MARK O. BARNETT, PH.D., P.E., BCEE

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Department of Civil Engineering
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BIOGRAPHICAL SKETCH

Mark Barnett is a Professor of Environmental Engineering and Associate Chair in the Department of Civil Engineering at Auburn University. Until recently, he also served as an administrative judge for the U.S. Nuclear Regulatory Commission, where he was appointed to a nine-judge panel conducting the initial hearings on the nation's first spent nuclear fuel repository in Yucca Mountain, Nevada. Dr. Barnett has a B.S. in Chemical Engineering and an M.S. in Environmental Engineering from the University of Tennessee and a Ph.D. in Environmental Sciences and Engineering from the University of North Carolina. Dr. Barnett has thirty years of national and international environmental engineering and science experience in industry, government, and academia. His technical research focuses on the chemical processes controlling water quality and contaminant behavior in natural and engineered systems. He has been a principal or co-principal investigator on fifteen grants totaling over $7.5 million, and he has published over fifty peer-reviewed journal articles, several book chapters, and a book that collectively have received well over two thousand citations (h-index=27). He is a licensed professional engineer and a board certified member of the American Academy of Environmental Engineers and Scientists with technical experience in water and wastewater treatment; site assessment and remediation; soil and groundwater contamination; human-health risk assessments; contaminant bioavailability; environmental forensics; environmental and aquatic chemistry; low-level radioactive and hazardous waste management; and nuclear environmental engineering. Dr. Barnett has taught fundamental and applied courses in environmental and aquatic chemistry; water and wastewater treatment; environmental engineering principles and design; and sustainable design and development. His work has been supported by industry, the National Science Foundation, the Department of Energy, the Department of Defense, the Environmental Protection Agency, and the Water Research Foundation. His current interests are in environmental policy; sustainable development; and water, sanitation, and health in underserved communities.

EDUCATION

Ph.D. in Environmental Sciences and Engineering — 1998
University of North Carolina at Chapel Hill

M.S. in Environmental Engineering — 1991
University of Tennessee, Knoxville

B.S. in Chemical Engineering — 1985
University of Tennessee, Knoxville

PROFESSIONAL BACKGROUND

Professor and Associate Chair	2014 – Current
Malcolm Pirnie Professor	2009 – 2014
Malcolm Pirnie Associate Professor	2007 – 2009
Associate Professor and Brasfield & Gorrie Scholar	2004 – 2007
Assistant Professor and Brasfield & Gorrie Scholar	2001 – 2004
Assistant Professor	1999 – 2001

Department of Civil Engineering
Auburn University, Auburn, AL

Administrative Judge — 2007 – 2019
U. S. Nuclear Regulatory Commission

Visiting Scientist — January - June 2005
Department of Environmental Sciences
Sectie Bodemkwaliteit
Wageningen University and Research Centre
Wageningen, The Netherlands

Research Associate — 1993 – 1999
Environmental Sciences Division
Oak Ridge National Laboratory, Oak Ridge, TN

Adjunct Faculty Member — 1994 – 1996
Department of Civil and Environmental Engineering
Oak Ridge Resident Graduate Program
University of Tennessee, Knoxville

Doctoral Fellow — 1991 – 1993
Department of Environmental Sciences and Engineering
University of North Carolina at Chapel Hill

Graduate Research Assistant — 1989 – 1991
Department of Civil and Environmental Engineering
University of Tennessee, Knoxville

Engineer — 1985 – 1989
Newport News Shipbuilding, Newport News, VA

AWARDS AND HONORS

Recognized as one of the "Twenty Top Professors of Civil Engineering" by onlineengineeringprograms.com	2016
Malcolm Pirnie Professorship	2007-2014
Appointed Nuclear Regulatory Commission Administrative Judge	2007
AU College of Engineering Faculty Research Award	2002
Brasfield & Gorrie Scholar in Civil Engineering	2001-2007
ORNL Corporate President's Award	1995
United States Department of Education Doctoral Fellowship	1991

Tau Beta Pi, the National Engineering Honor Society 1991
Chi Epsilon, the National Civil Engineering Honor Society 1990

PROFESSIONAL CREDENTIALS

Professional Engineer, State of Alabama
Board Certified Environmental Engineer, American Academy of Environmental Engineers & Scientists
Top Secret Security Clearance

COURSES TAUGHT

Auburn University	Introduction to Environmental Engineering
	Water Supply, Treatment, and Distribution
	Environmental Engineering Design
	Human Odyssey
	Chemical Principles of Environmental Engineering
	Advanced Chemical Principles of Environmental Engineering
	Sustainable Design and Development
University of Tennessee	Aquatic Chemistry
	Environmental Engineering Chemistry

RESEARCH SUPPORT RECEIVED

Planning Grant: Engineering Research Center for Resilient Rural Infrastructure (RRI). A. S. Nowak, G. Dozier, R. Norton, M. O. Barnett, and A. Smith. National Science Foundation. FY 19, $97,500.

Understanding the Subsurface Reactive Transport of Transuranic Contaminants at DOE Sites. M. O. Barnett (PI/PD), T. E. Albrecht-Schmitt, J. E. Saiers, D. K. Shuh. U. S. Department of Energy Environmental Remediation and Science Program (ERSP), FY 10-13, $978,000.

Development of Modeling Methods and Tools for Predicting Coupled Reactive Transport Processes in Porous Media under Multiple Scales. T. P. Clement, M. O. Barnett, N. Jones and C. Zheng. DOE Environmental Management and Science Program (EMSP), FY 06-08, $950,000.

The Effect of Soil Properties on Decreasing Toxic Metal Bioavailability: Field Scale Validation to Support Regulatory Acceptance. A. L. Hawkins, M. O. Barnett, et al. DOD-EPA-DOE Environmental Security Technology Certification Program (ESTCP), FY 06-08, $112,600 (AU).

Sequestration of Subsurface Elemental Mercury. M. O. Barnett, W. P. Hamilton, W. H. Harper, and K. S. Savage. Environmental Protection Agency STAR Program. March 1, 2005 – February 28, 2008, $324,342.

Development and Application of an Innovative Nanotechnology for in-situ Remediation of Mercury-Contaminated Alabama Soils and Sediments. D. Zhao and Mark O. Barnett. USGS-Alabama Water Resources Research Institute, March 1 2005-February 29, 2006, Amount: $75,103.

Developing a new class of ion exchangers for selective removal of arsenic and exploring an engineered approach for treatment and reuse of spent regenerant. D. Zhao, M. O. Barnett, and T. A. Kramer. American Water Works Association Research Foundation (AwwaRF), August 1, 2004-June 15, 2005, $148,074.

