DR. SAMUEL JUSTIN TRAINA
Director, Sierra Nevada Research Institute
University of California, Merced
P.O. Box 2039
Merced, CA 95344

[redacted]
Married with one child

E-mail: Straina@ucmerced.edu
Phone: (209) 724-4311

EDUCATION

- University of California, Berkeley (Soil Resource Management) 1978
- Ph.D. University of California, Berkeley (Soil Chemistry) 1983

FIELD OF SPECIALIZATION

- Surface, colloidal, and complexation chemistry in soils, sediments, and natural waters, remediation of contaminated soils and sediments.

PROFESSIONAL EXPERIENCE

- Director of the Sierra Nevada Research Institute, July 1, 2002-present
  Professor of Natural Science, University of California, Merced, July 1, 2002-present
- Professor of Soil Physical Chemistry, School of Natural Resources, Professor of Environmental Science, Professor of Geological Science. The Ohio State University. July 1, 1997 – June 30, 2002.
- Associate Professor of Soil Physical Chemistry, School of Natural Resources, Associate Professor of Environmental Science, Associate Professor of Geological Science. The Ohio State University. July 1, 1994 – June 30, 1997.
- Director of the Graduate Program in Environmental Sciences, The Ohio State University. July 1, 1995 - 1998.
- Associate Professor of Soil Physical Chemistry, Department of Agronomy, and Associate Professor of Environmental Science. The Ohio State University. July 1, 1991 - June 30, 1994
- Assistant Professor of Soil Physical Chemistry, Department of Agronomy, and Assistant Professor of Environmental Biology. The Ohio State University. 1985-June 30, 1991.
- Assistant Research Soil Chemist Department of Soil and Environmental Sciences. University of California, Riverside. 1984-1985
- Postdoctoral Research Soil Chemist (with G. Sposito) Department of Soil and Environmental Sciences. University of California, Riverside. 1983-1984
- Graduate Research Assistant and Graduate Teaching Assistant, University of California, Berkeley. 1978-1983

HONORS

- Distinguished Research Award, Ohio Agricultural Research and Development Center. 1990
- Distinguished Multidisciplinary Team Research Award, Ohio Agricultural Research and Development Center. 1998.

- Cox Visiting Professor, School of Earth Sciences, Stanford University, 1998.
- Soil Science Society of America Fellow, 2001.
- Marion L. and Chrystie M. Jackson Clay Scientist Career Award, 2005.

ADMINISTRATIVE EXPERIENCE

- Chair of Graduate School Curriculum Committee, OSU 1991
- Chair of University Research Committee, OSU 1993
- Director of the Graduate Program in Environmental Sciences, OSU 1995 - 1998
- University Selective Investment Committee, OSU 1998-2000
- Associate Vice President of Agriculture Search Committee, OSU 1998-1999
- Co-Director of Environmental Molecular Science Institute, OSU 2001-2003
- SNRI Director, UC Merced 2002-present

BOOK CHAPTERS AND MONOGRAPHS

- Logan, T.J. and S.J. Traina. 1993. Trace metals in agricultural soils. *In* Metal speciation and transport in ground waters. Lewis publishers.

- Hayes, K.F., and S.J. Traina. 1998. Metal ion speciation and its significance to ecosystem health. *In* Soil Chemistry and Ecosystem Health. Soil Sci. Soc. Am., Special Publication.

- Traina, S.J. and S. Chattopadhyay. 1996. Spectroscopic methods for characterization of organic contaminants: applications of optical, electronic measurements. *In* Sahwney, B. ed. CMS Workshop Lectures, Organic pollutants in the environment. 8:173-197. The Clay Minerals Soc., Boulder, CO.

- Traina, S.J. 1999. The environmental chemistry of cadmium. Dev. Plant Soil Sci. *Cadmium in Soils and Plants* 85:11-37.

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2. Traina, S.J. and H.E. Doner. 1985. Heavy metal induced releases of Mn(II) from a hydrous manganese dioxide. Soil Soc. Am. J. 49:317-321.

3. Traina, S.J. and H.E. Doner. 1985. Copper-Mn(II) exchange on a chemically reduced birnesite. Soil Sci. Soc. Am. J. 49:307-313.

4. Traina, S.J. and H.E. Doner. 1985. Co, Cu, Ni, and Ca sorption by a mixed suspension of smectite and hydrous manganese dioxide. Clays and Clay Min. 33:118-122.

