

NATHAN YEE

Department of Environmental Sciences
Department of Earth and Planetary Sciences
Rutgers, The State University of New Jersey
New Brunswick, New Jersey 08901

I. Personal Data

Phone: (732) 932-9800 x6221	Date of Birth: September 10, 1976
Fax: (732) 932-8644	Place of Birth: Calgary, Canada
Email: nyee@envsci.rutgers.edu	Citizenship: Canadian

II. Academic Degrees

B.Sc.	1997	Earth and Planetary Sciences	McGill University
Ph.D.	2001	Geological Sciences	University of Notre Dame
Ph.D. Thesis:		“Experimental studies of adsorption reactions in bacteria-water-rock systems: Implications for heavy metal transport” Supervised by Professor Jeremy B. Fein	

III. Appointments

2010-present	Associate Professor, Rutgers-New Brunswick Department of Environmental Sciences Department of Earth and Planetary Sciences
2006 – 2010	Assistant Professor, Rutgers-New Brunswick Department of Environmental Sciences Department of Earth and Planetary Sciences
2004 – 2006	Assistant Professor, Rutgers-Newark Department of Earth and Environmental Sciences
2002 – 2003	Visiting Scholar, University of Toronto Department of Geology
2001 – 2003	Postdoctoral Research Fellow, University of Leeds School of Earth Sciences
2000 – 2001	Research Assistant, University of Notre Dame Department of Civil Engineering and Geological Sciences
1999	Visiting Scientist, Sandia National Laboratories Geochemistry Department
1997 – 1999	Teaching Assistant, University of Notre Dame Department of Civil Engineering and Geological Sciences

IV. Awards

2009	Houtermans Medal, European Society for Geochemistry
2010	Rutgers Board of Trustees Research Fellowship for Scholarly Excellence
2010	Academic Excellence Award for Excellence in Teaching, Rutgers University

V. Peer-Reviewed Journal Articles

1. Wang Y, Wiatrowski H.A., Ria J., Lin C.C, Young L.Y., Kerkhof L.J., Yee N., Barkay T. (2011) Impact of mercury on denitrification and denitrifying microbial communities in nitrate contaminated subsurface sediments, *FEMS Microbial Ecology* (submitted)
2. Mishra B., Fein J., Yee N., Beveridge T., Myneni S.(2011) Hg-thiol complexation on bacterial cell walls controls Hg solubility and transport for intra-cellular processes, *Environmental Science & Technology* (submitted)
3. Cuebas M., Villafane A., McBride M., Yee N., Bini E. (2011) Arsenate reduction and expression of multiple chromosomal *ars* operons in *Geobacillus kaustophilus*, *Microbiology*, 157, 2004-2011
4. Rauschenbach I., Yee N., Häggblom M.M., Bini E. (2011) Energy Metabolism and Multiple Respiratory Pathways Revealed by Genome Sequencing of *Desulfurispirillum indicum* strain S5, *Environmental Microbiology*, 13, 1611-1621
5. Yee N. (2011), Geomicrobiology of selenium: Life and death by selenite, *Applied Geochemistry*, 26, S324-S325
6. Slater L., Day-Lewis F., Ntarlagiannis D., O'Brien M., Yee N. (2009) Geoelectrical measurement and modeling of biogeochemical breakthrough behavior during microbially induced precipitation of elemental selenium, *Geophysical Research Letters*, 36, L14402, doi:10.1029/2009GL038695
7. Wiatrowski H.A., Das S., Kukkadapu K., Ilton E., Barkay T., Yee N. (2009) Reduction of Hg(II) to Hg(0) by magnetite, *Environmental Science & Technology*, 43, 5307-5313
8. Ma J., Kobayashi D.Y. Yee N. (2009) Role of menaquinone biosynthesis genes in selenate reduction by *Enterobacter cloacae* SLD1a-1 and *Escherichia coli* K12, *Environmental Microbiology*, 11, 149-158
9. Boonfueng T. Axe L., Yee N., Hahn D. Ndiba P.K. (2009) Zn sorption mechanisms onto sheathed *Leptothrix discophora* and the impact of nanoparticulate biogenic Mn oxide coating, *Journal of Colloid and Interface Science*, 333, 439-447
10. Zhu W., Young L.Y., Yee N., Serfes M., Rhine E.D., Reinfelder J.R. (2008) Sulfide driven arsenic mobilization from arsenopyrite and black shale pyrite, *Geochimica et Cosmochimica Acta* 72, 5243-5250
11. Personna Y., Ntarlagiannis D., Slater L., Yee N., O'Brien M., Hubbard S. (2008) Spectral Induced Polarization and Electrode Potential Monitoring of Microbially-Mediated Iron Sulfide Transformations, *Journal of Geophysical Research*, 113, G02020, doi:10.1029/2007JG000614
12. Slater L., Yee N., O'Brien M., Ntarlagiannis D., Zhang C., Williams K.H., Personna Y. (2008) Galvanic cell based self potential (SP) results from microbial-driven redox chemistry in natural wetland soils, *Geophysics*, 73, F65-F70

