

Curriculum Vitae

Eric E. Roden

Education

B.S., Biology, Lebanon Valley College, 1983

Ph.D., Marine-Estuarine Environmental Science, University of Maryland, 1990

Professional Experience

1982-83 Research Technician, Pennsylvania Department of Agriculture
1984-86 Research Assistant, University of Maryland, Chesapeake Biological Laboratory
1986-87 Teaching Assistant, University of Maryland, Department of Microbiology
1987-90 Research Assistant, University of Maryland, Chesapeake Biological Laboratory
1990-92 National Research Council Postdoctoral Research Associate, U.S. Geol. Survey
1993 Postdoctoral Research Associate, Battelle Pacific Northwest Laboratory
1993-1998 Assistant Professor of Biological Sciences, The University of Alabama
1998-2004 Associate Professor of Biological Sciences, The University of Alabama
2004-2005 Professor of Biological Sciences, The University of Alabama
2005- Professor of Geoscience, University of Wisconsin

Graduate and Postdoctoral Advisors

- Jon H. Tuttle, University of Maryland, Chesapeake Biological Laboratory (graduate)
- Derek R. Lovley, U.S. Geological Survey, Water Resources Division; now in Department of Microbiology, University of Massachusetts, Amherst (postdoctoral)
- John M. Zachara, Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory (postdoctoral)

Honors and Awards

- Marion L. and Chrystie M. Jackson Mid-Career Clay Scientist Award, June 2020
- Environmental Science and Technology, Excellence in Review Award, November 2003
- National Research Council Postdoctoral Research Fellowship, Sep 1990-Nov 1992
- Member of Phi Kappa Phi, University of Maryland Chapter
- Ph.D. Suma Cum Laude, University of Maryland, December 1990
- B.Sc. Suma Cum Laude, Lebanon Valley College, May 1983

Research Interests

- Environmental microbiology, microbial ecology and ecophysiology
- Low-temperature aqueous geochemistry, sediment chemical diagenesis
- Microbe-mineral interactions
- Microbial redox cycling of iron and associated iron isotope geochemistry
- Environmental genomics of iron-reducing and oxidizing bacteria
- Soil/sediment carbon cycling

Teaching History

Honors General Biology II (Microbes & Plants) (U*, 3 hrs)	Spring 2000, 2001
Microbial Ecology (U/G*, 3 hrs)	Fall 1994, 1995; Spring 2003, 2004, 2005
Aquatic Biogeochemistry (G, 3 hrs)	Spring 1995, 1996, 1999
Advanced Ecology (Ecological Modeling) (G, 3 hrs)	Fall 1995, 1998
Microbial Ecology Laboratory (U/G, 2 hrs)	Fall 1996; Spring 2003
Environmental Modeling (U/G, 3 hrs)	Fall 1997, 2002, 2004
Introduction to Inquiry (U, 3 hrs)	Fall 1998, 1999, 2000, 2001
Confronting Global Change (U, 3 hrs)	Spring 2004
Geomicrobiology (U/G, 3 hrs)	Fall 2001, 2003; Spring 2006, 2008, 2009
Life in Earth's Extreme Environments (U, 2hrs)	Spring 2006, Fall 2006-2011, Fall 2013-2021
Geochemical-Biogeochemical Modeling (G, 3 hrs)	Spring 2007, 2010, 2013, 2016, 2018, 2020
Geobiology (U/G, 3 hrs)	Spring 2009, Spring 2011, Fall 2015-2019
Soil Microbiology and Biochemistry (U/G, 3 hrs)	Spring 2009, Fall 2010, Fall 2011, Spring 2014-2016
Life in the Universe (Astrobiology) (U, 2 hrs)	Spring 2010, Spring 2011-2012, Spring 2014-2021
Introductory Geochemistry (U, 3 hrs)	Spring 2011, 2012, 2014, 2015, 2017-2020
* U = Undergraduate; G = Graduate	

Recent Professional Activities

- Associate Editor, *Frontiers in Microbiology*
- Member of the editorial panels of *Geomicrobiology Journal* and *Geobiology*, 2007-present
- Member of DOE-EMSL Geochemistry/Biogeochemistry and Subsurface Science Theme Advisory Panel, 2009-present
- Co-chaired symposia on microbial phyllosilicate redox transformations at 2009 American Chemical Society and 2010 Goldschmidt Geochemistry conferences
- Served on ERSP (SBR) Transuranic Science Focus Area review panel, April 2009
- Served on Early Career Research in Subsurface Environmental Systems Sciences Program review panel, December 2009
- Invited participant in BER Workshop on Subsurface Complex System Science, August 2009
- Co-authored concept paper, with Qusheng Jin, to NSF-sponsored workshop on Futures in Geobiology and Low-temperature Geochemistry Workshop, August 2010
- Invited participant in NSF-sponsored workshop on Geomicrobiology and Microbial Geochemistry, November 2013
- Member of NASA of the Mars Exploration Program Analysis Group (MEPAG) which reviewed and updated the description of Special Regions on Mars as places where terrestrial organisms might replicate, December 2013-November 2014

Refereed Publications¹

155. Zhang, F. F., H. F. Xu, E. S. Shelobolina, H. Konishi, and E. E. Roden. 2021. Precipitation of low-temperature disordered dolomite induced by extracellular polymeric substances of methanogenic Archaea *Methanosarcina barkeri*: Implications for sedimentary dolomite formation. *Am. Miner.* 106:69-81. (25)

¹ Numbers in parentheses indicate relevant research award(s) in Research Funding Summary located at the end of this document.

154. Dunham, E.C., J.E. Dore, M.L. Skidmore, E.E. Roden, and E.S. Boyd. 2021. Lithogenic hydrogen supports microbial primary production in subglacial and proglacial environments. *Proc. Nat. Acad. Sci. USA* 118:e2007051117. (31, 35)
154. Napieralski, S. A., and E. E. Roden. 2020. The weathering microbiome of an outcropping granodiorite. *Front. Microbiol.* 11:601907. (31, 35)
153. Fortney, N. W., B.L.Beard, J. A. Hutchings, M. R. Shields, T. S. Bianchi, E. S. Boyd, C. M. Johnson, and E. E. Roden. 2020. Geochemical and stable Fe isotopic analysis of dissimilatory microbial iron reduction in Chocolate Pots hot spring, Yellowstone National Park. *Astrobiology.* 21:83-102. (31)
152. Zhao, Q., S. Dunham-Cheatham, D. Adhikari, C. Chen, A. Patel, S. R. Poulson, D. Obrist, P. S. J. Verburg, X. Wang, E. R. Roden, A. Thompson, and Y. Yang. 2020. Oxidation of soil organic carbon during an anoxic-oxic transition. *Geoderma.* 377:114584. (33)
151. Yu, W. B., H. F. Xu, D. Y. Tan, Y. H. Fang, E. E. Roden, and Q. Wan. 2020. Adsorption of iodate on nanosized tubular halloysite. *Appl. Clay Sci.* 184:10.
150. Napieralski, S. A., H. L. Buss, S. L. Brantley, S. Lee, H. Xu, and E. E. Roden. 2019. Microbial chemolithotrophy mediates oxidative weathering of granitic bedrock. *Proc. Nat. Acad. Sci. USA* 116:26394-26401.
140. Yost, J. L., E. E. Roden, and A. E. Hartemink. 2019. Geochemical fingerprint and soil carbon of sandy Alfisols. *Soil Syst.* 3:22.
139. Yu, W. B., H. F. Xu, E. E. Roden, and Q. Wan. 2019. Efficient adsorption of iodide from water by chrysotile bundles with wedge-shaped nanopores. *Appl. Clay Sci.* 183:10. (28)
138. Jung, H. B., H. F. Xu, and E. E. Roden. 2019. Long-term sorption and desorption of uranium in saprolite subsoil with nanoporous goethite. *Appl. Geochem.* 102:129-138. (28)
137. Thiel, V., A.M.G. Costas, N.W. Fortney, J.N. Martinez, M. Tank, E.E. Roden, E.S. Boyd, D.M. Ward, S. Hanada, and D.A. Bryant. 2019. "*Candidatus Thermomonas thiotrophicus*," A non-phototrophic member of the *Bacteroidetes/Chlorobi* with dissimilatory sulfur metabolism in hot hpring mat communities. *Front. Microbiol.* 9:3159. (31)
136. He, S. M., M. P. Lau, A. M. Linz, E. E. Roden, and K. D. McMahon. 2019. Extracellular electron transfer may be an overlooked contribution to pelagic respiration in humic-rich freshwater lakes. *mSphere* 4:e00436-00418. (31, 35)
135. Mejia, J., S. He, Y. Yang, M. Ginder-Vogel, and E. E. Roden. 2018. Stability of ferrihydrite-humic acid coprecipitates under iron-reducing conditions. *Environ. Sci. Technol.* 52: 13174–13183. (33)

134. Amenabar, M. J., D. R. Colman, S. Poudel, E. E. Roden, and E. S. Boyd. 2018. Electron acceptor availability alters carbon and energy metabolism in a thermoacidophile. *Environ. Microbiol.* 20:2523-2537. (31)
133. Fortney, N. W., S. He, B. Converse, E. S. Boyd, and E. E. Roden. 2018. Investigating the composition and metabolic potential of microbial communities in Chocolate Pots hot springs. *Front. Microbiol.* 9:2075. (31)
132. Fortney, N. W., S. He, A. Kulkarni, M. Friedrich, C. Holz, E.S. Boyd, E.E. Roden. 2018. Stable isotope probing of microbial iron reduction in Chocolate Pots hot spring, Yellowstone National Park. *Appl. Environ. Microbiol.* 11 e02894-17. (31)
131. Stern, N., J. Meija, S. He, Y. Yang, M. Ginder-Vogel, and E. E. Roden. 2018. Dual role of humic substances as electron donor and shuttle for dissimilatory iron oxide reduction. *Environ. Sci. Technol.* 52:5691–5699. (32-34)
130. He, S., R. A. Barco, D. Emerson, and E. E. Roden. 2017. Comparative genomic analysis of neutrophilic iron(II) oxidizer genomes for candidate genes in extracellular electron transfer. *Front. Microbiol.* 8:1584. (31)
129. Adhikari, D., Q. Zhao, K. Das, J. Meija, R. X. Huang, X. L. Wang, S. R. Poulson, Y. Z. Tang, E. E. Roden, and Y. Yang. 2017. Dynamics of ferrihydrite-bound organic carbon during microbial Fe reduction. *Geochim. Cosmochim. Acta* 212:221-233. (33)
128. Stern, N., M. Ginder-Vogel, J. C. Stegen, E. Arntzen, D. W. Kennedy, B. R. Larget, and E. E. Roden. 2017. Colonization habitat controls biomass, composition, and metabolic activity of attached microbial communities in the Columbia River hyporheic corridor. *Appl. Environ. Microbiol.* 83:e00260-00217. (32)
127. Creswell, J. E., M. M. Shafer, C. L. Babiarz, S. Z. Tan, A. L. Musinsky, T. H. Schott et al. 2017. Biogeochemical controls on mercury methylation in the Allequash Creek wetland. *Environ. Sci. Pollut. Res.* 24:15325-15339. (29)
126. Zhao, Q., D. Adhikari, R. X. Huang, A. Patel, X. L. Wang, Y. Z. Tang et al. 2017. Coupled dynamics of iron and iron-bound organic carbon in forest soils during anaerobic reduction. *Chem. Geol.* 464:118-126. (33)
125. Amenabar, M. J., E. L. Shock, E. E. Roden, J. W. Peters, and E. S. Boyd. 2017. Microbial substrate preference dictated by energy demand rather than supply. *Nat. Geosci.* 10:577-581. (31)
124. Percak-Dennett, E. M., S. He, B. J. Converse, H. Konishi, H. Xu, C. S. Chan et al. 2017. Microbial acceleration of aerobic microbial pyrite oxidation at circumneutral pH. *Geobiology* 15:690-703. (31, 32)

123. Reddy, T. R., X. Y. Zheng, E. E. Roden, B. L. Beard, and C. M. Johnson. 2016. Silicon isotope fractionation during microbial reduction of Fe(III)-Si gels under Archean seawater conditions and implications for iron formation genesis. *Geochim. Cosmochim. Acta* 190:85-99. (31)
122. Zheng, X. Y., B. L. Beard, T. R. Reddy, E. E. Roden, and C. M. Johnson. 2016. Abiologic silicon isotope fractionation between aqueous Si and Fe(III)-Si gel in simulated Archean seawater: Implications for Si isotope records in Precambrian sedimentary rocks. *Geochim. Cosmochim. Acta* 187:102-122. (31)
121. Shi, B. J., K. Liu, L. L. Wu, W. Q. Li, C. M. Smeaton, B. L. Beard et al. 2016. Iron isotope fractionations reveal a finite bioavailable Fe pool for structural Fe(III) reduction in nontronite. *Environ. Sci. Technol.* 50:8661-8669. (31)
120. Jung, H. B., H. F. Xu, H. Konishi, and E. E. Roden. 2016. Role of nano-goethite in controlling U(VI) sorption-desorption in subsurface soil. *J. Geochem. Explor.* 169:80-88. (27, 28)
119. Urschel, M., T. Hamilton, E. Roden, E. Boyd. 2016. Substrate preference, uptake kinetics, and bioenergetics in a facultatively autotrophic, thermoacidophilic Crenarchaeote. *FEMS Microbiol. Ecol.* 92:fiw069. (31)
118. Wu, T., A. M. Griffin, C. A. Gorski, E. S. Shelobolina, H. Xu, R. K. Kukkadapu, and E. E. Roden. 2016. Interactions between Fe(III)-oxides and Fe(III)-phyllosilicates during microbial reduction 2: Natural subsurface sediments. *Geomicrobiol. J.* 34:231-241. (27, 30, 32)
117. Xu, S., D. Adhikari, R. Huang, H. Zhang, Y. Tang, E. Roden, Y. Yang. 2016. Biochar-Facilitated Microbial Reduction of Hematite. *Environ. Sci. Technol.* 50:2389-2395. (33)
116. Mejia, J., E. E. Roden, and M. Ginder-Vogel. 2016. Influence of oxygen and nitrate on Fe (hydr)oxide mineral transformation and soil microbial communities during redox cycling. *Environ. Sci. Technol.* 50:3580-3588. (33)
115. Fortney, N. W., B. J. Converse, S. He, B. L. Beard, C. M. Johnson, E. S. Boyd, and E. E. Roden. 2016. Microbial Fe(III) oxide reduction potential in Chocolate Pots hot springs, Yellowstone National Park. *Geobiology* 14: 255-275. (31)
114. He, S., C. Tominski, A. Kappler, S. Behrens, and E.E. Roden. 2016. Metagenomic analyses of the autotrophic Fe(II)-oxidizing, nitrate-reducing enrichment Culture KS. *Appl. Environ. Microbiol.* 82:2656-2668. (31)
113. Wu, T., R. Kukkadapu, A. M. Griffin, C. A. Gorski, H. Konishi, H. Xu, and E. E. Roden. 2016. Interactions between Fe(III)-oxides and Fe(III)-phyllosilicates during microbial reduction 1: Synthetic sediments. *Geomicrobiol. J.* 34:793-806. (27, 30, 32)