A Novel Ion Exchange Process for Selective Removal of As(V) and Enhanced Stability of Process Residuals. D. Zhao and M. O. Barnett. NSF-EPA Partnership for Environmental Research New Technology for the Environment (NTE) Program, FY 04-05, $99,452.

Decreasing Toxic Metal Bioavailability with Novel Soil Amendment Strategies. P. M. Jardine, M. O. Barnett, and S. E. Fendorf. DOD-EPA-DOE Strategic Environmental Research and Development Program (SERDP), FY 03–05, $361,000 (AU).

In-situ Destruction of PCBs, PCE, and TCE in Alabama Soils and Groundwater using a New Nanoscale Sorptive Catalyst. D. Zhao, C. R. Lange and M. O. Barnett. United States Geological Survey (USGS)-Alabama Water Resources Institute. FY 03. $24,951.

Quantifying the Bioavailability of Toxic Metals in Soils. M. O. Barnett and P. M. Jardine. DOD-EPA-DOE Strategic Environmental Research and Development Program (SERDP), FY 00–02, $880,000 (total), $329,000 (AU).

Reductive Immobilization of U(VI) in Fe(III) Oxide-Reducing Subsurface Sediments: Analysis of Coupled Microbial-Geochemical Processes in Experimental Reactive Transport Systems. E. E. Roden, M. O. Barnett, and C. R. Lange. DOE Environmental Management and Science Program (EMSP), FY 01-03, $338,000 (AU).

Retention of Copper in Sediment of Aquaculture Ponds Treated with Copper Sulfate. C. Boyd, D. Zhao, and M. O. Barnett. Auburn University Environmental Institute, AY 02-03, $80,000.

An Investigation into the use of Powdered Activated Alumina for the Removal of Toxic Metals from Contaminated Water. Alabama Legacy for Environmental Research Trust Awards. $80,809 ($39,581 external) for one year. T. A. Kramer and M. O. Barnett.

Particle and Transport Dispersion in Atmospheric Boundary Layers. Auburn College of Engineering Research Infrastructure Program. A. Ahmed, M. O. Barnett, and R. J. Hartfield. AY 02-03, $98,496.

Fate and Transport of Radionuclides Beneath the Hanford Tank Farm: Unraveling Coupled Geochemical and Hydrological Processes in the Vadose Zone. P. M. Jardine, S. E. Fendorf, C. C. Ainsworth, S. C. Brooks, I. L. Larsen, and M. O. Barnett. DOE Environmental Management and Science Program (EMSP), FY 00-02, $1,275,000 (total).

RESEARCH STAFF SUPERVISED

J. Zhuang, M.S.	Research Associate	2000 – 2009
T. Cheng, Ph.D.	Postdoctoral Research Fellow	2003 – 2004
J. Y. Choi, Ph.D.	Postdoctoral Research Fellow	2002 – 2003
J. K. Yang, Ph.D.	Postdoctoral Research Fellow	2000 – 2002

GRADUATE STUDENTS SUPERVISED

C. Preston Waid	M.C.E. 2020
Abhishek Mukesh Shah	M.C.E. 2018
Angela Poore	M.C.E. 2017
Ryan Bock	M.C.E. 2014
Daniel B. Gingerich	M.S. 2013
Hangping Zheng	M.S. 2013
Brian P. Haliena	M.S. 2012
Dominick M. Viruleg	M.C.E. 2012
Nick D. Freeman	M.C.E. 2012
N. H. Melson	M.S. 2011
V. A. Loganathan	Ph.D. 2010
J. T. Dove	M.S. 2009
O. K. Hartzog	M.S. 2008
T. Radu (Co-advisor with T. P. Clement)	Ph.D. 2007
J. E. Snelling	Ph.D. 2007
J. M. Bower-Green	M.S. 2007
D. W. Kilgour	M.S. 2007
S. M. Sanders (Co-advisor with P. Srivastava)	M.S. 2007
Y. Wang	M.S. 2005
R. A. Bevis-Moseley	M.S. 2005
M. Romero	M.S. 2004
J. M. Phillippi (Co-advisor with T. P. Clement)	M.S. 2004
J. L. Subacz	M.S. 2004
M. J. McIndoe	M.S. 2003
S. A. Butler	M.C.E. 2002
D. T. Tackett-McLemor (Co-advisor with S. E. Taylor)	M.S. 2002
L. M. Veal-Montgomery (Co-advisor with S. E. Taylor)	M.S. 2002
D. C. Stejskal (Co-advisor with T. A. Kramer)	M.S. 2001
J. C. Hilliard	M.S. 2001
L. E. Derrick-Williams	M.S. 2000
D. E. Zimmerman	M.S. 1995

PROFESSIONAL MEMBERSHIPS

American Chemical Society
American Society of Civil Engineers
American Water Works Association
Association of Environmental Engineering and Science Professors
Engineers Without Borders

CURRENT SERVICE AND PROFESSIONAL ACTIVITIES

Department
Executive Committee

College
Faculty Mentor, Auburn University Student Chapter, Engineers Without Borders
Mentorship Committee, Samuel Ginn College of Engineering
University
New Faculty Colleague Circle

National
Atomic Safety and Licensing Board, Powertech (USA) Inc. (Dewey-Burdock In Situ Uranium Recovery Facility) [75 Fed. Reg. 13141 (March 18, 2010)]
Government Affairs Committee, Association of Environmental Engineering and Science Professors
State Representative, American Academy of Environmental Engineers and Scientists

PEER-REVIEWED SCIENTIFIC JOURNAL ARTICLES

Gingerich, D. B., A. Sengupta and M. O. Barnett (2017). "Is the Arsenic Rule Affordable?" *Journal American Water Works Association* **109**(9): E381-E392.

Haliena*, B., H. Zheng*, N. Melson*, D. I. Kaplan and M. O. Barnett† (2016). "Decreased Salinity and Actinide Mobility: Colloid-Facilitated Transport or pH Change?" *Environmental Science & Technology*. **50**(2): 625-632.

Jardine, P. M., Stewart, M. A., Barnett, M. O., Basta, N. T., Brooks, S. C., Fendorf, S., Mehlhorn, T. L. (2013) "Influence of Soil Geochemical and Physical Properties on Chromium(VI) Sorption and Bioaccessibility" *Environmental Science & Technology*. **47**(19): 11241-11248

Yang, Y., S. Wang, M.J. Polinski, Y. Liu, M.O. Barnett, and T.E. Albrecht-Schmitt (2013). "Dissolution of uranyl and plutonyl borates: Influences of crystalline structures and aqueous ligands." *Chemical Geology*. **357**: 67-74.

