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Mineralogical Society of Great Britain and Ireland

THE UK'S SCIENCE COUNCIL



Sir Tom McKillop

As an umbrella organisation, the Science Council's membership is a wide collection of different bodies representing chemistry, biology, physics, mathematics, Earth science, psychology and many other professional groups. We need to bring all of these groups together around common issues and deliver a much more coherent, aligned presentation of our interests to government and others, with the aim of enhancing the status of science and scientists. Our role in the Science Council is very much to make the sum of the parts more effective in representing what science can do; so having that breadth of membership is absolutely vital.

We certainly have some big issues to face. How do we make science more relevant to society? How do we pull in youngsters and get them excited about science? And how can we ensure that the professional standing of scientists and the credibility of science are maintained? In that context, building the importance of the chartered scientist is pivotal.

There are many organisations in the science world, some of which are very closely affiliated with a particular discipline or community, such as mathematics, engineering, or physics, for example. Knowing just who should be doing what and who can be most effective is an issue of discussion, and it will often be best for the specialist organisation, such as the Royal Society of Chemistry or the Institute of Physics, to speak about or lead on a topic. The Science Council is definitely not going to usurp the role of its individual member bodies. But we can help them and those wishing to consult the science community by bringing together the appropriate groupings on a topic, by spreading the net broadly across science, and by helping to evaluate the issues and provide advice or guidance that is broadly based and consensual. In my view, it is multi-disciplinarity that lies at the heart of the Science Council and is the key to our potential roles. We must also get much more effective in aligning all of our interests and agreeing what we should be saying to government or to society on any particular matter.

We have spent recent months sorting out the mechanics of the organisation to ensure we have effective governance and accountability in the Science Council, something that is very important to get right in an umbrella body. We are now moving on to an agenda which is much more about the presentation of science to society and particularly to youngsters. One of our key programmes is *Careers from Science*, a project that includes a website for young people showing the wide range of exciting careers open to those who have studied science and mathematics at A level. We are also developing our special interest groups in health and sustainability to enable us to consider these issues from a truly multi-disciplinary perspective. And we are building our representative role working with government and others to ensure that we have the right levels of investment and support for science and scientists so that science can really make a difference to people's lives.

It is a great honour to have been elected President of the Science Council. I am enjoying the role and look forward to contributing whatever I can to advance the role of science and scientists in society.

Sir Tom McKillop
President of the UK Science Council

BURSARY REPORT



First, I would like to thank the Mineralogical Society for supporting my attendance at the AGU Fall Meeting 2007. I was very pleased to have the opportunity to present my poster at the largest international gathering of geophysical researchers in the world. But I was also happy to represent a community of mineral scientists who seek answers to the major questions about the Earth's deep interior.

I really enjoyed attending the meeting because I learned much about the most recent scientific advances and the most innovative research projects in geophysics, in its widest sense. Furthermore, it provided me with an excellent forum in which to present my results and draw the community's attention to my work in mineral-physics simulations, which is particularly relevant to seismologists.

My research is focused on the implementation of force-field simulations in order to understand structural, elastic and transport properties of mantle-related perovskites, for which extreme conditions are difficult to achieve experimentally. This could provide seismologists with new ideas and more information about the physical properties of these minerals and their influence on the amplitude attenuation of seismic waves when they travel through the lower mantle.

This meeting also allowed me to share different opinions about my project and gave me the opportunity to interact with other researchers in the same field, including the leading players in the mineral-physics community.

I also had the chance to get involved in different activities in the Education and Careers section, where I met other research students from other countries and interacted with representatives of organisations where I could pursue my career interests in geophysics, particularly in rock and mineral physics, in the near future.

Liliana Goncalves-Ferreira

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Metamorphic Petrology

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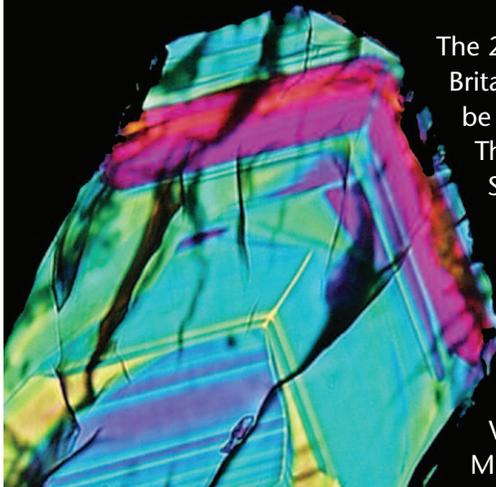
The key benefit in the Landmark series is the commentaries by guest editors.

