www.univie.ac.at/Mineralogie/EMU

European Mineralogical Union

The EMU Medal Committee calls upon member societies and all European mineralogists for nominations for the EMU Medal for Research Excellence. This medal is awarded to young scientists who have already made outstanding contributions in research and who have helped further European collaboration in science. Nominations should be sent to the chairman of the EMU Medal Committee, Roland Oberhänsli (Universität Potsdam, Institut für Geowissenschaften, Karl-Liebknecht-Strasse 24, Haus 27, D-14476 Golm, Germany; e-mail: roob@geo.uni-potsdam.de).

The officers of EMU are pleased to announce that the next EMU School will be on the subject "Nanoscopic Approaches in Earth and Planetary Science" and will be held August 12–17, 2007, in Munich, Germany. For further details, see the website www.9th-EMU-School.de.

Peter Ulmer, President
David Vaughan, Past President
Herta Effenberger, Secretary

EMU MEDAL FOR RESEARCH EXCELLENCE

This silver medal is awarded to young scientists who have made significant contributions to research and who are active in strengthening European scientific links. In 2006, medals were awarded to Luca Bindi and Bruno Lanson.

Luca Bindi

Luca Bindi was born in 1971 in Prato, Italy. He studied at the Department of Earth Sciences of the University of Florence (1991–1996) and went on to obtain a PhD in mineralogy and petrology at the same university (1998–2000). His research has continued in Florence with various postdoctoral research positions (2000–2006); lately, he has also been involved in collaboration with the scientists of the Division of Mineralogy of the Natural History Museum of Florence.

The research of Luca Bindi has been mainly devoted to understanding structural complexity in minerals (e.g. incommensurate structures, superstructures, twinned structures) by integrating mineralogy and advanced crystallography. His research has also involved the description and characterization of new minerals and the determination of the physical and chemical conditions of minerals in the mantle. His pioneering work on K-rich clinopyroxenes has been widely recognized internationally, and his work on the characterization of minerals in ore deposits has been highly regarded amongst economic geologists. Specifically, he has demonstrated that large amounts of potassium (up to 5 wt% K_2O) can enter the structure of natural and synthetic clinopyroxenes and he has discussed the implications of this for the mineralogy of the Earth's deep mantle. Also, he has carried out the first five-dimensional crystal structure refinement of a natural material (melilite) displaying a two-dimensional incommensurate structure, and he has demonstrated that some natural silver sulfosalts (of the pearceite– polybasite group) are fast ionic conductors, which may have important technological applications. The most impressive features of Luca Bindi's research are the breadth of his work and his extraordinary productivity. At thirty-five years of age, he has published more than 60 papers in internationally renowned journals.

The excellence of his research was nationally recognized when he received, in 2001, an award from the Italian Society of Mineralogy and Petrology (SIMP) for the best PhD thesis in mineralogy or petrology and, in 2004, the Panichi Award from SIMP for outstanding research in mineralogy by a young scientist. For the relevance and international dimensions of his work, Luca Bindi has been awarded the 2006 EMU Medal for Research Excellence.

Bruno Lanson

Bruno Lanson was born in 1965 in Châtellerault, France. After a civil engineering degree from the École Supérieure d'Ingénieurs in Poitiers (1987), he obtained a PhD in geology (1990) in Paris, under the supervision of Bruce Velde. He carried out postdoctoral research at the USGS, Denver (1990–1992) and subsequently at the Mineral Geochemistry Laboratory of Elf-Aquitaine Production Co., Pau (1992–1994). Researcher with the Centre National de la Recherche Scientifique since 1995, he is currently head of the Environmental Geochemistry Group at the LGIT (Geophysics and Tectonophysics Laboratory), Joseph Fourier University, Grenoble, France.

The work of Bruno Lanson has aimed at understanding the structures and physical properties, particularly the surface reactivity, of finely divided minerals (phyllosilicates and phyllomanganates). Bruno Lanson's earliest achievement was the development of a coherent, simple decomposition method of the complex X-ray diffraction spectra obtained from clay mineral mixtures found in sedimentary rocks. This work resulted in a user-friendly computer program which, even after a decade of concurrent development, remains one of the most robust. Since then Lanson has explored and characterized the relationships between the structure and macroscopic properties of clays and phyllomanganates using advanced microscopic and diffraction techniques (TEM-SAED) and synchrotron spectroscopic methods (XANES, EXAFS).

Questions concerning minor and toxic element capture and release by manganese minerals are of prime importance at sites of industrial pollution. They have been addressed by Lanson through the identification and structural and chemical characterization of oxide nanocrystals produced by bacteria or found on and within root hairs of plants grown under controlled conditions. At the same time, Lanson has been active in solving the problems of clay-mineral evolution under conditions of changing temperature and chemistry. He has linked the quantitative description of complex parageneses to the kinetic processes of clay transformation occurring in natural or perturbed sediments. Some of these studies have involved international collaborations that have spanned Europe, from Karlsruhe to Moscow.

Bruno Lanson has already achieved international recognition as one of the leading workers in his field. He will surely continue to make major advances in the physico-chemical characterization of nanominerals and in the understanding of their interaction with the living world in Earth's surface systems. For the international relevance of his work to key questions in environmental sciences, Bruno Lanson has been awarded the 2006 EMU Medal for Research Excellence.

Stefano Merlino
Chair of the EMU Medal Committee