. He. 1999. Changing rates of overbank sedimentation on the floodplains of British rivers over the past 100 years, p.207-222. In: A.G. Brown and T.A. Quine (eds.), **Fluvial Processes and Environmental Change**, Wiley, Chichester.
- Walling, D.E., and Q. He. 1998. The spatial variability of overbank sedimentation in river floodplains. **Geomorphology** 24:209-223.
- Walling, D.E., and Q. He. 1998. Use of fallout ^{137}Cs measurements for validating and calibrating soil erosion and sediment delivery models. In: *Modelling Soil Erosion, Sediment Transport and Closely Related Hydrological Processes*, (Proceedings Vienna Symposium, July 1998), **International Association of Hydrological Sciences Publication 249**:267-278.
- Walling, D.E., and Q. He. 1997 Use of fallout ^{137}Cs in investigations of overbank sediment deposition on river floodplains. **Catena** 29(3-4):263-282.
- Walling, D., and Q. He. 1997. Investigating spatial patterns of overbank sedimentations on river floodplains. **Water Air Soil Pollution** 99(1-4):9-20.
- Walling, D., and Q. He. 1997. Models for converting ^{137}Cs measurements to estimates of soil redistribution rates on cultivated and uncultivated soils (Including software for model implementation). **A contribution to the International Atomic Energy Agency Coordinated Research Programmes on Soil Erosion (D1.50.05) and Sedimentation (F3.10.01)**, Department of Geography, Exeter, UK
- Walling, D.E., and Q. He. 1994. Rates of overbank sedimentation on the flood plains of several British rivers during the past 100 years. **International Association of Hydrological Sciences Publication 224**:203-210.
- Walling, D.E., and Q. He. 1993 Toward improved interpretation of caesium-137 profile in lake sediments, pp. 31-53. *In*: J. McManus and R. Duck (eds.), **Geomorphology and sedimentology of lakes and reservoirs**, Wiley, Chichester.
- Walling, D.E., and Q. He. 1993b. Use of cesium-137 as a tracer in the study of rates and patterns of floodplain sedimentation. **International Association of Hydrological Sciences Publication No. 215**:319-328.
- Walling, D.E., and Q. He. 1992. Interpretation of cesium-137 profile in lacustrine and other sediments - The role of catchment derived inputs. **Hydrobiologia** 235/236:219-230.
- Walling, D.E., Q. He, and P.C. Appleby. 2002. Conversion models for use in soil-erosion, soil-redistribution, and sedimentation investigations, p. 111-164. In: Zapata, F. (ed.).

Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity, Kluwer Academic Publishers, Dordrecht, The Netherlands.

- Walling, D.E., Q. He, and W. Blake. 2000. River flood plains as a phosphorus sink. **International Association of Hydrological Sciences Publication No. 263**:211-218.
- Walling, D.E., Q. He, and W. Blake. 1999. Use of Be-7 and Cs-137 measurements to document short- and medium-term rates of water-induced soil erosion on agricultural land. **Water Resources Research** 35(12):3865-3874.
- Walling, D.E., Q. He, and A.P. Nicholas. 1996. Floodplains as suspended sediment sinks, pp. 399-440. In: M., Anderson, D.E. Walling, and P. Bates (eds.), **Floodplain Processes**, J. Wiley, Chichester, UK.
- Walling, D.E., Q. He, and T.A. Quine. 1996. Use of fallout radionuclides measurements in sediment budget investigations. **Géomorphologi: Relief, Processes, Environmental** 1996(2):41-54.
- Walling, D.E., Q. He, and T.A. Quine. 1995. Use of caesium-137 and lead-210 as tracers in soil erosion investigations. **International Association of Hydrological Sciences Publication No. 229**:163-172.
- Walling, D.E., Q. He, and P.A. Whelan. 2003. Using ^{137}Cs measurements to validate the application of the AGNPS and ANSWERS erosion and sediment yield models in two small Devon catchments. **Soil and Tillage Research** 69(1-2):27-43.
- Walling, D.E., and P. Kane. 1984. Suspended sediment properties and geomorphological significance, pp. 311-334. In: T.P. Burt and D.E. Walling (eds.), **Catchment experiments in fluvial geomorphology**, Geo Books, Norwich, U.K.
- Walling, D.E., and P.W. Morehead. 1989. The particle size characteristics of fluvial suspended sediments: an overview. **Hydrobiologia** 176/177:125-149.
- Walling, D.E. and P.N. Owens. 2003. The role of overbank floodplain sedimentation in catchment contaminant budgets. **Hydrobiologia** 494:83-91.
- Walling, D. and P. N. Owens. 2002. The role of flood plain sedimentation in catchment sediment and contaminant budgets, p. 407-416. In: F.J. Dyer, M.C. Thoms, and J.M. Olley (eds.), **The Structure, Function and Management Implications of Fluvial Sedimentary Systems**, **International Association of Hydrological Sciences Publication No. 276**.
- Walling, D.E., P.N. Owens, J. Carter, G.J.L. Leeks, S. Lewis, A.A. Meharg and J. Wright. 2003. Storage of sediment-associated nutrients and contaminants in river channel and floodplain systems. **Applied Geochemistry** 18(2):195-220.

- Walling, D.E., P.N. Owens, and G.J.L. Leeks. 1999 Fingerprinting suspended sediment sources in the catchment of the River Ouse, Yorkshire, UK. **Hydrological Processes** 13(7):955-975.
- Walling, D.E., P.N. Owens, and G.J.L. Leeks. 1999. Rates of contemporary overbank sedimentation and sediment storage on the floodplains of the main channel systems of the Yorkshire Ouse and River Tweed, UK. **Hydrological Processes** 13(7):993-1009.
- Walling, D.E., P.N. Owens, and G.J.L. Leeks. 1998 The characteristics of overbank deposits associated with a major flood in the catchment of the River Ouse, Yorkshire. **Catena** 32:309-331.
- Walling, D.E., P.N. Owens, and G.J.L. Leeks. 1998. The role of channel and floodplain storage in the suspended sediment budget of the River Ouse, Yorkshire, UK. **Geomorphology** 22:225-242.
- Walling, D.E., P.N. Owens, and G.J.L. Leeks. 1997. The characteristics of overbank deposits associated with a major flood event in the catchment of the River Ouse, Yorkshire, UK. **Catena** 31(1-2):53-75.
- Walling, D.E., P.N. Owens, B.D. Waterfall, G.J.L. Leek, and P.D. Wass. 2000. The particle size of fluvial suspended sediment in the Humber and Tweed catchments, UK. **The Science of the Total Environment** 251/252:205-222.
- Walling, D.E., M.R. Peart, F. Oldfield, and R. Thompson. 1979. Suspended sediment sources identified by magnetic measurements. **Nature** 281:110-113.
- Walling, D.E., and T.A. Quine. 1995. The use of fallout radionuclide measurements in soil erosion investigations. **Proceedings International Symposium on Nuclear and Related Techniques in Soil/Plant Studies for Sustainable Agriculture and Environmental Preservation**. International Atomic Energy Agency Publication ST1/PUB/947:597-619.
- Walling, D.E., and T.A. Quine. 1993 **Use of caesium-137 as a tracer of erosion and sedimentation: Handbook for the application of the caesium-137 technique**. U.K. Overseas Development Administration Research Scheme R4579, Department of Geography, University of Exeter, Exeter, United Kingdom, 196pp.
- Walling, D.E., and T.A. Quine. 1993. Using Chernobyl-derived fallout radionuclides to investigate the role of downstream conveyance losses in the suspended sediment budget of the River Severn, UK. **Physical Geography** 14:239-253.

