Satish C. B. Myneni

Associate Professor
151 Guyot Hall
Department of Geosciences
Princeton University
Princeton, NJ 08544

Telephone: (609) 258-5848
FAX: (609) 258-1274
E-mail: smyneni@princeton.edu

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Professional Experience

2005-Present	Associate Professor, Department of Geosciences, Princeton University
1999-2005	Assistant Professor, Department of Geosciences, Princeton University
1999-Present	Affiliated faculty member of Department of Chemistry, and Department of Civil & Environmental Engineering, Princeton University
1999-Present	Faculty Staff Scientist, Lawrence Berkeley National Laboratory
1998-99	Geological Scientist, Lawrence Berkeley National Laboratory
1995-98	Post-Doctoral Scientist, Lawrence Berkeley National Laboratory
1991-95	Graduate Teaching & Research Assistant, Ohio State University
1989-91	Research Scientist (Junior Manager), Environmental Research Division Steel Authority of India Ltd., India

Education

Osmania University	Geology, physics, chemistry	B.Sc (Hons), 1985
Indian Institute of Technology	Applied geology & Geochemistry	M.Sc & M. Tech, 1989
The Ohio State University	Environmental geochemistry	Ph.D, 1995

Honors

2003	Nominated by graduate students for the Graduate Mentoring Award
2002	Nominated by the Princeton University for the Packard Fellowship
2001	Best Research Paper on Interfacial Processes in the Environment, Basic Energy Sciences (DOE)
1998	Nominated by the Lawrence Berkeley National Laboratory for the U.S. Presidential Early Career Scientist and Engineer Award
1992	Outstanding Teaching Associate Award (1992), The Ohio State University
1985-87	Merit Scholarship, Indian Institute of Technology, Bombay

Membership in Professional Societies

American Chemical Society
The Geochemical Society

University Service

2000-Present	Organizer, Environmental Geology & Geochemistry Seminar (EGGS) series, Department of Geosciences, Princeton University
2005-Present	Chair, Undergraduate Work Committee, Department of Geosciences, Princeton University
2006	Academic Advisor to freshmen & sophomores, Wilson College, Princeton University
2004	Undergraduate Work Committee, Department of Geosciences, Princeton University
2004	Academic Advisor for juniors (5) and seniors (4), Department of Geosciences, Princeton University
2000-2004	Faculty Fellow, Wilson College, Princeton University
2000-2001	Academic Advisor to freshman, Wilson College, Princeton University

Professional Affiliations & Service

2004-Present	Member, Proposal Review Panel (Spectroscopy), National Synchrotron Light Source, Brookhaven National Laboratory
1996-Present	Reviewed grant proposals for DOE (Geosciences, Chemical Sciences and Materials Sciences), NSF (Geosciences, Chemical Sciences, Hydrological sciences), USDA, Petroleum Research Fund, and Swiss and Swedish research foundations.
1994-Present	Reviewed research articles for several journals, which include for Science, Nature, Geochemica et Cosmochemica Acta, Environ. Science & Technology, J. Colloid Interface Science, Langmuir, Soil Science Society of America Journal, Clays and Clay Minerals, Chemical Geology, J. Synchrotron Radiation, J. Physical Chemistry
2006	DOE (ERSP) Proposal Review Panel
2006	Advanced Photon Source, Review Panel, Sector 20.
2004	Synchrotron Radiation Center, University of Wisconsin, Preparation of white paper for the development of soft X-ray synchrotron facilities.
2004	Geochemistry representative, NSF/DOE workshop on User Facilities in Geosciences
2003	National Research Council Workshop on Novel Approaches to the Management of Greenhouse Carbon
2003	Proposal Review Panel, DOE (Biogeochemistry-NABIR)
2003	National Synchrotron Light Source, Brookhaven National Laboratory, Preparation of white paper for the development of new synchrotron (NSLS-II).
2000-2003	Member-elect, User Executive Committee, Stanford Synchrotron Radiation Laboratory, Stanford, CA.
2000	Workshop on Future Directions of Soft X-ray Synchrotron Research, Tennessee
1998-2004	Member of Core Research Team. Molecular environmental science initiative to construct soft X-ray spectroscopy and spectromicroscopy facilities at the Advanced Light Source, Berkeley, CA.

