

On-Line Electrochemistry/Mass Spectrometry Literature (non-volatiles)

Patents

Gamace, P. H.; Waraska, J. C. "Pharmaceutical Discovery and Development." U.S. 2005/0148838 A1; July 7, 2005.

Granger, M. C.; Van Berkel, G. J. "Porous Electrospray Emitter." U.S. 2004/0245457 A1; December 9, 2004.

Van Berkel, G. J. "Planar Flow-By Electrode Capacitive Electrospray Ion Source." U.S. Patent 6,677,593; January 13, 2004.

Van Berkel, G. J. "Thin-Channel Electrospray Emitter." U.S. Patent 6,784,439 B2; August 31, 2004.

Van Berkel, G. J. "Planar Flow-By Electrode Capacitive Electrospray Ion Source." U.S. Patent 6,677,593 B1; January 13, 2004.

Karst, U.; Diehl, G.; Hayen, H. "Coupling Electrochemistry to Mass Spectrometry and High Performance Liquid Chromatography." U.S. 2003/0062475 A1, April 3, 2003.

Lev, O.; Gun, J.; Modestov, A. D. "Scanning Capillary Chemical Microscopy (SCM/MS)." PCT/WO01/94931 A1, December 13, 2001.

Cole, R. B.; Xu, X. "Apparatus and Method for Rapid On-Line Electrochemistry and Mass Spectrometry." U.S. Patent 5,879,949; March 9, 1999.

Phillips, L. R.; Bartmess, J. E. "Electrochemical Sample Probe for Use in Fast Atom Bombardment Mass Spectrometry." U.S. Patent 4,719,349; January 12, 1988.

Ph.D. Dissertations and M.S. Theses

Liljegren, G. "Development and Investigations of Novel Sample Preparation Techniques – Electrochemical Extraction and Evaluation of Miniaturized Analytical Devices Coupled to Mass Spectrometry." Uppsala University (Sweden) **2005**.

Li, Y. "Electrospray Fundamentals and Non-Covalent Peptide-Lipid Interactions as Studied by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry." University of New Orleans, **2004**.

Nilsson, S. "Development of Sheathless Electrospray Mass Spectrometry and Investigations of Associated Electrochemical Processes: A Fairy Tale." Uppsala University (Sweden) **2004**.

Wetterhall, M. C. E. "Electrifying the Molecules of Live. Peptide and Protein Analysis by Capillary Electrophoresis Coupled to Electrospray Ionization Mass Spectrometry." Uppsala University (Sweden) **2004**.

- Hayen, H. "Liquid Chromatography Mass Spectrometry for the Analysis of Nonpolar compounds." University of Twente (The Netherlands) **2003**.
- Bökman, C. F. "Analytical Aspects of Atmospheric Pressure Ionisation in Mass Spectrometry." Uppsala University (Sweden) **2002**.
- Diehl, J. G. R. "Liquid Chromatography/Electrochemistry/Mass Spectrometry of Ferrocene Derivatives." University of Twente (The Netherlands) **2002**.
- Fong, W. Y. K. "A Novel Tip Design for Electrospray Mass Spectrometry at Nanoliter Flowrate." Chinese University of Hong Kong **2001**.
- Zhang, Tianyi "Electrochemistry Coupled On-Line with Mass Spectrometry and Its Applications." University of Florida **2001**.
- Jurva, J. U. "Electrochemistry On-Line with Mass Spectrometry: Instrumental Methods for In Vitro Generation and Detection of the Drug Metabolites." University of Groningen (The Netherlands) **1999**.
- Regino, M. C. S. "Design, Characterization and Applications of Electrochemical Cells for Electrochemistry/Mass Spectrometry (Conversion Efficiency)." University of Florida **1997**.
- Xu, X. "Electrochemical Electrospray Mass Spectrometry (Metallocenes, Nitrobenzene, Ferrocene, Polycyclic Aromatic Hydrocarbons)." University of New Orleans **1996**.
- Jones, J. A. "Ion Trap Mass Spectrometry: On-Line Electrochemistry and Improved Ion Detection Efficiency (Aromatic Amines)." University of Florida **1995**.
- Thompson, M. V. "Electrochemical and Mass Spectrometric Investigations of Biological Molecules (Mitomycin C, Purines, Amino Acids)." University of Florida **1994**.
- Volk, K. J. "Electrochemistry and Enzymes On-Line with Mass Spectrometry." University of Florida **1989**.
- Phillips, L. R. "Electrochemically Assisted Fast Atom Bombardment Mass Spectrometry." Indiana University **1988**.
- Getek, T. A. "The Melding of Electrochemistry with Thermospray Mass Spectrometry." University of Houston **1987**.