Chattanathan, S.A., T.P. Clement, S.R. Kanel, M.O. Barnett, and N. Chatakondi (2013). "Remediation of Uranium-contaminated Groundwater by Sorption onto Hydroxyapatite Derived from Catfish Bones." *Water Air and Soil Pollution*. **224**(2) 1429.

Yang, Y., J.E. Saiers, and M.O. Barnett (2013). "Impact of Interactions between Natural Organic Matter and Metal Oxides on the Desorption Kinetics of Uranium from Heterogeneous Colloidal Suspensions." *Environmental Science & Technology*. **47**(6): 2661-2669.

Melson*, N.H., B.P. Haliena*, D.I. Kaplan, and M.O. Barnett† (2012). "Adsorption of tetravalent thorium by geomedia." *Radiochimica Acta* **100**(11): 827-832.

Yang, Y., J. E. Saiers, N. Xu, S. G. Minasian, T. Tyliszczak, S. A. Kozimor, D. K. Shuh, M. O. Barnett (2012). "Impact of Natural Organic Matter on Uranium Transport through

Saturated Geologic Materials: From Molecular to Column Scale." *Environmental Science & Technology* **46**(11): 5931-5938.

Jeppu*, G. P., T. P. Clement, M. O. Barnett, and K. K. Lee (2012). "A modified batch reactor system to study equilibrium-reactive transport problems." *Journal of Contaminant Hydrology* **129-130**: 2-9.

Barnett†, M O., V. A. Loganathan*, D. W. Kilgour*, O. K. Hartzog*, J. Zhuang*, Y. Wang, P. M. Jardine (2011). "Formation of Chloropyromorphite during the Physiologically Based Extraction Test: Experimental Artifact?" *Environmental Engineering Science* **28**(10): 719-724.

Kumar*, S., V. A. Loganathan*, R. B. Gupta and M. O. Barnett† (2011). "An Assessment of U(VI) removal from groundwater using biochar produced from hydrothermal carbonization." *Journal of Environmental Management* **92**(10): 2504-2512.

Kanel, S. R., T. P. Clement, M. O. Barnett and M. N. Goltz (2011). "Nano-Scale Hydroxyapatite: Synthesis, Two-Dimensional Transport Experiments, and Application for Uranium Remediation." *Journal of Nanotechnology*. Article ID 462382, 5 pages, doi:10.1155/2011/462382.

Jeppu, G. P., T. P. Clement, M. O. Barnett and K. K. Lee (2010). "A scalable surface complexation modeling framework for predicting arsenate adsorption on goethite-coated sands." *Environmental Engineering Science* **27**(2): 147-158.

Xiong, Z., F. He, D. Y. Zhao and M. O. Barnett (2009). "Immobilization of mercury in sediment using stabilized iron sulfide nanoparticles." *Water Research* **43**(20): 5171-5179.

Hartzog*, O. K., V. A. Loganathan*, S. R. Kanel*, G. R. Jeppu* and M. O. Barnett† (2009). "Normalization, comparison, and scaling of adsorption data: Arsenate and goethite." *Journal of Colloid and Interface Science* **333**(1): 6-13.

Srivastava, P., S. M. Sanders*, J. H. Dane, Y. Feng, J. Basile and M. O. Barnett (2009). "Fate and Transport of Sulfadimethoxine and Ormetoprim in Two Southeastern United States Soils." *Vadose Zone Journal* **8**(1): 32-41.

Loganathan*, V. A., M. O. Barnett†, T. P. Clement and S. R. Kanel* (2009). "Scaling of adsorption reactions: U(VI) experiments and modeling." *Applied Geochemistry* **24**(11): 2051-2060.

Moseley*, R. A., M. O. Barnett†, M. A. Stewart*, T. L. Mehlhorn, P. M. Jardine, M. Ginder-Vogel and S. Fendorf (2008). "Decreasing Lead Bioaccessibility in Industrial and Firing Range Soils with Phosphate-Based Amendments." *Journal of Environmental Quality* **37**(6): 2116-2124.

Bower*, J., K. S. Savage, B. Weinman*, M. O. Barnett†, W. P. Hamilton and W. F. Harper (2008). "Immobilization of mercury by pyrite (FeS_2)." *Environmental Pollution* **156**(2): 504-514.

Kilgour*, D. W., R. B. Moseley*, M. O. Barnett†, K. S. Savage and P. M. Jardine (2008). "Potential negative consequences of adding phosphorus-based fertilizers to immobilize lead in soil." *Journal of Environmental Quality* **37**(5): 1733-1740.

Kanel*, S. R., R. R. Goswami*, T. P. Clement, M. O. Barnett and D. Zhao (2008). "Two dimensional transport characteristics of surface stabilized zero-valent iron nanoparticles in porous media." *Environmental Science & Technology* **42**: 896-900.

Radu*, T.**,** A. Kumar*, T. P. Clement, G. Jeppu* and M. O. Barnett (2008). "Development of a scalable model for predicting arsenic transport coupled with oxidation and adsorption reactions." *Journal of Contaminant Hydrology* **95**: 30-41.

Sanders*, S. M., P. Srivastava, Y. Feng, J. H. Dane, J. Basile and M. O. Barnett (2008). "Sorption of the veterinary antimicrobials sulfadimethoxine and ormetoprim in soil." *Journal of Environmental Quality* **37**(4): 1510-1518.

Cheng*, T., M. O. Barnett†, E. E. Roden and J. L. Zhuang (2007). "Reactive transport of uranium(VI) and phosphate in a goethite-coated sand column: An experimental study." *Chemosphere* **68**(7): 1218-1223.

Hiemstra, T., M. O. Barnett and W. H. van Riemsdijk (2007). "Interaction of silicic acid with goethite." *Journal of Colloid and Interface Science* **310**(1): 8-17.

Phillippi*, J. M., V. A. Loganathan*, M. J. McIndoe*, M. O. Barnett†, T. P. Clement and E. E. Roden (2007). "Theoretical solid/solution ratio effects on adsorption and transport: Uranium(VI) and carbonate." *Soil Science Society of America Journal* **71**(2): 329-335.

Romero-Gonzalez*, M. R., T. Cheng*, M. O. Barnett† and E. E. Roden (2007). "Surface complexation modeling of the effects of phosphate on uranium(VI) adsorption." *Radiochimica Acta* **95**(5): 251-259.

Snelling*, J., M. O. Barnett†, D. Zhao and J. S. Arey (2007). "Methyl-tert-hexyl ether and methyl-tert-octyl ether as gasoline oxygenates: Anticipating widespread risks to community water supply wells." *Environmental Toxicology and Chemistry* **26**(11): 2253-2259.