Advisors

Graduate Advisors:

Dr. Samuel J. Traina	The Ohio State University (Currently at The University of California at Merced)
Dr. Terry J. Logan	The Ohio State University

Post-Doctoral Advisor:

Dr. Tetsu K. Tokunaga	Lawrence Berkeley National Laboratory

INVITED TALKS

2007

- Department of Civil Engineering & Geological Sciences, University of Notre Dame
- Stanford Linear Accelerator Center, Stanford
- Workshop on spectromicroscopy studies in soft X-ray region, Stanford Linear Accelerator Center, Stanford
- Advanced Photon Source, Argonne National Laboratory, Chicago
- National Synchrotron Light Source, Brookhaven National Laboratory

2006

- European Mineralogical Society Meetings (Bath, UK)
- Keynote, World Congress of Soil Science, Philadelphia
- Keynote, Frontiers in Geochemistry. American Chemical Society National Meetings, San Francisco.
- Workshop on Spectromicroscopy, Advanced Photon Source, Argonne National Laboratory, Chicago.
- National Synchrotron Light Source, Brookhaven National Laboratory

2005

- United Kingdom Synchrotron Research User's Conference (had to be cancelled in the last minute because of health problem)
- BES Workshop on Surface and Interfacial Sciences
- Goldschmidt Conference, Moscow, Idaho
- Pacifichem Conference, Hawaii

2004

- State University of New York, Stony Brook
- Canadian Light Source, University of Saskatchewan
- Soil Science Society of America, Symposium on Biogeochemical Cycling of Elements in Soils, Seattle
- Stanford Synchrotron Radiation Laboratory
- Workshop on Frontiers in Soft X-ray, VUV, and Infrared Research; Synchrotron Research Center, University of Wisconsin, Madison, WI
- Gordon Research Conference, Organic Geochemistry
- Gordon Research Conference, Environmental Chemistry (Water)
- Scientific Advisory Committee, Advanced Light Source, Berkeley
- Clay Minerals Society Symposium on Microbe-Mineral Interactions, Richland
- DOE/NSF Workshop on Research Facilities in Geosciences, Washington DC
- Future Directions in Actinide Chemistry, NSF/DOE Workshop, May (Could not attend)
- Department of Geosciences, University of Chicago, May (Could not accept)
- Key Note Speaker, International Humic Substance Society Conference, Boston

2003

- Turner Lecture, Department of Geological Sciences, University of Michigan, MI
- Environmental Research Division, Argonne National Laboratory, Argonne, IL
- Telluride Conference on Aqueous Geochemistry, Telluride, CO
- NABIR(DOE)/ Stanford Synchrotron Radiation Laboratory Workshop (could not attend)
- American Chemical Society, Princeton Chapter
- Guest Lecture, Center for Environmental Molecular Science, State University of New York, Stony Brook

- Mesilla Conference on Interfacial Phenomena, Mesilla de Mesilla, NM
- Arogonne National Laboratory/DOE Workshop, Argonne, IL

2002
- Goldschmidt Conference, Switzerland
- Mineralogical Society of America, Monterey, CA
- National Synchrotron Light Source, Brookhaven National Laboratory, Brookhaven, NY

2001
- Department of Soil & Environmental Sciences, University of Delaware
- Goldschmidt Conference, VA
- Department of Civil & Environmental Engineering, Johns Hopkins University, Baltimore, MD

2000
- International Conference on Electron Spectroscopy, Berkeley, CA
- Mineralogical Society of America, Geochemistry of Sulfate, Lake Tahoe, CA
- ETH, Switzerland (could not attend because of VISA related issues and teaching duties)
- DOE (Basic Energy Sciences) Workshop on Surface Chemical Processes, Washington, DC
- XAS Workshop on sulfur containing systems, Stanford Synchrotron Radiation Laboratory, Stanford, CA
- Advanced Photon Source, User's Conference, Chicago
- American Chemical Society, Washington, DC.

