

**Susan L. Brantley**

Department of Geosciences, Pennsylvania State University, University Park, PA

**Professional Preparation:**

Princeton University	Chemistry (Magna cum Laude)	1980	B.A.
Princeton University	Geol. and Geophys. Sciences	1983	M.A.
Princeton University	Geol. and Geophys. Sciences	1987	Ph.D.

**Appointments and Other Activities and Awards:**

2007	Elected Fellow, American Geophysical Union
2007	Wilson Award for Outstanding Service, College of Earth & Mineral Sciences, Penn State University
1/01/2006	Elected, President, Geochemical Society
1/2004-1/2006	Served as Vice-President, Geochemical Society
6/02-11/05	Served on the Advisory Committee to the Geosciences Directorate, NSF
4/22/2004	College of Earth and Mineral Sciences Faculty Mentoring Award
4/1/2003	Appointed Director, Earth and Environmental Systems Institute, Penn State
1/03-7/03	Visiting Scientist, U.S. Geological Survey Menlo Center
8/99-4/03	Director, Biogeochemical Research Initiative for Education, Penn State
7/98-4/03	Director, Center for Environmental Chemistry and Geochemistry, Penn State
7/97-present	Full Professor of Geosciences, Penn State
1/95-7/95	Visiting Scientist, Stanford Univ., Visiting Scientist, U.S. Geol Survey Menlo Ctr.
6/91-7/97	Associate Professor of Geosciences, Penn State
1988-1993	David and Lucile Packard Fellow
1987-1992	NSF Presidential Young Investigator
9/86-6/91	Assistant Professor of Geosciences, Penn State
9/81-9/86	Teaching and Research Asst, Depart of Geol & Geophy Sci, Princeton Univ.
8/80-8/81	Fulbright Scholar in Peru

**Recent National Committees:**

- 2005-present Vice-chair of the ESPS, Earth Sciences Policy and Research Space) Solid-Earth Panel to write the Solid-Earth Contribution to the "Earth Science Applications from Space: A Community Assessment and Strategy for the Future" (Decadal Study) funded by the National Aeronautics and Space Administration, and the National Oceanic and Atmospheric Administration to help establish a community vision and consensus priorities for Earth and environmental sciences and applications, Nov. 2004-2006.
- 2005-present Served on NRC Space Studies Board Panel, a committee who reviews goals and plans for NASA's Space and Earth Sciences
- 2005 Chair, NSF Committee of Visitors for National Science Foundation (Review of Surface Earth Processes Section, Earth Sciences, Geology and Paleontology and Hydrologic Sciences)

**Selected Publications (from over 80 total publications):**

- 1995 White, A.F., S.L. Brantley, (eds.) Chemical Weathering Rates of Silicate Minerals, Mineralogical Society of America Shortcourse, v. 31.
- 1998 Nugent, M.A., S.L. Brantley, C.G. Pantano, P.A. Maurice. The influence of natural mineral coatings on feldspar weathering. *Nature* 396, 527-622.
- 2000 Kump, L., S.L. Brantley, M.A. Arthur. Chemical weathering, atmospheric CO<sub>2</sub> and climate, *Earth and Planetary Science Reviews* 28, 611-667.
- 2001 Brantley, S., L. Liermann, T. Bullen. Fractionation of Fe isotopes by soil microbes and organic acids: *Geology* 29, 535-538.
- 2005 Liermann, L.J., Guynn, R.L., Anbar, A., and Brantley; S.L. Production of a