13. Ma J., Kobayashi D.Y. Yee N. (2007) Chemical kinetic and molecular genetic study of selenium oxyanion reduction by *Enterobacter cloacae* SLD1a-1, *Environmental Science & Technology*, 41, 7795-7801
14. Yee N., Ma J., Dalia A., Boonfueng T., Kobayashi D.Y. (2007) Se(VI) reduction and the precipitation of Se(0) by the facultative bacterium *Enterobacter cloacae* SLD1a-1 is regulated by FNR, *Applied and Environmental Microbiology*, 73, 1914-1920
15. Kenward P.A., Fowle D.A., Yee N. (2006) Microbial selenate sorption and reduction in nutrient limited systems, *Environmental Science & Technology*, 40, 3782-3786
16. Xu Y., Axe L., Yee N., Dyer J.A. (2006) Bidentate Complexation Modeling of Heavy Metal Adsorption and Competition on Goethite, *Environmental Science & Technology*, 40, 2213-2218
17. Yee N., Shaw S., Benning L.G., and Nguyen T.H. (2006) The rate of ferrihydrite transformation to goethite via the Fe(II) pathway, *American Mineralogist*, 91, 92-96
18. Ntarlagiannis D. Slater L.D., Yee N. (2005) On the low-frequency electrical polarization of bacterial cells in sands, *Geophysical Research Letters*, 32, L24402, doi:10.1029/2005GL024751
19. Fein, J.B, Boily J.F, Yee N., Gorman-Lewis D., and Turner B.F. (2005) Modeling the speciation of bacterial surface ligands: Comparison of discrete and continuous pKa approaches *Geochimica et Cosmochimica Acta*, 69, 1123-1132
20. Yee, N. and Fowle D.A. Ferris F.G. (2004) A Donnan Model for metal sorption onto *Bacillus subtilis*, *Geochimica et Cosmochimica Acta*, 68, 3657-3664
21. Yee, N., Benning L.G., Phoenix V.R., and Ferris F.G. (2004) Characterization of metal-cyanobacteria sorption reactions: A combined macroscopic and infrared spectroscopic investigation, *Environmental Science & Technology*, 38, 775-782
22. Benning L.G., Phoenix V.R. Yee N., and Konhauser K.O. (2004) Molecular characterization of cyanobacterial silicification using synchrotron infrared micro-spectroscopy, *Geochimica et Cosmochimica Acta*, 68, 729-741
23. Benning L.G., Phoenix V.R. Yee N., and Tobin, M. (2004) The dynamics of cyanobacterial silicification: an infrared micro-spectroscopic investigation, *Geochimica et Cosmochimica Acta*, 68, 743-757
24. Yee, N., Phoenix, V.R., Konhauser, K.O., Benning L.G. and F.G. Ferris (2003) The effect of bacteria on silica precipitation at neutral pH: Implications for bacterial silicification in geothermal hot springs, *Chemical Geology*, 199, 83-90.
25. Yee, N. and Fein, J.B. (2003) Quantifying metal adsorption onto bacteria consortia: A test and application of the surface complexation model, *Geomicrobiology Journal*, 20, 43-60
26. Kelly, S.D., Kemner, K.M., Fein, J.B., Fowle, D.A., Boyanov, M.I., Bunker, B.A., and Yee, N., (2002) X-ray absorption fine structure determination of pH-dependent U-bacterial cell wall interactions. *Geochimica et Cosmochimica Acta*, 66, 3855-3871