1999
- International Conference on X-ray Microscopy, Berkeley
- Department of Geological and Environmental Sciences, Stanford University, Stanford, CA
- Department of Civil and Environmental Engineering, Stanford University
- User's Conference, Advanced Light Source
- User's Conference, Stanford Synchrotron Radiation Laboratory, Stanford, CA

1998
- Department of Geological and Environmental Sciences, Stanford University, Stanford, CA
- Department of Earth Sciences, Pennsylvania State University, PA
- Department of Geosciences, Princeton University, Princeton, NJ
- DOE/ NABIR workshop on biogeochemistry of contaminated systems, Washington DC
- DOE (Basic Energy Sciences) Workshop on Aqueous Geochemistry & Interfacial Phenomena, Pascoe, WA
- Department of Environmental Science, Policy and Management, University of California, Berkeley
- American Chemical Society National Meetings

1996
- Department of Geological and Environmental Sciences, Stanford University, Stanford, CA
- Department of Environmental Science, Policy and Management, University of California, Berkeley, CA
- Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA
- Department of Civil & Environmental Engineering, Stanford University, Stanford, CA
- Earth Sciences Division, Lawrence Livermore National Laboratory, Livermore, CA

1995
- Earth Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA

- Wyoming Research Center, Laramie, WY

FUNDING HISTORY

- Role of sulfhydryl sites on bacterial cell walls in the biosorption, mobility and bioavailability of mercury & uranium.
  Department of Energy (2008-2009)
  Award: 125,000
- Molybdenum bioavailability and denitrification in soils.
  Co-PI, The Camille & Henry Dreyfus Foundation Post-Doctoral Fellowship,

Award: Funding for a post-doctoral scholar for two years

- Chemical and biological interactions at environmental interfaces,
  National Science Foundation -EMSI (Subcontract- Stanford University), 2004-2009,
  Award: 375,000 (Current).
- Reduction and reoxidation of soils during and after uranium bioremediation.
  Department of Energy-NABIR, 2004-2007,
  Award: 140,000 (Current).
- Indiana-Princeton-Tennessee NASA-Astrobiology Institute,
  NASA, 2003-2006
- Chemical and microbial interactions at environmental interfaces,
  National Science Foundation -CRAEMS (Subcontract- Stanford University), 2000-2005,
  Award: 425,000 (complete).
- Role of environmental molecular interfaces on the chemical and biological reactivity of pollutants,
  National Science Foundation -EMSI (Subcontract- The Ohio State University), 2000-2005,
  Award: 238,000 (complete).
- Contaminant-organic complexes: Their structure and energetics in surface decontamination processes,
  Department of Energy -EMSP, 2001-2005,
  Award: 300,000 (complete).
- In-situ evaluation of soil organic molecules: Functional group chemistry, aggregate structures, metal & mineral surface complexation using soft X-rays,
  Department of Energy-BES, 2000-2004,
  Award: 307,110 (complete).
- University Research Board Graduate Tuition Award
  Princeton University 2001-2004
  Tuition waived for one graduate student in those three years (all completed).
- Contaminant-organic complexes: Their structure and energetics in surface decontamination processes,
  Department of Energy -EMSP, 1998-1999, co-PI,
  Award: 50,000 (complete).
- Molecular Environmental Science at the Advanced Light Source,
  Co-PI, Lawrence Berkeley National Laboratory-LDRD, 1998-99,
  Award: ~ 50,000 (complete).
- In-situ evaluation of soil organic molecules: Functional group chemistry, aggregate structures, metal & mineral surface complexation using soft X-rays,
  Department of Energy -BES, 1998-1999,
  Award: 102,000 (Complete).
- Synchrotron soft X-ray spectroscopic studies of natural organic molecules,
  Lawrence Berkeley National Laboratory-LDRD, 1997-98,
  Award: ~ 147,000 (complete).

