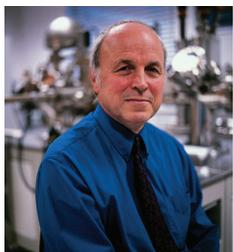




www.ima-mineralogy.org

## International Mineralogical Association

### NEW IMA WORKING GROUP ON ENVIRONMENTAL MINERALOGY AND GEOCHEMISTRY UP AND RUNNING



David Vaughan,  
Chair of WGEMG

The past decade has seen the emergence of a new field of research activity in the Earth and mineral sciences, one that is best termed "environmental mineralogy and geochemistry." The recently established IMA Working Group on Environmental Mineralogy and Geochemistry (WGEMG) is now up and running. It seeks to promote this field through organization of sessions at international conferences, short courses, specialist publications, networking, and a presence on the Internet. The officers of the WGEMG are Chairman David Vaughan (Manchester, England), Secretary John Jambor (Tsawwassen, B.C., Canada) and Vice-Chairman Tom Sato (Sapporo, Japan). They and the other scientists involved believe that mineralogy and geochemistry have a central role to play in the larger field of environmental science and in tackling the many environmental problems faced by humanity in the 21<sup>st</sup> century. In consultation with colleagues, they have produced a working definition of this field, as follows:

Environmental mineralogy and geochemistry is an interdisciplinary field dealing with systems at, or near, the surface of the Earth where the geosphere comes into contact with the hydrosphere, atmosphere and biosphere. This is the 'environment' on which plants and animals (including humans) depend for survival and which can be disrupted by human activity, particularly that associated with exploitation and utilization of Earth's resources. It deals with those systems containing minerals that constitute key environments (modern sediments, soils, atmospheric aerosols, parts of certain micro and macro-organisms including the human body). Both pure systems and those contaminated through human activities are considered, with emphasis on a fundamental (predictive) understanding of such systems at scales that can range from molecular to global. The full armoury of modern analytical, imaging, diffraction, spectroscopic and computer modelling techniques are employed.

Examples of specific topics within the scope of environmental mineralogy and geochemistry include the release, transport and dispersal of toxic wastes from mining and industry (including the nuclear industry) and the safe containment of such wastes; mineral-based atmospheric aerosols; minerals in the human body; geochemistry and human health; and preservation of minerals and rocks in culturally important buildings and artefacts.



*Elements* cover image September 2005 highlighting environmental mineralogy and geochemistry. The image shows low-pH acid mine drainage and reddish Fe-oxyhydroxide precipitates at the periphery of a tailings impoundment in the Joutel area, Quebec. The tailings are from a former copper producer, and the site has since undergone remediation. PHOTO COURTESY OF JOHN JAMBOR

Two conference sessions sponsored by the WGEMG have already been held: "Mineralogy and Geochemistry of Acid Mine Drainage and Metalliferous Minewastes" at Goldschmidt 2005, Idaho, USA, which resulted in the publication of a collection of papers as a special part-issue of *Applied Geochemistry* (volume 21, pp 1249-1334, 2006), and "Environmental and Medical Mineralogy" at the IMA conference in Kobe, Japan, in August 2006. Future plans include sponsorship of a session at Goldschmidt 2007 in Cologne, Germany ("Microbial Biomineralization: From Environmental Processes to New Technologies") and, in the

longer term, sponsorship of sessions at Goldschmidt 2008 (Vancouver) and IGC 2008 (Oslo).

WGEMG now requires national representatives to contribute to its activities. If you are interested in helping, please contact WGEMG Secretary John Jambor or one of the other officers.

For further information see the IMA website [www.ima-mineralogy.org](http://www.ima-mineralogy.org) or contact a WGEMG officer.

**CHAIR:** David J. Vaughan  
The University of Manchester  
School of Earth, Atmospheric  
and Environmental Sciences  
Manchester, M13 9PL, UK  
[david.vaughan@manchester.ac.uk](mailto:david.vaughan@manchester.ac.uk)

**VICE-CHAIR:** Tom Sato  
Hokkaido University, Laboratory  
of Environmental Geology  
Graduate School of Engineering  
Sapporo, Japan  
[tomsato@eng.hokudai.ac.jp](mailto:tomsato@eng.hokudai.ac.jp)

**SECRETARY:** John L. Jambor  
Leslie Research and Consulting  
Tsawwassen, BC V4M 3L9  
Canada  
[jljambor@aol.com](mailto:jljambor@aol.com)

The next Council meeting of IMA will be at the Frontiers in Mineral Science meeting, 26-28 June 2007, Cambridge, UK.

Please see the IMA website [www.ima-mineralogy.org](http://www.ima-mineralogy.org) and contact one of the councillors if there is an issue you would like the councillors to discuss.

### WOULD YOU LIKE YOUR COUNTRY TO HOST THE IMA CONFERENCE IN 2014?

IMA Council is calling for expressions of interest to host the 21<sup>st</sup> IMA General Meeting in 2014. Recent conferences have taken place in Toronto, Canada (1998), Edinburgh, UK (2002) and Kobe, Japan (2006, with about 1000 attendees; see *Elements* volume 2, issue 5, October 2006). The next event will be in Budapest, in August 2010, and will be organized jointly by Austria, Hungary, Croatia, Czech Republic, Romania and Slovakia.

The 2018 conference is planned for the USA and will highlight the Mineralogical Society of America centenary in 2019. IMA encourages geographic variation in the venue. If your society is interested in hosting the international mineralogical community in 2014, please contact IMA secretary, Maryse Ohnenstetter, [mohnen@crpg.cnrs-nancy.fr](mailto:mohnen@crpg.cnrs-nancy.fr), for further details and initial discussion.