Subject Reviews

- Zhou, F. "Electrochemistry Combined On-line with Atomic Mass Spectrometry and Related Techniques for Trace Metal Analysis and Electrode Reaction Studies." *Tr. Anal. Chem.* **2005**, *24*, 218-227.
- Karst, U. "Electrochemistry/Mass Spectrometry (EC/MS) – A New Tool to Study Drug Metabolism and Reaction Mechanisms." *Angew, Chem. Int. Ed.* **2004**, *43*, 2476-2478.

Diehl, G.; Karst, U. "On-Line Electrochemistry – MS and Related Techniques." *Anal. Bioanal. Chem.* **2002**, 373, 390-398.

Zhou, F. "Stripping Analysis Combined On-Line with Inductively Coupled Plasma- Atomic Emission Spectrometry and with Inductively Coupled Plasma-Mass Spectrometry." *Electroanalysis* **1996**, 8, 855-861.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "Electrochemistry On Line with Mass Spectrometry: Insight into Biological Redox Reactions." *Anal. Chem.* **1992**, 64, 21A- 33A

Bittins-Cattaneo, B; Cattaneo, E; Königshoven, P; Vielstich, W. "New Developments in Electrochemical Mass Spectroscopy." In *Electroanalytical Chemistry, Vol. 17*; Bard A. J., Ed.; Marcel Dekker: New York, 1991, pp. 181-220.

Chang, H.; Johnson, D.C.; Houk, R. S. "In Situ Coupling Between Electrochemistry and Mass Spectrometry - A Literature Review." *Tr. Anal. Chem.* **1989**, 8, 328-333.

Atmospheric Pressure Chemical Ionization (APCI)/Atmospheric Pressure Photoionization (APPI)

2004

Diehl, G.; Wasinski, F.A.H.; Roberz, B.; Luftmann, H.; Schmidt, T. C.; Andersson, J. T.; Karst, U. "Liquid Chromatography/Electrochemistry/Mass Spectrometry as Screening Techniqe fo Alcohols and Phenols in Fuels." *Microchim Acta* **2004**, 146, 137-147.

Van Leewen, S. M.; Hayen, H.; Karst, U. "Liquid Chromatography – Electrochemistry – Mass Spectrometry of Polycyclic Aromatic Hydrocarbons." *Anal. Bioanal. Chem.* **2004**, 378, 917-925.

2003

Hayen, H.; Karst, U. "Analysis of Phenothiazine and Its Derivatives Using LC/Electrochemistry/MS and LC/Electrochemistry/Fluorescence." *Anal Chem.* **2003**, 75, 4833-4840.

2002

Diehl, G.; Karst, U. "Fast liquid Chromatography-Electrochemistry-Mass Spectrometry of Ferrocenecarboxylic Acid Esters." *J. Chromatogr.* **2002**, 974, 103-109.

Kertesz, V.; Van Berkel, G. J. "Surface-Assisted Reduction of Aniline Oligomers, N-Phenyl-1,4-Phenylenediimine and Thionin in Atmospheric Pressure Chemical Ionization and Atmospheric Pressure Photoionization." *J. Am. Soc. Mass Spectrom.* **2002**, 13, 109 117.

2001

Diehl, G.; Liesener, A.; Karst, U. "Liquid chromatography with post-column electrochemical treatment and mass spectrometric detection of non-polar compounds." *Analyst* **2001**, 126, 288-290.

Electrospray**2005**

Cammarata, V.; Guo, T.; Illies, A.; Li, L.; Shevlin, P. "Gas-Phase Observation of Multiply Charged C₆₀ Anions." *J. Phys. Chem. A* **2005**, *109*, 2765-2767.

