



www.univie.ac.at/Mineralogie/EMU

European Mineralogical Union

EMU AND THE EUROPEAN GEOSCIENCES UNION

One of the largest geoscience events in Europe is the annual General Assembly of the European Geosciences Union (EGU). In 2005, this took place in Vienna (Austria) from April 24 to 29. Traditionally, the European Mineralogical Union meets in conjunction with the EGU (including holding its business meetings).

Contributions to the EGU meeting cover a broad spectrum of topics related to the geosciences, including space and planetary sciences. The mineralogical sciences were strongly represented in the 2005 programme. The programme section 'Volcanology, Geochemistry, Petrology and Mineralogy' (VGPM) included 22 sessions. In particular the EMU was involved in convening the following symposia:

- High-pressure and High-temperature Mineral Physics: Contributions towards the Understanding of Planetary Interiors
- Spectroscopy of Earth's Material: Experiments and Numerical Modelling

During the first of these symposia, the EMU medal ceremony took place. The EMU annually awards a silver medal to a young scientist who makes significant contributions to research and who is active in strengthening European scientific links. The EMU Medal for 2005 was awarded to David Dobson (University College London, UK; see the citation in volume 1, number 5, page 312 of *Elements*).

In addition, Eugen Libowitzky (University of Vienna, Austria), the 2003 EMU medallist, belatedly gave his medallist lecture entitled 'Dynamic disorder in crystal structures: results from diffraction and vibrational spectroscopy.' In this lecture, he noted that hydrogen can be a major, minor or trace constituent of a broad variety of minerals in the Earth's lithosphere. Hydrogen

atoms in crystal structures can be characterised by both diffraction and spectroscopic methods. Whereas the former are suitable for the investigation of stoichiometric phases exhibiting long-range order with atomic sites at least predominantly occupied by hydrogen atoms, IR spectroscopy is an excellent method for the characterisation of traces of hydrogen atoms in a crystal. The advantage of spectroscopy is the high time-resolution as compared to diffraction methods. Furthermore, the interaction between matter and radiation takes place on one site only. Spectroscopy using polarized radiation allows determination of the orientation of a vibrating molecule. As examples of phase transitions involving hydrogen, the minerals lawsonite and hemimorphite were discussed in detail. Both exhibit dynamic disorder-order processes involving hydrogen-bonded H₂O molecules and OH groups at low temperatures. Furthermore, it has become clear that even anhydrous minerals may contain hydrogen atoms at structural defects in relatively large amounts. Such minerals persist to great depths in subduction zones and may be responsible for recycling water. Because of the enormous volume of the Earth's mantle, nominally anhydrous minerals under high P-T conditions, and which contain hydrogen only as a minor or trace constituent, may play an important role in the water budget of the Earth. Nevertheless, there is still controversy as to whether the mantle is enriched or depleted in hydrogen through the processes associated with subduction zones.

FORTHCOMING GENERAL ASSEMBLIES OF EGU

The next EGU General Assembly will be held in Vienna from April 2 to 7, 2006. We would like to draw your attention to the following sessions planned for the VGPM section of the EGU meeting:

- Nanoscale Analytical and High-resolution (S)TEM Techniques for the Characterisation of Environmental and Geological Processes
- Accessory Minerals in Metamorphic and Igneous Rocks: Petrogenetic Indicators of Chemical and Physical Processes
- Urban Mineralogy
- Experiments under HP-HT Conditions: Applications in the Geosciences

We encourage you to participate in this conference. Further information is available at <http://meetings.copernicus.org/egu2006>.

Suggestions for sessions in mineral physics, mineralogy, and crystallography at the 2007 EGU General Assembly would be very welcome and should be addressed to Professor Peter Ulmer of ETH Zurich (peter.ulmer@erdw.ethz.ch) before September 1, 2006.

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

cont'd from p. 60

collected, particularly if electronic transfer is used; thus the originating society might pay \$45 and IMA a further \$10-\$15 on receipt. Banker's drafts sent by post are somewhat cheaper, but most of our members prefer not to use them. I can see two possible solutions:

- Recognize that the dues paid by societies with less than 25 members are almost trivial and allow them free membership. This does rely on high standards of honesty, but then, we are all scientists.
- Agree that payments by smaller societies can be made in cash at IMA business meetings, which now take place every two years.

One thing that the president of IMA rapidly learns is that the societies that support IMA vary enormously in their size and strength. On the one hand are large organizations like the Mineralogical Society of America, which have permanent staff and offices and are substantial publishing businesses. On the other hand there are small groups, sometimes within a national geological society, full of enthusiasm but lacking any formal structure. To members from richer countries \$2 may seem trivial (a litre of gasoline costs \$1.60 in the UK), but to less-well-off countries it may be substantial. Council appreciates all these issues. But making IMA work well is in

everyone's interest. International scientific collaboration should be a major force in the world, and we can all play our part in this.

Wherever you work I welcome your views and fresh ideas as to how we can achieve our aims. Please e-mail: ian.parsons@ed.ac.uk, Bob Downs, or any member of the IMA Council (addresses at www.ima-mineralogy.org). Any changes will be discussed fully by Council and by delegates at our business meetings in Kobe in July 2006 (www.congre.co.jp/ima2006).

Ian Parsons
President