STUDENTS AND POSTDOCTORAL SCHOLARS SUPERVISED

Post-Doctoral Scholars

Dr. Bhoopesh Mishra (2006-)

- Focusing on the redox transformations of U in sediments and the nature of mineral-water interfacial reactions
- Research was funded by the NSF (Chemical Sciences), DOE

Dr. Ashish Deshmukh (2003-2005)

- Currently Manager at Environ Corp. Inc.
- Research focus was on the speciation of natural organohalogens using FT-ICR electro-spray ionization mass spectrometry.
- Research was funded by the NSF (Chemical Sciences) and DOE (Basic Energy Sciences)

Dr. Juraj Majzlan (2002-2004)

- Currently a faculty member at Albert-Ludwig University in Freiberg, Germany
- Research focus was on the chemistry of poorly crystalline or amorphous Fe-, and Al-oxy hydroxides and sulfates in soils
- Research was funded by the NSF (Chemical Sciences) and Hess Post-doctoral Fellowship

Dr. Timothy Strathmann (2001-2003)

- Currently a faculty member at the Department of Civil and Environmental Engineering, University of Illinois, Urbana Champaign.
- Research focus was on the molecular understanding of metal complexation behavior of humic substances in the environment.
- Research was funded by NSF (Chemical Sciences), DOE (Basic Energy Sciences)

Dr. Daniel Giammar (2001-2002)

- Currently a faculty member at the Department of Civil and Environmental Engineering, Washington University, St. Louis.
- Research focus was on carbon sequestration in geologic formations
- Research was funded by the Council on Science and Technology Post-doctoral Fellowship (Princeton University), and DOE (Basic Energy Sciences)

Graduate Students

Alessandra Leri (Ph. D; 2002-2007)

- Research focus is on the biogeochemistry of natural organohalogens
- Department of Chemistry
- Research is funded by NSF (Graduate Student Fellowship), NSF (Chemical Sciences), DOE (BES), and University Research Board Graduate Tuition Award.
- Joined the Dept of Chemistry & Biochemistry as Assistant Professor at Marymount Manhattan College, NY

Michael Hay (Ph. D; 2001-2007)

- Research focus is on organo-mineral interactions and sulfur cycling in soil systems
- Department of Environmental Engineering & Water Resources
- Research is funded by NSF (Graduate Student Fellowship), EPA (Star Fellowship), and Wu Fellowship (Princeton University)
- Joined USGS, Menlo Park as Post-doctoral researcher

Laura F. Harrington (M.S; 2003-2006)

- Research focus is on the biogeochemistry of iron nanoparticles
- Department of Geosciences
- Research is funded by NSF (Graduate Student Fellowship)

David C. Edwards (Ph. D; 2005)

- Research focus is on the interactions of siderophores with metals and mineral surfaces
- Department of Chemistry
- Research is funded by DOE (EMSP), Advanced Light Source Graduate Fellowship, Princeton Environmental Institute-STEP Fellowship, and University Research Board Graduate Tuition Award.
- Currently a faculty member in the Environmental Sciences Department, Kutztown University, PA

Wei Jiang (M.S; 2002-2005)

- Research focus is on the bacteria-water interfacial chemistry
- Department of Geosciences

- Research is funded by NSF (Chemical Sciences), DOE (BES), and University Research Board Graduate Tuition Award.

Rachel G. Reina (M.Eng; 2000-2003)
- Thesis: Enzyme-catalyzed chlorination of organic molecules in model and natural systems.
- Department of Environmental Engineering & Water Resources
- Research was funded by DOE (BES), and NSF (Chemical Sciences)

Undergraduates (Senior Theses)

Oyenike Oyerinde (2007-2008)
- Research focus is on the biogeochemistry of organochlorines
- Department of Chemical Engineering
- Research is funded by Princeton University Senior Thesis Fellowship & NSF

Alexander Willis (2007-2008)
- Research focus is on the biogeochemistry of lead associated Pb-based paints and its impact on the environment.
- Department of Chemistry
- Research is funded by Princeton University Senior Thesis Fellowship & NSF

Jevon Harding (2006-2007)
- Research focus was on the biogeochemistry of organochlorines
- Department of Geosciences
- Research was funded by Princeton University Senior Thesis Fellowship & NSF