Guo, T.; Li, L.; Cammarata, V.; Illies, A. "Electrochemical Electrospray Mass Spectrometric Studies of I⁻ and SCN⁻ at Gold and Platinum Electrodes: Direct Detection of (SCN)₃⁻." *J. Phys. Chem. B* **2005**, *109*, 7821-7825.

Jurva, U.; Bissel, P.; Isin, E. M.; Igarashi, K.; Kuttub, S.; Castagnoli, N., Jr. "Model Electrochemical-Mass Spectrometric Studies of the Cytochrome P450-Catalyzed Oxidations of Cyclic Tertiary Allylamines." *J. Am. Chem. Soc.* **2005**, *127*, 12368-12377.

Kertesz, V.; Van Berkel, G. J. "Monitoring Ionic Adducts to Elucidate Reaction Mechanisms: Reduction of Tetracyanoquinodimethane and the Oxidation of Triphenylamine Investigated Using On-Line Electrochemistry/Electrospray Mass Spectrometry." *J. Solid State Electrochem.* **2005**, *9*, 390-397.

Kertesz, V.; Van Berkel, G. J.; Granger, M. C. "Study and Application of a Controlled-Potential Electrochemistry-Electrospray Emitter for Electrospray Mass Spectrometry." *Anal. Chem.* **2005**, *77*, 4366-4373.

Liljegren, G.; Dahlin, A.; Zettersten, C.; Berquist, J.; Nyholm, L. "On-Line Coupling of a Microelectrode Array Equipped Poly(dimethylsiloxane) Microchip with an Integrated Graphite Electrospray Emitter for Electrospray Ionization Mass Spectrometry." *Lab on a Chip* **2005**, *5*, 1008-1016.

Liljegren, G.; Forsgard, N.; Zettersten, C.; Pettersson, J.; Svedberg, M.; Herranen, M.; Nyholm, L. "On-Line Electrochemically Controlled Solid-Phase Extraction Interfaced to Electrospray and Inductively Coupled Plasma Mass Spectrometry." *Analyst* **2005**, *130*, 1358-1368.

Van Leeuwen, S. M.; Blankert, B.; Kauffman, J-M.; Karst, U. "Prediction of Clozapine Metabolism by On-Line Electrochemistry/Liquid Chromatography/Mass Spectrometry." *Anal. Bioanal. Chem.* **2005**, *382*, 742-750.

2004

Arakawa, R.; Yamaguchi, M.; Hotta, H.; Osakai, T.; Kimoto, T. "Product Analysis of Caffeic Acid Oxidation by On-Line Electrochemistry/Electrospray Ionization Mass Spectrometry." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1228-1236.

Bökman, C. F.; Zettersten, C.; Sjöberg, P. J. R.; Nyholm, L. "A Setup for Coupling of a Thin-Layer Electrochemical Flow Cell to Electrospray Mass Spectrometry." *Anal. Chem.* **2004**, *76*, 2017-2024.

Diehl, G.; Wasinski, F.A.H.; Roberz, B.; Luftmann, H.; Schmidt, T. C.; Andersson, J. T.; Karst, U. "Liquid Chromatography/Electrochemistry/Mass Spectrometry as Screening Technique for Alcohols and Phenols in Fuels." *Microchim Acta* **2004**, *146*, 137-147.

Gamache, P. H.; Meyer, D. F.; Granger, M. C.; Acworth, I. N. "Metabolomic Applications of Electrochemistry/Mass Spectrometry." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1717-1726.

Modestov, A. D.; Gun, J.; Mudrov, A.; Lev, O. "Radical Electrochemical Flow Cell for On-Line Coupling with Mass Spectrometry: Theory and Electrochemical Oxidation of Dimethylaminomethyl Ferrocene." *Electroanalysis.* **2004**, *16*, 376--19.

Modestov, A. D.; Gun, J.; Lev, O. "On-Line Electrochemical - Mass Spectrometry Study of the Mechanism, of Oxidation of *N,N*-Dimethyl-*p*-phenylenediamine in Aqueous Electrolytes." *J. Electroanal. Chem.* **2004**, *565*, 7-19.

