

Aerosol Research Program – Environmental Sciences Division

Peer-Reviewed Publications 2004 forward by the Group

1. Lynch, R. M., B. H. Voy, D. F. Glass, S. M. Mahurin, A. M. Saxton, R. L. Donnell, and M.-D. Cheng (2007) Assessing the Pulmonary Toxicity of Single-Walled Carbon Nanohorns, *Nanotoxicology*, 1(2): 157-166.
2. Mahurin, S. M. and M.-D. Cheng (2007) Generating nanoscale aggregates from colloidal nanoparticles by different aerosol spray techniques, *Nanotoxicology*, 1(2): 130-138.
3. Cheng, M.-D., Emory Ford, David DePaoli, Ed Kenik, and Peter Angelini (2007) Validation of TiO₂ Particle-Size Distribution Measured by Scanning Mobility Particle Sizer, *Ind. and Engr. Chem. Res.*, 46(19): 6269-6272.
4. Cheng, M.-D., D.-W. Lee, B. Zhao, H. Hu, D. J. Styers-Barnett, A. A. Puretzky, D. W. DePaoli, D. B. Geohegan, E. A. Ford, and P. Angelini (2007) Study of Formation and Production of Carbon Nanohorns Using Continuous *In-Situ* Characterization Techniques, *Nanotechnology*, 18(18), 9 May, 2007, 185,604.
5. Qi, C., D.-R. Chen and M.-D. Cheng (2007) Using a Fast-Scanning Electrical Nanoparticle Sizer to characterize Nanoparticles from Laser Ablation, *Aerosol and Air Qual. Res.*, 7(1): 1-16.
6. Chen, D.-R., W. Li, and M.-D. Cheng (2006) Development of a Multi-Stage Differential Mobility Analyzer, *Aerosol Sci. & Technol.*, 41(2): 217-230.
7. D.-W. Lee and M.-D. Cheng (2006) Particle Generation by UV-Laser Ablation During Surface Decontamination, *J. Air and Waste Manage. Assoc.*, 56:1591-1598.
8. Cheng, M.-D., R. W. Smithwick, III, and R. Hinton (2006) Use of Electrically Enhanced Aerosol Plasma Spectrometer for Real-Time Characterization of Beryllium Particles, *J. ASTM International*, 3(1), JAI13172, January.
9. Simpson, M. L., M.-D. Cheng, T. Q. Dam, K. E. Lenox, J. R. Price, J. M. Storey, E. A. Wachter, and W. G. Fisher (2005) *Appl. Optics*, 44(33): 7210-7217, Nov. 20.
10. Cheng, M.-D. and C. M. Jenkins (2005) Production and Dynamics of Ultrafine and Fine Particles in Contained Detonation of Aluminum Energetics, *J. Aerosol Sci.*, 36:1-12.
11. Cheng, M.-D. (2004) Effects of Nanophase Materials (≤ 20 nm) on Biological Responses, *J. Environ. Sci. & Health*, invited, A39(10): 2,691-2,705.
12. Lee, D.-W. and M.-D. Cheng (2004) Particle Generation by Laser Ablation during Surface Decontamination, *J. Aerosol Sci.*, 35:1527-1540.
13. Lee, D.-W. and M.-D. Cheng (2004) Investigation of Nanoparticle Generation during Surface Decontamination by Laser Ablation at Low Fluence, *J. Aerosol Sci.*, 35:1513-1526.

