Meet the Authors

Donald E. Canfield is a professor of ecology and director of the Nordic Center for Earth Evolution (NordCEE) in the Institute of Biology, University of Southern Denmark. Don has worked at understanding the modern cycles of iron and sulfur, the evolution of these cycles, and their interface with other element cycles, through geologic time. Don's work spans the range of microbial ecology, biogeochemistry, and geology. He may be found at any given time (when not sorting papers) in the lab, with his hands deep in mud, or banging on a rock. His favorite current research sites include meromictic Lake Cadagno in Switzerland and the oxygen-minimum zone off the coast of Chile.

Andreas Kappler is a professor of geomicrobiology at the University of Tübingen. He received an MSc/Diploma in chemistry and a PhD in microbiology from the University of Konstanz (Germany) and occupied postdoctoral positions at the ETH Zürich/EAWAG in environmental chemistry and at Caltech in geobiology. His research centers on the biogeochemical cycling of iron and humic substances and the consequences for the environmental fate of arsenic and organohalogens. He also studies the role of microbial iron oxidation in the deposition of Precambrian banded iron formations. He is on the editorial board of *Geobiology*, an associate editor of *PALAIOS*, and a councilor of the European Association of Geochemistry.

Kurt O. Konhauser is a professor of geomicrobiology in the Department of Earth and Atmospheric Sciences at the University of Alberta, Canada. He is editor-in-chief of the journal *Geobiology* and author of the textbook *Introduction to Geomicrobiology*, published by Wiley-Blackwell in 2007. His research is on the role of bacteria in modern mineral precipitation and elemental cycling and on how these same processes may have contributed to the preservation of early life forms and the formation of Precambrian banded iron formations. Other current interests include the use of Precambrian sediments as proxies for ancient seawater composition and evolution of the marine biosphere.

Joe H. S. Macquaker is an associate professor in the Department of Geology and Environmental Sciences at Memorial University, Newfoundland, Canada. Prior to moving to Canada in 2008, he had been on the faculty of the School of Earth, Environmental and Atmospheric Sciences at the University of Manchester, UK, where he had held various posts from reader to postdoctoral research associate over twenty years. In his research, he investigates how physical, chemical, and biological processes control lithofacies variability in organic carbon–rich, fine-grained sediments. He is currently examining how microbe-mediated respiratory processes interact with existing mineral phases to control diagenetic reactions in horizons associated with breaks in sediment accumulation.

Simon W. Poulton is a reader in biogeochemistry in the School of Civil Engineering and Geosciences at Newcastle University. Originally a geologist by training, his research interests now encompass the application of geochemical, biogeochemical, and isotopic techniques to address major issues related to the evolution of Earth's surface environment. He has paid particular attention to the operation of the global iron cycle and the development and application of iron speciation as a paleoredox tool. He has persistently returned to the study of anoxia in modern and ancient environments, not forgetting many enjoyable hours spent attempting to replicate such systems in the laboratory.

Robert Raiswell is an emeritus professor in the School of Earth and Environment, University of Leeds, where he has been since 1983. He received his PhD from Liverpool University in 1973 and has spent time as a visiting scientist at Yale, Georgia Institute of Technology, and the University of California, Riverside. His research is centered on the cycling of iron and sulfur in Earth surface environments, past and present. His current interests include the formation and bioavailability of iron nanoparticulates in glacial environments and the use of iron minerals to deduce the depositional environments of Proterozoic sediments. He was elected a fellow of the Geochemical Society in 2010.

Eric E. Roden is a professor of geoscience at the University of Wisconsin–Madison. He received his PhD from the University of Maryland and held postdoctoral positions at the U.S. Geological Survey and the Pacific Northwest National Laboratory. He joined the Department of Geoscience in Madison after twelve years in the Department of Biological Sciences at the University of Alabama–Tuscaloosa. His research is on aquatic biogeochemistry, specifically anaerobic microbial processes and the redox cycling of elements at the Earth's surface. He is a specialist in the ecology and physiology of iron-reducing and iron-oxidizing bacteria and has recently become involved in experimental studies of redox-driven fractionation of iron isotopes.

Bruce M. Simonson has been teaching and doing research with undergraduates at the Oberlin College Geology Department since 1979. He received his BA from Wesleyan University in 1972, then mapped in Central America for 2 years. He obtained his PhD from Johns Hopkins University where he was trained as a sedimentologist and acquired an enduring interest in surface environments on the early Earth. This led to field and petrographic studies of clastics, carbonates, volcanics, cherts, and iron formations on several continents. His current research focuses on Precambrian spherule layers that represent distal ejecta from large asteroid impacts.

Kevin G. Taylor is a professor of sediment geochemistry and diagenesis at Manchester Metropolitan University, UK, where he has been based for 15 years; prior to this, he was a postdoctoral researcher at the University of Manchester. In his research, he applies electron-beam, mineralogical, and chemical analysis to the understanding of early diagenetic mineral precipitation in organic-rich mudstones and hydrocarbon reservoir–analogue sandstones; he has also carried out sediment–porewater studies in modern natural and contaminated sediment systems. A particular focus of his research has been on iron-rich sediments and rocks, including Mesozoic ironstones, iron minerals in urban geosystems, and modern tropical carbonate systems impacted by terrigenous sediment.

Alexis S. Templeton is an assistant professor of microbial geochemistry in the Department of Geological Sciences at the University of Colorado at Boulder. She is interested in understanding how microbial organisms conserve energy released during water–rock reactions in subsurface environments and in defining the structure and reactivity of biomineralization products. Her work involves the integration of synchrotron-based X-ray spectroscopy, aqueous geochemistry, isotope geochemistry, and environmental microbiology to unravel biological and abiotic pathways for the transformation of Fe, Mn, and S in modern systems.