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EDUCATION

2006	University of Maryland	Ph.D.	Marine, Estuarine and Environ. Sciences
1999	Widener University	B.S.	Chemistry

PROFESSIONAL POSITIONS

2009 – Present Research Scientist, Environmental Sciences Division, Oak Ridge National Laboratory (ORNL). Environmental chemistry.

2008 – 2009 Postdoctoral Associate, Environmental Sciences Division, ORNL. Examined abiotic mercury reactions involving mercury and dissolved organic matter in order to gain a better understanding of mercury cycling in contaminated aquatic environments.

2006 – 2008 Research Associate Professor, University of North Carolina – Wilmington, Wilmington, NC. Examined the composition and reactivity of chromophoric dissolved organic matter and mercury in rainwater. Taught Environmental Chemistry laboratory and General Chemistry lecture and laboratory.

1999 – 2005 Graduate Research and Teaching Assistant, Chesapeake Biological Laboratory, University of Maryland Center of Environmental Science, Solomons, MD. Studies the role of geochemical interactions between mercury, dissolved organic matter, sulfide and iron on the reactivity and cycling of mercury and methylmercury in aquatic systems.

PROFESSIONAL SERVICE, AFFILIATIONS, AND HONORS

Reviewer: Environmental Science and Technology, Environmental Toxicology and Chemistry, Atmospheric Environment, Hydrobiologia, Environmental Pollution, Archives of Environmental Contamination, Aquatic Sciences, International Journal of Environmental and Analytical Chemistry.

2005: Academic grades review committee; Marine, Estuarine and Environmental Sciences Program.

2001 – 2003: Marine, Estuarine and Environmental Sciences (MEES) Graduate Student Organization representative.

2000 – 2005: Chesapeake Biological Laboratory/Maryland Sea Grant Outreach support for teacher development courses and public outreach programs.

2002: Undergraduate Schindler Project Research Committee at the Experimental Lakes Area, Ontario, Canada.

Honors: Outstanding Student Poster Presentation, 8th International Conference on Mercury as a Global Pollutant, Madison, WI. August 2006.
Chesapeake Biological Laboratory Graduate Fellowship 1999-2001.
Phi Kappa Phi Honor Society.
Phi Kappa Phi Undergraduate Scholarship Award.
American Chemical Society and American Institute of Chemists undergraduate chemistry awards.

SELECT RECENT PUBLICATIONS

Liang, L., Gu, B., Wang, W., Miller, C., Mishra, B., Kemner, K., Lai, Barry. (In review) X-ray Fluorescence Mapping of Mercury on Suspended Mineral Particles and Diatoms in a Contaminated Creek. Environ. Sci. technol.

Miller, C., Watson, D., Lester, B., Lowe, K., Pierce, E., Liang, L.(In revision) Characterization of soils from an industrial complex contaminated with elemental mercury. Envir. Res.

Kocman, D., Brooks, S., Miller, C. Yin, X. (In review) Evaluation of centrifugal ultrafilters for size fractionation of total mercury and methylmercury in freshwaters. Environ. Chem.

Miller, C., L. Liang, B. Gu. (2012) Competitive ligand exchange reveals mercury reactivity change with dissolved organic matter. Environ. Chem. 9: 495-501.

Moberly, J., C. Miller, S. Brown, C. Brandt, A. Palumbo, D. Elias. (2012) Role of Physiology and Gene Expression in Desulfovibrio africanus strain Walvis Bay Mercury Methylation. . Environ. Sci. Technol. 46:4929-4932

Biswas, A., S. Brooks, C. Miller, J. Mosher, X. Yin, and M. Drake. (2011). Bacterial growth phase influences methylmercury production by the sulfate-reducing bacterium *Desulfovibrio desulfuricans* ND132. Science of the Total Environment. 409:393-3948.

Gu, B., Y. Bian, C.L. Miller, W. Dong, X. Jiang, and L. Liang. 2011. Mercury reduction and complexation by natural organic matter in anoxic environments. Proc. Natl. Acad. Sci. USA 108: 1479-1483.

Miller, C., K.G. Gordon, R.J. Kieber, J.D. Willey, and P.J. Seaton. 2009. Chemical characteristics of chromophoric dissolved organic matter in rainwater. Atmosph. Environ. 43:2497-2502.

Miller, C., G. Southworth, S.C. Brooks, L. Liang and B. Gu. 2009. Kinetic controls on the complexation between mercury and dissolved organic matter in a contaminated environment. Environ. Sci. Technol. 43:8548-8553.

Miller, C., J. Willey, and R. Kieber. 2008. Changes in rainwater composition collect in Wilmington, North Carolina during tropical storm Ernesto. Atmosph. Environ. 42:846-855.

Willey, J., R. Kieber, P. Seaton, and C. Miller. 2008. Rainwater as a source of Fe(II) stabilizing ligands to seawater. Limnol. Ocean. 53:1678-1684.

Miller, C.L., R.P. Mason, C. Gilmour, and A. Heyes. 2007. Influence of dissolved organic matter on the complexation of Hg under sulfidic conditions. Environ. Tox. Chem.26:624-633.

Heyes, A. C.L. Miller, and R.P. Mason. 2004. Mercury cycling in the Hudson River Estuary. Marine Chem. 90:75-89.

Benoit, J.M., C.C. Gilmour, A. Heyes, R.P. Mason, and C.L. Miller. 2003. Geochemical and biological controls over methylmercury production and degradation in aquatic systems. pp. 262-297. IN: Biochemistry of Environmental Important Trace Elements, Y. Chai and O.C. Braids (eds.), American Chemical Society, Washington, DC.

Zhou, L., B.D. Johnson, C. Miller, and J.M. Wyvratt. 2000. Chiral capillary electrophoretic analysis of the enantiomeric purity of a pharmaceutical compound using sulfate β-cyclodextrin. J. Chromatogr. A. 875:389-401.

GRADUATE ADVISORS: R.P. Mason (University of Connecticut).
POSTDOCTORAL ADVISORS: B. Gu (ORNL); J. Willey and R. Kieber (University of North Carolina Wilmington [UNCW]).
GRADUATE STUDENTS SUPERVISED: S. Manley (UNCW), K. Gordon (UNCW).