112. Harrold, Z. R., M. L. Skidmore, T. L. Hamilton, L. Desch, K. Amada, W. vanGelder et al. 2016. Aerobic and anaerobic thiosulfate oxidation by a cold-adapted, subglacial chemoautotroph. *Appl. Environ. Microbiol.* 82:1486-1495. (31)
111. Converse, B. J., J. P. McKinley, T. C. Resch, and E. E. Roden. 2015. Microbial community composition across a subsurface redox transition zone. *Front. Microbiol.* 8:858. (30, 32)
110. Moreau, J. W., C. M. Gionfriddo, D. P. Krabbenhoft, J. M. Ogorek, J. F. DeWild, G. R. Aiken, and E. E. Roden. 2015. The effect of natural organic matter on mercury methylation by *Desulfobulbus propionicus* 1pr3. *Front. Microbiol.* 6:1369. (26)
109. Xiong, M.Y., E.S. Shelobolina, and E.E. Roden. 2015. Potential for microbial oxidation of ferrous iron in basaltic glass. *Astrobiology.* 5:331-340. (25)
108. Zhang, F. F., H. F. Xu, E.S. Shelobolina, H. Konishi, B. Converse, Z. Shen, and E. Roden. 2015. The catalytic effect of bound extracellular polymeric substances excreted by anaerobic microorganisms on Ca-Mg carbonate precipitation: Implications for the “dolomite problem”. *Am. Mineral.* 100:483-494. (25)
107. Rummel, J.D., Beaty, D.W., Jones, M.A., Bakermans, C., Barlow, N.G., Boston, P.J., Chevrier, V.F., Clark, B.C., de Vera, J.P.P., Gough, R.V., Hallsworth, J.E., Head, J.W., Hipkin, V.J., Kieft, T.L., McEwen, A.S., Mellon, M.T., Mikucki, J.A., Nicholson, W.L., Omelon, C.R., Peterson, R., Roden, E.E., Sherwood Lollar, B., Tanaka, K.L., Viola, D., Wray, J.J., 2014. A new analysis of Mars "Special Regions": Findings of the second MEPAG Special Regions Science Analysis Group (SR-SAG2). *Astrobiology* 14, 887-968.
106. Percak-Dennett, E. M., and E. E. Roden. 2014. Geochemical and microbiological responses to oxidant introduction in reduced subsurface sediment from the Hanford 300 Area, WA. *Environ. Sci. Technol.* 48:9197-9204. (30)
105. Percak-Dennett, E. M., J. L. Loizeau, B. L. Beard, C. M. Johnson, and E. E. Roden. 2013. Iron isotope geochemistry of biogenic magnetite-bearing sediments from the Bay of Vidy, Lake Geneva. *Chem. Geol.* 360:32-40. (25)
104. Benzine, J., E. Shelobolina, M.Y. Xiong, D.W. Kennedy, J.P. McKinley, X. Lin, and E.E. Roden. 2013. Fe-phylosilicate redox cycling organisms from a redox transition zone in Hanford 300 Area sediments. *Front. Microbiol.* 4:388. (30)
103. Li, W. Q., A. D. Czaja, M. J. Van Kranendonk, B. L. Beard, E. E. Roden, and C. M. Johnson. 2013. An anoxic, Fe(II)-rich, U-poor ocean 3.46 billion years ago. *Geochim. Cosmochim. Acta.* 120:65-79. (25)
102. Wu, L., R.P. Poulson-Brucker, B.L. Beard, E.E. Roden, and C.M. Johnson. 2013. Iron isotope characteristics of hot springs at Chocolate Pots, Yellowstone National Park. *Astrobiology.* 13:1091-1101. (25)

101. Zhang, F. F., C. Yan, H. H. Teng, E. E. Roden, and H. F. Xu. 2013. In situ AFM observations of Ca-Mg carbonate crystallization catalyzed by dissolved sulfide: Implications for sedimentary dolomite formation. *Geochim. Cosmochim. Acta*. 105:44-55. (25)
100. Converse, B. J., T. Wu, R. H. Findlay, and E. E. Roden. 2013. U(VI) Reduction in sulfate-reducing subsurface sediments amended with ethanol or acetate. *Appl. Environ. Microbiol.* 79:4173-4177. (27)
99. Czaja, A.D. C.M. Johnson, E.E. Roden, B.L. Beard, A.R. Voegelin, T.F. Nägler, N.J. Buekes, and M. Wille. 2013. Biological Fe oxidation controlled deposition of banded iron formation in the ca. 3770 Ma Isua Supracrustal Belt (West Greenland). *Earth. Planet. Sci. Lett.* 363:192-203. (21, 25)
98. Jin, Q. and E.E. Roden, and J.R. Giska. 2013. Geomicrobial kinetics: Extrapolating laboratory studies to natural environments. *Geomicrobiol. J.* 30:173-185. (14, 18, 19, 27)
97. Zhang, F., H. Xu, H. Konishi, J.M. Kemp, E. E. Roden, and Z. Shen. 2012. Dissolved sulfide-catalyzed precipitation of disordered dolomite: Implications for the formation mechanism of sedimentary dolomite. *Geochim. Cosmochim. Acta*. 97:148-165. (25)
96. Roden, E.E. 2012. Microbial iron-redox cycling in subsurface environments. *Biochem. Trans.* 40:1249-1256. (15, 25, 30)
95. Wu, T., E. Shelobolina, H. Xu, H. Konishi, R. Kukkadapu, and E.E. Roden. 2012. Isolation and microbial reduction of Fe(III) phyllosilicates from subsurface sediments. *Environ. Sci. Technol.* 46:11618–11626. (14, 18, 27)
94. Regier, N., B. Frey, B. Converse, E. Roden. A. Grosse-Honebrink, A. Garcia Bravo, and C. Cosio. 2012. Effect of *Elodea nuttallii* roots on bacterial communities and MMHg proportion in a Hg polluted sediment. *PloS One*. 7: e45565. (27, 29)
93. Shade, A., J.S. Read, N.D. Youngblut, N. Fierer, R. Knight, T.K. Kratz, N.R. Lottig, E.E. Roden, E.H. Stanley, J. Stombaugh, R.J. Whitaker, C.H. Wu, and K.D. McMahon. 2012. Lake microbial communities are resilient after a whole-ecosystem disturbance. *ISME J.* doi:10.1038/ismej.2012.56 (24)
92. Shelobolina, E, H. Xu, H. Konishi, R. Kukkadapu, T. Wu, M. Blöthe, and E.E. Roden. 2012. Microbial lithotrophic oxidation of structural Fe(II) in biotite. *Appl. Environ. Microbiol.* 78:5746–5752. (15, 25, 30)
91. Zhang, F., H. Xu, H. Konishi, E.S. Shelobolina, and E. E. Roden. 2012. Polysaccharide-catalyzed nucleation and growth of disordered dolomite: A potential precursor of sedimentary dolomite. *Am. Mineral.* 97:556-557. (25)

90. Jung, H.B, M. Boyanov, H. Konishi, Y. Sun, M. Bhoopesh, E. Roden, K. Kemner, H. Xu. 2012. Redox behavior of uranium at the nanoporous aluminum oxide-water Interface: implication for uranium remediation. *Environ. Sci. Technol.* 46:7301-7309. (27, 28)
89. Roden, E.E., J.M. McBeth, M. Blothe, E.M. Percak-Dennett, E.J. Fleming, R.R. Holyoke, G.W. Luther III, and D. Emerson. 2012. The microbial ferrous wheel in a neutral pH groundwater seep. *Front. Microbiol.* 3:172. (15, 25, 30).
88. Wu, L.L., E.M. Percak-Dennett, B.L. Beard, E.E. Roden, and C.M. Johnson. 2012. Stable iron isotope fractionation between aqueous Fe(II) and model Archean ocean Fe–Si coprecipitates and implications for iron isotope variations in the ancient rock record. *Geochim. Cosmochim. Acta.* 84:14-28. (21, 25)
87. Czaja, A.D. C.M. Johnson, E.E. Roden, B.L. Beard, A.R. Voegelin, T.F. Nägler, N.J. Buekes, M. Wille. 2012. Evidence for free oxygen in the Neoproterozoic ocean based on coupled iron–molybdenum isotope fractionation. *Geochim. Cosmochim. Acta.* 86:118-137. (21, 25)
86. Shelobolina E., H. Konishi, H. Xu, J. Benzine, M.Y. Xiong, T. Wu, M. Blothe, and E. Roden. 2012. Isolation of phyllosilicate-iron redox cycling microorganisms from an illite-smectite rich hydromorphic soil. *Front. Microbiol.* 3:134. (30).
85. Chakraborty, A., E. E. Roden, J. Schieber, and F. Picardal. 2011. Enhanced growth of *Acidovorax* sp. strain 2AN during nitrate-dependent Fe(II) oxidation in batch and continuous-flow systems. *Appl. Environ. Microbiol.* 77:8548-8556. (20)
84. Mohanty, S., B. Kollah, E.L. Brodie, T.C. Hazen, and E. E. Roden. 2011. 16S rRNA Gene microarray analysis of microbial communities in ethanol-stimulated subsurface sediment. *Microbes Environ.* 26:261-265. (18, 19, 27)
83. Coby A.J., F. Picardal F., E. Shelobolina, H. Xu, and E.E. Roden. 2011. Repeated anaerobic microbial redox cycling of iron. *Appl. Environ. Microbiol.* 77:6036-6042. (18, 19, 20)
82. Wu, L.L., Beard, B.L., Roden, E.E., Johnson, C.M., 2011. Stable iron isotope fractionation between aqueous Fe(II) and hydrous ferric oxide. *Environ. Sci. Technol.* 45:1847-1852. (21, 25)
81. Jin, Q. and E.E. Roden. 2011. Microbial physiology-based model of ethanol metabolism in subsurface sediments. *J. Contam. Hydrol.* 125:1-12. (14, 18, 19, 27)
80. Regberg, A., K. Singha, M. Tien, F. Picardal, Q. Zheng, J. Schieber, E. Roden, and S.L. Brantley. 2011. Electrical conductivity as an indicator of iron reduction rates in abiotic and biotic systems. *Wat. Resour. Res.* 47: W04509. (18, 19, 20)
79. Konhauser, K.O., A. Kappler, and E.E. Roden. 2011. Iron in microbial metabolisms. *Elements.* 7:89-93.

78. Percak-Dennett, E.M., B.L. Beard, H. Xu, H. Konishi, C.M. Johnson, and E.E. Roden. 2011. Iron isotope fractionation during microbial dissimilatory iron oxide reduction in simulated Archean seawater. *Geobiology*. 9:205-220. (15, 21, 25)
77. Roden, E.E. and Q. Jin. 2011. Thermodynamics of microbial growth coupled to metabolism of glucose, ethanol, short-chain organic acids, and hydrogen. *Appl. Environ. Microbiol.* 77:1907-1909. (14, 18, 19, 27)
76. Roden, E.E. and D. Emerson. 2011. Rust Never Sleeps: A new wave for neutral-pH Fe redox cycling. *Environ. Microbiol.* 3:21-23. (15, 25)
75. Craig, L, J.M. Bahr, and E.E. Roden. 2010. Localized zones of denitrification in a floodplain aquifer in southern Wisconsin, USA. *Hydrogeol. J.* 18: 1867–1879. (24)
74. Zhang, F., H. Xu, H. Konishi, and E. E. Roden. 2010. A relationship between d_{104} value and composition in the calcite - disordered dolomite solid solution series. *Am. Mineral.* 95:1650-1656. (25)
73. Wu, L., B. L. Beard, E. E. Roden, C. B. Kennedy, and C. M. Johnson. 2010. Stable Fe isotope fractionations produced by aqueous Fe(II)-hematite surface interactions. *Geochim. Cosmochim. Acta* 74:4249-4265. (21, 25)
72. Roden, E., A. Kappler, I. Bauer, J. Jiang, A. Paul, R. Stoesser et al. 2010. Extracellular electron transfer through microbial reduction of solid-phase humic substances. *Nat. Geosci.* 3:417-421. (1)
71. Tangelos, G. E., B. L. Beard, C. M. Johnson, C. N. Alpers, E. S. Shelobolina, H. Xu, H. Konishi, and E.E. Roden. 2010. Microbial production of isotopically light iron(II) in a modern chemically precipitated sediment and implications for isotopic variations in ancient rocks. *Geobiology* 8:197-208. (15, 21, 25)
70. Heimann, A., C. M. Johnson, B. L. Beard, J. W. Valley, E. E. Roden, M. J. Spicuzza, and N. J. Beukes. 2010. Fe, C, and O isotope compositions of banded iron formation carbonates demonstrate a major role for dissimilatory iron reduction in ~ 2.5 Ga marine environments. *Earth. Planet. Sci. Lett.* 294:8-18. (21, 25)
69. Istok, J. D., M. Park, M. Michalsen, A. M. Spain, L. R. Krumholz, C. Liu et al. 2010. A thermodynamically-based model for predicting microbial growth and community composition coupled to system geochemistry: application to uranium and technetium bioreduction. *J. Contam. Hydrol.* 112:1-14. (14, 18, 19)
68. Czaja, A. D., C. M. Johnson, B. L. Beard, J. L. Eigenbrode, K. H. Freeman, and K. E. Yamaguchi. 2010. Iron and carbon isotope evidence for ecosystem and environmental diversity in the ~2.7 to 2.5 Ga Hamersley Province, Western Australia. *Earth. Planet. Sci. Lett.* 292:170–180. (21, 25)