- Walling, D.E., and T.A. Quine. 1992. The use of caesium-137 measurement in soil erosion surveys. **International Association of Hydrological Sciences Publication No. 210**:143-152.
- Walling, D.E., and T.A. Quine. 1991. The use of ^{137}Cs measurements to investigate soil erosion on arable fields in the U.K.: potential applications and limitations. **Journal of Soil Science** 42:147-165.
- Walling, D.E., and T.A. Quine. 1991. Fluvial redistribution of Chernobyl radionuclides. **NERC News**, July 1991, pp. 22-25.
- Walling, D.E., and T.A. Quine. 1991. Recent rates of soil loss from areas of arable cultivation in the UK. **International Association of Hydrological Sciences Publication No. 203**:123-131.
- Walling, D.E., and T.A. Quine. 1990 Calibration of caesium-137 measurements to provide quantitative erosion rate data. **Land Degradation and Rehabilitation** 2:161-175.
- Walling, D.E., and T.A. Quine. 1990. Use of caesium-137 to investigate patterns and rates of soil erosion on arable fields, pp. 33-53. *In*: J. Broadman, I.D.I. Foster, and J.A. Dearing (eds.), **Soil erosion on agricultural land**, Wiley, London.
- Walling, D.E., T.A. Quine, and Q. He. 1992 Investigating contemporary rates of floodplain sedimentation, pp. 166-184. *In*: P.A. Carling and G.E. Petts (eds.), **Lowland floodplain rivers: Geomorphological perspectives**. Wiley, Chichester.
- Walling, D.E., T.A. Quine, and Q. He. 1992. Rates and patterns of contemporary rates of floodplain sedimentation, pp. 185-202. *In*: P.A. Carling and G.E. Petts (eds.), **Lowland floodplain Rivers: Geomorphological perspectives**. Wiley, Chichester.
- Walling, D.E., T.A. Quine, and J.S. Rowan. 1992. Fluvial transport and redistribution of Chernobyl fallout radionuclides. **Hydrobiologia** 235:231-246.
- Walling, D.E., J.S. Roman, and S.B. Bradley. 1989. Sediment associated transport and redistribution of Chernobyl fallout radionuclides. **International Association of Hydrological Sciences Publication No. 184**:37-45.
- Walling, D.E., M.A. Russell, R.A. Hodgkinson, and Y. Zhang. 2002. Establishing sediment budgets for two small lowland agricultural catchments in the UK. **Catena** 47(4):323-353.
- Walling, D.E., M.A. Russell, and B.W. Webb. 2001. Controls of nutrient content of suspended sediment transported by British rivers. **Science of the Total Environment** 266:113-123.

- Walling, D.E. and B.W. Webb. 1996. Erosion and sediment yield: a global overview. p.3-9 *In* Bogen, J, T. Fergus and D.E. Walling (eds.. Proceedings of the Exeter Symposium, July 1996. IAHS Publication no. 236, IAHS Press, Wallingford.
- Walling, D.E., and B.W. Webb. 1987. Material transport by the world's rivers: evolving perspectives. **International Association of Hydrological Sciences Publication No. 164**:313-329.
- Walling, D.E. and Webb, B.W. 1987. Suspended load in gravel-bed rivers: UK experience. P. 691-723. In C.R. Thorne, J.C. Bathurst and R.D. Hey (eds.) **Sediment transport in gravel-bed rivers**. John Wiley and Sons Ltd, Chichester.
- Walling, D.E. and B.W. Webb. 1983. Patterns of sediment yield, p. 69-100 *In* K.J. Gregory (ed.) **Background to palaeohydrology**, John Wiley and Sons Ltd, Chichester.
- Walling, D.E., B.W. Webb, and M.A. Russell. 1997. The sediment-associated nutrient transport in UK rivers. **International Association of Hydrological Sciences Publication No. 243**:69-81.
- Walling, D.E., and J.C. Woodward. 1995. Tracing sources of suspended sediment in river basins. **Marine and Freshwater Research** 46:327-336.
- Walling, D.E., and J.C. Woodward. 1992. Use of radiometric fingerprints to derive information on suspended sediment sources. **International Association of Hydrological Sciences Publication No. 210**:153-164.
- Walling, D.E., J.C. Woodward, and A.P. Nicholas. 1993. A multi-parameter approach to fingerprinting suspended sediment sources. **International Association of Hydrological Sciences Publication No. 215**:329-340.
- Walling, D.E. and Y. Zhang. 2004. Predicting slope-channel connectivity: a national scale approach. In: Golosov, V., V. Belyaev, and D.E. Walling, (Eds.) **Sediment Transfer through the Fluvial System**. IAHS Press, Wallingford, UK, International Association of Hydrological Sciences Publication no. 288:107-114.
- Walton, A. 1963. The distribution in soils of radioactivity from weapon tests. **Journal of Geophysical Research** 68:1485-1496.
- Wan, G.J., Z.G. Bai, H. Qing, J.D. Mather, R.G. Huang, H.R. Wang, D.G. Tang, and B.H. Xiao. 2003. Geochemical records in recent sediments of Lake Erhai: implications for environmental changes in a low latitude-high altitude lake in southwest China. **Journal of Asian Earth Sciences** 21(5):489-502.

- Wan, G.J., W.Z. Lin, R.G. Huang, and Z.L. Cheng. 1991. Dating characteristics and erosion traces of ^{137}Cs vertical profiles in Lake Hongfeng sediments. **Chinese Science Bulletin** 36:674-677.
- Wan, G., and P.H. Santschi. 1987. Prediction of radionuclide inventory for sediments in Lake Greifensee, Switzerland. **Scientia Geographica Sinica** 7:358-363.
- Wan, G., P.H. Santschi, K. Farrenkothen, M. Strum, and W. Strum. 1985. Distribution and dating of ^{137}Cs for recent sediments in Lake Greifensee (Switzerland). **Acta Scient. Circumstantia** 5:360-365.
- Wan, G.J., P.H. Santschi, M. Strum, K. Farrenkothen, A. Lucek, E. Werth, and C. Schuller. 1987. Natural (^{210}Pb , ^7Be) and fallout (^{137}Cs , $^{239,240}\text{Pu}$, ^{90}Sr) radionuclides as geochemical tracers of sedimentation in Greifensee, Switzerland. **Chemical Geology** 63:181-196.
- Wan, G., P.H. Santschi, M. Strum, K. Farrenkothen, A. Lueck, E. Werth, and C. Schuller. 1986. A comparative study on recent sedimentation rates in Lake Greifensee, Switzerland, using varve counting and radionuclide dating. **Geochimica** 9:259-270.
- Wang, Guo-ping, J. Liu, and J. Tang. 2004. The long-term nutrient accumulation with respect to anthropogenic impacts in the sediments from two freshwater marshes (Xianghai Wetlands, Northeast China). **Water Research** 38(20):4462-4474.
- Wang, Guo-ping, Liu Jing-shuang, and Tang Jie. 2004. Historical variation of heavy metals with respect to different chemical forms in recent sediments from Xianghai Wetlands, Northeast China. **Wetlands** 24(3):608-619.
- Wang, X.K., W.M. Dong, J.Z. Du, and Z.Y. Tao. 1999. Sorption and desorption of radiocesium on calcareous soil: Results from batch and column investigations. **Journal of Radioanalytical Nuclear Chemistry** 240(3):783-787.
- Wang, X.K., J.Z. Du, Z.Y. Tao, and Z.X. Fan. 2003. Migration characteristics of radionuclides Sr-85+89(2+), (CS+)-C-134, I-125(-), (SeO3²⁻)-Se-75 and Eu152+154(III) in Chinese soils - Column investigation. **Journal of Radioanalytical and Nuclear Chemistry** 258(1):133-138.
- Wang, X.K., T. Rabung, and H. Geckeis. 2003. Effect of pH and humic acid on the adsorption of cesium onto gamma-Al₂O₃. **Journal of Radioanalytical and Nuclear Chemistry** 258(1):83-87.
- Wang, Y.C., X.B. Zhang, S.L. Li, Q.C. Zhao, J.J. Jiao, Y.Y. Zhang, M.Q. Yan, and L.X. Bai. 1991. The quantification of siltation depth of arable land in the Gaoqiao of the Three Gorges area using Cs-137. **Geography** 4:63-64. (In Chinese)