Genevieve Lessard (2006-2007)
- Research focus was on molecular mechanisms involving fluorosis
- Department of Civil & Environmental Engineering
- Research was funded by Princeton University Senior Thesis Fellowship & NSF

Rachel Zwillinger (2005)
- Research focus was on the biogeochemistry of organoiodines
- Department of Geosciences/ Woodrow Wilson School
- Research is funded by the Princeton University Senior Thesis Fellowship
- Received "Howell Prize" for her Junior Paper on this topic
- On the shortlist for the Luce Scholars Program

Matthew Cooper (2005)
- Research focus was on the biogeochemistry of arsenic associated with pressure treated wood and its environmental impact
- Department of Geosciences/ Woodrow Wilson School
- Research is funded by the Princeton University Senior Thesis Fellowship
- On the shortlist for the Rhodes Scholarships

Rabia Ali (2004, Currently in the graduate program of Woodrow Wilson School of Public and International Affairs)
- Thesis: Iron chemistry in acid mine drainage, and precipitation of green rust
- Department of Physics
- Research is funded by DOE (BES)

Sarah Hammitt (2004)
- Thesis: Influence of coal combustion gases on metal mobility and plant uptake, Centralia, PA.
- Department of Geosciences
- Research is funded by Department of Geosciences, DOE (BES)

Jacqueline A. Hakala (2003, Currently in the graduate program at The Ohio State University)
- Thesis: The geochemical distribution and speciation of organobomines in wetland sediments
- Department of Geosciences
- Research is funded by the Department of Geosciences, DOE (BES), NSF (Chemical Sciences)
- Received Sigma-Xi Award

Sarah Jane O. White (2002, Currently in the graduate program at Tufts University)

- Thesis: Influence of elevated soil-CO_2 on mineral-weathering and soil biogeochemistry, Mammoth Mountain, CA
- Department of Chemistry
- Research is funded by the Department of Geosciences, Carbon Mitigation Initiative (funded by the BP and Ford Foundation).
- Received "Environmental Studies Thesis Prize"

Undergraduates (Junior Papers)

2007

- David Grauer (Department of Chemistry). Biogeochemistry of arsenic in soils
- Jash Bansal (Department of Chemistry). Cycling of chlorine in soils

2006

- Anurag Parikh (Department of Chemistry). Biogeochemistry of arsenic in soils
- James Yan (Department of Chemistry). Biomineralization in corals
- Michael Honigberg (Department of Chemistry). Uranium redox transformation in sediments
- Alexander Willis (Department of Chemistry). Speciation of mercury in fish

2005

- Mike Westrol (Department of Chemistry). Biogeochemistry of arsenic in soils
- April Schachtel (Department of Chemistry). Accumulation of aluminum and iron in brain tissue and its relation to Alzheimers disease
- Eddie Burgess (Department of Chemistry). Chemistry of aluminum polymers in aqueous solutions

2004

- Samantha Adamson (Department of Chemistry), Focus is on the biogeochemistry of arsenic associated with pressure treated wood
- Colin Fuller (Department of Chemistry), Topic not decided
- Nathan Harbacek (Department of Chemistry), Topic not decided
- Rachel Zwillinger, Focus was on organoiodines in soils. Received Howell Prize for her Junior paper.

2003

- Rachel Zwillinger, Focus was on organoiodines in soils.
- Ralph Kliener (Department of Chemistry), Focus was on arsenic speciation in pressure treated wood
- Teresa Soroka (Department of Chemistry), Focus was on rates of soil formation in Hawaiian Islands

2002

- Jacqueline A. Hakala, Focus was on carbon sequestration in geologic formations
- Jonathan Levine (Department of Chemistry), focus was on organohalogens.

Also a second reader for several junior papers and senior theses.