27. Yee, N. and Fein, J.B. (2002) Does metal adsorption onto bacteria inhibit or enhance metal transport?--Column and batch reactor experiments on Cd-*Bacillus subtilis*-quartz systems, *Chemical Geology*, 185, 303-319
28. Yee, N. and Fein, J.B. (2001) Cd adsorption onto bacterial surfaces: A universal adsorption edge?, *Geochimica et Cosmochimica Acta*, 65, 2037-2042
29. Kelly, S.D., Boyanov, M.I., Bunker, B.A., Fein, J.B., Fowle, D.A., and Yee, N. Kemner, K.M., (2001) XAFS determination of the bacterial cell wall functional groups responsible for complexation of Cd and U as a function of pH U-bacterial cell wall interactions at low pH. *Journal of Synchrotron Radiation*, 8, 946-948
30. Yee, N., Fein, J.B. and Daughney, C.J. (2000) Experimental study of the pH, ionic strength, and reversibility behavior of bacteria adsorption onto mineral surfaces, *Geochimica et Cosmochimica Acta*, 64, 609-617
31. Daughney, C.J., Fein, J.B. and Yee N. (1998) A comparison of the thermodynamics of metal adsorption onto two common bacteria, *Chemical Geology*, 144, 161-176
32. Fein, J.B., Daughney, C.J., Yee, N. and Davis, T.A. (1997) A chemical equilibrium model for metal adsorption onto bacterial surfaces, *Geochimica et Cosmochimica Acta*, 61, 3319-3328

VI. Book Chapters

1. Yee N. and Kobayashi D.Y. (2008) Molecular genetics of selenate reduction by *Enterobacter cloacae* SLD1a-1, *Advances in Applied Microbiology*, 64, 107-123
2. Lin C.C., Yee N., Barkay T. "Microbial transformations in the mercury cycle", In *Environmental Chemistry and Toxicology of Mercury*. Ed. G. Liu, Y. Cai, and N. O'Driscoll, Hoboken: John Wiley & Sons, 2011

VII. Invited Addresses

1. Yee N., Iron Reduction by Clostridia, Goldschmidt Conference, Prague Czech Republic, 2011
2. Yee N., Evolution of Selenate Reducing Bacteria, Symposium of the Geochemistry of the Earth Surface 9, Boulder, 2011
3. Yee N., Microbial Biology of Metal Sorption onto Bacterial Surfaces, American Geophysical Union Fall Meeting, San Francisco, 2010
4. Yee N., Reduction of Hg(II) to Hg(0) by Biogenic Magnetite, Goldschmidt Conference, Knoxville TN, 2010
5. Yee N. "Biotic/Abiotic Pathways of Hg(II) Reduction by Dissimilatory Iron Reducing Bacteria", Geological Society of America, Baltimore, March 2010