Subacz*, J. L., M. O. Barnett†, P. M. Jardine and M. A. Stewart (2007). "Decreasing arsenic bioaccessibility/bioavailability in soils with iron amendments." *Journal of Environmental Science and Health Part A-Toxic/Hazardous Substances & Environmental Engineering* **42**(9): 1317-1329.

Cheng*, T., M. O. Barnett†, E. E. Roden and J. Zhuang (2006). "Effects of solid-to-solution ratio on uranium(VI) adsorption and its implications." *Environmental Science and Technology* **40**(10): 3243-3247.

Liu*, R. Q., D. Y. Zhao and M. O. Barnett (2006). "Fate and transport of copper applied in channel catfish ponds." *Water Air and Soil Pollution* **176**(1-4): 139-162.

Snelling*, J., M. O. Barnett†, D. Y. Zhao and J. S. Arey (2006). "Methyl tertiary hexyl ether and methyl tertiary octyl ether as gasoline oxygenates: Assessing risks from atmospheric dispersion and deposition." *Journal of the Air & Waste Management Association* **56**(10): 1484-1492.

Jeon, B. H., B. A. Dempsey, W. D. Burgos, M. O. Barnett and E. E. Roden (2005). "Chemical reduction of U(VI) by Fe(II) at the solid-water interface using natural and synthetic Fe(III) oxides." *Environmental Science & Technology* **39**(15): 5642-5649.

Jones, S. A., M. O. Barnett, A. Bhandari and T. LaPara (2005). "An initial effort to count environmental engineers in the USA." *Environmental Engineering Science* **22**(6): 772-782.

Radu*, T., J. L. Subacz*, J. M. Phillippi and M. O. Barnett† (2005). "Effects of dissolved carbonate on arsenic adsorption and mobility." *Environmental Science & Technology* **39**(20): 7875-7882.

Yang*, J. K., M. O. Barnett†, J. L. Zhuang, S. E. Fendorf and P. M. Jardine (2005). "Adsorption, oxidation, and bioaccessibility of As(III) in soils." *Environmental Science & Technology* **39**(18): 7102-7110.

Cheng*, T., M. O. Barnett†, E. E. Roden and J. Zhuang (2004). "Effects of phosphate on uranium(VI) adsorption to goethite-coated sand." *Environmental Science and Technology* **38**(22): 6059-6065.

Jeon, B. H., S. D. Kelly, K. M. Kemner, M. O. Barnett, W. D. Burgos, B. A. Dempsey and E. E. Roden (2004). "Microbial reduction of U(VI) at the solid-water interface." *Environmental Science & Technology* **38**(21): 5649-5655.

Liu*, R., D. Zhao, M. O. Barnett, C. Boyd and A. A. McNevin (2003). "Dynamics and environmental fate of copper in aquaculture ponds treated with copper sulfate." *Journal of Environmental Monitoring and Restoration*: 1-8.

Stewart, M. A., P. M. Jardine, M. O. Barnett, T. L. Mehlhorn, L. K. Hyder and L. D. McKay (2003). "Influence of soil geochemical and physical properties on the sorption and bioaccessibility of Cr(III)." *Journal of Environmental Quality* **32**: 129-137.

Stewart, M. A., P. M. Jardine, C. C. Brandt, M. O. Barnett, S. E. Fendorf, L. D. McKay, T. L. Mehlhorn and K. Paul (2003). "Effects of contaminant concentration, aging, and soil properties on the bioaccessibility of Cr(III) and Cr(VI) in soil." *Soil and Sediment Contamination* **12**(1): 1-21.

Williams*, L. E., M. O. Barnett†, T. A. Kramer and J. G. Melville (2003). "Adsorption and transport of As(V) in experimental subsurface systems." *Journal of Environmental Quality* **32**(3): 841-850.

Yang*, J. K., M. O. Barnett†, P. M. Jardine and S. C. Brooks (2003). "Factors controlling the bioaccessibility of arsenic(V) and lead(II) in soil." *Soil and Sediment Contamination* **12**(2): 165-179.

Barnett, M. O.†, P. M. Jardine and S. C. Brooks (2002). "Uranium(VI) adsorption to heterogeneous subsurface media: Application of a surface complexation model." *Environmental Science and Technology* **36**(5): 937-942.

Bostick, B. C., S. E. Fendorf, M. O. Barnett, P. M. Jardine and S. C. Brooks (2002). "Uranyl surface complexes formed on subsurface media from DOE facilities." *Soil Science Society of America Journal* **66**: 99-108.

Lindberg, S. E., H. Zhang, A. F. Vette, M. S. Gustin, M. O. Barnett and T. Kuiken (2002). "Dynamic flux chamber measurement of gaseous mercury emission fluxes over soils: II. Effect of flushing flow rate and verification of a two-resistance exchange interface simulation model." *Atmospheric Environment* **36**: 847-859.

Yang*, J. K., M. O. Barnett†, P. M. Jardine, N. T. Basta and S. W. Casteel (2002). "Adsorption, sequestration, and bioaccessibility of As(V) in soils." *Environmental Science and Technology* **36**(21): 4562-4569.

Zhang, H., S. E. Lindberg, M. O. Barnett, A. F. Vette and M. S. Gustin (2002). "Dynamic flux chamber measurement of gaseous mercury emission fluxes over soils: I. Simulation of gaseous mercury emissions from soils using a two-resistance exchange interface model." *Atmospheric Environment* **36**: 835-846.

Barnett†, M. O. and R. R. Turner (2001). "Bioaccessibility of mercury in soils." *Soil and Sediment Contamination* **10**(3): 301-316.

Barnett†, M. O., R. R. Turner and P. C. Singer (2001). "Oxidative dissolution of metacinnabar (β-HgS) by dissolved oxygen." *Applied Geochemistry* **16**(13): 1499-1512.

Barnett†, M. O., P. M. Jardine, S. C. Brooks and H. M. Selim (2000). "Adsorption and transport of U(VI) in subsurface media." *Soil Science Society of America Journal* **64**(3): 908-917.

Barnett†, M. O., L. A. Harris, R. R. Turner, R. J. Stevenson, T. J. Henson, R. C. Melton and D. P. Hoffman (1997). "Formation of mercuric sulfide in soil." *Environmental Science and Technology* **31**(11): 3037-3043.

Barnett†, M. O., L. A. Harris, R. R. Turner, T. J. Henson, R. E. Melton and R. J. Stevenson (1995). "Characterization of mercury species in contaminated floodplain soils." *Water, Air, and Soil Pollution* **80**(1): 1105-1108.