Theses Committees (Graduate Students)

Geosciences

Susannah Dorfman (2007-Present)
Brian Gertsch (2005-Present)
Mark Davidson (2002 - Present)
Daniel McGown (2004-2007)
Lihuang Lin (Graduated, 2003)

Environmental Engineering & Water Resources

Luke MacDonald (2005-Present)

Breege Mackle (2001-Present)
Junu Shreshta (2001- 2007)
Shangping Xu (Graduated, 2004)

Chemical Engineering
Steve Maria (Graduated, 2003)

General Examination Committee
Luke MacDonald (Civil & Environmental Engineering)
Jeffery S. Paul (Civil & Environmental Engineering)
Sarah Gasda (Civil and Environmental Engineering)
Bernice Rosenzweig (Civil and Environmental Engineering)
Eric Egleston (Civil and Environmental Engineering)

Examining Committee Member
Yememi Oyerinde (2007, Chemistry)
Madeli Castruita (2006, Chemistry)
Jyothishman Dasgupta (2005, Chemistry)
Steve Maria (2004, Chemical Engineering)
Mirko Schoenitz (2001, Geosciences)

LIST OF PUBLICATIONS

1) Leri AC., Marcus MA., Myneni SCB X-ray spectroscopic investigation of natural organochlorine distribution in weathering plant material. ***Geochim. Cosmochim. Acta*** (In press & available online).
2) Hay M. B., Myneni SCB. Structural environments of carboxyl groups in organic molecules from terrestrial systems: Part I: Infrared spectroscopy, ***Geochim. Cosmochim. Acta*** 71: 3518-3532 (2007).
3) Deshmukh, Hay M. B., Myneni SCB. Structural environments of carboxyl groups in organic molecules from terrestrial systems: Part II: NMR spectroscopy, ***Geochim. Cosmochim. Acta*** 71: 3533-3544 (2007).
4) Komlos, J., Mishra B., Lanzirotti A., Myneni SCB., Jaffe PR. Real-time speciation of uranium during active bioremediation and U(IV) reoxidation. ***J. Environ. Eng.*** (*In press*).