- Ward, T.E., J. Breeden, K. Komisarck, R. Porter, J. Czuczwa, R. Kaminski, and B.D. McVeety. 1987. ^{137}Cs radioactive dating of Lake Ontario sediment cores. **BNL-40550**, 10 pp. Brookhaven National Laboratory, Upton, New York
- Warren, A., S. Batterbury, and H. Osbahr. 2001. Sustainability and Sahelian soils: Evidence from Niger. **The Geographical Journal** 167(4):324-341.
- Warren, A., H. Osbahr, S. Batterbury and A. Chappell. 2003. Indigenous views of soil erosion at Fandou Béri, southwestern Niger. **Geoderma** 111(3-4):439-456.
- Warren, S. D., H. Mitasova, D. L. Gebhart, M. G. Hohmann, S. Landsberger, and F. Iskander. 2000. Validation of enhancements to the Universal Soil Loss Equation topographic factor using $^{137}\text{Cesium}$, Champaign, Illinois, USACERL, ERDC/CERL TR-00-8.
- Wass E. 1992. Foerdelning av Cs-137 I sedimentet I Raaksjoen, en Mellansvensk Skogssjoe, sex aar efter tjernobylolyckan (Distribution of Cs-137 in lake sediment). Uppsala Univ., Sweden **Limnologiska Institutionen Report No. NEI-SE-138**, 23pp. (Swedish)
- Wasserman, M.A., D.V. Perez, and A.C.M. Bourg. 2002. Behavior of cesium-137 in some Brazilian oxisols. **Communications in Soil Science and Plant** 33(7-8):1335-1349.
- Wasson, R.J., G. Caitcheon, A.S. Murray, M. McCulloch, and J. Quade. 2002. Sourcing sediment using multiple tracers in the catchment of Lake Argyle, Northwestern Australia. **Environmental Management** 29(5):634-646.
- Wasson, R.J., R.L. Clark, P.M. Nanninga, and J. Waters. 1987. ^{210}Pb as a chronometer and tracer Burrinjuck Reservoir, Australia. **Earth Surface Processes and Landforms** 12:399-414.
- Wasson, R.J., R.L. Clark, I.R. Willett, J. Waters, B.L. Campbell, and D. Outhet. 1984. Erosion history in Burrinjuck Reservoir, NSW, pp. 221-229. In: R.J. Loughran (ed.), **Drainage basin erosion and sedimentation**, University of Newcastle, Newcastle, Australia.
- Wasson, R.J., R.K. Mazari, B.J. Starr, and G. Clifton. 1998. The recent history of erosion and sedimentation on the Southern Tablelands of southeastern Australia: sediment flux dominated ny channel incision. **Geomorphology** 24:291-308.
- Wasson, R.J., L.J. Olive, and C.J. Rosewell. 1996. Rayes of erosion and sediment transport in Australia, p. 139-148. In: D.E. Walling and B.W. Webb. (Eds.), **Erosion and Sediment Yield: Global and Regional Perspectives**, International Association of Hydrological Sciences Publication No. 236, Wallingford, UK.
- Watmough, S. A., T.C. Hutchinson, and R.D. Evans. 1998. Douglas Quantitative analysis of sugar maple tree rings by laser ablation in conjunction with ICP-MS. **Journal of Environmental Quality** 27(5):1087-1094

- Waugh, W.J., J. Carroll, J.D. Abraham, and D.S. Landeen. 1998. Applications of dendrochronology and sediment geochronology to establish reference episodes for evaluations of environmental radioactivity. **Journal of Environmental Radioactivity** 4 (3):269-286.
- Weigers, J. 1996. Prediction of solid/liquid distribution coefficients of radiocaesium in soils and sediments. Part II. A new procedure for solid phase speciation of radiocaesium. **Applied Geochemistry** 11:595-600.
- Wauters, J., and A. Cremers. 1996. Effect of particle concentration and fixation on radiocesium sorption. **Environmental Science and Technology** 30(10):2892-2898.
- Wauters, J., A. Elsen, A. Cremers, A.V. Konoplev, A.A. Bulgakov, and R.N.J. Comans. 1996. Prediction of solid/liquid distribution coefficients of radiocaesium in soils and sediments. Part one. A simplified procedure for the solid phase characterization. **Applied Geochemistry** 11:587-592.
- Wauters, J., L. Sweeck, E. Valcke, A. Elsen, and A. Cremers. 1994. Availability of radiocesium in soils: A new methodology. **Science of the Total Environment** 157:239-248.
- Wauters, J., M. Vidal, A. Elsen, and A. Cremers. 1996. Prediction of solid/liquid distribution coefficients of radiocaesium in soils and sediments. Part two: a new procedure for solid phase speciation of radiocaesium. **Applied Geochemistry** 11:595-599.
- Weigand, S., W. Schimmack, and K. Auerswald. 1998. The enrichment of ^{137}Cs in the soil loss from small agricultural watersheds. **Zeitschrift für Pflanzenernährung und Bodenkunde** 16(4):479-484.
- Weis, D.A., J.C. Callaway, and R.M. Gersberg. 2001. Vertical accretion rates and heavy metal chronologies in wetland sediments of the Tijuana Estuary. **Estuaries** 24(6A):840-850.
- Wendling, L.A., J.B. Harsh, C.D. Palmer, M.A. Hamilton, and M. Flury. 2004. Cesium sorption to illite as affected by oxalate. **Clays and Clay Minerals** 52(3):375-381.
- Wenning, R.J., N.L. Bonnevie, and S.L. Huntley. 1994. Accumulation of metals, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons in sediments from the lower Passaic River, New Jersey. **Archives of Environmental Contamination Toxicology** 27:64-81.
- Wheatcroft, R.A., and C.K. Sommerfield. 2005. River sediment flux and shelf sediment accumulation rates on the Pacific Northwest margin. **Continental Shelf Research** 25(3):311-332.