*Graduate student or postdoctoral author.

†Notes where I am the corresponding author.

POLICY PUBLICATIONS

Barnett, M. O. (2010). "Biofuels and Greenhouse Gas Emissions: Green or Red?" *Environmental Science & Technology* **44**(14): 5330-5331.

Barnett, M. O. (2010). "The History of Weapons of Terror: An exploration of the myths and realities of chemical and biological warfare." Review of A History Of Chemical and Biological Weapons by Edward M. Spiers, *Chemical & Engineering News* **88**(29): 40-41.

PATENTS

Zhao, D., Z. Xiong, M. Barnett, R. Liu, W. F. Harper, F. He (2009) In situ immobilization of metals in contaminated sites using stabilized iron phosphate nanoparticles. Pat. No. US 7,581,902 B2.

BOOKS AND BOOK CHAPTERS

Barnett, Mark O. and Douglas B. Kent, (eds.) (2008). Adsorption of Metals by Geomedia II: Variables, Mechanisms, and Model Applications. Developments in Earth and Environmental Sciences. Amsterdam, Elsevier.

Radu, T., J. C. Hilliard, J. K. Yang and M. O. Barnett† (2005). Transport of As(III) and As(V) in experimental subsurface systems. Advances in Arsenic Research: Integration of

Experimental and Observational Studies and Implications for Mitigation, ACS Symposium Series Vol. 915. P. A. O'Day, D. Vlassopoulos, X. Meng and L. G. Benning. Washington, DC, American Chemical Society**:** 91-103.

Saunders, J. A., S. Mohammad, N. E. Korte, M.-K. Lee, M. Fayek, D. Castle and M. O. Barnett (2005). Groundwater Geochemistry, Microbiology, and Mineralogy in Two Arsenic-Bearing Holocene Alluvial Aquifers from the United States. Advances in Arsenic Research: Integration of Experimental and Observational Studies and Implications for Mitigation, ACS Symposium Series Vol. 915. P. A. O'Day, D. Vlassopoulos, X. Meng and L. G. Benning. Washington, DC, American Chemical Society**:** 191-205.

Barnett, M. O., W. P. Hamilton, T. A. Kramer and A. R. Bowers (2001). Chemical precipitation: removal of complexed metals from an industrial wastewater. Chemical Processes Laboratory Manual, Association of Environmental Engineering and Science Professors**:** Section 2-2-1, pp. 1-13.

Kim, K., P. J. Hanson, M. O. Barnett and S. E. Lindberg (1997). Biogeochemistry of Mercury in the Air-Soil-Plant System. Mercury and Its Effects on Environment and Biology. H. Sigel and A. Sigel. New York, Marcel Dekker**:** 185-212.

PRESENTATIONS, ABSTRACTS, AND PROCEEDINGS

Barnett, M. O. (2020). Civil and Environmental Engineering: Grand Challenges and a New Vision for an Old Profession. Invited presentation, Department of Civil and Environmental Engineering, South Dakota School of Mines & Technology, February 20, Rapid City, SD.

White, K. D., M. Elliott and M. O. Barnett (2019). Wastewater Management Challenges in the Rural Alabama Black Belt: Conditions and a Path Forward. National Onsite Wastewater Reuse Association (NOWRA) Mega-Conference, October 16, Loveland, CO.

Barnett, M. O., H. Beard, B. Eaton, P. Hardy, T. Haygood, T. Herrington, D. Jones and L. Willis (2019). Environmental Justice and Community Development in the Black Belt. Panel Discussion, November 25, Selma, AL.

White, K. D., M. Elliott and M. O. Barnett (2019). Wastewater Management Challenges in the Rural Alabama Black Belt: Conditions and a Path Forward. Alabama Water Resources Conference and Symposium, September 4, Orange Beach, AL.

White, K. D., M. Elliott and M. O. Barnett (2019). Wastewater Management Issues in the Rural Alabama Black Belt and a Proposed Path Forward. American Chemical Society Fall 2019 National Meeting & Exposition, August 25-29, San Diego, CA.

Barnett, M. O. (2019). Auburn University, Engineers Without Borders, and Water Supply and Distribution in Underserved Communities. Invited presentation, Tomorrow's Community Innovators, June 11, Auburn, AL.

White, K. D., M. Elliott and M. O. Barnett (2019). Wastewater Management Challenges in the Rural Alabama Black Belt: Conditions and a Path Forward. Alabama/Mississippi Water Joint Annual Meeting, July 28-31, Mobile, AL.

Barnett, M. O. (2019). Opportunities for Innovation in Engineering Education. Invited presentation, Tickle College of Engineering, University of Tennessee, April 26, Knoxville, TN.

Barnett, M. O., M. Brown, C. Flowers and M. McIntyre (2018). Health, Justice, and Infrastructure in Lowndes County. Panel Discussion, September 22, Hayneville, AL.

Barnett, M. O. (2018). Water Infrastructure Resilience. Invited presentation, Air Force War College, October 31, Montgomery, AL.

Barnett, M. O. (2017). Radionuclides, Colloids, and Virtual Water. Invited presentation, Department of Geological Sciences, University of North Carolina, March 23, Chapel Hill, NC.

Barnett, M. O. (2016). Water Supply and Distribution in Underserved Communities. Alabama/Mississippi Section American Water Works Association 69th Annual Conference, October 9-11, Montgomery, AL.

Barnett, M. O. (2015). History of Environmental Engineering in the U.S.. Invited presentation, School of Environment and Energy Engineering, Beijing University of Civil Engineering and Architecture, May 20, Beijing, China.

Barnett, M. O. (2015). Civil and Environmental Engineering: Grand Challenges and a New Vision for an Old Profession. Invited presentation, Department of Civil and Environmental Engineering, University of Tennessee, February 5, Knoxville, TN.

Barnett, M. O. (2014). Civil and Environmental Engineering: Grand Challenges and a New Vision for an Old Profession. Invited presentation, Department of Civil Engineering, University of Kentucky, March 12, Lexington, KY.

Barnett, M.O. (2014). Science and Leadership. Invited presentation, Ground Water and Ecosytem Restoration Division, Environmental Protection Agency. January 15. Ada, OK.

Gingerich, D. and M.O. Barnett (2013). Incorporation of Income Distribution into the EPA's Affordability Metrics. American Water Works Association Annual Conference & Exhibition. June 9-13. Denver, CO.

Barnett, M. O. (2012). Civil and Environmental Engineering: Grand Challenges and a New Vision for an Old Profession. Invited presentation, Department of Civil and Environmental Engineering, Michigan State University, June 12, East Lansing, MI.