67. Kirk, M. F., E. E. Roden, L. J. Crossey, A. J. Brealey, and M. N. Spilde. 2010. Experimental analysis of arsenic precipitation during microbial sulfate and iron reduction in model aquifer sediment reactors. *Geochim. Cosmochim. Acta* 74:2538-2555. (18, 20, 23)
66. Blothe, M., and E. E. Roden. 2009. Composition and activity of an autotrophic Fe(II)-oxidizing, nitrate-reducing enrichment culture. *Appl. Environ. Microbiol.* 75:6937–6940. (15, 25)
65. Shelobolina, E. S., H. Konishi, H. F. Xu, and E. E. Roden. 2009. U(VI) sequestration in hydroxyapatite produced by microbial glycerol 3-phosphate metabolism. *Appl. Environ. Microbiol.* 75:5773-5778. (14, 18, 19)
64. Wu, L., B. L. Beard, E. E. Roden, and C. M. Johnson. 2009. Influence of pH and dissolved Si on Fe isotope fractionation during dissimilatory microbial reduction of hematite. *Geochim. Cosmochim. Acta* 73:5584-5599. (21, 25)
63. Blothe, M., and E. E. Roden. 2009. Microbial iron redox cycling in a circumneutral-pH groundwater seep. *Appl. Environ. Microbiol.* 75:468-473. (15)
62. Creswell, J. E., S. C. Kerr, M. H. Meyer, C. L. Babiarez, M. M. Shafer, D. E. Armstrong, and E. E. Roden. 2008. Factors controlling temporal and spatial distribution of total mercury and methylmercury in hyporheic sediments of the Allequash Creek wetland, northern Wisconsin. *J. Geophys. Res. Biogeosciences* 113:G00C02. (24)
61. Mohanty, S., B. Kollah, D. Hedrick, A. Peacock, R. K. Kukkadapu, and E. E. Roden. 2008. Biogeochemical processes in ethanol stimulated uranium-contaminated subsurface sediments. *Environ. Sci. Technol.* 42:4384-4390. (14, 18)
60. Johnson, CM, B.L. Beard, and E.E. Roden. 2008. The iron isotope fingerprints of redox biogeochemical cycling in modern and ancient Earth. *Ann. Rev. Earth Planet. Sci.* 36:457-493. (21, 25)
59. Johnson, C. M., B. L. Beard, C. Klein, N. J. Beukes, and E. E. Roden. 2008. Iron isotopes constrain biologic and abiologic processes in banded iron formation genesis. *Geochim. Cosmochim. Acta* 72:151-169. (21)
58. Burgos, W. D., J. M. Senko, B. A. Dempsey, E. E. Roden, J. J. Stone, K. M. Kenmer, and S. D. Kelly. 2007. Soil humic acid decreases biological uranium(VI) reduction by *Shewanella putrefaciens* CN32. *Environ. Engin. Sci.* 24:755-761. (12)
57. Cheng, T., M. O. Barnett, E. E. Roden, and J. L. Zhunag. 2007. Reactive transport of uranium(VI) and phosphate in a goethite-coated sand column: An experimental study. *Chemosphere* 68:1218-1223. (11)
56. 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 Sci. Soc. Am. J.* 71:329-335. (11)

55. Boyanov, M.I., O'Loughlin, E.J., Roden, E.E. Fein, J.B. and Kemner, K.M. 2007. Adsorption of Fe(II) and U(VI) to carboxyl-functionalized microspheres: the influence of speciation on uranyl reduction studied by titration and EXAFS. *Geochim. Cosmochim. Acta.* 71:1898-1912. (11, 12)
54. 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* 95:251-259. (11)
53. Crosby, H.A. Roden, E.E., Johnson, C.M. and Beard, B.L. 2007. The mechanisms of iron isotope fractionation produced during dissimilatory Fe(III) reduction by *Shewanella putrefaciens* and *Geobacter sulfurreducens*. *Geobiology.* 5:169-189. (21)
52. Chandler D.P., Jarrell A.E., Roden E.R., Golova J., Chernov B., Schipma M.J., Peacock A.D., and Long P.E. 2006. Suspension array analysis of 16S rRNA from Fe- and SO₄²⁻-reducing bacteria in uranium-contaminated sediments undergoing bioremediation. *Appl. Environ. Microbiol.* 72: 4672-4687. (19)
51. Scheibe, T.D., Fang, Y., Murray, C.J., Roden, E.E., Chen, J., Chien, Y.J, Brooks, S.C., Hubbard, S.S. 2006. Transport and biogeochemical reaction of metals in a physically and chemically heterogeneous aquifer. *Geosphere.* 2: 220-235. (12, 14)
50. Roden, E. E. 2006. Geochemical and microbiological controls on dissimilatory iron reduction. *C.R. Geosci.* 348:456-467. (11, 12)
49. Kerin, E. J., C.C. Gilmour, E.E. Roden, M.T. Suzuki, J.D. Coates, and R.P. Mason. 2006. Mercury methylation by dissimilatory iron-reducing bacteria. *Appl. Environ. Microbiol.* 72:7919-7921. (16, 17)
48. 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. *Environ. Sci. Technol.* 40: 3243-3247. (11)
47. Weber, K.A. P.F. Churchill, K.K. Kukkadapu, and E.E. Roden. 2006. Anaerobic redox cycling of iron by freshwater sediment microorganisms. *Environ. Microbiol.* 8:100-113. (7)
46. Crosby, H.A., C.M. Johnson, E.E. Roden, and B.L. Beard. Fe(II)-Fe(III) electron/atom exchange as a mechanism for Fe isotope fractionation during dissimilatory iron oxide reduction. 2005. *Environ. Sci. Technol.* 39:6698-6704. (13)
45. Jeon, B.H., S.D. Kelly, K.M. Kemner, M.O. Barnett, W.D. Burgos, B.A. Dempsey, E.E. Roden. 2005. Chemical reduction of U(VI) by Fe(II) at the solid-water interface using natural and synthetic iron(III) oxides. *Environ. Sci. Technol.* 39:5642-5649 (11, 12)
44. Warner, K.A., J.-C. J. Bonzongo, E.E. Roden, M.G. Ward, A.C. Green, I. Chaubey, W.B. Lyons, and D.A. Arrington. 2005. Effect of watershed parameters on mercury distribution in

different environmental compartments in the Mobile Alabama River Basin, USA. *Sci Tot. Environ.* 347:187-207. (8)

43. Roden, E.E. and T.D. Scheibe. 2005. Conceptual and numerical model of uranium(VI) reductive immobilization in fractured subsurface sediments. *Chemosphere.* 59:617-628. (14)

42. Chen, J., S. Hubbard, Y. Rubin, C. Murray, E. Roden, and E. Majer. Geochemical characterization using geophysical data: a case study at the south Oyster bacterial transport site in Virginia. *Wat. Resour. Res.* 40:W12412. (10)

41. Johnson, C.M., E.E. Roden, S.A. Welch, and B.L. Beard. Experimental constraints on Fe isotope fractionation during magnetite and Fe carbonate formation coupled to dissimilatory hydrous ferric oxide reduction. *Geochim. Cosmochim. Acta.* 69:663-693. (13)

40. Cheng, T., M.O. Barnett, E.E. Roden, and J. Zhuang. 2004. The effects of phosphate on uranium(VI) adsorption to goethite-coated sand. *Environ. Sci. Technol.* 38: 3059-6065. (11)

39. Jeon, B.H., S.D. Kelly, K.M. Kemner, M.O. Barnett, W.D. Burgos, B.A. Dempsey, E.E. Roden. 2004. Microbial reduction of U(VI) at the solid-water interface. *Environ. Sci. Technol.* 38:5649-5655. (11, 12)

38. Roden, E.E., D. Sobolev, B. Glazer, and G.W. Luther. 2004. Potential for microscale bacterial Fe redox cycling at the aerobic-anaerobic interface. *Geomicrobiol. J.* 21:379-391. (1, 9, 13)

37. Roden, E.E. 2004. Analysis of long-term bacterial vs. chemical Fe(III) oxide reduction kinetics. *Geochim. Cosmochim. Acta.* 68:3205-3216. (5, 11, 12)

36. Jeon, B.H., B.A. Dempsey, W.D. Burgos, R.A. Royer and E.E. Roden. 2004. Modeling the sorption kinetics of divalent metals ions to hematite. *Wat. Res.* 38:2499-2504. (7, 12)

35. Wildung, R.E., S.W. Li, C.J. Murray, K.M. Krupka, Y. Xie, N.J. Hess, and E.E. Roden. 2004. Technetium reduction in sediments of a shallow aquifer exhibiting dissimilatory iron reduction potential: influence of sediment physicochemical properties. *FEMS Microb. Ecol.* 49:151-162. (10)

34. Sobolev, D. and E.E. Roden. 2004. Characterization of a chemolithoautotrophic Fe(II)-oxidizing β -proteobacterium isolated from freshwater wetland sediments. *Geomicrobiol. J.* 21:1-10. (1, 9)

33. Roden, E.E. 2003. Diversion of electron flow from methanogenesis to crystalline Fe(III) oxide reduction in carbon-limited cultures of wetland sediment microorganisms. *Appl. Environ. Microbiol.* 59:5702-5706. (1)

32. Roden, E.E. and R.G. Wetzel. 2003. Competition between Fe(III)-reducing and methanogenic bacterial for acetate in iron-rich freshwater wetland sediments. *Microb. Ecol.* 45:252-258. (1)

31. Roden, E.E. 2003. Fe(III) oxide reactivity toward biological versus chemical reduction. *Environ. Sci. Technol.* 37:1319-1324 (5)
30. Warner, K.A., E.E. Roden, and J.C. Bonzongo. 2003. Microbial mercury transformations in anoxic freshwater sediments under iron-reducing and other electron accepting conditions. *Environ. Sci. Technol.* 37:2159-2165. (8)
29. Sobolev, D., and E.E. Roden. 2002. Evidence for rapid microscale bacterial redox cycling of iron in circumneutral environments. *Anton. van Leeuw.* 81:587-597. (1, 9, 13)
28. Roden, E.E., M.R. Leonardo, and F.G. Ferris. 2002. Immobilization of strontium during iron biomineralization coupled to dissimilatory hydrous ferric oxide reduction. *Geochim. Cosmochim. Acta.* 66:2823-2839. (6)
27. Roden, E.E. and M.M. Urrutia. 2002. Influence of biogenic Fe(II) on bacterial crystalline Fe(III) oxide reduction. *Geomicrobiol. J.* 19:209-251. (5)
26. Roden, E.E. and R.G. Wetzel. 2002. Kinetics of microbial Fe(III) oxide reduction in freshwater wetland sediments. *Limnol. Oceanogr.* 47:198-211. (1)
25. Weber, K.A., F.W. Picardal, and E.E. Roden. 2001. Microbially catalyzed nitrate-dependent oxidation of biogenic solid-phase Fe(II) compounds. *Environ. Sci. Technol.* 35:1644-1650. (7)
24. Sobolev, D. and E.E. Roden. 2001. Suboxic deposition of ferric iron by bacteria in opposing gradients of Fe(II) and oxygen. *Appl. Environ. Microbiol.* 67:1328-1334. (1, 9)
23. Jackson, C.R., P.F. Churchill, and E.E. Roden. 2000. Successional changes in bacterial assemblage structure during epilithic biofilm development. *Ecology.* 82:555-566. (9)
22. Roden, E.E., M.M. Urrutia, and C.J. Mann. 2000. Bacterial reductive dissolution of crystalline Fe(III) oxide in continuous-flow column reactors. *Appl. Environ. Microbiol.* 66:1062-1065. (5)
21. Jackson, C.R. , E.E. Roden, and P.F. Churchill. 2000. Denaturing gradient gel electrophoresis can fail to separate 16S rDNA fragments with multiple base differences. *Mol. Biol. Today.* 1:15-17. (9)
20. Parmar, N., L.A. Warren, E.E. Roden, and F.G. Ferris. 2000. Solid phase capture of strontium by the iron reducing bacterium *Shewanella alga* strain BrY. *Chem. Geol.* 169:281-288. (6)
19. Roden, E.E. and M.M. Urrutia. 1999. Ferrous iron removal promotes microbial reduction of crystalline iron(III) oxides. *Envir. Sci. Technol.* 33:1847-1853. (5)

18. Urrutia, M.M., E.E. Roden, and J.M. Zachara. 1999. Influence of aqueous and solid-phase Fe(II) complexants on microbial reduction of crystalline Fe(III) oxides. *Environ. Sci. Technol.* 33:4022-4028. (3, 5)
17. Small, T.D. , L.A. Warren, E.E. Roden, and F.G. Ferris. 1999. Sorption of strontium by bacteria, Fe(III) oxide, and bacteria-Fe(III) oxide composites. *Environ. Sci. Technol.* 33:4465-4470. (6)
16. Jackson, C.R., E.E. Roden, and P.F. Churchill. 1998. Changes in bacterial species composition in enrichment cultures with various dilutions of inoculum as monitored by denaturing gradient gel electrophoresis. *Appl. Environ. Microbiol.* 64:5046-5048.
15. Urrutia, M.M., E.E. Roden, J.K. Fredrickson, and J.M. Zachara. 1998. Microbial and surface chemistry controls on reduction of synthetic Fe(III) oxide minerals by the dissimilatory iron-reducing bacterium *Shewanella alga*. *Geomicrobiol. J.* 15:269-291. (3, 5)
14. Coates, J.D., D.J. Ellis, E.L. Blunt-Harris, C.V. Gaw, E.E. Roden, and D.R. Lovley. 1998. Recovery of humics-reducing bacteria from a diversity of environments. *Appl. Environ. Microbiol.* 64:1504-1509. (1)
13. Roden, E.E. and J.W. Edmonds. 1997. Phosphate mobilization in iron-rich anaerobic sediments: microbial Fe(III) oxide reduction vs. iron-sulfide formation. *Arch. Hydrobiol.* 139:347-378. (2)
12. Jackson, C.R., J.P. Harper, D. Willoughby, E.E. Roden, and P.F. Churchill. 1997. A simple, efficient method for separation of humic substances and DNA in environmental samples. *Appl. Environ. Microbiol.* 63:4993-4995.
11. Roden, E.E. and R.G. Wetzel. 1996. Organic carbon oxidation and suppression of methane production by microbial Fe(III) oxide reduction in vegetated and unvegetated freshwater wetland sediments. *Limnol. Oceanogr.* 41:1733-1748. (1)
10. Roden, E.E. and J.M. Zachara. 1996. Microbial reduction of crystalline Fe(III) oxides: Influence of oxide surface area and potential for cell growth. *Environ. Sci. Technol.* 30:1618-1628. (3)
9. Roden, E.E., J.H. Tuttle, W.R. Boynton, and W.M. Kemp. 1996. Carbon cycling in mesohaline Chesapeake Bay sediments 2. Kinetics of particulate and dissolved organic carbon turnover. *J. Mar. Res.* 54:343-383.
8. Roden, E.E., J.H. Tuttle, W.R. Boynton, and W.M. Kemp. 1995. Carbon cycling in mesohaline Chesapeake Bay sediments 1. POC deposition rates and mineralization pathways. *J. Mar. Res.* 53:799-819.
7. Roden, E.E. and D.R. Lovley. 1993. Evaluation of ⁵⁵Fe as a tracer of Fe(III) reduction in aquatic sediments. *Geomicrobiol. J.* 11:49-56.

6. Roden, E.E. and D.R. Lovley. 1993. Dissimilatory Fe(III) reduction by the marine microorganism, *Desulfuromonas acetoxidans*. *Appl. Environ. Microbiol.* 59:734-742.
5. Roden, E.E. and J.H. Tuttle. 1993. Inorganic sulfur cycling in mid and lower Chesapeake Bay sediments. *Mar. Ecol. Prog. Ser.* 93:101-118.
4. Roden, E.E. and J.H. Tuttle. 1993. Inorganic sulfur turnover in oligohaline estuarine sediments. *Biogeochemistry.* 22:81-105.
3. Lovley, D.R., E.E. Roden, E.J.P. Phillips, and J.C. Woodward. 1993. Enzymatic iron and uranium reduction by sulfate-reducing bacteria. *Mar. Geol.* 113:41-53.
2. Phillips, E.J.P., D.R. Lovley, and E.E. Roden. 1993. Non-microbially reducible Fe(III) in sediments is not in mixed Fe(III)-Fe(II) oxides. *Appl. Environ. Microbiol.* 59:2727-2729.
1. Roden, E.E. and J.H. Tuttle. 1992. Sulfide release from estuarine sediments underlying anoxic bottom water. *Limnol. Oceanogr.* 37:725-738.