- molybdophore during metal-targeted dissolution of silicates by soil bacteria, Chemical Geology. 220, pg. 285-302.
- 2005 Zerkle, A.L., House, C.H., and Brantley, S. L. Biogeochemical signatures through time as inferred from whole microbial genomes. American Journal of Science, 305, pg. 467-502.
- 2005 Buss, H.L., Bruns, M.A., Schultz, M.J., Moore, J., Mathur, C.F., and Brantley, S.L. The coupling of biological iron cycling and mineral weathering during saprolite formation, Luquillo Mountains, Puerto Rico, Geobiology 3, 247-260.
- 2006 Ruebush, S.S., Icopini, G.A., Brantley, S.L. and Tien. M. In vitro enzymatic reduction kinetics of mineral oxides by membrane fractions from *Shewanella oneidensis* MR-1. Geochimica et Cosmochimica Acta, 70, pg. 56-70.
- 2006 Ruebush, S., Brantley, S.L., and Tien, M. Reduction of soluble and insoluble iron forms by membrane fractions of *Shewanella oneidensis* grown under aerobic and anaerobic conditions. Applied Environmental Microbiology, 72:40099-2240/06 pg. 2925-2935.
- 2006 Fletcher, R.C., Buss, H.L., and Brantley, S.L. A spheroidal weathering model coupling porewater chemistry to soil thickness during steady-state denudation. Earth and Planetary Science Letters. 244:1-2, pg. 444-457.

### Synergistic Activities:

Director, Earth and Environmental Systems Institute, an interdisciplinary research center, College of Earth and Mineral Sciences; Advisor (ex-Director), Center for Environmental Chemistry and Geochemistry, Penn State, an interdisciplinary research center operating across four Colleges; Advisor (ex-Director), Biogeochemical Research Initiative for Education, Penn State, an interdisciplinary graduate program funded by NSF/IGERT and Penn State—program funds graduate education in the field of Microbial Biogeochemistry; Secretary General Water Rock Interaction 11, held June 2004 in Saratoga Springs, NY for aqueous geochemists worldwide; Member, NSF Advisory Committee for Directorate of Geosciences; Member, Weathering System Science Consortium, a working group organizing Weathering Scientists nationally (<http://www.wssc.psu.edu/index.html>).

### Collaborators and Co-editors:

B. Alexander	D. Fisher	A. Marin	P. Sak
A. D. Anbar	T. Gardner	R. Mathur	I. Schaperdoth
R. Avino	A. R. Goyne	P. A. Maurice	M. L. Sorey
J. Barling	R. L. Gynn	N. P. Mellott	R. F. Stallard
M. Bau	J. P. Hamilton	J. Moore	D. Stonestrom
T. Brombach	E. M. Hausrath	K. T. Mueller	M. Tien
H. L. Buss	P. J. Heaney	K. M. Murphy	B. F. Turner
S. Caliro	M. L. Hilley	A. Navarre	N. Tsomaia
V. Cameron	C. H. House	A. Neaman	D. Voigt
J. T. Chesley	G. A. Icopini	B. L. Newalkar	C. Werner
G. Chiodini	S. Komarneni	C. G. Pantano	A. F. White
J. Chorover	J. Kubicki	J. D. Rogie	J. Wyngaard
L. J. Criscenti	V. Lebron	S. Ruebush	S. Yau
P. Dulski	J. L. Lewicki	J. Ruiz	Z. Zhang
W. E. Evans	L. J. Liermann	M. Russo	A. Zimmerman

### Dissertations Directed/Graduate Students Advised:

- (6) Post Doctoral Scholars over the last five years; L. Criscenti, G. Icopini, J. Jang, A. Neaman, J. Senko, A. Zimmerman.
- (26) Students supervised: A. Agustsdottir, A. Barnes, H. Buss, V. Cameron, Y. Chen, M. Everett, E. Hausrath, B. Kimball, K. Koepenick, V. Lee, J. Lewicki, I. MacInnis, N. Mellott, J. Moore,

S. Murphy, A.Navarre, M. Nugent, A. Regberg, G. Rowe, S. Ruebush, L. Stillings,  
N.Tsomaia, B.Turner, C. Werner, J. Williams, S. Yau.

**Thesis Advisor:** D. A. Crerar (deceased) **Post Graduate Advisor:** None