## ROBERTA RUDNICK ELECTED AS A NEW MEMBER OF THE NATIONAL ACADEMY OF SCIENCES

Roberta Rudnick
Photo by Rhoda Baer

Roberta Rudnick, a geology professor at the University of Maryland, College Park, USA, has been elected to the National Academy of Sciences (NAS). She was one of 72 new members and 18 foreign associates recognized for their distinguished, continuing achievement in original research. Membership in the NAS is generally considered one of the highest scientific honors given in the United States.

Rudnick's research focuses on the origin and evolution of the continents, particularly the lower continental crust and the underlying mantle lithosphere. She integrates data from diverse sources, including petrography, petrology, major and trace element geochemistry, isotope geochemistry, and geophysics. She is also exploring the utility of lithium isotopes in tracing crustal recycling in the mantle, fluid flow in the shallow crust, and continental weathering.

Acclaimed as a teacher as well as a researcher, Rudnick was praised by former graduate student Cin-Ty A. Lee in an American Geophysical Union citation for the 2006 Bowen Award, given for "outstanding contributions to volcanology, geochemistry, or petrology." In 2010, she was also awarded the title "Distinguished University Professor," the highest academic honor the University of Maryland confers upon a faculty member.

## EMU SILVER MEDAL TO MAX WILKE

The European Mineralogical Union's Silver Medal for Research Excellence is awarded annually to young scientists who make significant contributions to research and are active in strengthening European scientific links. In 2009, the medal was awarded to Max Wilke (Institut für Geowissenschaften, GFZ Potsdam, Germany). A medal ceremony followed by a lecture by the medallist took place during the IMA 2010 meeting in Budapest, Hungary. Max Wilke has successfully worked in a number of areas, ranging from experimental geochemistry to field-based petrology. He has broad knowledge in the fields of geology, mineralogy, and fluid–rock and melt–rock interactions. He has published significant contributions on topics as diverse as materials science, biomaterials, silicate-melt properties, and heat and mass transport in contact aureoles. In the last few years, he has focused on the investigation of the effect of redox conditions on systems containing multivalent elements. He has become an expert in sophisticated in situ spectroscopic methods. He applies high resolution experimental and spectroscopic techniques in innovative ways to the clarification of major issues in Earth science.

The hallmark of Max Wilke's contributions to mineral science is the application of in situ spectroscopic techniques to the investigation of the properties of Earth materials under high pressure and temperature. He has developed improved experimental setups and analytical procedures at the ERSF (Grenoble, France) and DESY (Hamburg, Germany) synchrotron radiation facilities and has applied X-ray absorption spectroscopy (EXAFS, XANES) in his work. Among his many important results is that cooling has a major effect on the local environment of cations in melts and that information obtained from quenched melts is ambiguous. Max Wilke has significantly contributed to the determination of mineral solubilities in water and hydrous melts using his expertise in in situ synchrotron radiation micro-X-ray fluorescence. In this technique, dissolution and dissolution kinetics are measured by XRF in hydrothermal diamond anvil cells. Most importantly, the work has shown that the validity of conventional solubility studies at high pressures and temperatures may be hampered by incomplete equilibrium between solids and fluid. Such data are essential for the interpretation of mass transport by fluids in the Earth's crust. Recently, Max Wilke has started to apply resonant inelastic X-ray scattering (RIXS) to the determination of electronic states in solid Earth materials.

**Wilhelm Heinrich**, **François Holtz**, and **Herta Effenberger**

## FRIEDHELM VON BLANCKENBURG RECEIVES THE 2010 RALPH ALGER BAGNOLD MEDAL FROM THE EUROPEAN GEOSCIENCES UNION

Friedhelm von Blanckenburg

The Ralph Alger Bagnold Medal was awarded to Friedhelm von Blanckenburg for the innovative nature and profundity of his geomorphological research. Since the late 1990s, Friedhelm von Blanckenburg has dedicated his research to geomorphology. He studies Earth surface processes by innovatively using cosmogenic isotopes, which are formed by the interaction of cosmic rays with atoms in the atmosphere, hydrosphere, and uppermost lithosphere. Von Blanckenburg has used these isotopes and various other mineralogical techniques to quantify rates of weathering and erosion in a wide range of environments, from the wet tropics to the boreal regions. He has addressed some enduring questions concerning geomorphology and the magnitude of human impact on the rate of erosion.

Von Blanckenburg has conducted a number of other major studies, including the unraveling of the history and speed of river-profile evolution and rejuvenation in the rivers of central Europe. Friedhelm von Blanckenburg received the Ralph Alger Bagnold Medal during the EGU 2010 meeting in Vienna.

(Modified from a European Geosciences Union source)