

## WANG ZHENG

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### EDUCATION

2010 Trent University, Ontario, Canada Ph.D. Environmental and Life Sciences  
2004 University of Science and Technology of China B.S. Environmental Sciences

### PROFESSIONAL POSITIONS

2010 – Present Postdoctoral Research Associate, Molecular Environmental Processes, Environmental Sciences Division, Oak Ridge National Laboratory. Responsible for photochemical reduction and demethylation of mercury and their relationship to organic matters.

2005 – 2010 Research Assistant, Trent University, Ontario, Canada. Systematically studied stable isotope fractionation of mercury during various kinetic processes in its biogeochemical cycles, including photochemical reduction, abiotic non-photochemical reduction and volatilization. Determined isotope compositions of Hg in various environmental samples, including sediment, soil, lichen, fish, lake water, and air. Investigated mechanisms of mass independent fractionation of Hg isotopes, and mechanisms of photochemical reduction. Developed or optimized analytical techniques for different Hg species using CV-AFS, HR-ICPMS and MC-ICPMS.

2003 – 2004 Undergraduate Research Assistant, University of Science and Technology of China. Examined concentration, distribution and speciation of 12 trace elements in coal from Huaibei coalfield of China. Investigated sulfur speciation and their correlation with trace elements in coal.

### PROFESSIONAL SERVICE, AFFILIATIONS, AND HONORS

2008 Teaching Assistant Training Certificate of Trent University  
2007 – 2009 Dean's Scholarship, Trent University  
2001, 2002 Excellent Students Scholarship, University of Science and Technology of China

### SELECT RECENT PUBLICATIONS

Zheng W. and H. Hintelmann. 2010. Nuclear field shift effect in isotope fractionation of mercury during abiotic reduction in the absence of light. *J. Phys. Chem. A* 114:4238-4245.

Zheng W. and H. Hintelmann. 2010. Isotope fractionation of mercury during its photochemical reduction by low-molecular-weight organic compounds. *J. Phys. Chem. A* 114:4246-4253.

Gantner N., H. Hintelmann, W. Zheng, and D. Muir. 2009. Variations in stable isotope fractionation of Hg in food webs of Arctic lakes. *Environ. Sci. Technol.* 43: 9148-9154.

Zheng W. and H. Hintelmann. 2009. Mercury isotope fractionation during photoreduction in natural water is controlled by its Hg/DOC ratio. *Geochim. Cosmochim. Acta* 73:6704-6715.

Zheng W., D. Foucher, and H. Hintelmann. 2007. Mercury isotope fractionation during volatilization of Hg(0) from solution into the gas phase. *J. Anal. At. Spectrom.* 22:1097-1104.

Zheng W., G.J. Liu, and L.G. Zheng. 2005. Characteristics of the distribution and concentration of twelve harmful trace elements in coals from Huaibei Coalfield. *Earth Environ.* 33:27-32.

Yang P.Y., H.Y. Zhang, W. Zheng, F. Wang, and G.J. Liu. 2004. Distribution of some environmental significance trace elements in coals from Huaibei coalfield. *Coal Geol. Explor.* 32:1-3.

**GRADUATE ADVISORS:** H. Hintelmann (Trent University).  
**POSTDOCTORAL ADVISORS:** B. Gu (ORNL)