Meet the Authors

Andreas Bott obtained his PhD at the Max-Planck-Institute for Chemistry in Mainz under Prof. Paul Crutzen. He is currently University Professor for Theoretical Meteorology at the Rheinische Friedrich-Wilhelms-University Bonn. His main research interests are in the thermodynamics of clouds and precipitation. His current research activities are in the fields of cloud microphysics and radiation fogs, as well as in the development of new physical parameterizations for use in numerical models of the atmosphere.

Benjamin R. DiTrolio is a PhD candidate in the Rosenstiel School of Marine and Atmospheric Science, University of Miami. He attended the University of Massachusetts, Amherst, where he graduated summa cum laude in 2008 with a BS in chemistry. Currently he is working under Dr. Frank Millero to characterize the effect of pH on the speciation of metals with organic matter in the marine environment.

Grant S. Henderson is a professor in the Department of Geology at the University of Toronto. He studied geology and chemistry at the University of Auckland, New Zealand, and the University of Western Ontario, Canada. He has been interested in the structure of glasses as it applies to geological melts since the early 1980s. His current research emphasizes the use of synchrotron-based spectroscopic and diffraction techniques to elucidate the structure of silicate and germanate glasses. He is particularly interested in the coordination and medium-range structure changes responsible for variation in physical properties.

Tim Holland is a Reader in the Department of Earth Sciences at the University of Cambridge. He did an undergraduate degree in geology at Oxford from 1971 to 1974, and then a DPhil on eclogites in the Tauern Window, Austria, at Oxford from 1974 to 1977. After spending two years at Chicago doing high-pressure experiments with Bob Newton, he returned to Britain in 1979 for a teaching/research post at Cambridge. He has continued to work on high-pressure metamorphism and the thermodynamics of minerals there. Work with Roger Powell started after a chance meeting at a conference in London in 1981, and their friendship and collaboration continue to this day.

Frank J. Millero, professor of marine and physical chemistry at the Rosenstiel School of Marine and Atmospheric Science, University of Miami, received his BS (1961) from Ohio State University and his MS (1964) and PhD (1965) from Carnegie Mellon University in physical chemistry. After a brief interval in industry, he moved to the University of Miami in 1966. From 1986 to 2006 he was Associate Dean of Academic Studies at the School. He serves as an associate editor for a number of journals, and since 1993 has been editor-in-chief of *Marine Chemistry*. Millero's research includes studies of the global carbon dioxide cycle in the world's oceans, ionic interactions in seawater, trace metals in natural waters, and ocean acidification.

Daniel R. Neuville is a CNRS research director at the IPGP in Paris. He received his PhD in geochemistry at the University of Paris 7 in 1992 and then moved to a postdoctoral position at the Geophysical Laboratory, Carnegie Institution of Washington, where he conducted research on the structure and properties of crystals, glasses, and melts in relation to volcanology and the glass-making industry. He has used various thermodynamics and rheological tools in his work, and he has carried out in situ investigations of melts and crystals at high temperature using Raman, NMR, and X-ray diffraction and absorption.

Giulio Ottonello holds the Chair of Geochemistry at the University of Genoa (Italy). His main interests concern theoretical aspects of the reactivity of Earth materials in various aggregation states, especially aqueous solutions and silicate melts, to which he applies methods ranging from classical thermodynamics to *ab initio* quantum chemical calculations. Among his various publications, he is the author of the scholarly book *Principles of Geochemistry* (Columbia University Press, New York, 1997).

Roger Powell is an ARC Australian Professorial Fellow in the School of Earth Sciences at the University of Melbourne. Following his first degree at the University of Durham, he did a DPhil at Oxford from 1970 to 1973. Following short stints elsewhere, he taught at the University of Leeds from 1975 to 1984. He then moved to the antipodes where he remains. He works on the application of mathematics, statistics, and thermodynamics to metamorphic rocks, and also provides software implementations of solutions to problems. The core of his work continues to be carried out in collaboration with Tim Holland.

Pascal Richet is a senior geophysicist at the Institut de Physique du Globe de Paris. He works mainly on the physics of minerals and melts under wide temperature and pressure ranges. In addition, he is involved in transferring fundamental research to problems of industrial interest and writes articles and books to promote the popularization, history, and philosophy of science. Examples are the *Guide to the Volcanoes of France* and the *Guide to the Volcanoes of French Overseas Territories* (Editions Belin, Paris, 2003 and 2007, both in French).

Surendra Saxena is the director of the Center of Study of Matter at Extreme Conditions at Florida International University, Miami, Florida. He graduated from the Institute of Mineralogy and Geology, Uppsala University, Sweden, in 1967. He was a professor at Brooklyn College, City University of New York, until 1991 and then a professor at Uppsala University (1989–1999). He was elected as a member of the Royal Swedish Academy of Sciences in 1994. He is the recipient of La Laurea Ad Honorem in Scienze Geologiche, Padova University, Italy, 2001, and of the Rudbeck Medal of Excellence in Science, Uppsala University, Sweden, 2007.

Pierpaolo Zuddas is Professor of Environmental Geochemistry at the Université de Lyon, France. His research is aimed at understanding the kinetics and thermodynamics of water and mineral interfaces using field and theoretical approaches. He also works on the human environmental impacts in urban areas and at mining sites, on the reactivity of naturally occurring nanoparticles, and on the environmental risks of waste deposits in geological media. He received the Italian *laurea* degree in geological sciences from the University of Cagliari and a PhD from the University of Paris for his work on trace element behavior in geothermal fluids. He has also worked at McGill University in Canada on the kinetics of calcite formation in seawater.