- Wheeler, A.J., F. Oldfield, and J.D. Orford. 1999. Depositional and post-depositional controls on magnetic signals from salt marshes on the north-west coast of Ireland. **Sedimentology** 46(3):545-558.
- Wheeler, A.J., J.D. Orford, and O. Dardis. 1998. Saltmarsh deposition and its relationship to coastal forcing over the last century on the north-west coast of Ireland. **Geologie en Mijnbouw** 77(3): 295-310.
- Wheeler, D.A. 1988. Atmospheric dispersal and deposition of radioactive material from Chernobyl. **Atmos. Environmental** 22:853-863.
- Whicker, F.W. 1983. Radionuclide transport processes in terrestrial ecosystems. **Journal of Radiation Research** 94:135-150.
- Whicker, F.W., W.C. Nelson, and A.F. Gallegos. 1972. Fallout ^{137}Cs and ^{90}Sr in trout from mountain lakes in Colorado. **Health Physics** 23:519-527.
- Whicker, F.W. and J.E. Pinder III. 2002. Food chains and biogeochemical pathways: Contributions of fallout and other radiotracers. **Health Physics** 82(5):680-689.
- Whicker, F.W., J.E. Pinder III, J.W. Bowling, J.A. Alberts, and I.L. Brisbin Jr. 1990. Distribution of long-lived radionuclides in an abandoned reactor cooling reservoir. **Ecology Monographs** 60:471-496.
- Whicker, F.W., and V. Schultz. 1982. **Radioecology: nuclear energy and the environment**. CRC Press, Boca Raton, FL.
- Whicker, J.J., F.W. Whicker, and S. Jacobi. 1994. Cs-137 in sediments of Utah lakes and reservoirs - Effects of elevation, sedimentation rate and fallout history. **Journal of Environmental Radioactivity** 23:265-283.
- White, P.J., and M.R. Broadley. 2000. Mechanisms of caesium uptake by plants. **New Phytologist** 147(2):241-256.
- Whitehead, N.E., R.G. Ditchburn, W.J. McCabe, W.J. Mason, J. Irwin, R.A. Pickrill, and G.R. Fish. 1998. Application of natural and artificial fallout radionuclides to determining sedimentation rates in New Zealand lakes. **New Zealand Journal of Marine Freshwater Research** 32(3):489-503.
- Whitelock, A., and R.J. Loughran. 1994. Sediment production and storage in an urbanizing basin, Lake Macquarie, New South Wales, Australia. **International Association of Hydrological Sciences Publication** 224:103-110.

- Whiting, P.J., E.C. Bonniwell, and G. Matisoff. 2001. Depth and areal extent of sheet and rill erosion based on radionuclides in soils and suspended sediment. **Geology** 29(12):1131-1134.
- Whiting, P.J., E.C. Bonniwell, and G. Matisoff. 1999. A mass balance method for determining the depth area of rill and sheetwash erosion of soils using fallout radionuclides (^7Be , ^{137}Cs , ^{210}Pb). **EOS (Transaction of the American Geophysical Union)** 80:F445. Abstract
- Whitmore, T.J., M. Brenner, and C.L. Schelske. 1996. Highly variable sediment distribution in shallow, wind-stressed lakes: A case for sediment-mapping surveys in paleolimnological studies. **Journal of Paleolimnology** 15 (3):207-221.
- Wicherek, S.P., and C. Bernard. 1995. Assessment of soil movement in a watershed from Cs-137 and conventional measurements (example: the Parisian Basin). **Catena** 25:141-151.
- Widdows, J., A. Blauw, C.H.R. Heip, P.M.J. Herman, C.H. Lucas, J.J. Middelburg, S. Schmidt, M.D. Brinsley, F. Twisk, and H. Verbeek. 2004. Role of physical and biological processes in sediment dynamics of a tidal flat in Westerschelde Estuary, SW Netherlands. **Marine Ecology-Progress Series** 274:41-56.
- Widerlund, A., and P. Roos. 1994. Varved sediment in the Kalix River Estuary, Northern Sweden. **Aqua Fennica** 24:163-169.
- Wieland, E., P.H. Santschi, and J. Beer. 1991. A multitracer study of radionuclides in Lake Zurich, Switzerland. 2. Residence times, removal processes and sediment focussing. **Journal of Geophysical Research** 96:17067-17080.
- Wieland, E., P.H. Santschi, P. Hohener, and M. Strum. 1993. Scavenging of Chernobyl ^{137}Cs and ^{210}Pb in Lake Sempach, Switzerland. **Geochimica et Cosmochimica Acta** 57:2959-2979.
- van Wijngaarden, M., C. Rigollet, and R.J. De Meijer. 2002. Assessment of historic flood plain sedimentation rates along the River Meuse in The Netherlands using ^{137}Cs dating with PHAROS, p. 389-397. In: F.J. Dyer, M.C. Thoms, and J.M. Olley (eds.), The Structure, Function and Management Implications of Fluvial Sedimentary Systems, **International Association of Hydrological Sciences Publication No. 276**.
- Wildi, W., J. Dominik, J-Luc Loizeau, R.L. Thomas, P.-Yves Favarger, L. Haller, A. Perroud, and C. Peytremann. 2004. River, reservoir and lake sediment contamination by heavy metals downstream from urban areas of Switzerland. **Lakes and Reservoirs: Research and Management** 9(1):75-87.

- Wilken, R.D., I. Moreira, and A. Rebello. 1986. ^{210}Pb and ^{137}Cs fluxes in a sediment core from Guanabara Bay, Brazil. **Science of the Total Environment** 58:195-198.
- Wilkerson, D.F., S. Arya, and B.L. Wilson. 1993. Investigations of radionuclides in the aqueous sediment environment surrounding a coal burning power plant. **Journal of Environmental Science Health A28**:1005-1015.
- Wilkin, D.C., and S.J. Hebel. 1982. Erosion, redeposition and delivery of sediment to midwestern streams. **Water Resources Research** 18:1278-1282.
- Wilkins, B.T., N. Green, I.K. Haslam, D.A. Huntley, K.R. Dyer, D. Cavrot, M.J. Tooley, and Y. Zong. 1999. Potential incursion of marine sediment inland during storms: the radiological importance of actinides. **Journal of Environmental Radioactivity** 44(2-3):371-388.
- Williams, H. 2003. Modeling shallow autocompaction in coastal marshes using cesium-137 fallout: Preliminary results from the Trinity River Estuary, Texas. **Journal of Coastal Research** 19(1):180-188.
- Williams, H.L.F. 1995. Assessing the impact of weir construction on recent sedimentation using cesium-137. **Environmental Geology** 26:166-171.
- Williams, H.F.L., and T.S. Hamilton. 1995. Sedimentary dynamics of an eroding tidal marsh derived from stratigraphic records of Cs-137 fallout, Fraser Delta, British Columbia, Canada. **Journal of Coastal Research** 11:1145-1156.
- Wilson, G.C., A.E. Litherland, and J.C. Rucklidge. 1984. Dating of sediments using accelerator mass spectrometry. **Chemical Geology** 44:1-17.
- Wilson, C.G., G. Matisoff, and P.J. Whiting. 2003. Short-term erosion rates from a Be-7 inventory balance. **Earth Surface Processes and Landforms** 28(9):967-977.
- Wilson, T.R.S. 1974. Caesium-137 as a water movement tracer in the St. George's Channel. **Nature** 248:125-127.
- Winkelmann, I., G.N. Romanov, P. Goloshapov, P. Gesewsky, S. Mundigl, H. Buchroeder, M. Thomas, C. Brummer, and W. Burkart. 1998. Measurements of radioactivity in environmental samples from the Southern Urals. **Radiation Environmental Biophysics** 37(1):57-61.
- Winkelmann, I., C. Strobl, and M. Thomas. 2004. Aerial measurements of artificial radionuclides in Germany in case of a nuclear accident. **Journal of Environmental Radioactivity** 72(1-2):225-231.

