

JEFFREY W. TALLEY, Ph.D.

Assistant Professor, Bioengineering and Environmental Engineering
Department of Civil Engineering and Geological Sciences, 156 Fitzpatrick Hall,
University of Notre Dame, Notre Dame, Indiana 46556-0767
Phone: 574-631-5164; Fax: 574-631-9236; Email: jtalley11@nd.edu

Education

Ph.D. Carnegie Mellon University, 2000, Civil and Environmental Engineering
M.S.E. The Johns Hopkins University, 1995, Environmental Engineering and Science
M.L.A. Washington University-St. Louis, 1988, History and Philosophy
M.A. Assumption College, 1985, Religious Studies
B.S. Louisiana State University, 1981, Forestry (Environmental Science)

Experience

2003-Present Faculty Member, NSF Environmental Molecular Science Institute,
University of Notre Dame
2001-Present Assistant Professor, Department of Civil Engineering and Geological Sciences,
University of Notre Dame
1996-2001 Research Environmental Engineer and Biotechnology Research Team Leader, Environmental
Laboratory, Waterways Experiment Station (WES)
1992-1996 Environmental Engineer, Hazardous, Toxic, Radiological Waste (HTRW) Branch, Engineering
Division, Baltimore District, US Army Corps of Engineers
1981-1992 Engineer Officer, US Army Corps of Engineers

Relevant Conference and Journal Publications

Luthy, R.G., Ghosh, U., Gillette, J.S., Zare, R.N., and Talley, J.W. "Analytical Tools to Assess Sequestration and Bioavailability of Organic Compounds," *AEEESP Research Frontiers Conference*, Aug 1-3, 1999, Penn State University, PA.
Ghosh, U., Luthy, R.G., Talley, J. W., Zare, R. N. "Natural Fate of PAHs in Sediments." Remediation Technology Development Forum, Sep 12-13, 2000, Wilmington, DE.
Luthy, R., Ghosh, U., Gillette, S., Zare, R., Talley, J.W., and Tucker, S. "Microscale PAH Location and Association With Organic Matter and Effects on Biotreatment and Bioaccumulation," *Chemical Speciation and Reactivity in Water Chemistry and Water Technology: A Symposium in Honor of James J. Morgan*, American Chemical Society (ACS) 220th National Meeting, Aug 20-25, 2000, Washington DC
Talley, J.W., and Larson, S. "Correlations Between Chemical Extractability, Bioavailability, and Bioaccumulation of PAHs in Marine Sediments," *Sediment & Soil Chemistry Session*, Society of Environmental Toxicology and Chemistry (SETAC) Annual Meeting, Nov 12-16, 2000, Nashville, TN
Talley, J.W., Ghosh, U., Tucker, S., G., Furey, J., Luthy, R. G., "Particle-Scale Understanding of the Bioavailability of PAHs in Sediment," *Environmental Science & Technology*, Special Issue in Honor of James J. Morgan, 2002; 36(3); 477-483.

Significant Journal Publications

Stocking, A.J., Deeb, R.A., Flores, A.E., Stringfellow, W., Talley, J., Brownell, R., and Kavanaugh, M., C. "Bioremediation of MTBE: A Review From a Practical Perspective," *Biodegradation*; 2000, 11 (2-3); 187-201.
Ringelberg, D., Talley, J.W., Perkins, E., Tuckers, S., Luthy, R.G., and Bouwer, E., Fredrickson, H. "Succession of Phenotypic, Genotypic, and Metabolic Community Characteristics during In Vitro Bioslurry Treatment of PAH-Contaminated Sediments," *Applied and Environmental Microbiology*; 2001, 67 (4); 1542-1550.
Ghosh, U., Talley, J., and Luthy, R.G. "Particle-Scale Investigation of PAH Desorption Kinetics and Thermodynamics from Sediment," *Environmental Science and Technology*, 2001; 35 (17); 3468-3475.
Talley, J.W., Ghosh, U., Tucker, S., Furey, J., and Luthy, R.G. "Thermal Programmed Desorption (TPD) of PAHs from Mineral and Organic Surfaces," *Environmental Engineering Science*, 2003 (accepted).