Ochran, R. A.; Konermann, L. "Effects of Ground Loop Currents on Signal Intensities in Electrospray Mass Spectrometry." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1748-1754.

Permentier, H. P.; Bruins, A. P. "Electrochemical Oxidation and Cleavage of Proteins with On-Line Mass Spectrometric Detection: Development of an Instrumental Alternative to Enzymatic Protein Digestion." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1707-1716.

Pozniak, B.; Cole, R. B. "Negative Ion Mode Evolution of Potential Buildup and Mapping of Potential Gradients within the Electrospray Emitter." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1737-1747.

Roussel, C.; Dayon, L.; Lion, N.; Rohner, T. C.; Josserand, J.; Rossier, J. S.; Jensen, H.; Girault, H. H. "Generation of Mass Tags by the Inherent Electrochemistry of Electrospray for Protein Mass Spectrometry." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1767-1779.

Seiwert, B.; Henneken, H.; Karst, U. "Ferrocenoyl Piperazide as Derivatizing Agent for the Analysis of Isocyanates and Related Compounds Using Liquid Chromatography/ Electrochemistry/Mass Spectrometry (LC/ES/MS)." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1727-1736.

Van Berkel, G.J.; Asano, K. G.; Granger, M. C. "Controlling Analyte Electrochemistry in an Electrospray Ion Source with a Three-Electrode Emitter Cell." *Anal. Chem.* **2004**, *76*, 1493-1499.

Van Berkel, G.J.; Kertesz, V.; Ford, M.J.; Granger, M. C. "Efficient Analyte Oxidation in an Electrospray Ion Source Using a Porous Flow-through Electrode Emitter." *J. Am. Soc. Mass Spectrom.* **2004**, *15*, 1755-1766.

Yamaguchi, M.; Mizooku, Y.; Osakai, T.; Kimoto, T.; Arakawa, R. "Study of the Oxidation Processes of Catechins by On-Line Electrolysis /ESI-MS." *BUNSEKI KAGAKU* **2004**, *53*, 547-553.

2003

Gamache, P.; McCarthy, R.; Waraska, J.; Acworth, I. "Pharmaceutical Oxidative Stability Profiling with High Throughput Voltammetry." *Am. Lab.* **2003**, *35*, 21-25.

- Gamache, P.; Smith, R.; McCarthy, R.; Waraska, J.; Acworth, I. "ADME/Tox Profiling – Using Coulometric Electrochemistry and Electrospray Ionization Mass Spectrometry." *Spectroscopy* **2003**, *18*, 14-xx.
- Gun, J.; Modestov, A.; Lev, O.; Poli, R. "Reduction of $[(C_5Me_5)_2Mo_2O_5]$ and $[(C_5Me_5)_2Mo_2O_4]$ in Methanol/Water/Trifluoroacetate Solutions and Investigated by Combined On-Line Electrochemistry Electrospray–Ionization Mass Spectrometry." *Eur. J. Inorg. Chem.* **2003**, 2264-2272.
- Gun, J.; Modestov, A.; Lev, O.; Saurenz, D.; Vorotyntsev, M. A.; Poli, R. "Studies on the Reduction of $[(C_5Me_5)_2Mo_2O_5]$ in Methanol/Water/Actetate Solutions by On-Line Electrochemical Flowcell and Electrospray Mass Spectrometry." *Eur. J. Inorg. Chem.* **2003**, 2264-2272.
- Hayen, H.; Karst, U. "Analysis of Phenothiazine and Its Derivatives Using LC/Electrochemistry/MS and LC/Electrochemistry/Fluorescence." *Anal Chem.* **2003**, *75*, 4833-4840.
- Jurva, U.; Wikstrom, H. V.; Weidolf, L.; Bruins, A.P. "Comparison Between Electrochemistry/Mass Spectrometry and Cytochrome P450 Catalyzed Oxidation Reactions." *Rapid Comm. Mass Spectrom.* **2003**, *17*, 800-810.
- Permentier, H. P.; Jurva, U.; Barroso, B.; Bruins, A. P. "Electrochemical Oxidation and Cleavage of Peptides Analyzed with On-Line Mass Spectrometric Detection." *Rapid Comm. Mass Spectrom.* **2003**, *17*, 1585-1592.
- 2002**
- Jurva, U. Wikstrom, H. V.; Bruins, A. P. "Electrochemically Assisted Fenton Reaction: Reaction of hydroxyl Radicals with Xenobiotics Followed by On-Line Analysis with High Performance Liquid Chromatography/Tandem Mass Spectrometry." *Rapid Comm. Mass Spectrom.* **2002**, *16*, 1934-1940.
- Kertesz, V.; Deng, H.; Asano, K. G.; Hettich, R. L.; Van Berkel, G.J. "*N*-Phenyl-1,4-Phenylenediamine and Benzidine Oxidation Products Identified Using On-Line Electrochemistry/Electrospray Fourier Transform Mass Spectrometry." *Electroanalysis* **2002**, *14*, 1027-1030.
- Kertesz, V.; Dunn, N. M.; Van Berkel, G. J. "Electrochemistry-Electrospray–Mass Spectrometry Study of Cesium Uptake in Nickel Hexacyanoferrate Films." *J. Am. Soc. Mass Spectrom.* **2002**, *13*, 109 117.
- Kertesz, V.; Van Berkel, G. J. "Surface-Assisted Reduction of Aniline Oligomers, *N*-Phenyl-1,4-Phenylenediimine and Thionin in Atmospheric Pressure Chemical Ionization and Atmospheric Pressure Photoionization." *J. Am. Soc. Mass Spectrom.* **2002**, *13*, 109 117.
- Zhang, T.; Palii, S. P.; Eyler, J. R.; Brajter-Toth, A. "Enhancement of Ionization Efficiency by Electrochemical Reaction Products in On-Line Electrochemistry Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry." *Anal. Chem.* **2002**, *74*, 1997-1103.