6. Yee N. "Selenium Oxyanion Reduction by Subsurface Microorganisms", Department of Geological Sciences, November 2009
7. Yee N. "Microbe-Selenium Interactions: The Selenium Paradox" Goldschmidt Conference, Davos Switzerland, June 2009
8. Yee N. "Subsurface Bacteria that Respire Selenium", SUNY Stony Brook, Department of Geosciences, November 2008
9. Yee N. "Molecular Geomicrobiology – Genes and Geochemistry", Chinese Academy of Sciences, Gaungzhou Institute of Geochemistry, May 2008
10. Yee N. "Principles of Molecular Geomicrobiology – Genes and Geochemistry", Southern China University of Technology, May 2008
11. Yee N. "A Molecular Model for Microbial Selenium Reduction" Chinese Academy of Geological Sciences, Institute of Geology, May 2008
12. Yee N. "Geomicrobiology of Selenium" New Jersey Institute of Technology, Department of Chemistry and Environmental Science Seminar Series, February 2008
13. Yee N. "Microbes Making Minerals: Insights from Microscopic, Spectroscopic and Genetic Studies" University of Notre Dame, Environmental Geoscience and Environmental Engineering Seminar Series, November 2006
14. Yee N., "Microbial Biomineralization: The Genetic of Se(0) Biomineral Formation", MIT Biogeochemistry Seminar Series, February 2006
15. Yee N., "Microbial Metal Sequestration Mechanisms", New Jersey Institute of Technology, Department of Civil and Environmental Engineering Seminar Series, November 2005
16. Yee N. "The Microbial Cell Surface Electric Field: Life in an Ion Cloud", American Geophysical Union Spring Meeting, New Orleans, May 2005 (Invited)
17. Yee N. "The Kinetics and Mechanisms of Selenium Oxyanion Reduction by *Enterobacter cloacae*", Goldschmidt Conference, Moscow Idaho, May 2005 (Invited)
18. Yee N. "Microbe-Metal Interactions: Insights from synchrotron radiation-based spectroscopic studies" Kansas University, Dept. of Geology Colloquium, May 2005
19. Yee. N "Understanding Biomineral Formation: An Interdisciplinary Approach" Arizona State University, Dept. of Geological Sciences Seminar Series, May 2003
20. Yee. N. "Geochemical Reactions at the Bacteria-Water Interface" University of Toronto, Dept. of Geology Rockfest Seminar Series, January 2003
21. Yee N. "Geochemical Reactions at the Bacteria-Water Interface" University of Windsor, Great Lakes Institute for Environmental Research Seminar Series, October 2002

22. Yee N. "Application of Synchrotron Radiation-Infrared Spectroscopy to Geomicrobiological Investigations" University of Saskatchewan, Depart. of Saskatchewan Seminar Series, February 2002
23. Yee N. "The Role of Bacteria in Heavy Metal Contaminant Transport" University of Leeds, School of Earth Sciences Seminar Series, October 2001
24. Yee. N. "Microbes and Metal Sequestration" Princeton University, Department of Geosciences, March 2001
25. Yee. N. "Quantifying Adsorption Reactions in Bacteria-Water-Rock systems" Lamont-Doherty Earth Observatory of Columbia University, December 2000

VIII. Research Grants

1. Title of Project: Microbial Oxidation of Hg(0): Its Effect on Hg Stable Isotope Fractionation and Methylmercury Production
 Location: Rutgers University
 Funding Agency: Department of Energy – ERSP
 Period of the Award: 9/1/11-8/31/14
 Amount Awarded: \$1,099,555
 Role: Principal Investigator
2. Title of Project: Evolutionary map of life's electronic circuits
 Funding Agency: Gordon and Betty Foundation
 Location: Rutgers University
 Period of the Award: 4/15/11-4/14/14
 Amount Awarded: \$1,075,000
 Role: Co-Principal Investigator (PI: P. Falkowski)
3. Title of Project: Molecular studies of dissimilatory selenium reduction by subsurface microorganisms
 Location: Rutgers University
 Funding Agency: NSF – Geobiology and Low Temperature Geochemistry
 Period of the Award: 7/1/09-6/30/12
 Amount Requested: \$399,544
 Role: Principal Investigator
4. Title of Project: Prebiotic evolution of redox chemistry on Earth
 Location: Rutgers University
 Funding Agency: NSF – Molecular and Cellular Biosciences
 Period of the Award: 07/2009-07/2011
 Amount Requested: \$299,987
 Role: Co-Principal Investigator (PI: P. Falkowski)
5. Title of Project: Reduction of mercury in saturated subsurface sediments and its potential to mobilize mercury in its elemental form
 Funding Agency: Department of Energy – ERSP
 Period of the Award: 1/1/08-12/31/10