- Winter, L.T., I.D.L. Foster, S.M. Charlesworth, and J.A. Lees. 2001. Floodplain lakes as sinks for sediment-associated contaminants - a news source of proxy hydrological data? **Science of the Total Environment** 266(1-3):187-194.
- Wiranatha, A.S., C.W. Rose, and M.S. Salama. 2001. A comparison using the caesium-137 technique of the relative importance of cultivation and overland flow on soil erosion in a steep semi-tropical sub-catchment. **Australian Journal of Soil Research** 39(2):219-238.
- Wirth, E. L. Hiersche, L. Kammerer, G. Krajewska, R. Krestel, S. Mahler, and R. Rommelt. 1994. Transfer equations for Cesium-137 for coniferous forest understory plant species. **Science of the Total Environment** 157:163-170.
- Wise, S.W. 1980. Caesium-137 and lead-210: a review of the technique and application to geomorphology, pp. 109-127. *In*: R.A. Cullingford, D.A. Davidson, and J. Lewin (eds.), **Timescales in geomorphology**, Wiley, London.
- Wise, S. 1977. **The use of fallout radionuclides Pb-210 and Cs-137 in estimating denudation rates and in soil erosion measurements**. Geography Department, King's College, London, Occasional Paper 7, 38 pp.
- Witinok, P.M. 1992. **On the relationship between sediment deposition and land use changes in a lacustrine wetland**. Doctor's Thesis, University of Iowa, Iowa City, Iowa.
- Witkamp, M., and B. Barzansky. 1968. Microbial immobilization of ^{137}Cs in forest litter. **Oikos** 19:392-395.
- Witkamp, M., and M.L. Frank. 1970. Effects of temperature, rainfall and fauna on transfer of ^{137}Cs , K, Mg and mass in consumer-decomposer microcosms. **Ecology** 51:466-474.
- Wolfe, B. H.J. Kling, G.J. Brunskill, and P. Wilkinson. 1994. Multiple dating of a freeze core from lake 227, an experimentally fertilized lake with varved sediment. **Canadian Journal of Fisheries and Aquatic Science** 51:2274-2285.
- Wolterbeek, H.Th., Z. Jeran, T. Verburg, J.J.M. de Goeij, and J. van Dam. 2004. Chernobyl ^{137}Cs in lichens: Use of specific activity showing differences in transport routes of Cs and ^{137}Cs . **Journal of Radioanalytical and Nuclear Chemistry** 259(1):13-18.
- Wong, G.T.F., and C.S. Moy. 1984. Cesium-137, metals and organic carbon in sediments of the James River estuary, Virginia. **Estuaries and Coastal Shelf Science** 18:37-49.
- Wong, H.K.T., J.O. Nriagu, and R.D. Coker. 1984. Atmospheric input of heavy metals chronicled in lake sediment of the Algonquin Provincial Park, Ontario, Canada. **Chemical Geology** 44:187-210.
- Woodwell, G.M. 1969. Radioactivity and fallout: The model pollution. **Bioscience** 19:884-887.

- Wooldridge, D.D. 1965. Tracing soil particle movement with Fe-59. **Soil Science Society of America Proceedings** 29:469-472.
- Worsley, A.T., and F. Oldfield. 1988. Palaeoecological studies of three lakes in the highlands of Papua New Guinea. II. Vegetational history over the last 1600 years. **Journal of Ecology** 76:1-18.
- Wrenn, M.E., J.W. Lentsch, M. Eisenbud, G.J. Lauer, and G.P. Howells. 1971. Radiocesium distribution in water, sediment, and biota in the Hudson River estuary from 1964 through 1970. **Proceedings third national symposium on radioecology**. US Atomic Energy Commission, Oak Ridge, TN.
- Wright, S.M., B.J. Howard, P. Strand, T. Nylén, and M.S. Sickel. 1999. Prediction of ^{137}Cs deposition from atmospheric nuclear weapons test within the Arctic. **Environmental Pollution** 104:131-143.
- Wu, R.G. and H. Tiessen. 2002. Effect of land use on soil degradation in alpine grassland soil, China. **Soil Science Society of America Journal** 66(5):1648-1655.
- Wu, Y.H., S.M. Wang, W.L. Xia, Y.X. Zhu, and Y. Yin. 2001. Environmental variation in central Tibetan Plateau in the last 200 years. **Science in China Series D-Earth** 44(Suppl. S):332-337.
- Wu, Y., Z. Li, X. Zhang, and Y. Wang. 1994. Study of ^{137}Cs method used in soil erosion and sediment delivery on sloping fields in gully area on loessal plateau. **Bulletin of Soil and Water Conservation** 14(2):22-26. (In Chinese)
- Xiang, L., X.X. Lu, D.L. Higgitt, and S.M. Wang. 2002. Recent lake sedimentation in the middle and lower Yangtze basin inferred from Cs-137 and Pb-210 measurements. **Journal of Asian Earth Sciences** 21(1):77-86.
- Xu, J.Y., G.J. Wang, C.S. Wang, R.G. Huang, and J.A. Chen. 1999. The vertical profiles of ^{210}Pb and ^{137}Cs and its dating in recent sediments of Lake Erhai and Lake Lugu. **Journal of Lake Science** 11(2):110-116.
- Yeager, K.M., P.H. Santschi, J.D. Phillips, and B.E. Herbert. 2005. Suspended sediment sources and tributary effects in the lower reaches of a coastal plain stream as indicated by radionuclides, Loco Bayou, Texas. **Environmental Geology** 47(3):382-395.
- Yamada, M. and Y. Nagaya. 2000. Vertical profiles, inventories, and activity ratios of Pu239+240 and Cs-137 in sediments from Sagami Bay, western Northwest Pacific margin. **Journal of Radioanalytical and Nuclear Chemistry** 246(2):369-378.

- Yamada, M., and Y. Nagaya. 2000. Pu239+240 and Cs-137 in sediments from Tokyo Bay: Distribution and inventory. **Journal of Radioanalytical and Nuclear Chemistry** 245(2):273-279.
- Yamagata, N., S. Matsuda, and M. Chiba. 1969. Radioecology of cesium-137 and strontium-90 in a forest. **Journal of Radiation Research** 10:107-112.
- Yamagata, N., S. Matsuda, and K. Kodaira. 1963. Run-off of caesium-137 and strontium-90 from rivers. **Nature** 200:668-669.
- Yamamoto, M., M. Hoshi, J. Takada, S. Oikawa, I. Yoshikawa, T. Takatsuji, A.K. Sekerbaev, and B.I. Gusev. 2002. Some aspects of environmental radioactivity around the former Soviet Union's Semipalatinsk nuclear test site: Local fallout Pu in Ust'-Kamenogorsk district. **Journal of Radioanalytical and Nuclear Chemistry** 252(2):373-394.
- Yamamoto, M., M. Hoshi, J. Takada, A. Sakaguchi, K.N. Apsalikov, and B.I. Gusev. 2004. Current levels and distribution of Cs-137 and Pu isotopes in soil on the Kazakhstan territory of the Kazakhstan-Chinese border: Semipalatinsk and Lob Nor nuclear test sites detonation. **Journal of Radioanalytical and Nuclear Chemistry** 261(3):533-545.
- Yamamoto, M. J. Kuwabara, and D.J. Assinder. 1998. Curium isotopes and americium-242m in Irish Sea sediment. **Radiochimica Acta** 83(3):121-126.
- Yamamoto, M., M. Matsui, S. Igarashi, M. Yoshioka, H. Hayakawa, and T. Kitagawa. 1979. Distribution and behavior of ²³⁹Pu, ¹³⁷Cs, and ⁶⁰Co in sediment at Urazoko Bay. **Journal of Radiation Research** 20:264-275.
- Yan, M., Y. Zhang, Y. Liu, Q. Zhao, X. Zhang, Y. Wang, and S. Li. 1991. Use of cesium-137 to estimate erosion rates, p. 16. *In: Second international conference on methods and applications of radioanalytical Chemistry*, Washington, DC.
- Yan, M., and Y. Zhang. 1998. Prospects of caesium-137 used in the study of aeolian processes. **Journal of Desert Research** 18:182+. (In Chinese)
- Yan, P. and Z.B. Dong. 2001. Dust deposition and its measurement by ¹³⁷Cs in the Gonghe Basin, Qinghai Province, China. **Environmental Science** 22(2):32-37. (Chinese)
- Yan, P., Z.B. Dong, G.R. Dong, X.B. Zhang, and Y.Y. Zhang. 2001. Preliminary results of using Cs-137 to study wind erosion in the Qinghai-Tibet Plateau. **Journal of Arid Environments** 47(4):443-452.
- Yan, P., G.G. Dong, and Z.B. Dong. 2001. Cs-137 tracing of lacustrine sediments in the Dalian Lake, Qinghai Province, China. **Chinese Science Bulletin** 46(Suppl. S):83-87.