Proceedings Papers

- Roden, E.E. 2004. Analysis of Fe^{III} oxide reactivity toward long-term bacterial vs. chemical reduction, pp. 1227-1230 In Wanty, R.B. and R.R. Seal II (Eds), Proceedings of the 11th International Symposium on Water-Rock Interaction. AA Balkema Publishers, New York. (5, 11, 12)
- Howell, J.R., Donahoe, R.J., Roden, E.E. and Ferris, F.G. 1998. Effects of microbial iron oxide reduction on pH and alkalinity in anaerobic bicarbonate-buffered media: implications for metal mobility. *Mineral. Mag.* 62A (2):657-658. (6)

Book Chapters

- Napieralski, S.A., Fortney, N.W., and Roden, E.E. Iron oxidation. 2020. In Gargaud M. et al. (Eds) Encyclopedia of Astrobiology. Springer, Berlin, Heidelberg.
- Fortney, N.W., Napieralski, S.A., and Roden, E.E. Iron reduction. 2020. In Gargaud M. et al. (Eds) Encyclopedia of Astrobiology. Springer, Berlin, Heidelberg.
- Abedon, S.T., Breitenberger, C., Roden, E.E. and Williams, J.B. 2008. Ecological Processes: Respiration. p. 3010-3020 In Jorgensen, S.E. (Ed). Encyclopedia of Ecology. Elsevier.
- Roden, E. E. 2008. Microbiological controls on geochemical kinetics 1: Fundamentals and case study on microbial Fe(III) reduction. In S. L. Brantley, J. Kubicki, and A. F. White (eds.). Kinetics of Water-Rock Interactions, pp. 335-415. Springer, New York.

Roden, E. E. 2008. Microbiological controls on geochemical kinetics 2: Case study on microbial oxidation of metal sulfide minerals and future prospects. In S. L. Brantley, J. Kubicki, and A. F. White (eds.). *Kinetics of Water-Rock Interactions*, pp. 417-467. Springer, New York.

Roden, E. E., and D. Emerson. 2007. Microbial metal cycling in aquatic environments. In C. J. Hurst, D. Lipson, R. Crawford, J. Garland, A. Mills, and L. D. Stezenbach (eds.). *Manual of Environmental Microbiology*, 3rd Edition, pp. 540-562. American Society for Microbiology, Washington, DC.

Johnson, C.M., B. Beard, E. Roden, D. Newman, K. Nealson. 2003. Isotopic constraints on biogeochemical cycling of Fe. pp. 409-427 *In* Johnson, C.M., B.L. Beard, and F. Albarede (Eds.) *Geochemistry of non-traditional stable isotopes*, *Reviews in Mineralogy and Geochemistry*, Vol. 55, Mineralogical Society of America/Geochemical Society.

Chaubey, I., K.A. Warner, G.M. Ward, and E.E. Roden. 2001. Statistical analysis of land use effect on in-stream nutrient concentrations, p. 33-38 *In* Proc. Mini-Symposium on Statistical Methods in Hydrology, P.K. Haan and R.D. Harmel (Eds.). ASAE, St. Joseph, MI.

Invited Presentations at Scientific Conferences

58. Roden, E.E. Rate-limiting step of dissimilatory microbial iron oxide nanoparticle reduction. American Chemical Society National Meeting, Atlanta, GA, August 2021.

57. Roden, E.E. Extracellular biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments. Marion L. and Chrystie M. Jackson Mid-Career Clay Scientist Award Lecture, Clay Minerals Society Annual Meeting, Richland WA, June 2020.

56. "Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments". Adrian Smith Lecture in Environmental Geochemistry, University of Waterloo, Department of Earth Sciences, Waterloo, Ontario, Canada, April 2020. (postponed due to Covid)

55. Roden, E.E. Rate-limiting step of dissimilatory microbial iron oxide nanoparticle reduction. American Chemical Society National Meeting, Philadelphia, PA, April 2020.

54. Yang, Y., D. Adhikari, Zhao, Q., Dunham-Chetham, S., Das, K, Mejia, J., R. Huang, Wang, X., Poulson, S., D. Obrist, E.E. Roden, Y. Yang, Tang, Y, Obrist, D., Roden, E.E.. Biogeochemical stability and reactions of iron-organic carbon complexes. American Geophysical Union Fall Meeting, New Orleans, December 2017.

53. Roden, E.E. Microbial Iron Redox Metabolism in Circumneutral pH Environments. American Geophysical Union Fall Meeting, December 2016.

52. Roden, EE. Metagenomic analysis of extracellular electron transfer (EET) mechanisms in novel enrichment cultures. Workshop on U.S.–China Collaborative Research on Microbe–

Mineral Interactions: Microbial Extracellular Electron Transfer with Minerals as Electron Sources and Sinks, March 2015.

51. Roden, E.E. Microbial iron redox cycling in circumneutral pH terrestrial environments. American Geophysical Union Fall Meeting, December 2014.

50. Roden, E.E. Geochemical and microbiological complexity in soil-sediment redox oscillations. Complex Soil Systems Conference, September 2014.

49. Percak-Dennett, E. Roden, H. Xu, H. Konishi, C. Chan, A. Bhattacharyya and T. Borch. Microbial chemolithoautotrophic oxidation of pyrite at neutral pH. Goldschmidt Conference, June 2014.

48. Roden, E.E. Microbial iron redox cycling in sedimentary environments. American Chemical Society National Meeting, April 2013.

47. Roden, E.E. Microbial iron redox cycling in sedimentary environments. International Workshop on Iron Biogeochemistry, Monte Verita (Ascona), Switzerland, March 2013.

46. Roden, E.E. Microbial oxidation of insoluble Fe(II)-bearing minerals relevant to the Hanford 300 Area and other subsurface environments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2012.

45. Roden, E.E. and E. Shelobolina. Microbial iron redox cycling in subsurface environments. Biochemical Society (UK) Conference on “Electron transfer at the microbe-mineral interface”, Norwich, UK, April 2012.

44. Roden, E.E. Repeated anaerobic microbial redox cycling of iron. NSF-sponsored workshop on “Iron in Coastal Streams”, June 2011.

43. Roden, E.E. Physiology-based models of microbial redox metabolism. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2011.

42. Roden, E.E. Microbially-mediated anaerobic redox cycling of iron in sediments: pathways and biogeochemical significance. Duquesne University Minisymposium on Metals in Biological Systems, December 2010.

41. Roden, E. New mechanisms and microorganisms associated with extracellular Fe redox metabolism. University of Wisconsin, Department of Bacteriology Raper Symposium, August 2010.

40. Roden E., A. Kappler, I. Bauer, J. Jiang, A. Paul, R. Stoesser, H. Konishi, and H. Xu. Microbial reduction of solid-phase humic substances and electron shuttling to Fe(III) oxide. Goldschmidt Conference, June 2010.

39. Shelbolina E., H. Xu, H. Konishi, R. Kukkadapu, T. Wu, and E. Roden. Microbial oxidation and mineralogical alteration of biotite. Goldschmidt Conference, June 2010.
38. Wu, T., E. Shelobolina, R. Kukkadapu, and E. Roden. Experimental studies of microbial Fe(III)-phyllosilicate reduction in subsurface sediments. Goldschmidt Conference, June 2010.
37. Roden, E.E. Microbial Fe(II) oxidation and mineralization in sediments of an acidic, hypersaline lake (Lake Tyrell, Victoria, Australia). Second U.S.-China Geomicrobiology Workshop, May 2010.
36. Picardal, F., Shelobolina, E., Xu, H., Roden, E. Microbially-mediated anaerobic redox cycling of iron and nitrogen in sediments. Goldschmidt Conference, June 2009.
35. Roden E., A. Kappler, I. Bauer, J. Jiang. A. Paul, and R. Stoesser. Solid-phase humic material as a microbial electron acceptor and electron shuttle to Fe(III) oxide. Wetland Biogeochemistry Symposium, June 2009.
34. Shelobolina, E., M. Blöthe, H. Konishi, H. Xu, and E. Roden. Microorganisms involved in iron redox cycling in smectite. American Chemical Society National Meeting, March, 2009.
33. E.E Roden, M. Blothe, G. Tangalos, E. Freeman, H. Xu, J. Eigenbrode, V. Gillerman. Weathered volcanic tuff in Box Canyon, ID as an analog to ancient weathering environments on Mars. NASA Astrobiology Science Conference (AbSciCon), April 2008.
32. Roden, E.E. Anaerobic redox cycling of iron in sediments: pathways and biogeochemical significance. American Chemical Society National Meeting, September 2006.
31. Roden, E.E. Kinetic and thermodynamic controls on microbial Fe(III) oxide reduction. Telluride Research Science Center Workshop on Iron Redox Chemistry at Environmentally Relevant Surfaces, Telluride, CO, July 2006.
30. Roden, E.E. Microbially-mediated anaerobic redox cycling of iron in sediments and culture. American Society for Microbiology Annual Meeting, Washington, DC, May 2006.
29. Roden, E.E. Geochemical controls on microbial Fe(III) oxide reduction kinetics. American Chemical Society National Meeting, Atlanta, GA, March 2006.
28. Roden, E.E. A general rate law for bacterial Fe(III) oxide reduction. 15th Annual Goldschmidt Conference, Moscow, ID, May 2005.
27. Roden, E.E. Geochemical and microbiological controls on dissimilatory iron reduction. French Academy of Sciences, Colloquium on the Biogeochemistry of the cycle of iron; green rusts and fougérite (Biogéochimie du cycle du fer - Rouilles Vertes et fougérite), Paris, December 2004.

26. Roden, E.E. 2004. Analysis of Fe^{III} oxide reactivity toward long-term bacterial vs. chemical reduction. 11th International Symposium on Water-Rock Interaction, Saratoga Springs, NY, June 2004.
25. Roden, E.E. 2004. Surface chemical and thermodynamic controls on bacterial metal reduction in subsurface environments. U.S. Federal Interagency Workshop on Conceptual Model Development for Subsurface Reactive Transport Modeling of Inorganic Contaminants, Radionuclides, and Nutrients, Albuquerque, NM, April 2004.
24. Roden, E.E. 2004. U(VI) reduction at the solid-water interface. U.S. Department of Energy, Natural and Enhanced Bioremediation Annual PI Meeting, Warrenton, VA, March 2004.
23. Roden, E.E. 2003. Thermodynamic versus surface area control of microbial $\text{Fe}(\text{III})$ oxide reduction kinetics. American Geophysical Union Fall Meeting, San Francisco, CA, December 2003.
22. Roden, E.E. 2003. Geochemical and microbiological controls on dissimilatory iron reduction. International Workshop on Biogeochemical Processes Involving Iron Minerals in Natural Waters, Monte Verita (Ascona), Switzerland, November 2003.
21. Roden, E.E. 2003. Coupled microbial $\text{Fe}(\text{III})$ oxide reduction and uranium(VI) reduction in subsurface sediments. U.S. Department of Energy, Natural and Enhanced Bioremediation Field Research Center Workshop, Oak Ridge National Laboratory, Oak Ridge, TN, September 2003.
20. Roden, E.E. 2003. Microbial $\text{Fe}(\text{III})$ oxide reduction: an obvious choice for mesoscale experiments and numerical modeling. U.S. Department of Energy, Idaho National Engineering and Environmental Laboratory Workshop on Mesoscale Subsurface Science Research, Salt Lake City, UT, August 2003.
19. Roden, E.E. 2003. Reactive transport modeling of microbial-geochemical interactions in the subsurface: coupled $\text{Fe}(\text{III})$ oxide/uranium(VI) reduction. U.S. Department of Energy, Basic Energy Sciences Workshop on Integrating Numerical Models of Reactive Flow and Transport into Fundamental Geoscience Research, Carmel Valley, CA, June 2003.
18. Roden, E.E. and K.A. Weber. 2003. Nitrate-dependent $\text{Fe}(\text{II})$ oxidation in surface and subsurface sediments. American Society for Microbiology Annual Meeting, Washington, DC, May 2003.
17. Roden, E.E. and K.A. Weber. 2003. Influence of nitrate on iron redox cycling and mineralogy in freshwater sediments. Clay Society and Mineralogical Society of America Classic Clays and Minerals Conference, Athens, GA, June 2003.
16. Roden, E.E. and K.A. Weber. 2002. Microbial nitrate-dependent oxidation of solid-phase $\text{Fe}(\text{II})$. American Chemical Society National Meeting, Orlando, FL, April 2002.

15. Roden, E.E., D. Sobolev, and G.W. Luther III. 2001. Evidence for rapid microscale redox cycling of iron in circumneutral environments. International Symposium on Microbial Ecology, Amsterdam, The Netherlands, September 2001.
14. Warner, K.A., E.E. Roden, and J.C. Bonzongo. 2001. Effects of different electron accepting conditions on net microbial mercury methylation potential in mineral-rich sediments. Workshop on the Fate, Transport, and Transformation of Mercury in Aquatic and Terrestrial Environments. West Palm Beach, FL, May 2001.
13. Roden, E.E. and D. Sobolev. 2000. Coupled microbial Fe(II) oxidation Fe(III) reduction at redox interfaces: potential for rapid microscale cycling of iron. American Geophysical Union Fall Meeting, San Francisco, FL, December 2000.
12. Roden, E.E. and F.G. Ferris. 2000. Immobilization of aqueous strontium during carbonate mineral formation coupled to microbial Fe(III) oxide reduction. Symposium on Chemical-Biological Interactions in Contaminant Fate, American Chemical Society National Meeting, Washington, DC, August 2000.
11. Roden, E.E. 2000. Kinetics of microbial Fe(III) oxide reduction in freshwater wetland sediments. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Copenhagen, Denmark, June 2000.
10. Warner, K.A., E.E. Roden, and J.C. Bonzongo. 2000. Microbial mercury methylation and demethylation potential rates under different electron accepting conditions in mineral-rich wetland sediments. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Copenhagen, Denmark, June 2000.
9. Roden, E.E. 1999. Microbial and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial physiology. Gordon Conference on Applied and Environmental Microbiology, June 1999.
8. Roden, E.E. 1997. Organic carbon oxidation coupled to microbial Fe(III) oxide reduction in freshwater wetland sediments. American Society for Microbiology Annual Meeting, Miami, FL, May 1997.
7. Roden, E.E. 1997. Geochemical and microbiological controls on bacterial iron oxide reduction. Geological Society of America Southeastern Region Annual Meeting, Auburn, AL, September 1997.
6. Roden, E.E. M.M. Urrutia, and J.M. Zachara. 1996. Surface area and microbiological controls on Fe(III) oxide reduction. American Chemical Society, Industrial and Environmental Chemistry Division Special Session on Emerging Technologies in Hazardous Waste Management, Atlanta, GA, October 1996.