Barnett, M. O. (2012). Meeting Grand Challenges, Preparing Engineers for 2025 and Beyond. Invited presentation, Department of Civil and Environmental Engineering, Tennessee Technological University, June 8, Cookeville, TN.

Yang, Y., J.E. Saiers, N. Xu, T. Tyliszczak, D. Shuh, and M.O. Barnett (2011). Impact of Natural Organic Matter on Uranium Transport through Saturated Geologic Materials: From Molecular to Column Scale. American Geophysical Union Fall Meeting, December 5-9, San Francisco, CA.

Loganathan, V. A., M. O. Barnett and T. P. Clement (2010). An Assessment of U(VI) Adsorption at Multiple Scales. 239th American Chemical Society Conference, March 21-25, San Francisco, CA.

Barnett, M. O. (2010). Environmental research: Where have we been, where are we, and where are we going? Invited presentation, Department of Civil, Construction, and Environmental Engineering, University of Alabama, Tuscaloosa, AL.

Kanel, S. R., M. O. Barnett and T. P. Clement (2008). Removal of uranium from groundwater using different types of synthetic and natural hydroxyapatite material. 235th American Chemical Society Meeting, April 6-10, New Orleans, LA.

Jeppu, G., K. Hartzog, S. R. Kanel, T. P. Clement and M. O. Barnett (2008). Scaling of U(VI) and As(V) Interactions with Synthetic Iron Oxide-Coated Sands. 236th ACS National Meeting, August 17 – 21, Philadelphia, PA.

Barnett, M. O., K. Hartzog, D. Kilgour, C. Luo, R. Moseley, T. Radu, J. L. Subacz, J. K. Yang and D. Zhao (2008). Arsenic Research at Auburn University (invited). Electric Power Research Institute Arsenic Workshop, July 22, Pensacola, FL.

Clement, T. P., S. Kanel, R. Goswami, F. He, D. Zhao and M. Barnett (2008). Two Dimensional Transport Characteristics of Iron Nano-particles in Porous Media. MODFLOW and More 2008, May 19-21, Golden, CO.

Kanel, S. R., R. Goswami, T. P. Clement, M. O. Barnett and D. Zhao (2008). Transport of Surface Stabilized Zero-Valent Iron Nano Particles in Two-Dimensional Flow Container Packed with Porous Media. 235th American Chemical Society Meeting, April 6-10, New Orlean, LA.

Kanel, S. R., V. A. Loganathan, G. Jeppu, A. Kumar, V. Srinivasan, T. Radu, K. Hartzog, J. McLaughlin, A. Shrestha, A. S. Sunder, J. Torlapati, M. O. Barnett, C. Zheng, N. L. Jones and T. P. Clement (2008). Development of Modeling Methods and Tools for Predicting Coupled Reactive Transport Processes in Porous Media at Multiple Scales. DOE-Environmental Remediation Science Program Annual PI Meeting, April 7-9, Lansdowne, VA.

Luo, C., J. Zhuang, D. Zhao and M. O. Barnett (2008). Pilot-scale Demonstration of a Selective Ion Exchange Process for the Removal of Arsenic from Groundwater Alabama-Mississippi Section, American Water Works Association, 61st Annual Conference, October 5-7, Montgomery, AL.

Dove, J. T., J. M. Bower and M. O. Barnett (2008). Subsurface Reactive Barriers to Mercury Mobilization. Alabama Water Resources Conference and Symposium, September 3-5, Orange Beach, AL.

Hartzog, K., G. Jeppu, S. R. Kanel, V. A. Loganathan, M. O. Barnett and T. P. Clement (2007). Scaling Arsenate Adsorption on Goethite-Coated Sand: Laboratory Experiments and Surface Complexation Modeling. Alabama Water Resources Conference and Symposium, September 5-7, Orange Beach, AL.

Hawkins, A. and M. Barnett (2007). The Effect of Soil Properties on Toxic Metal Bioavailability: Field Scale Validation. 22nd Annual EPA Risk Assessors Conference, July 9-12, Brooklyn, NY.

Xiong, Z., F. He, D. Zhao, M. O. Barnett and W. F. Harper (2007). In-situ Immobilization of Mercury in Sediment and Soil by A New Class of Stabilized Iron Sulfide Nanoparticles.

Alabama Water Resources Conference and Symposium, September 5-7, Orange Beach, AL.

Barnett, M. O. (2006). Estimating and reducing the relative bioavailability of arsenic in soil Invited presentation at the Electric Power Research Institute's Arsenic Bioavailability Workshop, November 28, Tampa, FL.

Barnett, M. O. (2006). Adsorption and Transport of Metals and Radionuclides in the Subsurface. Invited presentation at Imperial College, University of London, May 8, London, UK.

Barnett, M. O. (2006). Adsorption, Transport, and Bioavailability of Metals and Radionuclides in the Subsurface. Invited presentation, Henry Hunter Lecture, Department of Chemical Engineering, Mississippi State University, April 25, Starkville, MS.

Barnett, M. O., D. Zhao, W. F. Harper, J. Bower, Z. Xiong, W. P. Hamilton, K. Savage and R. R. Turner (2006). Interactions of mercury with sulfur and its implications to mercury cycling Invited presentation at U.S. Army Engineer Research and Development Center, April 24, Vicksburg, MS.

Barnett, M. O., D. Zhao, W. F. Harper, J. Bower, Z. Xiong, W. P. Hamilton, K. Savage and R. R. Turner (2006). Immobilization of Hg by Sulfide Minerals. Invited presentation at EPA Region 4 Headquarters, February 28, Atlanta, GA.

Bower, J., M. O. Barnett, W. P. Hamilton, W. F. Harper and K. Savage (2006). Immobilization of Mercury by Sulfide Minerals. Alabama Water Resources Conference and Symposium, September 6-8, Orange Beach, AL.

Cheng, T., M. O. Barnett, M. Romero, J. M. Phillippi, M. J. McIndoe, T. P. Clement and E. E. Roden (2006). Adsorption and transport of uranium(VI) and phosphate: An examination of the applicability of batch experiments to porous media transport. 231st American Chemical Society National Meeting, March 26-30, Atlanta, GA.

Kilgour, D., R. Moseley, M. O. Barnett and P. M. Jardine (2006). The Potential Negative Effects of Phosphate Amendments to Lead Contaminated Soils. Alabama Water Resources Conference and Symposium, September 6-8, Orange Beach, AL.

Steinwinder, T. R., D. Zhao, M. O. Barnett and B. An (2006). Stabilizing arsenic-laden residuals from ion exchange processes. 231st American Chemical Society National Meeting, March 26-30, Atlanta, GA.

