

BIOGRAPHICAL SKETCH

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NAME Thomas Peters	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME (credential, e.g., agency login) PETERSTM			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of Florida, Gainesville, FL	B.S.	1990	Environmental Engineering
University of Florida, Gainesville, FL	M.S.	1992	Environmental Engineering
The University of North Carolina at Chapel Hill	Ph.D.	2004	Industrial Hygiene/Aerosol Physics

A. Personal Statement

Dr. Peters is an engineer trained in aerosol physics who applies his efforts to the study of human health as it relates to particulate exposures. He develops novel strategies to quantify the morphology, concentration, and size of airborne particles. He uses these strategies to understand and control contaminants in diverse occupational and environmental settings. Dr. Peters has developed methods to assess airborne engineered nanomaterials apart from background aerosols through activity monitoring with direct-read instruments and computer-controlled single-particle electron microscopy of collected particles. These methods are now being incorporated into an NIEHS-supported project to investigate exposures that may result from physical manipulation (e.g., sanding) products that contain engineered nanomaterials. In work funded by the US EPA, Dr. Peters has collaborated with Dr. Kumar to develop novel methods to assess the spatial, temporal, and compositional variability in atmospheric particulate matter. His key role in this work has been to develop and standardize low-cost, passive sampling methods with analysis by computer-controlled scanning electron microscopy for determination of coarse particle mass concentration (PM_{10-2.5}) and its compositional make up.

B. Positions and Honors**Positions.**

1990-1992	Graduate Research Assistant, University of Florida, Gainesville, FL
1993-2000	Research Aerosol Engineer/Scientist, RTI International, Research Triangle Park, NC
2000-2004	Graduate Research Assistant, The University of North Carolina at Chapel Hill, NC
2004-2010	Assistant Professor, The University of Iowa, Iowa City, IA
2010-present	Associate Professor, The University of Iowa, Iowa City, IA

Honors and Awards.

1990	EPA Air Pollution Control Scholarship
2003	FY2001 EPA Scientific and Technology Achievement Award: Level 1
2004	Bernard G. Greenberg Award for Excellence in Doctoral Research
2005	University of Iowa, College of Public Health New Investigator Award
2008	American Industrial Hygiene Association, "Best Aerosol Poster in Show" Award
2009	American Industrial Hygiene Association, "Best Aerosol Poster in Show" and "Best Poster in Graduate Student Session" Awards
2010	David Swift Award for Best Aerosols Paper Applied to Industrial Hygiene Michigan Industrial Hygiene Society Best Paper Award

C. Selected Peer-reviewed Publications (15 of 44)

1. **Peters, T.M.**, H.M. Chein, D.A. Lundgren, J. Berntsen (1994) Sub-micron aerosol generator development for EPA's Human Exposure Laboratory. *Aerosol Sci. Technol.* 20:51-61.
2. **Peters, T.M.**, G.A. Norris, R.W. Vanderpool, D.B. Gemmill, R.W. Wiener, R.W. Murdoch, F.F. McElroy, M. Pitchford (2001) Field performance of PM_{2.5} reference method samplers. *Aerosol Sci. Technol.* 34:433-443.
3. **Peters, T.M.**, R.W. Vanderpool, R.W. Wiener (2001) Design and calibration of the WINS impactor. *Aerosol Sci. Technol.* 34:389-397.
4. Rosati, J.A., J.S. Brown, **T.M. Peters**, D. Leith, C.S. Kim (2002) A polydisperse aerosol inhalation system designed for human studies. *J. Aerosol Sci.* 33(10):1433-1446.
5. **Peters, T.M.**, D. Leith (2004) Modeling large-particle deposition in bends of exhaust ventilation systems. *Aerosol Sci. Technol.* 38:1171-1177.
6. Volckens, J.A.E., **T.M. Peters** (2005) Counting and particle transmission efficiency of the Aerodynamic Particle Sizer (APS 3321). *J. Aerosol Sci.* 36(12):1400-1408.
7. **Peters, T.M.**, W.A. Heitbrink, D.E. Evans, T.J. Slavin, A.D. Maynard (2006) The mapping of fine and ultrafine particle concentrations in engine machining and assembly plant. *Ann. Occup. Hyg.* 50:249-257.
8. **Peters T.M.** (2006) Use of the aerodynamic particle sizer to measure ambient PM_{10-2.5}: the coarse fraction of PM₁₀. *J. Air Waste Manag. Assoc.* 56(4):411-6.
9. Ott, D.K., N. Kumar, **T.M. Peters** (2008) Passive sampling to capture spatial variability of PM_{10-2.5}. *Atmospheric Environ.* 42(4):746-756.
10. Ott, D.K. and **T.M. Peters** (2008) A Shelter to Protect a Passive Sampler for Coarse Particulate Matter, PM_{10-2.5}. *Aerosol Sci. Technol.* 42(4):299-309.
11. **Peters, T.M.**, S. Elzey, R. Johnson, H. Park, V. Grassian, T. Maher, P. O'Shaughnessy (2009) Airborne monitoring to distinguish engineered nanomaterials from incidental particles for environmental health and safety. *J. Occup. Envir. Hyg.* 6(2):73-81. DOI: 10.1080/15459620802590058.
12. O'Shaughnessy, P.T., K. Kelley, K. Donham, **T.M. Peters** (2010) Task-based variability of dust in swine barns. *J. Occup. Envir. Hygiene.* 7:7-13.
13. Boysen, D., **T.M. Peters** (2010) Impactor designed to increase mass output rate of nanoparticles from a pneumatic nebulizer. *J. Aerosol Sci.* 41(2):170-179. DOI: 10.1016/j.jaerosci.2009.11.001.
14. Cyrs, W.D., D.A. Boysen, G. Casuccio, T. Lersch, **T.M. Peters** (2010) Nanoparticle collection efficiency to the surface of capillary pore membrane filters. *J. Aerosol Sci.* 41:655-664. DOI:10.1016/j.jaerosci.2010.04.007.
15. Cena, L., **T.M. Peters** (2011) Characterization and control of airborne particles emitted during production of epoxy/carbon nanotube nanocomposites. *J. Occup. Envir. Hyg.* 8:86-92. DOI: 10.1080/15459624.2011.545943.