5. Roden, E.E. 1996. Influence of anaerobic microbial metabolism on phosphate mobility in wetland sediments. Annual Meeting of the Soil Science Society of America, Indianapolis, IN, November 1996.
4. Roden, E.E. 1996. Fe(III) oxide reduction in wetland sediments. Fourth Symposium on Biogeochemistry of Wetlands, New Orleans, LA, March 1996.
3. Roden, E.E. 1995. Microbial Fe(III) oxide reduction and Fe cycling in iron-rich freshwater wetland sediment. American Chemical Society, Industrial and Environmental Chemistry Division Special Session on Emerging Technologies in Hazardous Waste Management, Atlanta, GA, October 1995.
2. Roden, E.E. and Y.A. Gorby. 1994. Microbial reduction of crystalline Fe(III) oxides and structural Fe(III) in layered clay minerals. American Chemical Society, Industrial and Environmental Chemistry Division Special Session on Emerging Technologies in Hazardous Waste Management, Atlanta, GA, October 1994.
1. Roden, E.E. 1990. Carbon cycling in mesohaline Chesapeake Bay sediments. New perspectives in the Chesapeake system 1990: proceedings of a conference. Chesapeake Research Consortium, November 1990.

Contributed Presentations at Scientific Conferences

186. Roden, E.E., E. Bulur, S.A. Napieralski, S.P. Loheide, M. Ginder-Vogel, C. Zahasky, E. Arntzen, R. Ghosh. Transport-reaction modeling of particulate organic matter dynamics in riverbed sediments. Goldschmidt Geochemistry Conference, July 2021.
185. Roden, E.E., E. Bulur, S.A. Napieralski, S.P. Loheide, M. Ginder-Vogel. Transport-reaction modeling of particulate organic matter dynamics in riverbed sediments. American Geophysical Union Fall Meeting, San Francisco, December 2020.
- 1854 Haas, L.D., Roden, E.E., Ginder-Vogel, M., Zambito, J.J., 2020, Fate of metals in microbially-mediated pyrite oxidation in a carbonate-buffered sandstone aquifer in Wisconsin, USA, American Geophysical Union Fall Meeting, San Francisco, December 2020.
183. Haas, L.D., Roden, E.E., Ginder-Vogel, M., Zambito, J.J., 2020, Microbially-mediated pyrite oxidation in the Tunnel City Group and Wonewoc Formation sandstones of Trempealeau County, . Geological Society of American Annual Meeting, October 2020.
182. Roden, E.E., N. Stern, and M. Ginder-Vogel. Influence of fresh particulate organic matter input on Hanford 300 Area riverbed sediment microbial metabolism. American Geophysical Union Fall Meeting, San Francisco, December 2019.
181. Ginder-Vogel, M. S. Bessey, S.P. Loheide, and E.E. Roden Particulate organic matter retention by sandy sediments. American Geophysical Union Fall Meeting, San Francisco, December 2019.

180. Haas, L.D., Roden, E.E. Ginder-Vogel, M., Zambito, J.J. Microbially-mediated pyrite oxidation at circumneutral pH in sandstones of Trempealeau County, WI, Water@UW-Madison Fall Student Symposium, Madison, WI October 2019.

179. Napieralski, S.A. and Roden, E.E. Acceleration of pyrite oxidation by lithotrophic microorganisms at neutral pH. Geological Society of American Annual Meeting, Phoenix, AZ. September 2019.

178. Ginder-Vogel, M. E. Roden, S. Loheide, P. Van Cappellen, and F. Reza Nezhad. Transport and transformation of particulate organic matter (POM) in permeable riverbed sediments. PNNL Science Focus Area Workshop, Richland, WA, September 2019.

177. Haas, L.D., Roden, E.E, Ginder-Vogel, M., Zambito, J.J., 2019, Microbially-mediated pyrite oxidation at circumneutral pH in sandstones of Trempealeau County, WI, Geological Society of America Annual Meeting, Phoenix, AZ. September 2019.

176. Haas, L.D., Roden, E.E, Ginder-Vogel, M., Zambito, J.J. Microbially-mediated oxidation of trace element-bearing sulfide minerals in sandstones of Trempealeau County, WI, Sigma-XI Annual Meeting & Student Research Conference, Madison, WI June 2019.

175. Haas, L.D., Roden, E.E., Ginder-Vogel, M., Zambito, J.J. Microbially-mediated oxidation of trace element-bearing sulfide minerals in sandstones of Trempealeau County, WI, Wisconsin Ground Water Association Annual Conference, Sun Prairie, WI, April 2019.

174. Haas, L.D., Roden, E.E, Ginder-Vogel, M., Zambito, J.J., 2019, Microbially-mediated oxidation of trace element-bearing sulfide minerals in sandstones of Trempealeau County, WI, American Water Resources Association—Wisconsin Annual Meeting, Delavan, WI, February 2019.

173. Napieralski S, V. Marcon V, S. Brantley, E. Roden. Aerobic microbial lithotrophic oxidation of pyrite at neutral pH. Goldschmidt Geochemistry Conference, Boston, MA, August 2018.

172. Zheng X. Y, B.L. Beard, E.E. Roden, A.D. Czaja, C.M. Johnson. New constraints on ferrous Fe concentrations in the Archean ocean. Goldschmidt Geochemistry Conference, Boston, MA, August 2018.

171. Xu, S., D. Adhikari, R., Huang, Y. Tang, E.E. Roden, Y. Yang. Biochar-facilitated microbial reduction of hematite. American Chemical Society Spring Meeting, New Orleans, LA, March 2018.

170. Zhao, Q., D. Adhikari, N. Stern, J. Mejia, Y. Agnan, A. Thompson, A.B. Kersting, B. Gu, M Ginder-Vogel, D. Obrist, E.E. Roden, Y. Yang. Carbon stability in Fe redox reactions: Coupling geochemistry, microbiology, and field monitoring. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2018.

169. Roden, E.E., T. Wu, S. He, and E. Shelobolina. Microbial reduction and oxidation of Fe(III)-oxides and Fe(III)-phyllosilicates in soil and sedimentary environments. Clay Minerals Society Annual Meeting, Champaign, IL, June 2018.
168. Shi, B., P. Van Cappellen, C.T. Parsons, C.M. Smeaton, E.E. Roden, C.M. Johnson, and B. Kendall. Different pools of bioavailable iron in nontronite NAu-1: insights from iron stable isotopes. Clay Minerals Society Annual Meeting, Champaign, IL, June 2018.
167. Napieralski, S., H.L. Buss, S. He, and E.E. Roden. Extracellular electron transfer as a mechanism of biogeochemical weathering of Fe(II) silicates by lithotrophic iron oxidizing bacteria. Clay Minerals Society Annual Meeting, Champaign, IL, June 2018.
166. Adhikari, D., D. Wordofa, S. Dunham-Cheatham, S. Poulson, E.E. Roden, Y. Yang. Aerobic microbial respiration of mineral-bound organic carbon: Bioavailability and priming effects. American Chemical Society Spring Meeting, New Orleans, LA, March 2018.
165. Bessey, S., J. Mejia, N. Stern, S. Loheide, E.E. Roden, M.A. Ginder-Vogel. Transport and transformation of particulate organic matter in permeable riverbed sediments. American Chemical Society Spring Meeting, New Orleans, LA, March 2018.
164. Adhikari, D., Q. Zhao, K.K. Das, X. Wang, S. Poulson, Y. Tang, D. Obrist, E.E. Roden, Y. Yang. Impact of redox reactions on carbon stability: Reduction, oxidation, and reduction-oxidation transition. American Chemical Society Spring Meeting, New Orleans, LA, March 2018.
163. Napieralski¹, S.A., H.L. Buss, E.E. Roden. A subsurface Fe-silicate weathering microbiome. American Geophysical Union Fall Meeting, New Orleans, December 2017.
162. Olson, J.C., J.M. Bahr, M.B. Gotkowitz, E.E. Roden. Long-term alterations in groundwater chemistry induced by municipal well pumping. Geological Society of American Annual Meeting, Seattle, WA, October 2017.
161. Yang, Y., D. Obrist, E.E. Roden, A.B. Kersting, B. Gu. Biogeochemical Release and Reactions of Iron-Bound Organic Carbon During the Redox Processes. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2017.
160. Adhikari, D., D. Wordofa, Q. Zhao, S. Dunham-Cheatham, K.K. Das, R. Huang, J. Mejia, S.R. Poulson, X. Wang, Y. Tang, E.E. Roden, Y. Yang. Biogeochemical Fate and Stability of Iron Oxide Organic Carbon Complexes. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2017.
159. Fortney, N.W., S. He, E.S. Boyd, E.E. Roden. Geochemical and genomic evidence for an in situ lithoautotrophic Fe-oxidizing microbial community at Chocolate Pots hot springs, Yellowstone National Park, USA. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.

158. Bueter, L.M., C.M. Johnson, P. Chanda, B.L. Beard, E.E. Roden, and E.S. Boyd. Reductive dissolution of pyrite by methanogens. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.
157. Zheng, X.Y., B.L. Beard, T.R. Reddy, E.E. Roden, C.M. Johnson. Tracing biological and abiological processes in the early Earth using silicon isotopes. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.
156. Amenabar, M.A., E.L. Shock, E.E. Roden, and E.S. Boyd. Energy demand, not supply, dictates substrate preference. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.
155. Colman, D.R., M.R. Lindsay, E.R. Roden, E.S. Boyd. Transitioning metagenomes into interactomes in a chemosynthetic sulfur based hot spring community. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.
154. Napieralski, S.A., H.L. Buss, and E.E. Roden. Microbiological and genomic analysis of a terrestrial subsurface Fe(II)-silicate based lithotrophic microbial community. NASA Astrobiology Science Conference (AbSciCon), Tempe, AZ, April 2017.
153. Roden, E.E. Microbial Iron Redox Metabolism in Circumneutral pH Environments. American Chemical Society Spring Meeting, San Francisco, CA April 2017.
152. Adhikari, D., Q. Zhao, K.K. Das, J. Mejia, R. Huang, X. Wang, S.R. Poulson, Y. Tang, E.E. Roden, Y. Yang. Fate of ferrihydrite-bound organic carbon during microbial reduction. American Chemical Society Spring Meeting, San Francisco, CA April 2017.
151. Adhikari, D., Q. Zhao, K.K. Das, S. Xu, J. Mejia, R. Huang, X. Wang, S.R. Poulson, Y. Tang, D. Obrist, E.E. Roden, Y. Yang. Linking carbon stability to iron redox reactions. American Chemical Society Spring Meeting, San Francisco, CA April 2017.
150. Mejia, J., N. Stern, S. He, Y. Yang, E.E. Roden, M.A. Ginder-Vogel. Geochemical and genomic analysis of coupled redox transformations of humic substances and iron oxides. American Chemical Society Spring Meeting, San Francisco, CA April 2017.
149. Zhao, Q., D. Adhikari, R. Huang, A. Patel, X. Wang, Y. Tang, D. Obrist, E.E. Roden, Y. Yang. Coupled dynamics of iron and iron-bound organic carbon in forest soils during anaerobic reduction. American Chemical Society Spring Meeting, San Francisco, CA April 2017.
148. Fortney, N.W., S. He, A. Kulkarni, M.W. Friedrich, E.S. Boyd, E.E. Roden. Targeted metagenomic survey of the Fe-cycling microbial community at Chocolate Pots hot springs, Yellowstone National Park. American Geophysical Union Fall Meeting, San Francisco, CA, December 2016.

147. Napieralski, S.A. and Roden, E.E. Microbiological and genomic analysis of a terrestrial subsurface Fe(II)-silicate based lithotrophic microbial community. Poster presented at the annual Midwest Geobiology Symposium, Cincinnati, OH, October 2016.
146. Fortney, N.W., A. Kulkarni, S. He, M.W. Friedrich, E.S. Boyd, E.E. Roden. Exploring the active Fe-cycling microbial community at Chocolate Pots hot springs, Yellowstone National Park. Astrobiology Graduate Conference, Boulder, CO, July 2016.
145. Napieralski, S.A. and Roden, E.E. Microbiological and genomic analysis of a terrestrial subsurface Fe(II)-silicate based lithotrophic microbial community. Presented at Astrobiology Graduate Conference, Boulder, CO, July 2016.
144. Stern, N. Roden, E.E., J. Stegen, E. Artzen, D. Kennedy. Composition and metabolic activity of Columbia River SIZ microbial communities in relation to habitat and DOC source. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2016.
143. Jung, H., H. Xu, H. Konishi, and E.E. Roden. Nanoporous goethite controlling the mobility of uranium in saprolite subsoil: Long-term sorption and desorption experiments. American Chemical Society Annual Meeting. San Diego, CA, March 2016.
142. Adhikari D., S.R. Poulson S.Sumaila, J.J. Dynes, J.M. McBeth, Y.Z. Tang, E.E. Roden, and Y. Yang. 2016. Mobilization of carbon in the abiotic and biotic reduction of ferrihydrite-organic matter complexes. American Chemical Society Annual Meeting. San Diego, CA, March 2016
141. Xu, S., Y. Yang, E.E. Roden, Y. Tang, R. Huang, and D. Adhikari. Biochar-facilitated Reduction of crystalline Fe(III) in hematite. American Geophysical Union Fall Meeting, San Francisco, CA, December 2015.
140. Liu, K. L. Wu, B. Shi, C.M. Smeaton, W. Li, B.L. Beard, C. Johnson, E.E. Roden, and P. Van Cappellen. Iron isotope fractionation reveals structural change upon microbial and chemical reduction of nontronite NAu-1. American Geophysical Union Fall Meeting, San Francisco, CA, December 2015.
139. Shi, B., L. Wu, K. Liu, W. Li, B.L. Beard, C. Johnson, E.E. Roden, and P. Van Cappellen. Importance of tetrahedral iron during microbial reduction of clay mineral NAu-2. American Geophysical Union Fall Meeting, San Francisco, CA, December 2015.
138. Meija, M., E.E. Roden, M.A. Ginder-Vogel. Impact of redox cycling on Fe (hydr)oxide transformations and organic matter degradation. Soil Science Society of American Annual Meeting, Minneapolis, MN, November 2015.
137. Stern, N., E.E. Roden, M.A. Ginder-Vogel. Dual role of humic substances as electron donors and shuttles for dissimilatory iron oxide reduction. Soil Science Society of American Annual Meeting, Minneapolis, MN, November 2015.

136. Fortney N.W., B.J. Converse, S. He, B.L. Beard, C.M. Johnson, E.S. Boyd, and E.E. Roden. In vitro and in situ iron geochemistry and microbial activity at Chocolate Pots Hot Springs, Yellowstone National Park. NASA Astrobiology Graduate Conference (AbGradCon), July 2015.

135. Fortney N.W., B.J. Converse, S. He, B.L. Beard, C.M. Johnson, E.S. Boyd, and E.E. Roden. In vitro and in situ iron geochemistry and microbial activity at Chocolate Pots Hot Springs, Yellowstone National Park. NASA Astrobiology Science Conference (AbSciCon), June 2015.

134. Nathaniel W. Fortney, N.W., E.E. Roden, E.S. Boyd, and B.J. Converse. In vitro and in situ analysis of microbial diversity at Chocolate Pots hot springs, Yellowstone National Park. Midwest Geobiology Symposium, September 2014.

