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European Mineralogical Union

EMU NEWS AND ANNOUNCEMENTS

EMU School on Mineral Behaviour at Extreme Conditions

The 7th School of the European Mineralogical Union was organized by Ronald Miletich and held in Heidelberg, Germany from June 19 to 26, 2005. The aim of the School was to provide younger scientists with an up-to-date overview of our knowledge of the behaviour of minerals and related geomaterials under 'extreme' physicochemical conditions, and techniques for gathering such information.

Participants from twelve countries attended a series of 20 lecture units, which focused on various aspects of the subject, ranging from experimental techniques at extreme conditions to the behaviour of particular types of materials. Topics covered included mineral structure studies using diffraction techniques, structural defects and phase transitions, a wide variety of physical properties including elastic and piezoelectric behaviour, plastic deformation, and studies of interaction with fluids. Presentations were made on both theoretical aspects concerned with the prediction of structures and properties under extreme conditions, and experimental details of techniques used in such studies, like laser heating, diamond anvil high-pressure cells, equipment for shock experiments, and specialist surface-sensitive techniques.

Poster presentations were made by attendees at the School, and these provided a focus for extensive discussions. In addition, one-day 'field trips' to specialist research laboratories in the area were integrated into the School programme so as to provide insights into the practical

work in the field. There were opportunities to visit the Research Institute for Experimental Geophysics and Geochemistry, Bayerisches Geoinstitut, Bayreuth; the Laboratory for High Pressure Research, Max Planck Institut, Mainz; and the Gesellschaft für Schwerionenforschung, Darmstadt. The lectures given during the School will be published in the near future in the *EMU Notes in Mineralogy Series* (details to follow).



EMU Research Excellence Medal awarded to David Dobson

The EMU awards annually a silver medal to a young scientist who makes significant contributions to research and who is active in strengthening European scientific links.

In 2005, this medal was awarded to David Dobson, who was born in 1970 in Beckenham, England, and who studied at Bristol University and University College, London. His research activities have been devoted to the area of mineral physics and to experiments at very high pressures, which have afforded information on the nature and properties of minerals deep inside the Earth. High-pressure experimentation is now on the threshold of an exciting new era as a result of the

development of new techniques involving high-strength materials coupled with the use of intense diffraction sources. These advances in experimental techniques and the major new insights that have been obtained are due to the work of a new generation of experimentalists, of whom David Dobson is a leading example.

At thirty-five years of age, David Dobson has published his scientific results in more than 30 papers in international journals, among them five papers in *Science* and *Nature*. He has achieved international recognition as one of the leading workers in his field. Not only has he mastered the most recondite techniques, he has considerably improved them. David Dobson has the talent of being able to get reliable data from difficult experiments. He is highly original and innovative in the design of his experiments and, even more importantly, he has applied them to some of the most important problems in planetary physics. The excellence of his research has already been nationally and internationally recognized, as he is already recipient of the President's Award of the Geological Society of London, a NERC Fellowship, an Alexander von Humboldt Fellowship, a Royal Society University Research Fellowship, a Philip Leverhulme Prize and an EGU Outstanding Young Scientist Medal.

To note just a few of his more significant contributions, he has helped to constrain and to explain the electrical conductivity

and thermal profile of the Earth's deep mantle; he has determined the viscosity of liquid iron at high pressures and thereby contributed to the understanding of the convective behaviour of the outer core, responsible for the Earth's magnetic field; he has identified and quantified the likely mechanism for deep-seated earthquakes associated with plate tectonic subduction; and he has developed novel experimental configurations enabling high-pressure studies to be combined with powerful neutron diffraction techniques to quantify mantle rheology and viscosity.

The EMU Medal Committee calls upon the member societies and all European mineralogists for nominations. Chairman of the EMU Medal Committee is Stefano Merlino, University of Pisa (e-mail address: merlino@dst.unipi.it). Proposals are welcome.

Other News

The 11th 'Experimental Mineralogy, Petrology and Geochemistry' meeting (EMPG-XI) will be held in Bristol, UK, from September 11 to 13, 2006. The next EMU council meeting will take place during this conference.

The next EMU School will be on the subject 'Technical Mineralogy: Silicate-Based Materials' – details of this event and of the EMPG-XI meeting will be available in future news announcements.

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