5. Traina, S.J., G. Sposito, D. Hesterberg, and U. Kafkafi. 1986. The effects of pH and organic acid addition on the solubility of residual orthophosphate in an acidic, montmorillonitic soil. Soil Sci. Soc. Am. J. 50:45-52.

6. Traina, S.J., G. Sposito, D. Hesterberg, and U. Kafkafi. 1986. Effects of ionic strength and added calcium ions on citrate-orthophosphate interactions in an acidic, montmorillonitic soil. Soil Sci. Soc. Am. J. 50:623-637.

7. Goldberg, S., and S.J. Traina. 1987. Chemical modeling of anion complexation on oxide surfaces using the constant capacitance model: Mixed ligand approach. Soil Sci. Soc. Am. J. 51:929-932.

8. Holtzclaw, K.M., R.H. Neal, G. Sposito, and S.J. Traina. 1987. A sensitive colorimetric method for the quantitation of selenite in soil solutions and natural waters. Soil Sci. Soc. Am. J. 51:75-78.

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10. Neal, R.H., G. Sposito, K.M. Holtzclaw, and S.J. Traina. 1987. Selenite adsorption on alluvial soils: II. Solution composition effects. Soil Sci. Soc. Am. J. 51:1165-1169.

11. Sposito, G., and S.J. Traina. 1987. An ion-association model for highly saline, NaCl-dominated waters. J. Environ. Qual. 16:80-85.

12. Traina, S.J., G. Sposito, G.R. Bradford, and U. Kafkafi. 1987. Kinetic study of citrate effects on orthophosphate solubility in an acid montmorillonitic soil. Soil Sci. Soc. Am. J. 51:1483-1487.

13. Che, M.D., T.J. Logan, S.J. Traina, and J. M. Bigham. 1988. Properties of water treatment lime sludges and their effectiveness as agricultural limestone substituents. J. Water. Pollut. Cont. Fed. 60:674-680.

14. Traina, S.J., D.A. Spontak, and T.J. Logan. 1989. Effects of cations on complexation of naphthalene by water soluble organic carbon. J. Environ. Qual. 18:221-227.

15. Pierzynski, G.M., T.J. Logan, and S.J. Traina. 1990. Phosphorus chemistry and mineralogy in excessively fertilized soils: solubility equilibria. Soil Sci. Soc. Am. J. 54:1589-1595.

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18. Traina, S.J. 1990. Applications of luminescence spectroscopy to studies of colloid-solution interfaces. Advan. Soil Sci. 14:167-189.

19. Traina, S.J., J. Novak, and N.E. Smeck. 1990. An ultraviolet absorbance method of estimating the percent aromatic C content of humic acids. J. Environ. Qual. 19:151-153.

20. Guertal, E.A., D.J. Eckert, S.J. Traina, and T.J. Logan. 1991. Differential phosphorous retention in soil profiles under no-till crop production. Soil Sci. Soc. Am. J. 55:410-413.

21. Traina, S.J. and B.M. Onken. 1991. Cosorption of pyrene and aromatic nitrogen heterocycles by hydrated smectites. J. Cont. Hydrol. 7:237-259.

22. Winland, R.L., S.J. Traina, and J.M. Bigham. 1991. Chemical composition of ocherous precipitates from Ohio coal mine drainage. J. Environ. Qual. 20:452-460.

23. Che, M, M. M. Loux, S. J. Traina, and T. J. Logan. 1992. Effect of soil pH on sorption and desorption of imazaquin and imazethapyr on clays and humic acid. J. Environ. Qual. 21:698-703.

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29. Ma, Q.Y., S.J. Traina, T.J. Logan. and J. Ryan. 1993. In situ Pb immobilization by apatite. Environ. Sci. Technol. 27:1803-1810.

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110. Taerakul, Panuwat; Lamminen, Mikko; He, Yontian; Walker, Harold W.; Traina, Samuel J.; Whitlatch, Earl. 2004. Long-Term Behavior of Fixated Flue Gas Desulfurization Material Grout in Mine Drainage Environments. J. Environ. Engin. 130:816-823.

111. Zachara, John M.; Ainsworth, Calvin C.; Brown, Gordon E.; Catalano, Jeffrey G.; McKinley, James P.; Qafoku, Odeta; Smith, Steven C.; Szecsody, James E.; Traina, Sam J.; Warner, Jeffrey A. 2004. Chromium speciation and mobility in a high level nuclear waste vadose zone plume. Geochim. Cosmochim. Acta. 68:13-30.