2001

Diehl, G.; Liesener, A.; Karst, U. "Liquid chromatography with Post-Column Electrochemical Treatment and Mass Spectrometric Detection of Non-Polar Compounds." *Analyst* **2001**, *126*, 288-290.

Johnson, K. A.; Shira, B. A.; Anderson, J. L.; Amster, I. J. "Chemical and On-Line Electrochemical Reduction of Metalloproteins with High Resolution Electrospray Ionization Mass Spectrometry Detection." *Anal. Chem.* **2001**, *73*, 803-808.

Kertesz, V.; Van Berkel, G. J. "Electropolymerization of Methylene Blue Investigated Using On-Line Electrochemistry/Electrospray Mass Spectrometry." *Electroanalysis* **2001**, *13*, 1425-1430.

Konnerman, L.; Silva, E. A.; Sogbein, O. F. "Electrochemically Induced pH Changes Resulting in Protein Unfolding in the Ion Source of an Electrospray Mass Spectrometer." *Anal. Chem.* **2001**, *73*, 4836-4844.

Modestov, A. D.; Srebniak, S.; Lev, O.; Gun, J. "Scanning Capillary Microscopy/Mass Spectrometry for Mapping Spatial Electrochemical Activity of Electrodes." *Anal. Chem.* **2001**, *73*, 4229-4240.

2000

Deng, H.; Van Berkel, G. J.; Takano, H.; Gazda, D., Porter, M. D. "Electrochemically-Modulated Liquid Chromatography Coupled On-line with Electrospray Mass Spectrometry." *Anal. Chem.* **2000**, *72*, 2641-2647.

Jurva, U.; Wikström, H. V.; Bruins, A. P. "In vitro mimicry of metabolic oxidation reactions by electrochemistry/mass spectrometry." *Rapid Commun. Mass Spectrom.* **2000**, *14*, 529-533.

Pretty, J. R.; Deng, H.; Goeringer, D. E.; Van Berkel, G. J. "Electrochemically- Modulated Preconcentration and Matrix Elimination for Organic Analytes Coupled On- Line with Electrospray Mass Spectrometry." *Anal. Chem.* **2000**, *72*, 2066-2074.