Amount Awarded:	\$996,810
Role:	Co-Principal Investigator (PI: T. Barkay)
6. Title of Project:	The kinetics and mechanisms of selenium reduction by soil microorganisms
Funding Agency:	USDA-NRI: Soil Processes
Period of the Award:	9/1/05-8/31/08
Amount Awarded:	\$246,916
Role:	Principal Investigator (sole PI)
7. Title of Project:	The biogeochemistry of Pb transformations mediated by phosphate-releasing bacteria
Funding Agency:	NJWRRI
Period of the Award:	7/1/07-6/30/08
Amount Awarded:	\$30,000
Role:	Principal Investigator (sole PI)
8. Title of Project:	The mechanisms of microbial selenium methylation
Funding Agency:	Rutgers University Research Council
Period of the Award:	7/1/07-5/1/08
Amount Awarded:	\$1,000
Role:	Principal Investigator (sole PI)
9. Title of Project:	Rutgers-Newark Biogeoscience Research Initiative
Funding Agency:	Academic Excellence Fund
Period of the Award:	January 2004
Amount Awarded:	\$60,000
Role:	Co-Principal Investigator
Collaborators:	Lee Slater, Dittmar Hahn, Erik Hamerlynk

IX. Teaching

Fall 2010	Water Chemistry, 3 credits (11:375:444); cross-listed with Environmental Geochemistry (01:460:417) <ul style="list-style-type: none"> • Enrollment: 21 students • Teaching Effectiveness: 4.82/5.00 • Overall Course Quality: 4.47/5.00
Spring 2010	Environmental Geology, 3 credits (01:460:202:02) <ul style="list-style-type: none"> • Enrollment: 49 students • Teaching Effectiveness: 4.87/5.00 • Overall Course Quality: 4.86/5.00
Fall 2009	Water Chemistry, 3 credits (11:375:444); cross-listed with Environmental Geochemistry (01:460:417) <ul style="list-style-type: none"> • Enrollment: 26 students • Teaching Effectiveness: 4.57/5.00 • Overall Course Quality: 4.55/5.00
Spring 2009	Environmental Geology, 3 credits (01:460:202:02)

	<ul style="list-style-type: none"> • Enrollment: 113 students • Teaching Effectiveness: 4.80/5.00 • Overall Course Quality: 4.76/5.00
Fall 2008	<p>Water Chemistry, 3 credits (11:375:444); cross-listed with Environmental Geochemistry (01:460:417)</p> <ul style="list-style-type: none"> • Course Completely Revised • Enrollment: 18 students • Teaching Effectiveness: 4.80/5.00 • Overall Course Quality: 4.57/5.00
Spring 2008	<p>Environmental Geology, 3 credits (01:460:202:02)</p> <ul style="list-style-type: none"> • Enrollment: 55 students • Teaching Effectiveness: 4.89/5.00 • Overall Course Quality: 4.85/5.00
Fall 2007	<p>Geomicrobiology, 3 credits (16:375:563)</p> <ul style="list-style-type: none"> • Newly Developed Course • Enrollment: 12 students • Teaching Effectiveness: 4.75/5.00 • Overall Course Quality: 4.67/5.00
Fall 2006	<p>Mineralogy, 4 credits (21:460:321)</p> <ul style="list-style-type: none"> • Enrollment: 8 students • Teaching Effectiveness: 4.71/5.00 • Overall Course Quality: 4.43/5.00
Spring 2006	<p>Environmental Geology, 3 credits (21:460:206)</p> <ul style="list-style-type: none"> • Enrollment: 65 students • Teaching Effectiveness: 4.76/5.00 • Overall Course Quality: 4.43/5.00 <p>Bioremediation, 3 credits (26:375:540)</p> <ul style="list-style-type: none"> • Newly Developed Course • Enrollment: 9 students • Teaching Effectiveness: 4.89/5.00 • Overall Course Quality: 4.78/5.00
Fall 2006	<p>Mineralogy, 4 credits (21:460:321)</p> <ul style="list-style-type: none"> • Enrollment: 6 students • Teaching Effectiveness: 5.00/5.00 • Overall Course Quality: 4.80/5.00
Spring 2006	<p>Aqueous Geochemistry, 3 credits (21:460:416)</p> <ul style="list-style-type: none"> • Newly Developed Course • Enrollment: 4 students <p><i>(Teaching evaluations not provided by the Department)</i></p> <p>Environmental Geology Lab, 1 credit (21:460:207)</p> <ul style="list-style-type: none"> • Enrollment: 255 students

(Teaching evaluations given only to Teaching Assistants)

- Fall 2005 Mineralogy, 4 credits (21:460:321)
- Course Completely Revised
 - Enrollment: 5 students
 - Teaching Effectiveness: 4.00/5.00
 - Overall Course Quality: 4.00/5.00