Professional Presentations by the Group

1. Cheng, M.-D., E. Corporan, M. DeWitt, S. M. Mahurin, R. Kagann, R. Hashmonay, R. Shores (2007) Characterization of Military Helicopter Emissions, 2007 Annual Symposium of SERDP/ESTCP, Washington, DC, Dec. 4-6.
2. Cheng, M.-D. (2007) Aerosol Plasma Spectrometer: Applications to Industrial Powder Manufacturing and Worker Protection, the 5th Asian Aerosol Conference, Kaohsiung, Taiwan, Aug. 26-29.
3. Lynch, R. M., B. H. Voy, D. F. Glass, S. M. Mahurin, B. Zhao, L. Tetard, A. Passian, K. T. Venmar, T. Thundat, and M.-D. Cheng (2007) In-Vivo Exposure Characterization and Visualization of SWNH Aggregates, the 3rd International Symposium on Nanotechnology, Occupational and Environmental Health, Taipei, Taiwan, Aug. 29-Sept. 1.
4. Lynch, R. M., B. H. Voy, B. Zhao, S. M. Mahurin, L. Tetard, A. Passian, K. T. Venmar, T. G. Thundat, and Cheng, M.-D. (2007) In-Vivo Exposure Characterization and Visualization of SWNHs Aggregates, The 3rd International Symposium on Nanotechnology, Occupational and Environmental Health, Taipei, Taiwan, August 29-September 1.
5. Poretzky, A. A., Geohegan, D. B., Styers-Barnett, D. J., Rouleau, C. M., Zhao, B., Hu, H., Cheng, M.-D., Lee, D.-W., and Ivanov, I. N. (2007) High Power Laser Vaporization Synthesis of Single Wall Carbon Nanotubes and Nanohorns, 9th annual Conference on Laser Ablation (COLA), Tenerife, Canary Islands, Spain, 09-24-2007.
6. Cheng, M.-D. (2007) Chemical Characterization of Particles by Optical Techniques, the 8th International Congress on Optical Particle Characterization, July 9-13, Karl-Franzens University, Graz, Austria, Invited Keynote Speech.
7. Cheng, M.-D., Dibyendu Mukherjee, and Amir Naqwi (2007) Enhancing Pharmaceutical Production Process by Using Laser-Induced Breakdown Spectroscopy as an *In-Situ* Continuous Characterization Technique, the 8th International Congress on Optical Particle Characterization, July 9-13, Karl-Franzens University, Graz, Austria.
8. Cheng, M.-D. (2007) Aerosol Plasma Spectrometer: Applications to Industrial Powder Manufacturing and Worker Protection, the 5th Asian Aerosol Conference, August 26-29, Kaohsiung, Taiwan.
9. Geohegan, D. B., A. A. Poretzky, G. Eres, D. Styers-Barnett, C. M. Rouleau, Z. Liu, I. N. Ivano, J. Jackson, R. F. Woods, S. Pannala, J. Wells, M.-D. Cheng, H. Cui, H. Hu, B. Zhao, M. Yoon, K. Xiao, and M. Garrett (2007) In Situ Time-Resolved Measurement of Carbon Nanotube and Nanohorn Growth, IWEPM 2007 International Winterschool on Electronic Properties of Novel Materials: Molecular Nanostructure, March 10-17, Kirchberg, Austria.
10. Cheng, M.-D., E. Corporan, M. DeWitt, K. Cowan, M. Holdren, and C. Spicer (2007) Military Aircraft Emissions Research – Case of Hercules Cargo Plane (C-130H) Emissions, National Meeting of Air and Waste Management Association, Pittsburgh, PA, June.

11. Mahurin, S. M. and M.-D. Cheng (2007) Characterization and Data Analysis of Particulate Emissions from B-52 Aircraft, National Meeting of Air and Waste Management Association, Pittsburgh, PA, June.
12. Cheng, M.-D. (2007) SERDP Military Aircraft Emissions Research Program, National Meeting of Air and Waste Management Association, Pittsburgh, PA, June.
13. Cheng, M.-D. and D. B. Geohegan (2006) Characterization and Control of Engineered Carbon Nanoparticles, Invited, Center for Nanophase Materials Sciences, Oak Ridge, TN, December.
14. Cheng, M.-D., E. Corporan, R. Kagann, and R. Shores (2006) Direct and Remote Characterization of Aircraft Emissions, The SERDP/ESTCP Annual Symposium, Washington, D.C., November.
15. Cheng, M.-D., C. M. Jenkins, W. A. Chang, and D.-W. Lee (2006) Production of Small Particles by Detonation of Energetic Materials, International Aerosol Conference, Minneapolis, MN, September.