1999

Arakawa, R.; Abura, T.; Fukuo, T.; Horiguchi, H.; Matsubayashi, G. "Analysis of Electrolysis Reactions of Metal Complexes Using On-Line Electrospray Ionization Mass Spectrometry with a Compact Electrolytic Flow-Through Cell." *Bull. Chem. Soc. Jpn.* **1999**, *72*, 1519-1523.

Deng, H.; Van Berkel, G. J. "Electrochemical Polymerization of Aniline Investigated using On-Line Electrochemistry/Electrospray Mass Spectrometry." *Anal. Chem.* **1999**, *71*, 4284-4293.

Deng, H.; Van Berkel, G. J. "A Thin-Layer Flow Cell Coupled On-Line with Electrospray-Mass Spectrometry for the Study of Biological Redox Reactions." *Electroanalysis* **1999**, *11*, 857-865.

Iwahashi, H. "3-Hydroxyanthralinic Acid-Derived Compounds Formed Through Electrochemical Oxidation." *J. Chromatogr. B* **1999**, *736*, 237-245.

1998

Pretty, J. R.; Van Berkel, G. J. "Electrochemical Sample Pretreatment Coupled On- Line with Electrospray Mass Spectrometry for Enhanced Elemental Analysis." *Rapid Commun. Mass Spectrom.* **1998**, *12*, 1644-1652.

1997

Iwahashi, H.; Iishii, T. "Detection of the Oxidative Products of 3-Hydroxykynurenine using High-Performance Liquid Chromatography-Electrochemical Detection - Ultraviolet Absorption Detection - Electron Spin Resonance Spectrometry and High - Performance Liquid Chromatography - Electrochemical Detection - Ultraviolet Absorption Detection - Mass Spectrometry." *J Chromatogr. A* **1997**, *773*, 23-31.

Lu, W.; Xu, X.; Cole, R. B. "On-Line Linear Sweep Voltammetry-Electrospray Mass Spectrometry." *Anal. Chem.* **1997**, *69*, 2478-2484.

1996

Xu, X.; Lu, W.; Cole, R. B. "On-Line Probe for Fast Electrochemistry/Electrospray Mass Spectrometry. Investigation of Polycyclic Aromatic Hydrocarbons." *Anal. Chem.* **1997**, *69*, 2478-2484.

1995

Bond, A. M.; Colton, R.; D'Agostino, A.; Downard, A. J.; Traeger, J. C. "A Role for Electrospray Mass Spectrometry in Electrochemical Studies." *Anal. Chem.* **1995**, *67*, 1691-1695.

Zhou, F.; Van Berkel, G. J. "Electrochemistry Combined On-Line with Electrospray Mass Spectrometry." *Anal. Chem.* **1995**, *67*, 3643-3649.

FAB

Phillips, L. R.; Bartmess, J. E. "Electrochemically Assisted Fast Atom Bombardment Negative-Ion Mass-Spectrometry of Quinones." *Biomed Environ. Mass Spectrom* **1989**, *18*, 878-883.

Phillips, L. R.; Bartmess, J. E. "A Device for Sensing Ion Source Conditions in FAB MS." *Org Mass Spectrom.* **1989**, *24*, 855-856.

Bartmess, J. E.; Phillips, L. R. "Electrochemically Assisted Fast Atom Bombardment Mass Spectrometry." *Anal. Chem.* **1987**, *59*, 2012-2014.

Inductively Coupled Plasma**2005**

Hasan, T.; Gazda, D.; Porter, M. D.; Houk, R. S. "On-Line Cleanup of Blanks by Electrochemically Modulated Liquid Chromatography for Inductively Coupled Plasma Mass Spectrometry." *Anal. Chim. Acta* **2005**, *537*, 63-68.

Liljegren, G.; Forsgard, N.; Zettersten, C.; Pettersson, J.; Svedberg, M.; Herranen, M.; Nyholm, L. "On-Line Electrochemically Controlled Solid-Phase Extraction Interfaced to Electrospray and Inductively Coupled Plasma Mass Spectrometry." *Analyst* **2005**, *130*, 1358-1368.

2003

Baca, A. J.; De La Ree, A. B.; Zhou, F.; Mason, A. Z. "Anodic Stripping Voltammetry Combined On-Line with Inductively Coupled Plasma-MS via a Direct-Injection High Efficiency Nebulizer." *Anal. Chem.* **2003**, *75*, 2507-2511.