Doctoral Theses: Primary Advisor

Matthew Colombo, Ph.D. Student
Environmental Sciences Graduate Program (Rutgers-NB)
Title of Project: Geochemical controls on microbial mercury methylation in groundwater
Expected Graduation 2014

Madhavi Parikh, Ph.D. Student
Geological Sciences Graduate Program (Rutgers-NB)
Title of Project: Biotic/abiotic mercury reduction by anaerobic bacteria
Expected Graduation 2013

Jincai Ma, Ph.D.
Environmental Sciences Joint Program (Rutgers-Newark/NJIT)
Title of Project: Mechanisms of microbial selenium oxyanion reduction
Graduated June 2008

Doctoral Theses: Co-Advisor

Ines Raushenbach, Ph.D. Student
Molecular Bioscience Graduate Program (Rutgers- NB)
Title of Ph.D. Project: Selenium and tellurium reduction by anaerobic bacteria
Expected Graduation 2011

Alexandra Walczak, Ph.D. Student
Molecular Bioscience Graduate Program (Rutgers- NB)
Title of Ph.D. Project: Sulfide mineral oxidation by chemolithotrophic prokaryotes
Expected Graduation 2011

Dimitri Ntarlagiannis, Ph.D. (2006)
Environmental Science Joint Program (Rutgers-Newark/NJIT)
Title of Ph.D. Dissertation: Geophysical imaging of microbial biofilms and biomineralization processes

Thipnakarin Boonfueng, Ph.D. (2006)
Department of Civil and Environmental Engineering (NJIT)
Title of Ph.D. Dissertation: The impact of abiotic and biogenic Mn oxide coatings on metal sequestration

Ying Xu, Ph.D. (2005)
Department of Civil and Environmental Engineering (NJIT)

Title of Ph.D. Dissertation: Experimental and modeling studies of metal adsorption on oxide coatings

Master's Theses: Primary Advisor

David Mack, M.S. (2006)

Environmental Science Joint Program (Rutgers-Newark/NJIT)

Title of Project: The effect of pH on microbial selenium oxyanion reduction

Master's Theses: Co-Advisor

Micheal O'Brien, M.S. (2009)

Environmental Science Joint Program (Rutgers-Newark/NJIT)

Title of Project: Self potential signatures of microbial Se(VI) reduction

Yves Personna, M.S. (2007)

Environmental Science Joint Program (Rutgers-Newark/NJIT)

Title of Project: Geophysical imaging of FeS biomineralization by sulfate reducing bacteria

Membership on Doctoral Examination Committee

Adam Mumford, Ph.D. Candidate (ABD)

Environmental Science Graduate Program

Rutgers University - New Brunswick

Wenyi Zhu, Ph.D. Candidate (2010)

Environmental Science Graduate Program

Rutgers University - New Brunswick

Lora Smith, Ph.D. (2008)

Environmental Science Graduate Program

Rutgers University - New Brunswick

Hannah Heinrich, Ph.D. (2007)

Department of Chemistry

University of Otago – New Zealand

Yuxin Wu, Ph.D. (2006)

Department Earth and Environmental Sciences

Rutgers University - Newark

Xavier Comas, Ph.D. (2005)

Department Earth and Environmental Sciences

Rutgers University - Newark

Postdoctoral Trainees

Dr. Xiuhong Zhao (2010 – 2011)

Postdoctoral Research Associate

One year of training

Title of Project: Reduction and methylation of Hg(II) by iron-reducing bacteria

Dr. Soumya Das (2007-2008)

Postdoctoral Research Associate

One year of training

Title of Project: Hg(II) interactions with iron minerals

Dr. David Ams (2006-2007)