Xie, L., D. E. Giammar, Y. Wang and M. O. Barnett (2006). Chemical interactions of lead and phosphate at mineral-water interfaces. 231st American Chemical Society National Meeting, March 26-30, Atlanta, GA.

Xiong, Z., D. Zhao and M. O. Barnett (2006). Immobilization of mercury from water and soils by stabilized iron sulfide nanoparticles. 232nd American Chemical Society National Meeting, September 10-14, San Franciso, CA.

Zhao, D., Z. Xiong, M. O. Barnett and W. F. Harper (2006). In-situ immobilization/containment of mercury in soils and sediments using a new class of stabilized metal sulfide nanoparticles. Invited presentation at EPA Region 4 Headquarters, February 28, Atlanta, GA.

Steinwinder, T., B. An, D. Zhao and M. O. Barnett (2005). Engineered Treatment of As-Laden Regeneration Brine for Enhanced Stability of Process Waste Residuals. 19th Annual Alabama Water Resources Conference and Symposium, September 8-9, Orange Beach, AL.

Zhao, D., B. An, T. Steinwinder, M. O. Barnett and T. Kramer (2005). Selective removal of arsenate from drinking water using a polymeric ligand exchanger. 230th ACS National Meeting, Aug. 28 - Sept. 1, Washington, DC.

Steinwinder, T. R., D. Zhao, M. O. Barnett and B. An (2005). A novel ion exchange process for arsenic removal from drinking water. American Water Works Association 124th Annual Conference and Exposition, June 12-16, San Francisco, CA.

Jardine, P. M., J. C. Parker, M. O. Barnett, S. E. Fendorf and M. Stewart (2005). Decreasing Toxic Metal Bioavailability with Various Soil Amendment Strategies. SERDP-ESTCP Symposium and Workshop, Nov. 29 - Dec. 1, Washington, DC.

Jones, S. A., M. Barnett, A. Bhandari and T. LaPara (2005). An Initial Effort to Count Environmental Engineers in the U.S.A. Association of Environmental Engineering and Science Professors First Biennial Research and Education Conference, July 23-27, Clarkson University, Potsdam, NY.

Stewart, M. A., P. M. Jardine, S. E. Fendorf and M. O. Barnett (2005). Use of soil amendments to reduce bioaccessibility of heavy metal contaminated soils (invited). 8th International Conference on the Biogeochemistry of Trace Elements, April 3-7, Adelaide, Australia.

Stewart, M. A., P. M. Jardine, S. E. Fendorf and M. O. Barnett (2005). Evaluation of soil properties to reduce bioaccessibility of heavy metals. International Conference on the Remediation of Contaminated Sediments, January 24-27, New Orleans, LA.

Subacz, J. L., J. K. Yang, J. Zhuang, M. O. Barnett, P. M. Jardine and S. E. Fendorf (2005). Estimating and Reducing As Bioaccessibility -Bioavailability in Soils in the U.S. Invited presentation at the Dutch National Institute for Public Health and the Environment (RIVM), April 28, Bilthoven, The Netherlands.

Barnett, M. O. (2004). Adsorption, Transport, and Bioavailability of Metals and Radionuclides in the Subsurface. Invited presentation at Washington University, October 15, St. Louis, Mo.

Barnett, M. O. (2004). Adsorption, Transport, and Bioavailability of Metals and Radionuclides in the Subsurface. Invited presentation at Texas A&M University, October 15, College Station, TX.

Subacz, J. L., Z. Zhuang, M. O. Barnett, M. A. Stewart, P. M. Jardine and J. Drexler (2004). Decreasing arsenic bioavailability in soil with iron amendments. 20th International Conference on Soils, Sediments, and Water, October 18-21, Amherst, MA.

Brooks, S. C., P. M. Jardine, M. O. Barnett and S. Fendorf (2004). "Assessing the effects of peat amendments on the mobility of cadmium in soils." *Abstracts of Papers of the American Chemical Society* **227**: U1106-U1106.

Cheng, T., M. O. Barnett and E. E. Roden (2004). Uranium (VI) adsorption to goethite-coated sand: Effects of phosphate. 227th American Chemical Society National Meeting, March 28-April 1, Anaheim, CA.

Cheng, T., M. O. Barnett and E. E. Roden (2004). The effects of phosphate on uranium adsorption to goethite-coated sand. International Workshop on Sorption Processes at Oxide and Carbonate Mineral Water Interfaces, March 25-26, Karlsruhe, Germany.

Radu, T. and M. O. Barnett (2004). Transport of As(III) and As(V) in Experimental Subsurface Systems containing MnO_2(s). Alabama Water Environment Association Conference, April 25-28, Orange Beach, AL.

Stewart, M. A., P. M. Jardine, S. E. Fendorf and M. O. Barnett (2004). Decreasing the bioaccessibility of Pb, Cd, and Cr(VI) with novel soil amendment strategies. Soil Science Society of America Annual Meetings, October 31-November 4, Seattle, Washington.

Subacz, J. L., Z. Zhuang, M. O. Barnett, M. A. Stewart, P. M. Jardine and J. Drexler (2004). Decreasing arsenic bioavailability in soil with iron amendments. Book of Abstracts, 20th International Conference on Soils, Sediments, and Water, October 18-21, Amherst, MA.

Barnett, M. O., J. Y. Choi, T. R. Gautam, M. J. McIndoe, J. M. Phillippi, T. P. Clement, C. R. Lange and E. E. Roden (2003). Subsurface reactive transport of U(VI). Biogeochemical Controls on the Mobility and Bioavailability of Metals in Soils and Groundwater International Conference, March 2-7, Monteverita, Switzerland.

Barnett, M. O., T. Radu, J. K. Yang and J. C. Hilliard (2003). Transport of As(III) and As(V) in experimental subsurface systems. 225th ACS National Meeting, September 7-11, New York, NY.

Barnett, M. O., J. K. Yang, J. L. Subacz, P. M. Jardine and S. E. Fendorf (2003). Estimating the oral bioavailability of arsenic in soil. U.S. EPA Bioavailability Workshop, April 15-16, Tampa, FL.

Jardine, P. M., J. C. Parker, M. O. Barnett and S. E. Fendorf (2003). Decreasing toxic metal bioavailability with novel soil amendment strategies. Partners in Environmental Technology Technical Symposium and Workshop, Washington, D.C.

Liu, R., D. Zhao, M. O. Barnett and C. Boyd (2003). Retention and speciation of copper in sediments of aquaculture ponds treated with copper sulfate. Alabama Water Resources Conference, September 3-5, Orange Beach, AL.