- Yan, P., G. Dong, X. Zhang, and Y. Zhang. 2000. Preliminary results of the study of wind erosion in Qinghai-Tibetan Plateau using ^{137}Cs technique. **Chinese Science Bulletin** 45(11):1019-1025.
- Yan, P. and P.J. Shi. 2004. Using the Cs-137 technique to estimate wind erosion in Gonghe Basin, Qinghai Province, China. **Soil Science** 169(4):295-305.
- Yan, P., P.J. Shi, and G.R. Dong. 2002. Application of Caesium-137 technique on wind erosion in Gonghe Basin, Qinghai Province, p. 142-146. In: J.A. Lee and T.M. Zobeck (eds.), **Proceedings of ICAR5/GCTE-SEN Joint Conference**, International Center for Arid and Semiarid Lands Studies, Texas Tech University, Lubbock, Texas, USA Publication 02-2.
- Yan, P., P.J. Shi, S.Y. Gao, L. Chen, X.B. Zhang, and L.X. Bai. 2002. Cs-137 dating of lacustrine sediments and human impacts on Dalian Lake, Qinghai Province, China. **Catena** 47(2):91-99.
- Yan, P. and X.B. Zhang. 1998. Prospects of caesium-137 used in study of aeolian processes. **Journal of Desert Research** 18(2):182-187. (Chinese)
- Yan, P., D. Zhibao, D. Guangrong, Z. Zinbao, and Z. Yiyun. 2001. Preliminary results of using ^{137}Cs to study wind erosion in the Inghai-Tibet plateau. **Journal of Arid Environments**. 47:443-452.
- Yang, H., Q. Chang, M. Du, K. Minami, and T. Hatta. 1998. Quantitative model of soil erosion rate using ^{137}Cs for uncultivated soils. **Soil Science** 163(3):248-257.
- Yang, H., Q. Chang, M. Du, K. Minami, and T. Hatta. 1997. An estimating model of soil erosion rate using ^{137}Cs in soil profiles for uncultivated soils. **Proceeding of the International Congress on Modelling and Simulation**, Dec. 8-11, 1997, Hobart, Australia.
- Yang, H., M. Du, Q. Zhao, K. Minami, and T. Hatta. 2000. A quantitative model for estimating mean annual soil loss in cultivated land using ^{137}Cs measurements. **Soil Science and Plant Nutrition** 46(1):69-79.
- Yang, H., M. Du, Q. Zhang, and J. Yang. 1999. Quantitative model considering surface enrichment to estimate soil erosion using ^{137}Cs . **Journal of soil Erosion and Soil and Water Conservation** 5(1):42-48. (In Chinese)
- Yang, H., M. Du, Q. Chang, K. Minami, and T. Hatta. 1998. Quantitative model for estimating soil erosion rates using ^{137}Cs . **Pedosphere** 8(3):211-220.

- Yasuda, H., S. Uchida, Y. Muramatsu, and S. Yoshida. 1995. Sorption of manganese, cobalt, zinc, strontium, and cesium onto agricultural soils: Statistical analysis on effects of soil properties. **Water Air Soil Pollution** 83:85-96.
- Yeager, K.M. and S.H. Santschi. 2003. Invariance of isotope ratios of lithogenic radionuclides: more evidence for their use as sediment source tracers. **Journal of Environmental Radioactivity** 69(3):159-176.
- Yi, C.L., P.G. Appleby J.F. Boyle, N.L. Rose, X.R. Dai, and P. Xie. 2004. The sedimentary record of a significant flooding event in Lake Taihu on the Yangtze Delta, China. **Journal of Coastal Research** Summer: 89-100.
- Yera, T.S., V.R. Vallejo, E. Valcke, C. Colle, H. Forstel, R. Millan, and H. Jougllet. 1999. Cs-137 and Sr-90 root uptake prediction under close-to-real controlled conditions. **Journal of Environmental Radioactivity** 45(3):191-217.
- Yoshida, S., Y. Muramatsu, A.M. Dvornik, T.A. Zhuchenko, and I. Linkov. 2004. Equilibrium of radiocesium with stable cesium within the biological cycle of contaminated forest ecosystems. **Journal of Environmental Radioactivity** 75(3):301-313.
- Young, T.C., A.G. Collins, and R.L. Sinsabaugh. 1994. Assessing sediment accumulation in a eutrophic Lake in Northern New York. **Lake and Reservoir Management** 10(2):85-93.
- Yu, J., and I. Neretnieks. 1997. Theoretical evaluation of a technique for electrokinetic decontamination of soils. **Journal of Contaminant Hydrology** 26(1/4):291-299.
- Yushkov, P.I., T.A. Chueva, E.N. Karavaeva, I.V. Molchanova, and N.V. Kulikov. 1993. Contents of Cs-134+137 and Sr-90 in the crown of birch trees in the first years after the accident at the Chernobyl Nuclear Power Plant. **Russian Journal of Ecology** 24:70-74.
- Zachara, J.M., S.C. Smith, C.X. Liu, J.P. McKinley, R.J. Serne, and P.L. Gassman. 2002. Sorption of Cs⁺ to micaceous subsurface sediments from the Hanford site, USA. **Geochimica et Cosmochimica Acta** 66(2):193-211.
- Zajaczkowski, M., W. Szczucinski, and R. Bojanowski. 2004. Recent changes in sediment accumulation rates in Adventfjorden, Svalbard. **Oceanologia** 46(2):217-231.
- Zalewski, M., J. Kapala, Z. Mnich, and P. Zalewski. 2002. Variation of Cs-137 deposition in soil and lakes in the north-east region of Poland. **Nukleonika** 47(2):75-78.
- Zapata, F. 2004. Soil erosion and sedimentation studies using fallout radionuclides: Recent developments and future application, p. 415-426. In: Francaviglia, F. (ed.) **Agricultural impacts of soil erosion and biodiversity: Developing indicators for policy analysis**, Proceeding from an OECD Expert Meeting, Rome, Italy, March 2003.

