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Mineralogical Society of Great Britain and Ireland

FROM THE PRESIDENT



Learned societies are all about the pursuit of knowledge and spreading its word; they are places where things might be learnt, matters discussed, and knowledge evaluated and disseminated. During the second half of the Victorian era, when the Mineralogical Society was founded, the goals of the Society were summarised as promoting and encouraging the study of the science of mineralogy (plus the intimately related subjects of petrology, geochemistry and crystallography). These goals remain true today, but there have been revolutions in the 'what' and the 'how' and the 'means'. Communication among groups of people in different countries, let alone nearby communities, has become easy and virtually instantaneous – a far cry from the days of personal messengers and gas-lit streets. Just considering how easy it is to disseminate information now, one might start to question this aspect of the role of learned societies nowadays. But this would be to neglect many issues. The amount of information being obtained and its detail and sophistication increase continually – a fact nicely illustrated by the recent MinSoc winter meeting (January 2006) with its focus on micro- to nanoscale developments in geosciences and the amazing technical tools now available for determining and interpreting aspects of mineral behaviour. The information and technology explosions, and their implicit promise of more to come, amount to little if their product just 'sits out there'. Information alone is not enough. It has to be examined, and knowledge has to be extracted and targeted to appropriate audiences; its application has to be advanced not only amongst academics and mineral enthusiasts, but also more widely in order to tackle the international environmental problems of the present day. Learned societies – through their promotion of peer-reviewed journals at minimal cost, and provision of forums for virtual and live debate and discussion – remain as crucial to the dissemination of knowledge and development of informed opinion as they were over 100 years ago.

It is therefore an honour for me to find myself speaking as the newly elected president of the Mineralogical Society, and looking forward to help extend the influence of the Society in promoting mineral sciences in their widest sense. I feel I am lucky to find myself here just now. The international nature of scientific investigation and debate are manifest, and are exemplified in the widespread general acclaim for this new *Elements* magazine, produced by cooperation among scientists from several international learned societies. In 2007, the Mineralogical Society and Cambridge University will host a meeting entitled 'Frontiers in Mineral Sciences' (Cambridge, 26–28 June, 2007), which will be the first combined meeting of the mineralogical societies of the United States, Canada, Great Britain and Ireland. The role of our societies in promoting the dissemination and application of knowledge is rapid in time and international in scale. For long must it continue!

Ben Harte
MinSoc President

THE SOCIETY'S SPECIAL INTEREST GROUPS THE CLAY MINERALS GROUP (CMG)



Chris Breen, professor of Materials Chemistry at Sheffield Hallam University and chair of the Clay Minerals Group, has worked on clay-organic composites for over 25 years and has recently transferred this expertise to the production, characterisation and use of clay-based polymer nanocomposites. Here he describes the history of the Clay Minerals Group and the rise in importance of clay mineralogy in the post-war era and its key role in present-day mineral science.

The Clay Minerals Group (CMG) is one of the seven special interest groups of the Mineralogical Society of Great Britain and Ireland. It promotes the advancement of clay science and clay technology and embraces all aspects of pure and applied research as well as reporting on industrial uses. The interests of the members cover a wide spectrum, including mining and mineral processing, soils and plant nutrition, crystallography, sedimentary geology, ceramics,

petroleum engineering, composites, environmental clean-up and catalysis. In addition to holding regular meetings at different venues around the UK, the CMG publishes reference monographs on specific aspects of clay science and is responsible for the journal *Clay Minerals*, the journal of the European Clay Groups.

The CMG was formed in 1947 and celebrated its Golden Jubilee at the Macaulay Land Use Research Institute in April 1997. Among its eminent early members were George Brindley and George Brown who, in addition to their role as founding members of the CMG Group, also edited the monograph *Crystal Structure and X-ray Identification of Clay Minerals*. In recognition of George Brown's contribution to the field of clay mineralogy, the CMG inaugurated the George Brown Lecture in 2000. The lecture is given at a CMG meeting by a speaker, academic or industrial, who is a recognised authority in his or her particular field. The sixth lecture in the series, entitled 'Probing the Structural Chemistry of Natural Nanoparticles with Micrometer-sized X-ray Beams', was recently presented by Dr. Alain Manceau from CNRS, Grenoble, at the Mineralogical Society's winter meeting in Bath. The lectures are published as reviews in *Clay Minerals*.