5) Bellenger J., Arnaud-Neu F., Asfari Z., Myneni S. C. B., Stiefel E. I., Kraepiel A. Complexation of oxoanions and cationic metals by the biscatecholate siderophore azotochelin. ***J. Biol. Inorg. Chem***. 12: 367-376 (DOI 10.1007/s00775-006-0194-6) (2007).
6) Edwards D. C., Myneni S. C. B. Near Edge X-ray Absorption Fine Structure Spectroscopy of bacterial hydroxamate siderophores in aqueous solutions. ***J. Phys. Chem. A*** 110: 11809-11818 (2006).
7) Cavalleri M., Naslund L. A., Edwards D. C., Wernet P., Ogasawara H., Myneni SCB., Ojamae L., Odelius M., Nilsson A., Pettersson LGM. The local structure of protonated water from X-ray absorption and density functional theory. ***J. Chem. Phys.*** **124** (19) 194508 (2006).
8) Leri A. C., Hay M. B., Lanzirotti A., Rao W., Myneni S. C. B. Quatitative speciation of absolute organohalogens concentrations in environmental samples by X-ray absorption spectroscopy. ***Anal. Chem***. **78**: 5711-5718 (2006).
9) Poussart P. M., Myneni S. C. B., Lanzirotti A. Tropical dendrochemistry: A novel approach to estimate age and growth from ringless trees. ***Geophys. Res. Let***. **33** (17) L17711 (2006).
10) Castruita M., Saito M., Schottel PC., Elmegren LA., Myneni SCB., Stiefel EI., Morel FMM. Overexpression and characterization of an iron storage and DNA-binding Dps protein from *Trichodesmium erythraeum*. ***App. Env. Microbiol.*** **72:** 2918-2914 (2006).
11) Bluhm H., Andersson K., Araki T., Benzerara K., Brown G. E., Dynes J. J., Ghosal S., Gilles M. K., Hansed H. –Ch, Heminger J. C., Hitchcock A. P., Ketteler G., Kilcoyne A. L. D., Kneedler E., Lawrence J. R., Leppard G. G., Majzlan J., Mun B. S., Myneni S. C. B., Nilsson A., Ogasawara H., Ogletree D. F., Pecher K., Salmeron M., Shuh D. K., Tonner B., Tyliszczak T., Warwick T., Yoon T. H. (2005) Soft X-ray microscopy and spectroscopy at the molecular environmental science beamline at the Advanced Light Source. ***J. Electron Spectosc. Relat. Phenom***. **150**: 86-104 (2005).
12) Edwards, D. C., Nielsen S. B., Jarzecki A. A., Spiro T. G., Myneni S. C. B. Experimental and theoretical vibrational spectroscopy studies of acetohydroxamic acid and desferrioxamine B in aqueous solutions: Effects of pH and iron complexation. ***Geochim. Cosmochim. Acta*** **69**: 3237-3248 (2005).
13) Edwards D. C., Myneni S. C. B. Hard and soft X-ray absorption spectroscopic investigation of aqueous Fe(III)-hydroxamate siderophore complexes ***J. Phys. Chem. A*** **109**: 10249-10256. (2005).
14) Strathmann T. J., Myneni S. C. B. Effect if soil fulvic acid on nickel (II) sorption and bonding at the aqueous-boehmite (γ-AlOOH) interface. ***Environ. Sci. Technol. 39***: 4027-4034 (2005).
15) Li W., Seal S., Rivero C., Lopez C., Richardson K., Pope A., Schulte A., Myneni S. C. B., Jain H., Antoine K., Miller A. C. Role of S/Se ratio in chemical bnding of As-S-Se glasses investigated by Raman, X-ray photoelectron, and extended X-ray absorption fine structure spectroscopies. ***J. App. Physics 98***: 053503 (2005).
16) Naslund L., Edwards D. C., Wernet P., Bergmann U., Ogasawara H., Pettersson L. G. M., Myneni S. C. B., Nilsson A. X-ray absorption spectroscopy study of the hydrogen bond network in the bulk water of aqueous solutions. ***J. Phys. Chem. A*** **109**: 5995-6002 (2005).
17) Majzlan J., Myneni S. C. B. Speciation of iron and sulfate in acid waters: Aqueous clusters to mineral precipitates. ***Environ. Sci. Technol. 39***: 188-194 (2005).
18) Maria S, Russell LM, Gilles MK, Myneni SCB. Organic aerosol growth mechanisms and their climate forcing implications. ***Science*** **306**: 1921-1924 (2004).
19) Xue S., Leri A., Myneni SCB., Jaffe P. Uptake of bromide by two wetland plants (*Typha latifolia* and *Phragmites australis* (Cav.) Trin. Ex Steud). ***Environ. Sci. Technol.***.**38**: 5642-5648 (2004).
20) Strathmann T., Myneni SCB. Speciation of aqueous Ni(II)-Carboxylate and Ni(II)-Fulvic Acid Solutions: Combined ATR-FTIR and XAFS Analysis. ***Geochim. Cosmochim. Acta*** **68**: 3441-1458, (2004).