2001

Ugo, P.; Zampieri, S.; Moretto, L. M.; Paolucci, D. "Determination of Mercury in Process and Lagoon Waters by Inductively Coupled Plasma-Mass Spectrometric Analysis after Electrochemical Preconcentration: Comparison with Anodic Stripping at Gold and Polymer Coated Electrodes." *Anal. Chim. Acta* **2001**, *434*, 291-300.

1998

Pretty, J. R.; Duckworth, D. C.; Van Berkel, G. J. "Electrochemical Sample Pretreatment Coupled On-Line with ICP-MS: Analysis of Uranium using an Anodically Conditioned Glassy Carbon Working Electrode." *Anal. Chem.* **1998**, *70*, 1141-1148.

Pretty, J. R.; Van Brkel, G. J.; Duckworth, D. C. "Adsorptive Stripping Voltammetry as a Sample Pretreatment Method for Trace Uranium Determinations by Inductively Coupled Plasma Mass Spectrometry." *Int. J. Mass Spectrom. Ion Processes* **1998**, *178*, 51-63.

1997

Pretty, J. R.; Duckworth, D. C.; Van Berkel, G. J. "Anodic Stripping Voltammetry Coupled On-Line with Inductively Coupled Plasma Mass Spectrometry: Optimization of a Thin-Layer Flow Cell System for Analyte Signal Enhancement." *Anal. Chem.* **1997**, *69*, 3544-3551.

1996

Hwang, T-J.; Jiang, S-J. "Determination of Copper, Cadmium, and Lead in Biological Samples by Isotope Dilution Inductively Coupled Plasma Mass Spectrometry After Online Pre-Treatment by Anodic Stripping Voltammetry." *J. Anal. At. Spectrom* **1996**, *11*, 353-357.

1995

Zhou, F., Van Berkel, G. J., Morton, S. J.; Duckworth, D. C.; Adeniyi, W. K.; Keller, J. M. "Development of On-Line Electrochemical Sample Pretreatment Methods for the Analysis of Thallium and Uranium by ICP-MS." In *Applications of Inductively Coupled Plasma-Mass Spectrometry to Radionuclide Determinations*, ASTM STP1291, Morrow, R. W.; Crains, J. S., Eds., American Society for Testing and Materials, West Conshohocken, **1995**, pp. 82-98.

1994

Pretty, J. R.; Blubaugh, E. A.; Caruso, J. A.; Davidson, T. M. "Determination of Chromium (VI) and Vanadium (V) Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Mass Spectrometry." *Anal. Chem.* **1994**, *66*, 1540-1547.

Pretty, J. R.; Blubaugh, E. A.; Caruso, J. A. "Determination of Arsenic (III) and Selenium (IV) Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Atomic Emission Spectrometry and Inductively Coupled Plasma Mass Spectrometry." *Anal. Chem.* **1993**, *65*, 3396-3403.

Pretty, J. R.; Blubaugh, E. A.; Evans, E. H.; Caruso, J. A.; Davidson, T. M. "Determination of Copper and Cadmium Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Mass Spectrometry." *J. Anal. At. Spectrom.* **1992**, 7, 1131-1137.

Pretty, J. R.; Evans, E. H.; Blubaugh, E. A.; Shen, W-L.; Caruso, J. A.; Davidson, T. M. "Minimisation of Sample Matrix Effects and Signal Enhancement for Trace Analytes Using Anodic Stripping Voltammetry With Detection by Inductively Coupled Plasma Atomic Emission Spectrometry and Inductively Coupled Plasma Mass Spectrometry." *J. Anal. At. Spectrom.* **1990**, 5, 437-443.

Particle Beam

2000

Zhang, T.; Brajter-Toth, A. "On-Line Investigation of the Generation of Nonaqueous Intermediate Radical Cations by Electrochemistry/Mass Spectrometry." *Anal.Chem.* **2000**, 72, 2533-2540.