Chris Breen

ANNOUNCEMENT

CALL FOR NOMINATIONS FOR AN ORDINARY MEMBER OF COUNCIL 2007

As a result of the retirement of Prof. Ian Parsons, nominations are being sought to fill one vacancy for an Ordinary Member of Council for 2007. A nomination form can be found on the website at: www.minersoc.org. Nominations must be endorsed by four Ordinary Members of the Society and nominees must be Ordinary Members or Fellows of the Society. Nominations should be sent to the Society office at 41 Queen's Gate, London SW7 5HR, to arrive by 31 May 2006 for consideration by Council at their meeting on 15 June 2006.

MINSOC WINTER MEETING – AN OPEN FORUM ON NANOTECHNOLOGY IN THE MINERAL SCIENCES

The 2006 winter meeting of the Mineralogical Society was entitled 'Micro- to Nano-geosciences: Developments and Applications'. The conference was held in Bath, south-west England from 5 to 6 January 2006 and attracted over 80 delegates. The opening presentation was the George Brown Lecture, which was given by Alain Manceau (Grenoble) who described the X-ray characterisation of natural nanoparticles.

The rest of the morning session featured applications of electron imaging (Ian Parsons, Simon Cuthbert), spectroscopy (Henrik Friis, Andrew Rakin), nano-indentation (W. Zhu) and an exquisite illustration of electron holography of magnetic materials (Richard Harrison, Josh Feinberg and co-workers). The afternoon session was devoted to extraterrestrial materials and included invited presentations on ion probe microanalysis (Ian Lyon, Manchester) and EELS spectroscopy (Laurence Garvie, Arizona), and descriptions of new techniques for imaging of meteorite matrices (Caroline Smith, Phil Bland). The session included a presentation by Anton Kearsley describing the wide range of techniques that will be used for characterisation of mineral grains safely returned to Earth by the Stardust mission, and a discussion of the spectroscopic analysis of interstellar dust by Peter Sarre. The day came to a close with the Hallimond Lecture, given by Conel Alexander (Smithsonian) on results from the laboratory analysis of interstellar grains. This talk was pitched at a perfect level for the audience and

From left to right, Chris Breen, David Price and ALAIN MANCEAU (George Brown Lecturer)

provided an excellent summary of the state of the art in the characterisation of extraterrestrial materials. Suitably inspired, the delegates retired to the Roman baths for dinner, extensive refreshment, and presentation of the Max Hey Medal to Paul Hoskin and the Schlumberger Medal to Reinhard Boehler.

Biomineral interactions were the main theme of the second day, although a parallel session was devoted to techniques of chemical and isotopic microanalysis (François Horréard, Benoit Disch) and their applications to metamorphic petrology (Ben Harte, Richard Hinton, Duncan Hay), which included an invited presentation on monazite dating by Nigel Kelly (Edinburgh). A major focus of the biomineratisation session was the applications of electron backscatter diffraction



CONEL ALEXANDER, 2006 Hallimond Lecturer



David Price (left) congratulates REINHARD BOEHLER, winner of the 2005 Schlumberger Medal



PAUL HOSKIN, winner of the 2005 Max Hey Medal



Delegates in the commercial exhibition area at the winter meeting

for understanding the architecture of invertebrate and vertebrate shells (Erika Griesshaber, Wolfgang Schmal, Paul Dalbeck) and the use of such biominerals as climate proxies (Jennifer England, Adrian Finch, Maggie Cusack). The other main theme of the second day was methods of characterisation of biological- and fluid-mineral interfaces (Vern Phoenix, Roland Hellmann) and included invited talks by Karim Benzerara (Paris) and Satish Myneni (Princeton). The meeting concluded with a series of presentations outlining the human dimension of mineralogy, with discussions of airborne pollutants (Ed Stephens, Jennifer Le Blond) and contaminated land (Maggie White, Bodil Kleim). More details about these presentations are available in the conference volume, which can be downloaded from the Society website at www.minsoc.org

The Society is very grateful to four instrument companies, Edax UK, Gatan UK, JEOL (UK) Ltd. and OMNISCAN, and to Kingston University, which supported and exhibited at the meeting (see photo).

Martin Lee
Convenor