

Meet the Authors



Robert J. Bodnar is University Distinguished and C.C. Garvin Professor of Geochemistry in the Department of Geosciences at Virginia Tech. He received his BS degree in chemistry from the University of Pittsburgh,

MS in geology from the University of Arizona, and PhD in geochemistry and mineralogy from the Pennsylvania State University. Research by Bodnar and his students involves the distribution and properties of fluids in Earth and planetary systems. He has published more than 100 peer-reviewed papers and 300 abstracts, and has presented over 100 invited talks in more than 20 countries. Bodnar is a Fellow of the Mineralogical Society of America (MSA) and the Society of Economic Geologists (SEG), and has served as SEG Thayer Lindsley Lecturer and MSA Distinguished Lecturer.



Benedetto De Vivo graduated from the University of Napoli Federico II in geological sciences in 1971. He is full professor of geochemistry at the same university. His current research interests span a

wide range of topics including environmental geochemistry, geochemical prospecting, and fluid and melt inclusions mostly in volcanic systems. He has published 125 papers, most of them in international peer-reviewed journals, and has edited several special volumes for peer-reviewed journals and three textbooks (in Italian) in geochemical prospecting and environmental geochemistry. In 2001 he was nominated Fellow of the Mineralogical Society of America for "his outstanding contributions to the fields of mineralogy, crystallography, geochemistry, and petrology".



Harry W. Green is Distinguished Professor of Geophysics at the University of California, Riverside. His research focuses on understanding flow in the mantle and its relationship to plate tectonics, with

particular attention to the interaction of fluids and rocks under stress at mid-ocean ridges and subduction zones. He and his students and colleagues have discovered high-pressure (anticrack) faulting during the olivine→spinel transformation (*Nature* 1989,

1990), the dynamic wetting of olivine grain boundaries by melt (*Nature* 1994), faulting due to dehydration of nominally anhydrous phases (*Nature* 2004), and the viability of dehydration faulting even when $\Delta V_{\text{reaction}}$ is negative (*Nature* 2004). In other recent work, he and his colleagues discovered exhumed ultradeep rocks (>300 km) in continental collision belts (*Science* 1996, 1999).



Haemyeong Jung

received his PhD from the University of Minnesota where he studied the effects of water on the plastic deformation and deformation microstructure of olivine. After working in

the Department of Geology and Geophysics at Yale University for one year, he is currently a post-doctoral research associate at the University of California at Riverside. His research interests are the basic mechanisms of earthquakes, the rheology and plastic flow of minerals in the crust and mantle, and the effects of fluid and stress on the deformation of crust and mantle minerals and the resultant seismic anisotropy.



Stephen E. Kesler is professor and associate chair in the Department of Geological Sciences at the University of Michigan. He is the author of *Our Finite Mineral Resources* (1975) and *Mineral Resources, Economics and the Environment* (1996). With

many of his students, he has worked on a wide range of problems related to ore deposits, exploration and environmental geochemistry, and the geology of the Caribbean region. He served as president of the Society of Economic Geologists in 1998 and is a member of the editorial board for the 100th anniversary volume of *Economic Geology*.



Annamaria Lima

graduated in geological sciences from the University of Napoli Federico II, where she is now associate professor in geochemistry. Her main areas of research and experience are

geochemical prospecting applied to natural resources exploration and evaluation of the environmental hazards related to their exploitation; the evaluation of anthropogenic pollution, site characterization, and remediation; and fluid and melt inclusions in minerals applied to ore deposit genesis, magmatology, and volcanology. She has published 54 papers, most of them in international peer-reviewed journals, and one textbook in Italian on environmental geochemistry.



Eiji Ohtani is professor of mineral physics at the Institute of Mineralogy, Petrology, and Economic Geology at Tohoku University. He is the leader of the 21st century COE program of Earth science at Tohoku

University. His main research areas are high-pressure mineral physics, experimental petrology, and comparative planetology. Recent research topics include the stability of high-pressure hydrous silicate phases and the effect of water on mantle dynamics; X-ray diffraction at high pressure using synchrotron radiation; metal-silicate partitioning and core formation of the Earth; kinetics of high-pressure phase transformation; and density and viscosity of silicate melts at high pressure.



James Webster is chairman of the Division of Physical Sciences and curator of Mineral Deposits at the American Museum of Natural History. He is a geochemist and experimental petrologist who investi-

gates magma and how magma drives explosive volcanic eruptions and generates metalliferous mineral deposits. He and his museum colleague Edmond Mathez are co-authors of the new book *The Earth Machine: The Science of a Dynamic Planet* and co-curators of the museum's Gottesman Hall of Planet Earth.



Michael E. Zolensky

was raised in upstate New York, but traveled out west to obtain a BS in geology from the New Mexico Institute of Mining and Technology. He completed a PhD in geochemistry and miner-

alogy at the Pennsylvania State University in 1983 on the topic of nuclear waste. While most of his colleagues went on to work in that field, Mike veered off into the study of meteorites and interplanetary dust (now called "astromaterials"). He has worked for NASA since 1985 and is currently on the science teams of the Stardust and Hayabusa comet and asteroid sample-return missions. Mike is the namesake of minor planet 6030/Zolensky. ■