- Zapata, F. 2003. Introduction "Field application of Cs-137 technique in soil erosion and sedimentation studies'. **Soil and Tillage Research** 69(1-2):1-2.
- Zapata, F. 2003. The use of environmental radionuclides as tracers in soil erosion and sedimentation investigations; recent advances and future development. **Soil and Tillage Research** 69(1-2):3-13.
- Zapata, F. 2002. **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**. Kluwer Academic Publishers, Dordrecht, The Netherlands, 219p.
- Zapata, F. 2002. Contribution of nuclear techniques to the development of integrated soil, water and nutrient management practices for increasing agricultural production. **Terra** 20(1):1-6.
- Zapata, F. 2001. Final report of the Co-ordinated Research Project on the Assessment of Soil Erosion through the use of the Cs-137 and related techniques as a basis for soil conservation, sustainable agricultural production and environmental protection. **IAEA-311-D1-RC-629-4**, International Atomic Energy Agency, Vienna, Austria.
- Zapata, F. 2001. Report of the FAO/IAEA Consultants meeting on the Assessment of soil conservation techniques for sustainable agricultural production. **IAEA Report-311-01CT01553**, International Atomic Energy Agency, Vienna, Austria.
- Zapata, F. and E. García-Agudo. 2000. Future prospects for the ¹³⁷Cs technique for estimating soil erosion and sedimentation rates. **Acta Geologica Hispanica** 35(3-4):197-205.
- Zapata, F., and E. García Agudo. 1998. **Report of the Second Research Coordination Meeting of the Coordinated Research Projects on "Assessment of soil erosion through the use of the Cs-137 and related techniques as a basis for soil conservation, sustainable agricultural production and environmental protection" and "Sediment assessment studies by environmental radionuclides and their application to soil conservation measures"**, May 1998, Bucharest. IAEA, Vienna, Austria.
- Zapata, F., and E. Garcia-Agudo. 1996. **Report on the first research co-ordinating meeting of the co-ordinated research programmes on assessment of soil erosion..., and sediment assessment studies..., 11-15 November 1996**. International Atomic Energy Agency, Vienna, Austria.
- Zapata, F. and E. Garcia-Agudo, C. Hera, K. Rozanski, and K. Froehlich. 1995. Use of nuclear techniques in soil erosion and siltation studies, pp. 631-642. *In*: International Atomic Energy Agency, **Nuclear techniques in soil-plant studies for sustainable agriculture**

and environmental preservation, International Atomic Energy Agency, Vienna, Austria.

- Zapata, F., E. Garcia-Agudo, J.C. Ritchie, and P.G. Appleby. 2002. Introduction, p. 1-14. In: Zapata, F. (ed.). **Handbook for the assessment of soil erosion and sedimentation using environmental radioactivity**, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Zebarth, B.J., H. Rees, J. Walsh, L. Chow, and D.J. Pennock. 2002. Soil variation within a hummocky podzolic landscape under intensive potato production. **Geoderma** 110(1-2):19-33.
- Zhang, C.L., J.R. Gong, X.Y. Zou, G.R. Dong, X.R. Li, Z.B. Dong, and Z. Qing. 2003. Estimates of soil movement in a study area in Gonghe Basin, north-east of Qinghai-Tibet Plateau. **Journal of Arid Environments** 53(3):285-295.
- Zhang, C.L., X.Y. Zou, G.R. Dong, X.B. Zhang, and Z. Qin. 2002. Characteristics of Cs-137 deposition in steppe area. **Chinese Science** 47(10):848-853.
- Zhang, J.W., M. Jin, F.H. Chen, R.W. Battarbee, and A.C.G. Henderson. 2003. High-resolution precipitation variations in the Northeast Tibetan Plateau over the last 800 years documented by sediment cores of Qinghai Lake. **Chinese Science Bulletin** 48(14):1451-1456.
- Zhang, X., M. Feng, and A. Wen. 2004. Using Cs-137 measurements and reservoir deposits to investigate the effects of ceasing cultivation on sediment yields and sediment sources in a small catchment on the Loess Plateau of China. **International Association of Hydrological Sciences Publication** 288:67-74.
- Zhang X., M. Feng, and A. Wen. 2002. Investigation of Erosion Rates and Sediment Sources by Using ¹³⁷Cs Technique in the Loess Plateau of China. **12th ISCO Conference**, May 26-31, 2002. Beijing, China, Volume 2, pp.450-456.
- Zhang, X., X. He, and Y. Qi. 2005. Interpreting ¹³⁷Cs depth profiles with no single peak in lake deposits in China, p. 78-84. In: D.E. Walling and A.J. Horowitz(eds.). **Sediment Budgets 1. International Association of Hydrological Sciences Publication 291**, Wallingford, UK, IAHS Press.
- Zhang, X.B., D.L. Higgitt, and D.E. Walling. 1990. A preliminary assessment of the potential for using caesium-137 to estimate rates of soil erosion in the Loess Plateau of China. **Hydrologic Science Journal** 35:243-251.
- Zhang, X.B., S. Li, T.A. Quine, and D.E. Walling. 1993. The effects of tillage on the estimates of erosion rates in cultivated soils using ¹³⁷Cs measurements. **Chinese Science Bulletin** 38:2072-2076.

- Zhang, X.B., S. Li, C. Wang, W. Tan, Q. Zhao, Y. Zhang, M. Yan, Y. Liu, J. Jiang, J. Xiao, and J. Zhou. 1989. Use of caesium-137 measurements to investigate erosion and sediment sources in a small drainage basin in the Loess Plateau of China. **Hydrological Processes** 3:317-323.
- Zhang, X.B., S.L. Li, C.H. Wang, W.P. Tan, Q.C. Zhao, Y.Y. Zhang, M.Q. Yan, Y.L. Liu, J.J. Jiang, J.L. Xiao, and J. Zhou. 1990. A study of sediment delivery from a small catchment in the Loess Plateau by the ^{137}Cs method. **Chinese Science Bulletin** 35:38-41. (Chinese)
- Zhang, X.B., T.A. Quine, and D.E. Walling. 1998. Soil erosion rates on sloping cultivated land on the Loess Plateau near Ansai, Shaanxi Province, China: An investigation using ^{137}Cs and rill measurements. **Hydrology Proceedings** 12(1):171-189.
- Zhang, X.B. T.A. Quine, D.E. Walling, and Z. Li. 1997. The role and significance of tillage erosion in soil redistribution on terraces in the Loess Plateau, China. **Journal of Soil and Water Conservation** 52(4):305. (Abstract)
- Zhang, X.B. T.A. Quine, D.E. Walling, and Z. Li. 1994. Application of the caesium-137 technique in a study of soil erosion on gully slopes in a yaun area of the Loess Plateau near Xifeng, Gansu Province, China. **Geografiska Annaler Series A. Physical Geography** 76A:103-120.
- Zhang, X.B., T.A. Quine, D.E. Walling, and A.B. Wen. 2000. A study of soil erosion on a steep cultivated slope in the Mt. Gongga Region near Luding, Sichuan, China, using the ^{137}Cs technique. **Acta Geologica Hispanica** 35(3-4):229-238.
- Zhang, X.B., L. Shaolong, L. Chenghua, T. Wanpei, A. Quingchang, Z. Yiyun, Y. Meiqiong, L. Yalum, J. Jingjiang, X. Jule, and J. Zhou. 1989. Use of caesium-137 measurements to investigate erosion and sediment sources within a small drainage basin on the loess plateau of China. **Hydrological Processes** 3:317-323.
- Zhang, X., and D.E. Walling. 2005. Characterizing land surface erosion from cesium-137 profiles in lake and reservoir sediments. **Journal of Environmental Quality** 34(2):514-523.
- Zhang, X.B. D.E. Walling, M.Y. Feng, and A.B. Wen. 2003. Pb-210(ex) depth distribution in soil and calibration models for assessment of soil erosion rates from Pb-210(ex) measurements. **Chinese Science Bulletin** 48(8):813-818.
- Zhang, X., D.E. Walling, and Q. He. 1999. Simplified mass balance models for assessing soil erosion rates on cultivated land using caesium-137 measurements. **Hydrologic Science Journal** 44(1):33-46.