Bernard Evans, in this case, places in context the chosen works and describes how they contributed to the advancement of the science. He weaves a fascinating tale. "Many metamorphic rocks are attractive in appearance, in hand specimen and in thin section under the microscope. Their aesthetic appeal touches senses beyond the merely scientific, a pleasure that most geochemists forego. Added to this is the satisfaction we derive as they reveal each new instance of nature's fidelity to scientific laws. But the aesthetic appeal comes at a cost. Metamorphic petrologists need to be adept in very many things: crystal chemistry, physical chemistry, phase equilibria, microscopy, textural analysis, regional geology, structural geology, geodynamics and geochronology."

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MAPT MEETING • AUGUST/SEPTEMBER 2009



The 2009 Annual Meeting of the Mineralogical Society of Great Britain and Ireland, 'Micro-Analysis, Processes, Time' (MAPT) will be held at Edinburgh University from Sunday, 30 August to Thursday, 4 September 2009. The lead convenor is Professor Simon Harley, chair of the Metamorphic Studies Group of the Mineralogical and Geological Societies. Other international and national bodies which are co-convening or contributing to the meeting and its workshops include the Société Française de Minéralogie et de Cristallographie, the Deutsche Mineralogische Gesellschaft, the International Association of Geoanalysts, and the Geochemistry and Volcanic and Magmatic studies Groups, also of the Mineralogical and Geological Societies.

Micro-analytical information is now central to many new observations in the Earth sciences, and it is critical to the testing and development of hypotheses related to Earth processes and behaviour on all time and length scales. In the last ten years, new developments in instrumentation have led to considerable improvement in very high spatial resolution micro-analysis in the mineralogical–geological sciences. For example, stable and radiogenic isotopes can now be determined by ion microprobe (SIMS), laser ICP–MS, electron backscatter diffraction (EBSD), SEM, and controlled ion thinning accomplished with the TEM. The new methods, in concert with longer-established techniques (e.g. electron microprobe analysis, petrographic analysis using optical microscopy, cathodoluminescence imaging and backscattered imaging) enable more-detailed and higher-resolution chemical and textural observations to be made in situ. These in turn provide more powerful and stringent tests of models of Earth's behaviour.

MAPT will provide a forum for the presentation and discussion of the many recent advances in micro-analytical techniques. The meeting will focus also on how these advances impact on our under-

standing of mineralogical–geochemical processes, their timescales of development, and the consequences for the measurement of time in the Earth sciences. MAPT will address the current development of new micro-analytical instrumentation and techniques as well as the new information and ideas that are arising from application of these techniques and older techniques of microscopic observation and analysis. We will welcome symposia and sessions and contributions on the nature of geological materials, the microscopic analysis of those materials, and the application to deciphering geological processes and the timing of those processes. MAPT will welcome and promote sessions that bridge the sub-disciplines by focussing on, for example, mineral behaviour in super-critical fluids or the applications of mineralogy in waste management and containment.

A list of suggested sessions is given below. MAPT will welcome both oral presentations and posters to these sessions, and will also welcome proposals for other sessions within the broad theme of the meeting. Please contact Simon Harley (simon.harley@ed.ac.uk) if you are interested in any of these, or if you would care to offer a session for consideration.

Suggested Sessions

- The deep Earth and mantle processes: Experiments and implications
- Mineral physics and experimental petrology at high pressure: A window into the deep Earth
- Formation, growth and differentiation of the continental crust: Insights from accessory minerals and isotopes
- High-precision (low-uncertainty) geochronology: Ar–Ar and U–Pb and their implications for the geological record
- LA–ICP–MS isotopic and trace element analysis: Techniques and applications to solid Earth studies
- Advances in the application of accessory mineral analysis to understanding crustal processes
- Polymetamorphism, orogenic belts, and thermal modelling from P–T–time records
- Deep subduction and exhumation of continental and oceanic crust
- General metamorphic petrology
- Light-element isotopes: Analysis and applications to mass fluxes in the Earth
- Frontiers in microanalysis and microtextures as applied to magmatic processes
- Fingerprinting exhumation: Advances in thermochronology and sediment provenance analysis
- New advances and applications in electron microscopic techniques
- EBSD, microstructural analysis and grain-scale processes: Insights and frontiers
- New advances in transmission electron microscopy characterisation and preparation of minerals
- Mineral microstructures: Their implications and applications
- Micromechanical properties of minerals: Applications in the Earth and construction sciences
- Environmental mineralogy: From science to solutions
- Mineralogy and global waste problems: Nuclear waste disposal and carbon capture
- Environmental mineralogy of mineral deposits
- New advances in mineral deposit geology and genesis

Please check the conference website for information:

[www.minersoc.org/
pages/meetings/MAPT/MAPT.html](http://www.minersoc.org/pages/meetings/MAPT/MAPT.html)