Phillippi, J. M., T. R. Gautam, T. P. Clement, M. O. Barnett, M. J. McIndoe and E. E. Roden (2003). Reactive transport of U(VI) in the subsurface. Alabama Water Resources Conference, September 3-5, Orange Beach, AL.

Phillippi, J. M., T. R. Gautam, T. P. Clement, M. J. McIndoe, M. O. Barnett and E. E. Roden (2003). "Reactive transport of U(VI) in groundwater." *Proceedings MODFLOW and More 2003: Understanding through modeling* **1**: 280.

Stewart, M. A., P. M. Jardine, S. E. Fendorf and M. O. Barnett (2003). Influence of soil properties on the bioaccessibility of Cr(VI) in soils. Soil Science Society of America National Meeting, November 2-6, Denver, CO.

Hilliard, J. C. and M. O. Barnett (2002). Arsenate interactions in the subsurface. Presented at Alabama's Water Environment Federation 25th Annual Conference, April 28-May 1, Orange Beach, AL.

Radu, T., J. K. Yang, J. C. Hilliard and M. O. Barnett (2002). Arsenite adsorption and transport in iron-coated sand. Presented at the 16th Annual Alabama Water Resources Conference, September 4-6, Orange Beach, AL.

Stewart, M. A., P. M. Jardine, L. D. McKay, T. L. Mehlhorn and M. O. Barnett (2002). Quantifying the bioaccessibility of heavy metals Cr, Cu, and Cd in soils. Presented at the 23rd Annual SETAC Meeting in North America, November 16-20, Salt Lake City, UT.

Stewart, M. A., P. M. Jardine, T. L. Mehlhorn, M. O. Barnett and L. D. McKay (2002). "Effects of soil geochemical and physical properties on the bioaccessibility of chromium in soil." *Abstr. Geol. Soc. Am.* **34**(2): 35.

Barnett, M. O., E. E. Roden, P. M. Jardine and S. C. Brooks (2001). Biogeochemical Interactions of U and Fe(III) oxides in subsurface environments. Presented at the 222nd ACS National Meeting, August 26-30, Chicago, IL.

Barnett, M. O., R. R. Turner and P. C. Singer (2001). "Formation and stability of mercuric sulfide in the subsurface." *ACS Environmental Chemistry Division Preprints of Extended Abstracts* **41**(2): 494-496.

Stejskal, D. C., T. A. Kramer and M. O. Barnett (2001). Removal of toxic metals from contaminated water using powdered activated alumina and coagulation/flocculation. Hazardous and Industrial Wastes: Proceedings of the Thirty-Third Mid-Atlantic Industrial and Hazardous Waste Conference. N. Assaf-Anid. Riverdale, NY**:** 29-39.

Stejskal, D. C., T. A. Kramer and M. O. Barnett (2001). Use of Coagulant Chemicals and Powdered Activated Alumina to Remove Arsenic from Drinking Water. Alabama-Mississippi Section of the AWWA Annual Conference, Biloxi, MS.

Stewart, M., P. M. Jardine, T. L. Mehlhorn and M. O. Barnett (2001). Physical and chemical controls on the bioaccessibility of Cr(III/VI) in soil. Soil Science Society of America Annual Conference, October 21-25, Charlotte, NC.

Barnett, M. O. (2000). Bioavailability of toxic metals in soil. Alabama Section of ASCE Winter Meeting, March 7, Auburn, AL.

Barnett, M. O., J. K. Yang, P. M. Jardine, M. Stewart, S. E. Fendorf and M. J. La Force (2000). Factors affecting the bioavailability of toxic metals in soils. SERDP/ESTCP Partners in Environmental Technology Symposium, November 28-30, Arlington, VA.

Bostick, B. C., S. E. Fendorf, M. O. Barnett, P. M. Jardine and S. C. Brooks (2000). Uranyl species formed during reactive transport through subsurface media. Soil Science Society of America Annual Meeting, November 5-9, Minneapolis, MN.

Derrick, B. and M. O. Barnett (2000). "Sorption and transport of arsenate in the subsurface." *EOS* **81**(48): F551.

Derrick, B. and M. O. Barnett (2000). Sorption and transport of arsenate in the subsurface. Sixth Annual Alabama Student Conference on Water Resources, September 6, Gulf Shores, AL.

La Force, M. J., S. E. Fendorf, M. O. Barnett and P. M. Jardine (2000). "Effects of residence time on contaminant bioavailability."

Zhang, H., S. Lindberg, A. Vette, M. Barnett, M. Gustin and T. Kuiken (2000). Dynamic flux chamber measurement of mercury emission fluxes over soils: Effect of sweep air flushing flow rate and verification of a two-resistance exchange interface simulation model. Presented at Society of Environmental Toxicology and Chemistry 21st Annual Meeting, November, Nashville, TN.

Barnett, M. O. and P. M. Jardine (1999). Quantifying the bioavailability of toxic metals in soils (Invited). SERDP/ESTCP Partners in Environmental Technology Symposium, November 30 - December 2, Arlington, VA.

Barnett, M. O. (1996). Speciation and bioavailability of mercury at East Fork Poplar Creek, TN. EPA/DOE Mercury Speciation Workshop, September 17-19, Denver, CO.

Miller, J. Q. and M. Barnett (1996). "Effective use of risk assessments and the public comment process to achieve acceptable remediation goals for mercury-contaminated sites." *Waste Manage. (Tucson, AZ)*.

Barnett, M. O., R. R. Turner and P. C. Singer (1995). "Oxidation of authigenic mercuric sulfide." *Abstr. Geol. Soc. Am.* **27**(2): 35.

Barnett, M. O., R. R. Turner, L. A. Harris, T. J. Henson, R. C. Melton and R. J. Stevenson (1994). "Characterization of mercury in contaminated floodplain soils." *Emerging Technol. Hazard. Waste Manage. VI*: 1292-1293.

Stevenson, R., L. Harris, R. Turner and M. Barnett (1994). "Transmission electron microscopy of mercury sulfide particles from a mercury-contaminated soil." *Proc. Ann. Meet. Microsc. Soc. Am.*: 774-775.

Barnett, M., B. Robinson, B. Tschantz, R. Lambert, G. Lessman, R. von Bernuth and B. Miller (1991). "Reuse of an industrial wastewater at Saturn." *Proc. ASCE Environ. Eng. Div. Spec. Conf.*: 218-223.

Barnett, M., B. Robinson, B. Tschantz, R. Lambert, G. Lessman, R. von Bernuth and W. Miller (1990). "A study of the treatment and re-use of cooling tower blowdown water at General Motor's Saturn Plant." *Tenn. Water Resour. Symp.*: 145-150.