- Zhang, X., D.E. Walling, T.A. Quine, and A. Wen. 1997. Use of reservoir deposits and caesium-137 measurements to investigate the erosional response of a small drainage basin in the rolling Loess Plateau region of China. **Land Degradation and Development** 8(1):1-16.
- Zhang, X., Y. Zhang, A. Wen, and M. Feng. 2003. Assessment of soil losses on cultivated land by using the ¹³⁷Cs technique in the Upper Yangtze River Basin in China. **Soil and Tillage Research** 69(1-2):99-106.
- Zhang, X.C., J.M. Friedrich, M.A. Nearing, and L.D. Norton. 2001. Potential use of rare earth oxides as tracers for soil erosion and aggregation studies. **Soil Science Society of America Journal** 65(5):1508-1515.
- Zhang, X.C., M.A. Nearing, and L.D. Norton. 2001. Tracing soil erosion and soil aggregation with rare earth oxides, pp. 230-233. In: J.C. Ascough, II and D.C. Flanagan (eds.) **Soil Erosion Research for the 21st Century**, American Society of Agricultural Engineers, St. Joseph, MI.
- Zhang, X.C., M.A. Nearing, V.O. Polyakov, and J.M. Friedrich. 2003. Using rare earth oxide tracers for studying soil erosion dynamics. **Soil Science Society of America Journal** 67(1):279-288.
- Zhang, Y., B.-Z. Peng, X. Gao, X.-Y. Tang, and H. Yang. 2002. Impact on Soil Erosion and Soil Properties by Human Disturbance--Case of the Low Mountains and Hills of Yixing, South Jiangsu Province. **Scientia Geographica Sinica/Dili Kexue** 22(3):336-341.
- Zhang, Y., B.Z. Peng, X. Gao, and H. Yang. 2004. Degradation of soil properties due to erosion on sloping land in southern Jiangsu Province, China. **Pedosphere** 14(1):17-26.
- Zhang, Y., and T.A. Quine. 2000. TBGIS: an integrated toolkit for terrain-based simulation of erosion and deposition patterns on arable land using Arc/Info GIS. **Proceedings 9th International Symposium on Spatial Data Handling**, Beijing, PRC, August 2000, Section 8a pp. 46-59.
- Zhang, Y., H. Yang, M.Y. Du, X.Y. Tang, H. Zhang, and B.Z. Peng. 2003. Soil erosion study on hillside in southern Jiangsu Province using the cesium-137 tracer technique. **Soil Science and Plant Nutrition** 49(1):85-92.
- Zheng, J., and M. Yamada. 2004. Sediment core record of global fallout and Bikini close-in fallout Pu in Sagami Bay, western Northwest Pacific margin. **Environmental Science & Technology** 38(13):3498-3504.

- Zheleznyak, M.I., and N. Yu Margvelashvil. 1997. Numerical simulation of three-dimensional fields of Chernobyl's radionuclides in the Kiev water reservoir. **Dopovidi Natsional'noyi Akademiyi Nauk Ukrayiny** 0(12):165-169. (Russian)
- Zhu, L.P., L. Chen, B.Y. Li, X.F. Li, W.L. Xia, and J.G. Li. 2002. Environmental changes reflected by the lake sediments of the South Hongshan Lake, Northwest Tibet. **Science in China Series D-Earth** 45(5):430-439.
- Zhu, L., P. Zhang, W. Xia, B. Li, and L. Chenpp. 2003. 1400-year cold/warm fluctuations reflected by environmental magnetism of a lake sediment core from the Chen Co, southern Tibet, China. **Journal of Paleolimnology** 29(4):391-401.
- Zhu, Y.G. 2000. Soil contamination with radionuclides and potential remediation. **Chemosphere** 41(1/2):121-128.
- Zhu, Y. G., G. Shaw, A. F. Nisbet, and B. T. Wilkins. 2000. Effect of potassium starvation on the uptake of radiocesium by spring wheat (*Triticum aestivum* cv. *Tonic*). **Plant and Soil** 220:27-34.
- Zhu, Y.G., and E. Smolders. 2000. Plant uptake of radiocaesium: a review of mechanisms, regulation and application. **Journal of Experimental Botany** 51(351):1635-1645.
- Zhuang, J., M. Flury, and Y. Jin. 2003. Colloid-facilitated Cs transport through water-saturated Hanford sediment and Ottawa sand. **Environmental Science & Technology** 37(21):4905-4911.
- Zhuang, S.Y., M.K. Wang, C.Y. Wu, and H. Yang. 2005. Soil erosion rate estimation using ^{137}Cs technique in red soil region, Southern China. **Soil Science** 170(2):120-128.
- Zong, Y., I. Shennan, R.A. Combellick, S.L. Hamilton, and M.M. Rutherford. 2003. Microfossil evidence for land movements associated with the AD 1964 Alaska earthquake. **Holocene** 13(1):7-20.
- Zubareva, I.F., L.P. Moshalevich, and C.V. Kovenya. 1989. Transport of ^{90}Sr from drained soil during water erosion processes. **Pochvovedenie** 4:144-147. (Russian)
- Zucker, C.R., Olsen, I.L. Larsen, and N.H. Cutshall. 1984. Inventories and sorption-desorption trends in radiocesium and radiocobalt in James River estuary sediments. **Environmental Geology and Water Science** 6:171-182.
- Zuo-Zhizheng, Z. 1992. Dynamic behaviour of ^{210}Pb , ^{210}Po and ^{137}Cs in coastal and shelf environments, pp. 129-145. In: **Deposition fluxes of atmospheric ^{210}Pb in the Netherlands**. Thesis Rijksuniversiteit Utrecht (Geologica Ultraiectina 87), 156 pp.

Zuo, Z.Z., D. Eisma, and G.W. Berger. 1991. Determination of sediment accumulation and mixing rates in the Gulf of Lyons, Mediterranean Sea. **Oceanologica Acta** 14:253-263.

Zwolsman, J.J.G., G.W. Berger, and G.T.M. van Eck. 1993. Sediment accumulation rates, historical inputs, post-depositional mobility and retention of major elements and trace elements in salt marsh sediments of the Scheldt estuary SW Netherlands. **Marine Chemistry** 44:73-94.

Zygmunt, J., S. Chibowski, and Z. Klimowicz. 1998. The effect of sorption properties of soil minerals on the vertical migration rate of cesium in soil. **Journal of Radioanalytical and Nuclear Chemistry** 231:57-62.

Zygmunt, J., S. Chibowski, S., and Z. Klimowicz. 1997. Studies of radiocaesium migration in soils with high organic matter content. **Polish Journal of Environmental Studies** 6(6):57-60.