21) Reina R., Leri A, Myneni SCB. Cl K-edge X-ray spectroscopic investigation of enzymatic formation of organochlorines in weathering plant material. ***Env. Sci. Technol***. **38**: 783-789 (10.1021/es0347336), (2004).
22) Wei J. Saxena A., Song B., Ward BB., Beveridge TJ., Myneni SCB. Elucidation of functional groups on Gram-positive and Gram-negative bacterial surfaces using infrared spectroscopy. ***Langmuir*** **20**: 11433-11442 (2004).
23) Naslund LA, Cavalleri M, Ogasawara H, Nilsson A, Pettersson LGM, Wernet P, Edwards DC, Sandstrom M, Myneni SCB. Direct evidence of orbital mixing between solvated transition-metal ions: An Oxygen 1s XAS and DFT study of aqueous systems. ***J. Phys. Chem*** *A*, **107**: 6869-6876 (Cover page article), (2003).
24) Myneni SCB. Soft X-ray spectroscopy and spectromicroscopy studies of organic molecules in the environment. In ***Rev. Mineral. Geochem***. Applications of Synchrotron Radiation in Low-Temperature Geochemistry and Environmental Science, Ed P. Fenter, M. Rivers, N. Sturchio, S. Sutton, **49**: 485-579, (2002)
25) Russell LM, Maria SF, Myneni SCB. Mapping organic coatings on atmospheric particles. ***Geophys. Res. Let***. **29**: 10.1029/2002GL014874 (2002).
26) Myneni SCB. Formation of stable chlorinated hydrocarbons in weathering plant material. ***Science***, **295**, 1039-1041 (Science Express, published online 17 January 2002; 10.1126/science.1067153), (2002).
27) Myneni SCB, Luo Y, Naslund LA, Ojamae L, Ogasawara H, Pelmenshikov A, Vaterlain P, Heske C, Pettersson LGM, Nilsson A. Spectroscopic evidence for unique hydrogen bonding structures in water. ***J. Phys***.*: Condens. Matter,* **14**, L213-L219, (2002).
28) Pettersson LGM, Nilsson A., Myneni SCB., Luo Y., Nyberg M., Cavalleri M., Ojame L., Naslund L., Ogasawara H., Odelius M., Pelmenshikov A. Electronic structure effects from hydrogen bonding in the liquid phase and in chemisorption: an integrated theory and experimental effort. ***J. Sync. Radiation***, **8**, 136-140, (2001).
29) Myneni SCB.. X-ray and vibrational spectroscopy of sulfate in earth materials. In: ***Rev. Mineral.*** Sulfate Minerals: Crystallography, Geochemistry, and Environmental Significance, ed. C. N. Alpers, J. L. Jambor, and D. K. Nordstrom, Vol 40: 113-172, (2000).
30) Myneni SCB., Brown J., Martinez GA., and Meyer-Ilse. W. Imaging of Humic Substance Macromolecular Structures in Water and Soils, ***Science***, **286**, 1335-1337, (1999).
31) Myneni SCB., Traina SJ., Waychunas GA., Logan TJ. Arsenate interactions with CaO: Formation of Johnbaumite. ***Min. Mag***. **62A**, 1050-1051, (1998).
32) Myneni SCB., Traina SJ., Waychunas GA., and Logan TJ. Experimental and Theoretical Vibrational Spectroscopic Evaluation of Arsenate Coordination in Aqueous Solutions, Solids and at Mineral-Water Interfaces. ***Geochim. Cosmochim. Acta***, **62**, 3285-3300, (1998).
33) Myneni SCB., Traina SJ., Waychunas GA., and Logan TJ. Vibrational Spectroscopy of Functional Group Chemistry and Arsenate Coordination in Ettringite. ***Geochim. Cosmochim. Acta***, **62**, 3499-3514, (1998).
34) Warwick T., Ade H., Cerasari S., Denlinger J., Franck K., Gracia A., Hayakawa S., Hitchcock A., Kikuma J., Kortright J., Meigs G., Moronne M., Myneni SCB., Rightor E., Rotenberg E., Seal S., Shin H-J., Steele R., Tyliszczak T., and Tonner B. A Scanning Transmission X-ray Microscope for Materials Science Spectromicroscopy at the Advanced Light Source. ***Rev. Sci. Instr***, **69**, 2964-2973, (1998).
35) Myneni SCB., Tokunaga TK., Brown Jr., GE. Green Rust in the Lab and in the Soil. Note. ***Science***, **281**, 1111a, (1998).
36) Myneni SCB., Traina SJ., and Logan TJ. Ettringite Solubility and Geochemistry of the $Ca(OH)_2$-$Al_2(SO_4)_3$-H_2O System at 1 atm Pressure and 298 K. ***Chem. Geol***., **148**, 1-19, (1998).
37) Myneni SCB, Tokunaga TK., Brown Jr., GE. Abiotic Se Redox Chemistry in the Presence of Fe(II, III)-oxides. ***Science***, **278**, 1106-1109, (1997).

38) Myneni SCB., Traina SJ., Logan TJ., and Waychunas GA. Oxyanion Behavior in Alkaline Environments: Sorption and Desorption of AsO_4^{3-} in Ettringite. ***Environ. Sci. Tech***., **31**, 1761-1768, (1997).