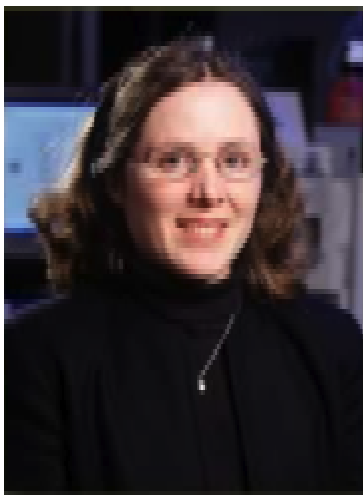


## PATRICIA A. MAURICE

*Professor, Dept. of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame Notre Dame, IN 46556, [pmaurice@nd.edu](mailto:pmaurice@nd.edu); <http://ceees.nd.edu/people/faculty>  
My research focuses on interactions of minerals, metals, organic matter, nanoparticles and bacteria at the molecular scale to the watershed scale*



### EDUCATION

- 1994 Ph.D. in Aqueous and Surface  
Geochemistry  
Dept. of Applied Earth Sciences  
Stanford University, Stanford, CA
- 1985 M.S. Geology/Geophysics  
Dartmouth College, Hanover, NH
- 1982 B.A., Earth and Planetary Sciences  
Johns Hopkins University, Baltimore,  
MD

### EMPLOYMENT

- 2003-present Professor, Dept. of Civil and  
Environmental Engineering and Earth  
Sciences, University of Notre Dame Associate Chair, 2011-2014  
Associate Dean for Research, College of Engineering 2008-2009  
Director, Center for Environmental Science and Technology 2003-2007  
Faculty Fellow, Kaneb Center for Teaching and Learning  
Faculty Fellow, Reilly Center for Science, Technology, and Values
- 2000-2003 Associate Professor, Dept. of Civil Engineering and Geological Sciences,  
University of Notre Dame
- 1999-2000 Associate Professor, Dept. of Geology, Kent State University.  
Member of KSU Water Resources Research Institute, and  
Honors College Faculty.
- 1994-1999 Assistant Professor, Dept. of Geology, Kent State University.  
Start date: January, 1994
- Fall, 1998 Visiting scientist, Los Alamos National Laboratories
- 1992-93 Lab Manager, Scanning Probe Microscopy Laboratory, Center for  
Materials Research, Stanford University. Instructor for SPM short-courses.
- 1991 Visiting Scientist, Swiss Federal Institute for Water Supply, Wastewater  
Treatment and Pollution Control, EAWAG, Zürich, Switzerland (guest of  
Prof. Dr. Werner Stumm).
- 1989-1993 Graduate research and teaching assistant, Stanford University.
- 1985-89 Hydrologist/geochemist, U.S. Geological Survey, Water-Resources Division,

### SELECTED RECENT PUBLICATIONS (~ 100 total)

- Kuhn, K., Neubauer, E., Hofman, T., von der Kammer, F., and Maurice, P.A. 2014.  
Accessibility of humic-associated Fe to a microbial siderophore: implications for  
Bioavailability, *Environmental Science & Technology*. 48: 1015-1022.
- McInnis, D., Bolster, D., and Maurice, P.A. 2014. Natural Organic Matter Transport

- Modeling with a Continuous Time Random Walk Approach. *Environmental Engineering Science*, 31: 98-106.
- Dehner, C., Morales-Soto, N., Behera, R.K., ShROUT, J., Theil, E.C., Maurice, P.A. and Dubois, J.L., 2013. Ferritin and ferrihydrite nanoparticles as iron sources for *Pseudomonas aeruginosa*. *J. of Biological Inorganic Chemistry*. 18, 3, 371-381.
- Seders-Dietrich, L., McInnis, D., Bolster, D., and Maurice, P.A. 2013. Effect of polydispersity on natural organic matter transport: An experimental and modeling study. *Water Research*, 47, 7, 2231-2240.
- Kuhn, K., Dubois, J.L., and Maurice, P.A. 2013. Strategies of aerobic microbial Fe acquisition from Fe-bearing montmorillonite clay. *Geochim. Cosmochim. Acta*, 117, 191-201.
- Kuhn, K., Dehner, C.A., Dubois, J. L., and Maurice, P.A. 2012. Iron acquisition from natural organic matter by an aerobic *Pseudomonas mendocina* bacterium: siderophores and cellular iron status. *Geomicrobiol.* 29, 9, 780-791.
- Barton, L.E., Grant, K., Quicksall, A.N., and Maurice, P.A. 2012. Effects of hematite nanoparticle size on siderophore-mediated dissolution. *Geomicrobiology*, 29, 4, 314-322.
- Barton, L.E., Grant, K.E., Kosel, T., Quicksall, A.N., and Maurice, P.A. 2011 Size dependent Pb sorption to nanohematite in the presence and absence of a microbial siderophore: effects of experimental design on sorption edges. *ES&T* 45, 3231-3237.
- Dehner, C.A., Barton, L.E., Maurice, P.A., and Dubois, J.L. 2011. Size-dependent bioavailability of hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>) nanoparticles to a common aerobic bacterium. *ES&T*, 45, 977-983.
- Schindler, M., Hawthorne, F.C., Mandaliev, P., Burns, P.C., and Maurice, P.A. 2011. An integrated study of uranium mineral dissolution processes: etch pit formation, effects of cations in solution, and secondary precipitation. *Radiochimica Acta* 99, 2, 79-94.
- Dehner, C. A., Awaya, J.D., Maurice, P.A., and DuBois, J.L. 2010. Use of siderophores, oxalate, and reductants for iron mobilization from the mineral hematite by the obligate aerobe *Pseudomonas mendocina*. *Applied and Environmental Microbiology*, 76, 2041-2048.
- Maurice, P.A. 2009. Environmental Surfaces and Interfaces from the Nanoscale to the Global Scale. A textbook. John Wiley & Sons.
- Hochella, M.F., Jr., Lower, S.K., Maurice, P.A., Penn, R.L., Sahai, N., Sparks, D.L., and Twining, B.S. 2008 Nanominerals, mineral nanoparticles, and Earth chemistry. *Science* 319: 1631-1635.

### SELECTED HONORS, AWARDS, ACTIVITIES

- Member, Board of Directors, Consortium of Universities for the Advancement of Hydrological Sciences, 2007-2011
- Editorial Panel, *Environmental Engineering Science*, 2005- present
- Associate editor, *Geochimica et Cosmochimica Acta*, 2000-2004
- Editorial review panel, *Chemical Geology*, 1999-
- Member, National Academy of Sciences/National Research Council committee on "A Risk-based Assessment of Transuranic and Radionuclear Waste," 2003-2004
- Member, National Academy of Sciences/National Research Council committee on "Integrated Observatories for Hydrologic and Related Sciences," 2004-2007
- Member, Environmental Advisory Board, Oak Ridge National Laboratory, 2005-
- Member, U.S. Department of Energy Biological and Environmental Research Advisory

Council, 2004-2008  
Honorary Chair, Humic Science & Technology Conference, 2013  
Reviewer Award, 2009 *ES&T* for outstanding technical reviews.  
Certificate of 'outstanding service' to the National Research Council committee on  
Integrated Observatories for Hydrologic and Related Sciences, 2007  
*Presidential Award*, University of Notre Dame, for excellence in research, teaching, and  
service 2005  
Kaneb Center for Teaching and Learning Faculty Fellow, University of Notre Dame, 2003  
National Science Foundation Graduate Fellowship  
Johns Hopkins University Honors, Phi Beta Kappa, L.F. Bissell full scholarship