112. Z. He, S. J. Traina, J. J. Bigham, and L. K. Weavers. 2005. Sonolytic Desorption of Mercury from Aluminum Oxide, *Environmental Science and Technology* 39(4), 1037-1044.

113. Kost, D.A., J.M. Bigham, R. C. Stehouwer, J.H. Beeghly, R. Fowler, S.J. Traina, W.E. Wolfe and W.A. Dick. 2005. Chemical and physical properties of dry flue gas desulfurization products. J. Environ. Qual. 34:676-685.

114. He, Y.T., and S.J. Traina. 2005. Cr(VI) reduction and immobilization by magnetite under alkaline pH conditions: the role of passivation. Environ. Sci. Technol. in press.

115. He, Y.T., J.M. Bigham, and S.J. Traina. 2005. Biotite dissolution and Cr(VI) reduction at elevated pH and ionic strength. Geochim. Cosmochim. Acta in press

GRADUATE STUDENTS AND POSTDOCS

Former Graduate Students

Name	Degree	Year	Current Appointment
Spontak, Dona	M.S.	1989	unknown
Shongwe, Gideon	Ph.D.	1990	Professor, University of Swaziland
Windland, Ron	M.S.	1990	US EPA
O'Loughlin, Edward	M.S. Ph.D.	1991 1999	Senior Research Scientist, Argone National Lab
Kane, Staci (formerly Kehrmeyer)	M.S.	1991	Research Scientist, LLNL
Onken, Blake	Ph.D.	1992	Agricultural Research Scientist, Navaho Nation
Wander, Michelle	Ph.D.	1992	Assoc. Prof. University of Illinois
Crawford, Jennifer	M.S.	1993	unknown
Radosevich, Mark	Ph.D.	1994	Assoc. Prof. University of Tennessee
Myneni, Satish	Ph.D.	1995	Assist. Prof. Princeton University
Martinez, Gustavo	Ph.D.	1995	Assoc. Prof. University of Puerto Rico
Xue, Yuan	Ph.D.	1995	Sprint
Peixoto, Ricardo	Ph.D.	1997	State Soil Scientist Paranah Brazil
Chattophadhyay, Sandip	Ph.D.	1997	Senior Research Scientist Battelle Memorial Institute
Adhyiya, Jagat	M.S.	1998	Environmental Consultant
Loch, Amy	M.S.	1999	Environmental Consultant
Brill, Marion	M.S.	1999	Environmental Consultant
Williams, David	M.S.	1999	Research Scientist, U`SGS
Lappin-Ickes, Jennifer	M.S.	1999	Environmental Consultant
Leonor-Barajas, Carmen	Ph.D.	2002	Assist. Prof. Universidad Francisco de Paula Santander, Columbia
Wen, Yi	Ph.D.	2002	Ph.D. student, Stanford
He, Yontian	Ph.D.	2003	postdoc with Patricia Dove Virginia Tech. University

Current Graduate Students
Doug Beak Ph.D. student, The Ohio Sate University (expected completion June 2005)
Samantha Lada Ph.D. student, The Ohio State University (expected completion, June 2005)
John Eward, Ph.D. student, UC Merced
Donald Schweizer, Ph.D. student, UC Merced

Former PostdocsPostdocs

Name	Doctoral Institution	Current Appointment
He, Xin-Tao	University of Illinois	unknown
Ma, Lena	Colorado State University	Professor, Univ. of Florida
Laperche, Valerie	University of Paris	Senior Research Scientist CNRS, France
Chen, Chia-chen	University of Michigan	Research Scientist, University of Texas
Yamakawa, Isao	Ohio State University	Chemical Abstracts
Chattophadyay, Demavita	Ohio State University	Senior Research Scientist, Battelle Memorial Institute

Current Postdocs
Domenik Wolff-Boenisch, Ph.D from
Shankar Sharma Sarkar, Ph.D. from University of Wyoming