133. Fortney, N., E. Roden, and E. Boyd. Microbial Fe(III) oxide reduction potential in Chocolate Pots hot springs, Yellowstone National Park. Goldschmidt Conference, June 2014.

132. Percak-Dennett E., E. Roden E., H. Xu, H. Konishi, C. Chan, A. Bhattacharyya and T. Borch. Microbial chemolithoautotrophic oxidation of pyrite at neutral pH. Goldschmidt Conference, June 2014.

131. Plymale, A., J.H. Lee, J. Fredrickson, A. Dohnalkova, J. Moran, C. Resch, J. McKinley, L. Shi, E. Roden and B. Converse. Acidovorax species reveal potential for oxidation of hydrogen coupled to reduction of oxygen, nitrate, and radionuclides across a subsurface redox gradient. Goldschmidt Conference, June 2014.

130. Meija, J., E.E. Roden, and M.G. Ginder-Vogel. Impact of oxidation mechanism on the evolution of Fe (hydr)oxide mineralogy during biogeochemical redox cycling. American Chemical Society National Meeting, August 2014.

129. Roden, E.E., E.M. Percak-Dennett, X. Lin, M. Miller, A.E. Konopka, and J.P. McKinley. Geochemical and microbiological response to oxidant introduction into reduced Hanford 300 Area sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2014.

128. Fortney, N., E. Roden, and E. Boyd. Microbial Fe(III) oxide reduction potential in Chocolate Pots hot springs, Yellowstone National Park. Midwest Geobiology Conference, November 2013.

127. Wu, L., R Brucker, B. Beard, E. Roden, and C. Johnson. Iron isotope characteristics of hot springs at Chocolate Pots, Yellowstone National Park. GSA Annual Meeting, October 2013.

126. Percak-Dennett, L., E. Roden, H. Xu, H. Konishi, C. Chan, A. Bhattacharyya, T. Borch, J. Zachara, J. Fredrickson. Microbial chemolithoautotrophic oxidation of pyrite at circumneutral pH. Department of Energy, Terrestrial Ecosystem Science-Subsurface Biogeochemistry Program Annual PI Meeting, May 2013.

125. Shi, L., Y. Liu, D. Kennedy, Z. Shi, Z. Wang, A. Dohnalkova, E. Roden, D. Bond, G. White, D. Richardson, K. Rosso, J. Zachara, J. Fredrickson. 2013. Electron transfer mechanisms for microbial iron redox cycle in Hanford subsurface Sediments. U.S. Department of Energy, Terrestrial Ecosystem Science-Subsurface Biogeochemistry Program Annual PI Meeting, May 2013.
124. Percak-Dennett, E. M., H. Konishi, H. Xu, and E.E. Roden. 2013. Aerobic microbial pyrite oxidation. American Chemical Society National Meeting, April 2013.
123. Wu, L., B. Beard, A. Neumann, M. Scherer, E. Roden, and C. Johnson. Stable iron isotope fractionation between aqueous Fe(II) and smectite. Goldschmidt Conference, June 2012.
122. Roden E., L. Wu, E.M. Percak-Dennett, B. Beard, and C. Johnson. Stable Fe isotope fractionation between aqueous Fe(II) and model Archean ocean Fe-Si coprecipitates: implications for the origin of Fe isotope variations in the ancient rock record. NASA Astrobiology Science Conference (AbSciCon), April 2012.
121. Percak-Dennett, E.M., J.J. Loizeau, B. Beard, C. Johnson C. and E. Roden. Iron isotope geochemistry of amorphous iron oxide-enriched sediments from the Bay of Vidy, Lake Geneva. NASA Astrobiology Science Conference (AbSciCon), April 2012
120. Zhang F., H. Xu, H. Konishi, E. Shelobolina and E. Roden. Polysaccharides-catalyzed nucleation and growth of disordered dolomite- A potential precursor of sedimentary dolomite. NASA Astrobiology Science Conference (AbSciCon), April 2012.
119. Roden, E.E., T. Wu, E. Shelobolina, B. Converse, R.F. Findlay, Q. Jin. Microbial communities associated with anaerobic metabolism and U(VI) reduction in ORFRC Area 2 sediment amended with acetate or ethanol. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2012.
118. Zhang, F., H. Xu, H. Konishi, C. Yan, H. Teng, and E.E. Roden. Aqueous sulfide-catalyzed nucleation and growth of disordered dolomite, a potential precursor of sedimentary dolomite. Geological Society of American Annual Meeting, October 2011.
117. Wu, L., E. Percak-Dennett, B.L. Beard, E.E. Roden, and C.M. Johnson. Stable iron isotope fractionations between aqueous Fe(II) and model Archean ocean Fe-Si coprecipitates. Geological Society of American Annual Meeting, October 2011.
116. Wu, T., E. Shelobolina, R. Kukkadapu, H. Xu, H. Konishi, and E.E. Roden. Isolation and microbial reduction of natural Fe(III)-bearing phyllosilicates from subsurface sediments. Geological Society of American Annual Meeting, October 2011.
115. Xu, H., H. Konishi, and E. E. Roden. Structures and defects of ferrihydrite: direct observation using z-contrast imaging. Geological Society of American Annual Meeting, October 2011.

114. Shelobolina, E., H. Xu, H. Konishi, T. Wu, and E. Roden. Lithotrophic oxidation of Fe(II)-silicates as the basis for a deep granitic biosphere. Geological Society of American Annual Meeting, October 2011.

113. Wu L, Percak-Dennett L, Beard B, Roden E, & Johnson C, Equilibrium iron isotope fractionations between aqueous Fe(II) and model Archean ocean Fe-Si coprecipitates, American Chemical Society Fall Meeting, August 2011.

112. Chakraborty, A., J. Schiebe, E.E. Roden, and F.W. Picardal. Enhanced growth of *Acidovorax delafieldii* 2AN during nitrate-dependent Fe(II) oxidation in continuous-flow systems. Goldschmidt Conference, June 2011.

111. Xiong, M., E. S. Shelobolina, J. Benzine, H. Konishi, H. Xu, E. Roden. Isolation of iron cycling microorganisms from illite-smectite rich rhizosphere. American Society for Microbiology General Meeting, May 2011.

110. Shelobolina, E.S., H. Xu, H. Konishi, R. Kukkadapu, T. Wu, M. Blöthe, and E. E. Roden. Lithotrophic Fe(II)-oxidizing organisms as microbial agents for granitic rock weathering. American Society for Microbiology General Meeting, May 2011.

109. Benzine, J., E. Shelobolina, M. Xiong, T. Wu, and E. Roden. Solid phase Fe(II)-oxidizing microaerophilic microorganisms from Hanford 300 sediments. American Society for Microbiology General Meeting, May 2011.

108. Converse, B., T. Wu, E. Shelobolina, R. Findlay, and E. Roden. Terminal electron acceptor metabolism in subsurface sediment flow-through reactors amended with different amounts of acetate or ethanol. American Society for Microbiology General Meeting, May 2011.

107. Xu, H., K. Kemner, E. Roden, H.B. Jung, Y. Sun, H. Konishi, B. Mishra, and M. Boyanov. The role of nanopores on U(VI) sorption and redox behavior in U(VI)-contaminated subsurface sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2011.

106. Shelobolina, E., J. Benzine, M.Y. Xiong, T. Wu, D. Kennedy, and E. Roden. Microbial phyllosilicate-Fe(II) oxidation in Hanford 300 Area sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2011.

105. Roden, E.E., T. Wu, E. Shelobolina, B. Converse, R.F. Findlay, Q. Jin. Microbial Redox metabolism and U(VI) reduction in ORFRC Area 2 sediment amended with acetate or ethanol. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2011.

104. Creswell, J.E., C. Babiarz, M.M. Shafer, S. Tan, T. Schott, E.E. Roden, D.E. Armstrong. Factors controlling methylmercury production in the Allequash Creek wetland: a multivariate statistical approach. American Geophysical Union, December 2010.

103. Ludois J., A. Heimann, C. Johnson, B. Beard, J. Valley, E. Roden, M. Spicuzza, and N. Beukes. Sr isotopes in banded iron formation carbonates: disequilibrium with ancient seawater. Goldschmidt Conference, June 2010.

102. Regberg A.K., Singha, D. Bond, F. Picardal, Q. Zheng, E. Roden, and S. Brantley. Using direct-current and complex electrical conductivity to monitor biogeochemical redox reactions. Goldschmidt Conference, June 2010.

101. Wu, L., B. Beard, C. Johnson, E. Roden. Equilibrium iron isotope fractionation between Fe(II) and hydrous ferric oxide. Goldschmidt Conference, June 2010.

100. Zhang F., H. Xu, H. Konishi, E. Shelobolina, and E. Roden. Abiotic synthesis of disordered dolomite in agar gel medium. Goldschmidt Conference, June 2010.

99. Sun Y., H. Xu, H.-B. Jung, H. Konishi, T. Chen, and E. Roden. The effect of nanopores on U(VI) adsorption / desorption at mineral – solution interface. Goldschmidt Conference, June 2010.

98. Honma, A. and E.E. Roden. Chemolithotrophic microbial oxidation of basalt glass. NASA Astrobiology Science Conference, April 2010.

97. Johnson, C.M., A. Heimann, B.L. Beard, J.W. Valley, E.E. Roden, M.J. Spicuzza, and N.J. Beukes. Iron, carbon, and oxygen isotope compositions of banded iron formation carbonates demonstrate a major role for microbial dissimilatory iron reduction in 2.5 b.y. old marine environments. NASA Astrobiology Science Conference, April 2010.

96. Ludois, J.M., A. Heimann, C.M. Johnson, B.L. Beard, J.W. Valley, E.E. Roden, and M.J. Spicuzza. Strontium isotopes of banded iron formation carbonates: an argument against iron carbonates precipitating from sea water. NASA Astrobiology Science Conference, April 2010.

95. Percak-Dennett, E.M., E.E. Roden, and C.M. Johnson. Evaluation of dissimilatory microbial iron oxide reduction as a mechanism for the generation of banded iron formation minerals. NASA Astrobiology Science Conference, April 2010.

94. Roden, E.E., M. Blothe, and E.S. Shelobolina. Microbial Fe(II) oxidation and mineralization in sediments of an acidic, hypersaline lake (Lake Tyrell, Victoria, Australia). NASA Astrobiology Science Conference, April 2010.

93. Roden, E.E., E. Shelobolina, B. Converse, R.F. Findlay, Q. Jin. Physiological models of microbial redox metabolism in biostimulated uranium(VI)-contaminated subsurface sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2010.

92. Shelobolina, E., T. Wu, D. Kennedy, and E. Roden. Microbial Fe-phylllosilicate redox metabolism in Hanford 300 Area sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2010.

91. Wu, T., E. Shelobolina, H. Xu, and E.E. Roden. Microbial Fe(III)-phyllosilicate reduction in subsurface sediments. U.S. Department of Energy, Subsurface Biogeochemistry Program Annual PI Meeting, April 2010.
90. Wu, L. B.L. Beard, E.E. Roden, C.B. Kennedy, and C.M. Johnson. 2009. Stable Fe isotope probing of aqueous Fe(II)-hematite surface interactions. Geological Society of American Annual Meeting, October 2009.
89. Zhang, F., H. Xu, H. Konishi, and E. E. Roden. 2009. A relationship between d_{104} value and composition in the calcite - disordered dolomite solid solution series. Geological Society of American Annual Meeting, October 2009.
88. Holyoke, R.R., A.S. Madison, E.E. Roden, E. Shelobolina, and G.W. Luther. 2009. Iron cycling in hypersaline sediments of Lake Tyrell, Victoria, Australia. American Chemical Society National Meeting, Washington, DC, August 2009.
87. Roden, E.E., S.R. Mohanty, and Q. Jin. 2009. Microbial physiology-based reaction model of ethanol metabolism in subsurface sediments. American Society for Microbiology General Meeting, May 2009.
86. Blöthe, M. E. Shelobolina, and E. Roden 2009. Fe(II) oxidizing bacteria in the hypersaline Lake Tyrell, Australia. American Society for Microbiology General Meeting, May 2009.
85. Shelobolina, E., M. Blöthe, and E. Roden. 2009. Oxidation of structural Fe(II) in phyllosilicates by a lithotrophic Fe(II)-oxidizing culture. American Society for Microbiology General Meeting, May 2009.
84. Wu, T., E. Shelobolina, H. Xu, and E. Roden. 2009. Separation of Fe-bearing phyllosilicate and iron oxide phases in sediments for microbial reduction studies. American Chemical Society National Meeting, Salt Lake City UT, March 2009.
83. Roden, E.E., Tangalos, G. E., B. L. Beard, C. M. Johnson, C. N. Alpers, E. S. Shelobolina, H. Xu, H. Konishi, and E.E. Roden. 2008. Iron isotope fractionation by microbial iron reduction in modern chemically precipitated sediments. American Geophysical Union Fall Meeting, San Francisco, CA, December 2008.
82. Zhang, F., H. Konishi, H. Xu, and E.E. Roden. 2008. Mineralogical Biosignature of High-Magnesian Calcite. American Geophysical Union Fall Meeting, San Francisco, CA, December 2008.
81. Xu, H. and E.E. Roden. 2008. The role of nanopores on U(VI) sorption and redox behavior in U(VI)-contaminated subsurface sediments. Geological Society of American Annual Meeting, October 2008.

80. Johnson, C., B. Beard, and E. Roden. 2008. Temporal variations in Fe isotope compositions of banded iron formations record changes in the nature of redox cycling. Goldschmidt Conference, July 2008.
79. Zhang, F., H. Xu, G. Farfan, J. Huberty, E.E. Roden. 2008. Substrate-controlled crystallization of calcite and aragonite. Goldschmidt Conference, July 2008.
78. Kirk, M.F., E.E. Roden, L.J. Crossey, and A.J. Brearley. 2008. Experimental analysis of arsenic mobility in iron and sulfate reducing environments. Goldschmidt Conference, July 2008.
77. Coby, A., J. Dockrey, E. Roden, F. Picardal, S. Mohanty, and E. Shelobolina. 2008. Anaerobic redox cycling of iron in flow-through reactors. American Society for Microbiology General Meeting, May 2008.
76. Mohanty, S., B. Kollah, E. Roden. 2008. Bioreduction of uranium and microbial dynamics in the FRC sediment amended with ethanol during flow through process. American Society for Microbiology General Meeting, May 2008.
75. Johnson, C., B. Beard, and E. Roden. 2008. Isotopic compositions of oxides and carbonates in Banded Iron Formations record the history of Fe redox cycling in the Archean and Proterozoic. NASA Astrobiology Science Conference (AbSciCon), April 2008.
74. Blothe, M., G. Tangelos, C. Kirby, and E. Roden. 2008. Iron bacteria in the hypersaline Lake Tyrrell, Australia. NASA Astrobiology Science Conference (AbSciCon), April 2008.
73. Roden, E.E. 2007. The rate-limiting step of microbial Fe(III) oxide reduction in the presence and absence of a soluble electron shuttle. American Society for Microbiology General Meeting, May 2007.
72. Blöthe, M. and E.E. Roden. 2007. Composition and function of a lithoautotrophic Fe(II)-oxidizing, nitrate-reducing enrichment culture. American Society for Microbiology General Meeting, May 2007.
71. Mohanty, S., E.E. Brodie, B. Kollah, and E. Roden. 2007. Comparative analysis of microbial communities associated with U(VI) bioreduction in ethanol-amended subsurface sediment by 16S rRNA clone libraries and a high density phylogenetic DNA microarray. American Society for Microbiology General Meeting, May 2007.
70. Kennedy, C.B., H.A. Crosby, B.L. Beard, E.E. Roden, and C.M. Johnson. 2006. Iron isotope fractionation during Fe(II)-hematite interactions. American Geophysical Union Fall Meeting, December 2006.
69. Roden, E.E. B. Kollah, and S. Mohanty. 2006. Flowthrough reactor experiments with ethanol-amended FRC Area 2 sediments. Fall PI Meeting, U.S. Department of Energy, Environmental Remediation Science Program, Oak Ridge, TN, October 2006.