1999

Regino, M. C. S.; Brajter-Toth, A. "Real Time Characterization of Catalysis by On-line Electrochemistry Mass Spectrometry. Investigation of Quinone Electrocatalysis of Amine Oxidation." *Electroanalysis* **1999**, 11, 374-379.

1998

Regino, M. C. S.; Weston, C.; Brajter-Toth, A. "Effect of mobile phase composition on the electrochemical cell conversion efficiency in electrochemistry mass spectrometry." *Anal. Chim. Acta* **1998**, 369, 253-262.

1997

Regino, M. C. S.; Brajter-Toth, A. "An Electrochemical Cell for On-Line Electrochemistry/ Mass Spectrometry." *Anal. Chem.* **1997**, 69, 5067-5072.

Thermospray

1998

Hambitzer G.; Heitbaum, J.; Stassen, I. "Electrochemical Thermospray Mass Spectrometry-Anodic Oxidation of *N,N*-Dialkylanilines." *J. Electroanal. Chem.* **1998**, 447, 117-124.

Hambitzer G.; Heitbaum, J.; Stassen, I. "Electrochemical Thermospray Mass Spectrometry Instrumentation for Coupling Electrochemistry to Mass Spectrometry." *Anal. Chem.* **1998**, 70, 838-842.

1997

Stassen, I.; Hambitzer G. "Anodic Oxidation of Aniline and *N*-alkylanilines in Aqueous Sulphuric Acid Studied by Electrochemical Thermospray Mass Spectrometry." *J. Electroanal. Chem.* **1997**, 440, 219-228.

1993

Hambitzer G.; Heinz, P.P; Stassen, I.; Heitbaum, J. "Electrochemical Thermospray Mass Spectrometry - A Method for the Investigation of the First Steps of Polymerization Reactions." *Synthetic Metals*. **1993**, 55-57, 1045-1050.

Hambitzer G.; Stassen, I. "Polymerization of Aniline in Aqueous Sulphuric Acid - Study by Electrochemical Thermospray Mass Spectrometry." *Synthetic Metals*. **1993**, 55-57, 1045-1050.

1992

Heinz, P. P.; Heitbaum, J.; Hambitzer, G. "Products and Reaction Mechanism of the Anodic Oxidation of Phenothiazine – Studies by Electrochemical Thermospray Mass Spectrometry." *Electrochem. Stoffgeurinnung: Graudlageu Ver fahreut* **1992**, 125, 793-799.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A.; Freeman, J. A. "A dynamic approach for studying redox reactions: electrochemistry on-line with mass spectrometry." *Analisis* **1992**, 20, 421-425.

1991

Dewald, H; Worst, S. A.; Butcher, J. A., Jr.; Saulinskas, E. F. "Separation and Identification of Isoflavones with On-line Liquid Chromatography-Electrochemistry- Theromospray Mass Spectrometry." *Electroanalysis* **1991**, 3, 777-782.

1990

Volk, K. J.; Yost, R. A.; Toth-Brajter-Toth, A. "On-Line Mass Spectrometric Insights into Electrochemical Reactions: Oxidation of Thiopurines." *J. Electrochem. Soc.* **1990**, 137, 1764-1771.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "On-line mass spectrometric investigation of the peroxidase-catalysed oxidation of uric acid." *J. Pharm. Biomed. Anal.* **1990**, 8, 205-215.

1989

Getek, T. A.; Korfmacher, W. A.; McRae, T. A.; Hinson, J. A. "Utility of Solution Electrochemistry Mass Spectrometry for Investigating the Formation and Detection of Biologically Important Conjugates of Acetaminophen." *J. Chromatogr.* **1989**, 474, 245-256.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "On-Line Electrochemistry/Thermospray/ Tandem Mass Spectrometry as a New Approach to the Study of Redox Reactions: The Oxidation of Uric Acid." *Anal. Chem.* **1989**, 61, 1709-1717.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "Characterization of Solution Phase and Gas- Phase Reactions in On-Line Electrochemistry-Thermospray Tandem Mass Spectrometry." *J. Chromatogr.* **1989**, 474, 231-243.

1986

Hambitzer, G.; Heitbaum, J. "Electrochemical Thermospray Mass Spectrometry." *Anal. Chem.* **1986**, 58, 1067-1070.