Nichols, S., Hundal, L.S., Talley, J.W., "Effects of Aging on Release Energy of Polycyclic Aromatic Hydrocarbon Contaminated Clays and Soils." *Journal of Environmental Toxicology and Chemistry*, 2003 (accepted).
Talley, J.W., Zhang, X., Waisner, S., Ringelberg, D., Hansen, L. "Characterization and Bioremediation of Petroleum Hydrocarbon Contaminated Soil with Smear Zone at Gasoline Alley," *Journal of Environmental Engineering*, 2003 (submitted).

Select Synergistic Activities

Young Engineer of the Year, SAME, 1994.
Silver Medal for Outstanding Scientific Support, Federal Executive Board, 1995.
Bronze de Fleury Medal for Leadership in Engineering, USACE, 1996.
National Technology Advancement Medal, SAME, 1996.
Engineering News Record (ENR) Next Generation Research Award, 1996.
Long Term Training (LTT) at Carnegie Mellon University, 1997-1998.
Sigma Xi (National Honorary Research), 1998.
Adjunct Faculty, Department of Chemistry, Mississippi College, 1999.
Research Project of the Year for Cleanup (with other collaborators), SERDP, 1999.
Best Research Award – Poster (with other collaborators), Gordon Research Conference on Environmental Science, 2000.
Strategic Environmental Research and Development Leadership Award, 2000.
Phi Kappa Phi National Honors Society, 2001.
American Society of Civil Engineers ExCEEed Fellow, 2002.

Collaborative Efforts

"In Situ Stabilization of Persistent Organic Contaminants in Marine Sediments," U.S. Dept. of Defense Strategic Environmental Research and Development Program (SERDP), R.G. Luthy (Stanford), U. Ghosh (Stanford), R. Zaire (Stanford), T. Bridges (WES), J.W. Talley (Notre Dame), Co-PI (2000-2003).
"Roanoke River and Natural Formation of Dioxin Studies." Georgia-Pacific Corporation, P. Burns (Notre Dame), B. Irvine (Notre Dame), J.W. Talley (Notre Dame), Co-PI (2001-2003).
"Microscale Characterization of the Binding and Sequestration of Nitroaromatics in Biotreated Soils," U.S. Army Corps of Engineers-Baltimore District, J. W. Talley, PI (Notre Dame), (2002-2003).
"Thermal Programmed Desorption Mass Spectrometry of Hydrophobic Organics," U.S. Army Engineer Research Development Center, J.W. Talley, PI (Notre Dame), (2001-2004).
"Complexation of Heavy Metal Ions with Natural Organic Matter in Contaminated Groundwater Systems: Its Effect on Coagulation in Drinking Water Treatment," Environmental Molecular Science institute (NSF), (2003-2007).

Graduate Advisors

Ph.D. Advisor, Dr. Richard G. Luthy, Carnegie Mellon University/Stanford University
M.S.E. Advisor, Dr. Edward Bouwer, The Johns Hopkins University

Graduate Students and Post-Doctorate Fellows Supervised

Dr. Xiangru Zhang, Post-Doctorate Fellow, University of Notre Dame. 2002-Present.
Ms. Kara Young, Ph.D. Student, University of Notre Dame, 2003-Present.
Ms. Guojing Liu, Ph.D. Student, University of Notre Dame, 2002-Present.
Ms. Erica F. Pirnie, Ph.D. Student, University of Notre Dame, 2001-Present.
Ms. Sara I. Nicholl, Ph.D. Student, University of Notre Dame, 2001-Present.
Dr. Lakhwinder S. Hundal, Senior Research Associate, University of Notre Dame. 2001-2002.
Dr. Altaf Wani, Post-Doctorate Fellow, The Johns Hopkins University at WES, 1998-2000.
Dr. Jeffrey Davis, Post-Doctorate Fellow, The Johns Hopkins University at WES, 1998-2000.
Mr. Sam Tucker, M.S. Student, Mississippi College at WES, 1998-2000.
Mr. Tommy Wall, M.S. Student, Mississippi State University at WES, 1997-1999.
Mr. Mike Burchell, M.S. Student, University of Mississippi at WES, 1996-1998.