Postdoctoral Research Associate

One year of training

Title of Project: Pb precipitation by phosphate-releasing bacteria

Independent Study and Research Projects

Michelle Wenelczyk, Undergraduate Student (2011-present); Joanne Theisen, Undergraduate Student (2010-present); Phyllis Ko, Undergraduate Student (2009-present); Francis Jordan, Graduate Student (2007-2008), Howard K. Eichenblatt, Undergraduate Student (2007-2008) Tammy Wang, Undergraduate Student (2007), Erik Sakowski, Undergraduate Student (2006) Ankur Dalia, Undergraduate Student (2006) , Hong Zhou, Graduate Student (2005) Rafael Jusino Graduate Student (2005), Xavier Comas, Graduate Student (2005), Alejandro Ruiz, Graduate Student (2005)

XI. Service

Reviewer for Journals

Geochimica et Cosmochimica Acta [11 reviews in past four years]

Environmental Science & Technology [5 reviews in the past two years]

Chemical Geology [6 reviews in the past three years]

Other Journals [1 review or less per year]: Science; Geology; Environmental Microbiology; FEMS Microbiology Ecology; Soil Biology & Biochemistry; Applied Geochemistry; Geomicrobiology Journal; Soil Biology & Biochemistry; Microbiology; Aquatic Geochemistry; Aquatic Microbial Ecology; Applied Microbiology and Biotechnology; Journal of Colloid and Interface Science; Water Research; Geochemical Transactions; Soil Science Society of America Journal; Archive für Hydrobiologie; Colloid and Polymer Scienc; Journal of Environmental Quality; Bulletin of Environmental Contamination and Toxicology

Reviewer for Grant Proposals

NASA: Exobiology and Evolutionary Biology Program

National Science Foundation: Low Temperature Geochemistry and Geobiology Program

National Science Foundation: Hydrologic Sciences Program

National Science Foundation: Biogeosciences Program

U.S. Department of Energy: ERSP Program

U.S. Department of Agriculture: Soil Processes Program

Swiss National Science Foundation: Div. of Mathematics, Physical and Engineering Sciences

American Chemical Society: Petroleum Research Fund

Science Steering

2009: Invited Expert, U.S. Department of Energy, ERSF Workshop
2011: External Reviewer, DOE PNNL Subsurface Biogeochemical Research Program

Editorship of Scholarly or Professional Journals

12/2006-ongoing: Associate Editor, JGR-Biogeosciences
08/2003-09/2007: Associate Editor, Geochemical News

Membership/Offices Held in Scholarly and Professional Societies

American Society for Microbiology (2006 – present)
American Geophysical Union (2001– present)
Geochemical Society (2000 – present)
Soil Science Society of America (2005 – 2008)
Geological Society of America (1999 – 2001)

Conference Organizer and Convener

Travel Grant Committee, Goldschmidt Conference, Knoxville, 2010
Microbes and Minerals, ASM General Meeting, Boston USA, 2008
Biom mineralization, Goldschmidt Conference, Copenhagen Denmark, 2004
Microbe-Mineral Transformations, AGU Chapman Conference, 2008
Aqueous Geochemistry Session, Geological Society of America, Denver, 1999

University Service

Search Committee Chair (2010-2011): Earth and Planetary Science Position - Department of Earth and Planetary Sciences (Rutgers-NB, SAS)
Admissions Interviewer (2010): General Honors Program (Rutgers-NB, SEBS)
Curriculum Committee (2009-present): Department of Environmental Sciences (Rutgers-NB, SEBS)
Admissions Committee Member (2006-2009): Graduate Program in Environmental Sciences (Rutgers-NB, SEBS)
Undergraduate Curriculum Committee (2008): Department of Earth and Planetary Sciences (Rutgers-NB, SAS)
Graduate Program Ad Hoc Committee (2008-2009): Proposal for a Graduate Program in Microbiology (Rutgers-NB)
Search Committee Member (2008-2009): Environmental Science Position - Department of Environmental Sciences (Rutgers-NB, SEBS)
Search Committee Member (2004-2005): Environmental Geology Position - Department of Earth and Environmental Sciences (Rutgers-Newark)
Search Committee Advisory Member (2004-2005): Environmental Chemistry Position - Department of Chemistry and Environmental Sciences (NJIT)
Search Committee Member (2005-2006): Geochemistry/Sedimentology Position - Department of Earth and Environmental Sciences (Rutgers-Newark)
Search Committee Member (2005-2006): Ecology and Evolution Position - Department of Biological Sciences (Rutgers-Newark)