68. Roden, E.E. 2006. Numerical simulation of the influence of different terminal electron-accepting processes on mercury methylation in aquatic sediments. 8th International Conference on Mercury as a Global Pollutant, August 2006.
67. Sedo, E. and E.E. Roden. 2006. Sulfate-reducing bacterial community structure in Hg-methylating freshwater sediments. 8th International Conference on Mercury as a Global Pollutant, August 2006.
66. Mohanty, S. B. Kollah, D. Chandler, D. Hedrick, A. Peacock, E. Roden 2006. Microbial community dynamics in ethanol-stimulated subsurface sediments. American Society for Microbiology General Meeting, May 2006.
65. Blothe, M. and E.E. Roden. 2006. Microbial iron cycling in two different circumneutral pH iron-rich habitats. American Society for Microbiology General Meeting, May 2006.
64. Roden, E.E. 2005. TEAPREV: A numerical tool for assessing rates of Terminal Electron-Accepting Processes in a Representative Elementary Volume of subsurface sediment. Geological Society of American Annual Meeting, October 2005.
63. Roden, E.E. 2005. TEAPREV: A numerical simulation model of Terminal Electron-Accepting Processes in a Representative Elementary Volume of subsurface sediment. American Society for Microbiology General Meeting, June 2005.
62. Mohanty, S, B. Kollah, and E.E. Roden. 2005. Biogeochemical processes in ethanol-stimulated subsurface sediments. American Society for Microbiology General Meeting, June 2005.
61. Blothe, M. and E.E. Roden. Microbial iron cycling in a circumneutral pH iron seep. American Society for Microbiology General Meeting, June 2005.
60. Blothe, M. and E.E. Roden. 2005. Microbial Iron Cycling in a Neutral pH Groundwater Iron Seep: Analog to Fe-Based Subsurface Microbial Life on Mars? Biennial Meeting of the NASA Astrobiology Institute, April 2005.
59. Roden, E.E. and B.H. Jeon. 2004. Biological versus chemical reduction of U(VI) at the solid-water interface. American Society for Microbiology General Meeting, May 2004.
58. Roden, E.E. and E. Sedo. 2003. Framework for numerical simulation of bacterial Fe(III) oxide reduction in circumneutral soil and sedimentary environments. American Geophysical Union Fall Meeting, December 2003.
57. Roden, E.E. 2003. Control of iron redox cycling in freshwater wetland sediments by microscale Fe(II)-O₂ reaction dynamics at the sediment-water interface. American Society of Limnology and Oceanography Aquatic Sciences Meeting, February 2003.

56. B.H. Jeon and E.E. Roden. 2003. Reductive immobilization of U(VI) at the oxide-water interface. American Chemical Society National Meeting, March 2003.
55. Roden, E.E. and T.D. Scheibe. 2002. Multiple pore region model of uranium(VI) reductive immobilization in structured subsurface media. American Geophysical Union Fall Meeting, December 2002.
54. Wildung, R.E., S.W. Li, C.J. Murray, K.M. Krupka, Y. Xie, N.J. Hess, and E.E. Roden. 2002. Technetium reduction in sediments of a shallow aquifer exhibiting dissimilatory iron reduction potential: influence of sediment physicochemical properties. International Society for Subsurface Microbiology Meeting, August 2002.
53. Overstreet, K.B., E.E. Roden, and C.J. Murray. 2001. Bacterial Fe(III) oxide reduction in intact coastal plain aquifer sediments. Geological Society of America Annual Meeting, October 2001.
52. Murray, C.J., Y.L. Xie, E.E. Roden, and K.B. Overstreet. 2001. Microbial reduction potential in coastal plain sediments. Geological Society of America Annual Meeting, October 2001.
51. Barnett, M.O., E.E. Roden, P.M. Jardine, S.C. Brooks. 2001. Biogeochemical interactions of U and Fe(III) oxides in subsurface environments: modeling and experimental results. American Chemical Society National Meeting, August 2001.
50. Roden, E.E. and D. Sobolev. 2001. Numerical simulation of bacterial Fe Redox cycling in experimental culture systems. American Society for Microbiology General Meeting, May 2001.
49. Sobolev, D. and E.E. Roden. 2001. Phylogenetic and physiological characterization of a neutrophilic lithotrophic Fe(II)-oxidizing bacterium isolated from wetland sediments. American Society for Microbiology General Meeting, May 2001.
48. Weber, K.A. P.F. Churchill, and E.E. Roden. 2001. Microbial community structure associated with the interaction between nitrogen and iron redox cycles in freshwater sediments. American Society for Microbiology General Meeting, May 2001.
47. Roden, E.E. and D. Sobolev. 2000. Suboxic deposition of ferric iron by bacteria in opposing gradients of Fe(II) and oxygen at circumneutral pH. American Society of Limnology and Oceanography Aquatic Sciences Meeting, June 2000.
46. Roden, E.E. 2000. Direct evidence for microbial reduction of solid-phase humic substances in freshwater wetland sediments. American Society for Microbiology Annual Meeting, May 2000.
45. Sobolev, D. and E.E. Roden. 2000. Interaction between Fe(III)-reducing and Fe(II)-oxidizing bacteria: potential for microscale microbial cycling of iron. American Society for Microbiology Annual Meeting, May 2000.

44. Weber, K.A., M.R. Leonardo, and E.E. Roden. 2000. Ferrous iron oxidation coupled to nitrate reduction by dissimilatory iron-reducing bacteria. American Society for Microbiology Annual Meeting, May 2000.
43. Baer, M.L., E.E. Roden, and P.F. Churchill. 2000. Analysis of successional changes within a natural microbial biofilm community using denaturing gradient gel electrophoresis. American Society for Microbiology Annual Meeting, May 2000.
42. Roden, E.E., M.R. Leonardo, V.K. Keith, and F.G. Ferris. 1999. Immobilization of aqueous strontium during carbonate mineral formation coupled to microbial Fe(III) Oxide Reduction. International Society for Subsurface Microbiology Meeting, August 1999.
41. Roden, E.E. and F.G. Ferris. 1999. Immobilization of aqueous strontium during carbonate mineral formation coupled to microbial Fe(III) oxide reduction. International Symposium on Environmental Biogeochemistry, October 1999.
40. Roden, E.E. and R.G. Wetzel. 1999. Humic substances accelerate microbial reduction of amorphous Fe(III) oxide in aquatic sediments. American Society for Microbiology Annual Meeting, May 1999.
39. Keith, V.K. and E.E. Roden. 1999. Immobilization of aqueous strontium during bacterial reduction of synthetic Fe(III) oxides. American Society for Microbiology Annual Meeting, May 1999.
38. Jackson, C.R., E.E. Roden, and P.F. Churchill. 1999. Changes in bacterial community structure during freshwater biofilm development. American Society for Microbiology Annual Meeting, May 1999.
37. Weber, K.A. and E.E. Roden. 1999. Biologically-catalyzed nitrate-dependent oxidation of microbially-reduced Fe(III) oxides. American Society for Microbiology Annual Meeting, May 1999.
36. Sobolev, D. and E.E. Roden. 1999. Molecular characterization of microaerophilic autotrophic Fe(II)-oxidizing enrichment cultures growing at circumneutral pH. American Society for Microbiology Annual Meeting, May 1999.
35. M.R. Leonardo, F.G. Ferris, and E.E. Roden. 1999. Sr²⁺ immobilization by authigenic carbonate precipitation under iron-reducing conditions. American Society for Microbiology Annual Meeting, May 1999.
34. Roden, E.E. 1999. Modeling iron cycling and the influence of microbial iron oxide reduction on methane production in freshwater wetland sediments. American Society of Limnology and Oceanography Aquatic Sciences Meeting, February 1999.

33. Leonardo, M.R. F.G. Ferris, and E.E. Roden. 1998. Analysis of iron-carbonate mineral formation during microbial reduction of synthetic amorphous iron oxide. American Society for Microbiology Annual Meeting, May 1998.
32. May, T.M. and E.E. Roden. 1998. ^3H -Leucine incorporation by Fe(III)-reducing bacteria. American Society for Microbiology Annual Meeting, May 1998.
31. Roden, E.E. and M.M. Urrutia. 1998. Microbial Fe(III) oxide reduction in open experimental systems. American Society for Microbiology Annual Meeting, May 1998.
30. Sobolev, D. and E.E. Roden. 1998. Iron-oxidizing bacteria in opposing gradients of ferrous iron and oxygen. American Society for Microbiology Annual Meeting, May 1998.
29. Weber, K.A. and E.E. Roden. 1998. Interaction of nitrate reduction and Fe(III) oxide reduction in freshwater wetland sediments. Annual Water Resources Conference of the American Water Resources Association, October 1998.
28. Weber, K.A. and E.E. Roden. 1998. Interaction of nitrate reduction and Fe(III) oxide reduction in freshwater wetland sediments. American Society for Microbiology Annual Meeting, May 1998.
27. May, T.M. and E.E. Roden. 1998. Models of the activity and growth of Fe(III)-reducing bacteria. Annual Water Resources Conference of the American Water Resources Association., October 1998.
26. Howell, R., R.J. Donahoe, and E.E. Roden. 1997. Effects of microbial iron oxide reduction on pH and alkalinity in anaerobic bicarbonate-buffered media. American Geophysical Union Fall Meeting, December 1997.
25. Roden, E.E. and M.M. Urrutia. 1997. Microbial Fe(III) oxide reduction in aquatic sediments: new insights into control and significance in biogeochemical fluxes. International Symposium on Environmental Biogeochemistry, October 1997.
24. Warren, L.A., F.G. Ferris, and E.E. Roden. 1997. Strontium reactions at *Shewanella* and hydrous ferric oxide surfaces. Geological Society of America Annual Meeting, October 1997.
23. Roden, E.E. and R.G. Wetzel. 1997. Iron oxide suppression of methane production in freshwater wetland sediments. American Society for Limnology and Oceanography Aquatic Sciences Meeting, June 1997.
22. Urrutia, M.M. and E.E. Roden. 1997. Growth parameters of Fe(III)-reducing bacteria on soluble and solid-phase Fe(III) oxides. American Society for Microbiology Annual Meeting, May 1997.

21. Coates, J.D., D.J. Ellis, E.L. Blunt-Harris, C.V. Gaw, E.E. Roden, and D.R. Lovley. 1997. Recovery of humics-reducing bacteria from a diversity of environments. American Society for Microbiology Annual Meeting, May 19997.
20. Urrutia, M.M., J.M. Zachara, and E.E. Roden. 1996. Influence of Al oxides and clay minerals on bacterial Fe(III) oxide reduction in anaerobic environments. Soil Science Society of America Annual Meeting, November 1996.
19. Roden, E.E. 1996. Rapid Fe cycling in freshwater wetland sediments. American Society for Microbiology Annual Meeting, March 1996.
18. Urrutia, M.M., E.E. Roden, and J.M. Zachara. 1996. Mechanisms of chelator stimulation of microbial Fe(III) oxide reduction. American Society for Microbiology Annual Meeting, May 1996.
17. May, T. and E.E. Roden. 1996. Microbial iron cycling in freshwater wetland sediments. Fourth Symposium on Biogeochemistry of Wetlands, March 1996.
16. Edmonds, J.W. and E.E. Roden. 1996. Relative influence of direct microbial Fe(III) oxide reduction vs. iron-sulfide mineral formation on phosphorus mobilization in freshwater wetland sediments. Fourth Symposium on Biogeochemistry of Wetlands, March 1996.
15. Jones, S.C., R. Donahoe, and E.E. Roden. 1996. Iron and iron-reducing bacteria: their distribution within a freshwater riparian wetland system. Fourth Symposium on Biogeochemistry of Wetlands, May 1996.
14. Roden, E.E. and R.G. Wetzel. 1996. Fe(III) oxide regulation of methane production in freshwater wetland sediments. Fourth Symposium on Biogeochemistry of Wetlands, March 1996.
13. Urrutia, M.M. E.E. Roden, and J.M. Zachara. 1995. Microbial and geochemical controls on dissimilatory Fe(III) reduction. American Chemical Society, Industrial and Environmental Chemistry Division Special Session on Emerging Technologies in Hazardous Waste Management, October 1995.
12. Roden, E.E. and R.G. Wetzel. 1995. Regulation of methane flux from freshwater wetland sediments by competing anaerobic microbial processes. International Association of Theoretical and Applied Limnology International Congress, July 1995.
11. Edmonds, J.W. and E.E. Roden. 1995. Relative influence of direct microbial Fe(III) oxide reduction vs. Fe-S mineral formation on phosphorus mobilization in freshwater wetland sediments. American Society of Limnology and Oceanography Annual Summer Meeting, June 1995.

10. Roden, E.E. and R.G. Wetzel. 1995. Regulation of methane production in freshwater wetland sediments by competing anaerobic microbial processes. American Society of Limnology and Oceanography Annual Summer Meeting, June 1995.
9. Wen, M.H., C.R. Lange, F.J. Molz, and E.E. Roden. 1995. Multi-component reactive transport modeling in perched wetland soils. American Geophysical Union Spring Meeting, April 1995.
8. Roden, E.E., J.M. Zachara, J.K. Fredrickson, and Y.A. Gorby. 1994. Reduction of synthetic and soil crystalline Fe(III) oxides by a dissimilatory Fe(III)-reducing bacterium. American Society for Microbiology Annual Meeting, May 1994.
7. Roden, E.E. and D.R. Lovley. 1991. Iron diagenesis in surficial freshwater Potomac River sediments. International Estuarine Research Federation Conference, October 1991.
6. Marvin, M.C., E.E. Roden, and D.G. Capone. 1991. Temporal and spatial variation in benthic microbial respiration in the mainstem of the Chesapeake Bay. American Society of Limnology and Oceanography Annual Meeting, February 1991.
5. Cornwell, J.C., E.E. Roden, P.A. Sampou, and D.G. Capone. 1990. Formation and distribution of iron sulfide minerals in Chesapeake Bay sediments. Annual Meeting of the American Chemical Society, August 1990.
4. Roden, E.E. and J.H. Tuttle. 1990. Rapid turnover of inorganic sulfur in oligohaline Chesapeake Bay sediments. American Geophysical Union Ocean Sciences Meeting, February 1990.
3. Tuttle, J.H., E.E. Roden, C.L. Divan, J.T. Bell, D.G. Cargo, and R.B. Jonas. 1988. Bacterial processes leading to the formation and maintenance of anoxia in Chesapeake Bay. American Geophysical Union Ocean Sciences Meeting, February 1988.
2. Roden, E.E. and J.H. Tuttle. 1988. Regional variation of sulfur cycling in Chesapeake Bay sediments. American Geophysical Union Ocean Sciences Meeting, February 1988.
1. Roden, E.E. and J.H. Tuttle. 1987. Microbial sulfate reduction and carbon flow in mesohaline Chesapeake Bay sediments. Annual Meeting of the American Society for Microbiology, May 1987.