RESEARCH PANELS
- DOE EPSCOR Program, 1992. Panel member
- Review of DOE Subsurface Science Program, Deep Microbiology and Co-contaminants Programs. 1994. Panel member
- US EPA, Exploratory Research Program, 1994. Panel Member
- USDA, National Research Initiative. 1994. Panel Member.
- USDA National Research Initiative. 1996. Panel Chair.
- DOE, ER-NABIR Program. 1996. Panel Member.
- DOE, ER-NABIR Program. 1996. Panel Chair.
- National Academy of Science/National Research Council Panel on Remediation of Naval Weapons Sites.
- DOE Workshop on "Advanced Technologies for Measuring Microbial Biomass and Activity at the Core Scale" Co-chair of workshop. 1998.
- DOE, OS-EM-EMSP 1999 Panel Chair.
- DOE, OS-EM-EMSP Panel Member, 2000
- DOE, OS-EM-EMSP Panel Member, 2001
- Review of Actinide Chemistry Group, Los Alamos National Laboratory. 2001. Panel Member.
- DOE Counter-terrorism advisory workshop, 2002
- DOE BERAC Subcommittee Member, 2003-2005.
- Review Committee for DOE, Savanah River Ecology Laboratory, 2003

- Review of Geochemistry Department, Earth Sciences Division, LBNL, 2003
- Grand Challenges Workshop in Biogeochemistry, DOE PNNL, 2003
- Selection Committee, DOE E.O. Lawrence Award, 2004
- Review of Geophysics Department, Earth Sciences Division, LBNL, 2004
- Committee of Visitors, Environmental Research Science Division, DOE, 2004
- Beam line proposal review panel, Advanced Light Source, 2004-present
- Beam line proposal review panel, Stanford Synchrotron Radiation Laboratory, 2004-present

PROFESSIONAL SOCIETY SERVICE

- Symposium Chair on Environmental Computational Chemistry, American Chemical Society, 1995.
- Associate Editor, Soil Science Society of America Journal 1994-1996.
- Chair, Division S-11 (Soils and Environmental Quality) of the Soil Science Society of America. 1996.
- Marion Jackson Award Com., Soil Science Soc. Amer. 1996-1998.
- Clarke Medal Committee. Geochemistry Soc. 1996-1999. (Chair, 1998).
- Associate Editor, Environmental Engineering Science, 1997-2002.
- Technical Chair, Clay Minerals Society, 1998-1999.
- Associate Editor, Geochimica et Cosmochimica Acta, 2000-2003.
- Associate Editor, Critical Reviews in Environmental Control, 2000-present.
- Clay Council, Clay Minerals Society, 2001-2007.
- Manuscript reviews for: Geochemica et Cosmochimica Acta, Environmental Science and Technology, Clays and Clay Minerals, Soil Science Society of America Journal, Journal of Environmental Quality, Langmuir, and Science.

UC MERCED SERVICE

- Director, Sierra Nevada Research Institute, July 2002-present
- Faculty Chair of UCM Proto-divisional Council, May-September, 2004
- Search Committee member for Biological Sciences positions (Natural Sciences)
- Search Committee member for Ecosystem Science position (Natural Sciences)
- Search Committee member for Environmental Microbiology position (Engineering)
- Search Committee member for Economics Positions (SSHA)
- Search Committee Chair for Microbial Ecology position (Natural Sciences)
- Search Committee Chair for Director of World Cultures Institute
- Design Committee for Castle Laboratories
- Presented seminars on UC Merced's Sierra Nevada Research Institute to:
  - Merced Chapter of AARP
  - Merced Chapter of Rotary
  - Merced Chapter of Sierra Club
  - Sierra Nevada Alliance
  - California Women in Agriculture
  - UC Merced Board of Trustees
  - Yosemite Forum (Yosemite National Park)
  - Statewide County Supervisors Meeting of UC Cooperative Extension Service

CURRENT GRANTS

Traina, S.J. *Collaborative Proposal: Probing the reductive potential of wetland pore waters and sediments.* NSF 2004-2007.

Traina, S.J. *Biogeochemistry of aerobic solubilization of Pu and U by microorganisms and their siderophores, reductants and exopolymers.* DOE-NABIR 2004-2005.

Traina, S.J. *Contaminant organic complexes: Their structure and energetics in surface decontamination.* DOE-EMSP. 2003-2005.

Traina, S.J. *Effects Of Chipped Orchard Prunings On C-Sequestration By Almond Orchard Soils.* Kearney Foundation for Soil Science. 2004-2005.

Harmon, T. (PI) , Traina, S.J., Bales, R., Estrin, D., Kaiser, W. Planning a multiscale sensor network to observe, forecast and manage a CLEANER California water cycle. NSF. 2004-2005