Guest Lectures at Academic/Research Institutions

57. “Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments”, Miami University, February 2019.
56. “Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments”, UW-Madison, Department of Soil Science, September 2018.

55. "Rust never sleeps: biogeochemical and genomic aspects of microbial Fe redox cycling", University of Waterloo, Department of Earth and Environmental Sciences, September 2018.
54. "Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments", UW-Madison, qBio Program, February 2018.
53. "Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments", UW-Madison, Department of Civil and Environmental Engineering, November 2017.
52. "Extracellular electron transfer (EET) in the critical zone: biological redox transformation of insoluble Fe-bearing minerals in soil and sedimentary environments", Penn State University, August 2017.
51. "Rust never sleeps: biogeochemical and genomic aspects of microbial Fe redox cycling", Penn State University, March 2016.
50. "Rust never sleeps: biogeochemical and genomic aspects of microbial Fe redox cycling", University of Florida, February 2016.
49. "Rust never sleeps: biogeochemical and genomic aspects of microbial Fe redox cycling", Ohio State University, November 2015.
48. "Iron isotope fractionation by microbial iron reduction in modern and ancient sediments", Ball State University, November 2014.
47. "Microbial iron redox cycling in subsurface environments", University of Nevada-Reno, April 2014.
46. "Microbial iron redox cycling in sedimentary environments", The University of Alabama, January 2013.
45. "Microbial iron redox cycling in subsurface environments", University of Delaware, November 2012.
44. "Iron isotope fractionation by microbial iron reduction in chemically precipitated sediments", Montana State University, September 2012.
43. "Microbial iron redox cycling in sedimentary environments", University of Toronto, September 2012.
42. "Microbially-mediated anaerobic redox cycling of iron in sediments: pathways and biogeochemical significance", Northwestern University, Department of Earth and Planetary Sciences, October 2010.

41. "Microbially-mediated anaerobic redox cycling of iron in sediments: pathways and biogeochemical significance", University of Illinois at Chicago, Department of Earth and Environmental Sciences, October 2010.
40. "Iron isotope fractionation by microbial iron reduction in modern chemically precipitated sediments", Institute F.-A. Forel, Geneva, Switzerland, September 2010.
39. "Rust never sleeps: microbial iron redox cycling in terrestrial (and extraterrestrial?) aerobic/anaerobic interfacial environments", Georgia State University, January 2010.
38. "Geochemical controls on microbial Fe(III) oxide reduction kinetics", Notre Dame University, Department of Geological Sciences, September 2008.
37. "Thermodynamic versus kinetic controls on the respiration of rust", University of Wisconsin, Department of Civil and Environmental Engineering, Environmental Chemistry and Technology Program, October 2008.
36. "In situ bioremediation of subsurface uranium contamination", University of Wisconsin, Department of Civil and Environmental Engineering, February, October 2008.
35. "Kinetic vs. thermodynamic controls on microbial Fe(III) oxide reduction", University of Illinois, Department of Geological Sciences, February 2007.
34. "Anaerobic redox cycling of iron in sediments: pathways and biogeochemical significance", Indiana University, Department of Geological Sciences, November 2006.
33. "Through the kinetoscopic looking glass: Phenomenological analysis of kinetic and thermodynamic controls on microbial Fe(III) oxide reduction", Penn State University, Department of Geosciences, October 2006.
32. "Geochemical controls on microbial Fe(III) oxide reduction: kinetics versus thermodynamics", Oregon State University, Department of Geological Sciences, April 2006.
31. "Microbes pumping iron: anaerobic redox cycling of iron in sediments and culture", University of Wisconsin, Department of Bacteriology, February 2006.
30. "Controls on phosphorus mobility in anaerobic sediments: Fe(III) oxide reduction vs. iron-sulfide formation", Smithsonian Environmental Research Center, November 2004.
29. "Experimental and modeling analysis of Fe redox cycling kinetics and the influence of microbial Fe(III) oxide reduction on methane production in freshwater wetland sediments", University of Maryland, Chesapeake Biological Laboratory, November 2004.

28. "Linking microbial ecophysiology and phylogenetics: a case study on biogeochemical redox cycling of iron and nitrogen in anoxic sediments", The University of Alabama, Department of Biological Sciences, October, 2003.

27. "Microbial nitrate-dependent oxidation of solid-phase Fe(II)", Argonne National Laboratory, Division of Environmental Research, August 2003.

26. "Experimental and modeling analysis of Fe redox cycling kinetics and the influence of microbial Fe(III) oxide reduction on methane production in freshwater wetland sediments", Auburn University, Department Civil Engineering, September 2002.

25. "Experimental and modeling analysis of Fe redox cycling kinetics and the influence of microbial Fe(III) oxide reduction on methane production in freshwater wetland sediments", University of Florida, Department of Soil and Water Science, September 2002.

24. "Microbiological and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial ecophysiology", Argonne National Laboratory, Division of Environmental Research, July 2002.

23. "Immobilization of strontium during iron biomineralization coupled to dissimilatory Fe(III) oxide reduction", Idaho National Environmental Engineering Laboratory, April 2002.

22. "Microbiological and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial ecophysiology", Department of Biological Sciences, University of Montana, April 2002.

21. "Mineral breathing microbes: bacterial Fe(III) oxide reduction in ancient and modern sedimentary environments". Auburn University, Department of Geology, September 2001.

20. "Microbiological and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial (eco)physiology", Stanford University, Department of Geological and Environmental Sciences, April 2001.

19. "Microbiological and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial (eco)physiology", University of New Mexico, Departments of Biology and Earth and Planetary Sciences, April 2001.

18. "Relief for wetland gas production: interactions between Fe(III) oxide reduction and methanogenesis in freshwater wetland sediments", Southern Illinois University, Department of Microbiology, November 2000.

17. "Mineral breathing microbes: bacterial Fe(III) oxide reduction in ancient and modern sedimentary environments". Summer Research Colloquium Program, Dauphin Island Sea Lab, June 2000.

16. "Microbial and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial physiology". University of Odense, Denmark, Danish Earth Sciences Center, June 2000.
15. "Microbial and geochemical controls on bacterial Fe(III) oxide reduction: links between surface chemistry and microbial physiology". University of Idaho, Department of Microbiology and Molecular Biology, April 2000.
14. "Relief for wetland gas production: interactions between Fe(III) oxide reduction and methanogenesis in freshwater wetland sediments", Mississippi State University, Department of Biology, February 1999.
13. "Dynamics of Fe cycling in freshwater aquatic sediments: oxidative vs. reductive kinetics", UFZ Centre for Environmental Research, Department of Inland Water Research Magdeburg, Magdeburg, Germany, June 1998.
12. "Competitive interactions between Fe(III) oxide reduction and methanogenesis in freshwater wetland sediments", University of Alabama at Birmingham, Department of Biology, May 1998.
11. "Microbial and geochemical controls on dissimilatory Fe(III) oxide reduction", University of Wyoming, Department of Geosciences, April 1998.
10. "Dynamics of Fe cycling in freshwater aquatic sediments: oxidative vs. reductive kinetics", Skidaway Institute of Oceanography, February 1998.
9. "Dynamics of Fe cycling in freshwater aquatic sediments: oxidative vs. reductive kinetics", Georgia Institute of Technology, School of Earth and Atmospheric Sciences, February 1998.
8. "Relief for wetland gas production: iron oxide suppression of methane production in freshwater wetland sediments", Lebanon Valley College, Department of Biology, March 1997.
7. "Relative influence of direct microbial Fe(III) oxide reduction vs. Fe-S mineral formation on phosphate mobilization in anaerobic sediments", Allegheny College, Departments of Biology and Environmental Sciences, October 1995.
6. "Phosphate mobilization in anaerobic wetland sediments: microbial Fe(III) oxide reduction vs. Fe-S mineral formation", University of Mississippi, Department of Biology, October 1995.
5. "Microbial Fe(III) oxide reduction in anaerobic sediments and culture", Tulane University, Department of Ecology, Evolution and Organismal Biology, March 1995.
4. "Microbial Fe(III) oxide reduction: controls and environmental significance. The University of Alabama, Department of Biological Sciences, February, 1995.
3. "Microbial Fe(III) oxide reduction in anaerobic sediments and culture", Dauphin Island Sea Laboratory, April 1994.

2. “Sulfur cycling in Chesapeake Bay sediments”, Lamar University, Department of Biology, February 1994.

1. “Sulfur cycling in Chesapeake Bay sediments”, Florida State University, Department of Oceanography, November 1993.

Professional Affiliations

American Chemical Society
American Geophysical Union
American Society for Limnology and Oceanography
American Society for Microbiology
International Association for Theoretical and Applied Limnology
Sigma Xi Research Society

Scientific Collaborators

Brian L. Beard, Geology and Geophysics, University of Wisconsin Madison
David Emerson, American Type Culture Collection/George Mason University
James K. Fredrickson, Environmental Microbiology, Pacific Northwest National Laboratory
Robert Findlay, Department of Biological Sciences, The University of Alabama
Qusheng Jin, Department of Geological Sciences, University of Oregon
Clark M. Johnson, Geology and Geophysics, University of Wisconsin Madison
George W. Luther, College of Marine Studies, University of Delaware
Flynn Picardal, School of Public and Environmental Affairs, Indiana University
Juergen Schieber, Geological Sciences, Indiana University
Huifang Xu, Geology and Geophysics, University of Wisconsin Madison
John M. Zachara, Pacific NW National Laboratory

Graduate Student Advisees

22. Marissa Cartwright, M.S. September 2021-present
21. Thais Altenbert, M.S. September 2021-present
20. Ece Bulur, M.S. September 2019-August 2021
19. Lisa Haas, M.S. September 2018-present
18. Allison Hartman, M.S. September 2017-January 2020
17. Stephanie Napieralski, Ph.D. September 2015-January 2020
16. Jacqueline Meija, Ph.D. June 2015-January 2018
15. Noah Stern, Ph.D., August 2014-May 2018
14. Nathan Fortney, Ph.D., August 2012-May 2018
13. Mai Yia Xiong, M.S. August 2011-June 2013
12. Jason Benzine, M.S. August 2010-May 2012
11. Cassidy Miller, M.S. August 2010-September 2012
10. Andrew Honma, Ph.D. August 2008-2010

9. Elizabeth Percak-Dennett Ph.D. August 2008-May 2014
8. Tao Wu, Ph.D. August 2006-2015
7. George Tangalos, M.S. August 2005-August 2008
6. Eva Sedo, Ph.D. August 2003-August 2008
5. Karrie Weber, Ph.D., May 2002
4. Dmitri Sobolev, Ph.D., December 2001
3. Robert Howell, M.S., May 1999
2. Colin Jackson, Ph.D., August 1999
1. Jennifer Edmonds, M.S., May 1996

Postdoctoral Advisees

15. Stephanie Napieralski, Ph.D. January 2020-present
14. Shaomei He (Assistant Scientist), June 2013-present
13. Lingling Wu, January 2008-August 2011
12. John Moreau, September 2006-2008
11. Chris Kennedy, May 2006-March 2007
10. Evgenya Shelobolina (Assistant Scientist), August 2005-October 2012
9. Aaron Coby, August 2005-August 2007
8. Marco Blöthe, August 2004-August 2009
7. Bharti Kollah, September 2003-June 2008
6. Santosh Mohanty, September 2003-September 2008
5. Donald Obenhuber, August 2002-March 2003
4. Byong-Hun Jeon, June 2002-April 2004
3. Kimberly A. Warner, October 1999-June 2004
2. Marcie L. Baer, November 1998-July 2000
1. Michael R. Leonardo, July 1997-May 2000

Journal Manuscript Reviews

Applied and Environmental Microbiology
Aquatic Geochemistry
Archives für Hydrobiologie
Biogeochemistry
Chemosphere
Environmental Science and Technology
Estuaries
FEMS Microbiology Ecology
Geochimica et Cosmochimica Acta
Geomicrobiology Journal
Journal of Microbiological Methods
Limnology and Oceanography
Marine Chemistry
Microbiology
Organic Geochemistry
Water, Air, and Soil Pollution
Water Research

Grant proposal reviews

National Science Foundation
Department of Energy
National Aeronautics and Space Administration

University of Alabama Committee Service

College of Arts & Sciences Graduate Committee	Fall 1994-Spring 1995
University Biosafety Research Committee	Fall 1994-Spring 1997
University Research Advisory Committee	Fall 1995-Spring 1996
College of Arts & Sciences Faculty Advisory Committee	Fall 1996-Spring 1998
University Waste Reduction & Recycling Committee	Fall 1996-Spring 1998
College of Arts & Sciences Faculty Diversity Committee	Spring 1998
University Information Technology Committee	Fall 1999-Spring 2000
University Graduate Council	Fall 2002-Spring 2005

University of Wisconsin Committee Service

- Civil and Environmental Engineering Aquatic Chemistry Position Search Committee, Fall 2010
- Geoscience Hydrogeology Position Search Committee, Fall 2010
- Department of Geoscience Graduate Studies Committee, Fall 2005-Fall 2007
- Department of Geoscience Finance Committee, Fall 2007-2010
- Department of Geoscience Finance Committee Chair, Fall 2008-2010
- Department of Geoscience Sedimentary Geology Position Search Committee, Fall 2008
- Department of Geoscience Hydrogeology Position Search Committee, Fall 2010
- Environmental Chemistry and Technology Aquatic Chemistry Position Search Committee, Fall 2010
- Microbiology Doctoral Training Program Steering Committee, Fall 2007-2011
- Department of Geoscience Graduate Studies Committee, Fall 2015-present
- Department of Geoscience Graduate Studies Committee Chair, Fall 2015-Fall 2017
- Department of Geoscience Executive Committee, Fall 2015-Fall 2018
- Isotope Geochemistry Position Search Committee, Fall 2017-Spring 2018
- Department of Geoscience Hydrogeology Position Search Committee, Fall 2018-Spring 2019
- Department of Geoscience Hydrogeology Cluster Hire Position Search Committee, Fall 2019-Spring 2020
- Department of Geoscience Undergraduate Studies Committee, Fall 2018-present