Mineralogical Society of Great Britain and Ireland

www.minersoc.org

MEMBERSHIP

As we drift towards the end of summer and the start of a new academic year, encourage your students to join the Mineralogical Society of Great Britain and Ireland (MinSoc) ... starting now! The first year of student membership is free of charge; they just need to sign up (www.minersoc.org/join-now.html). In return for this simple act, the new member will receive six issues of *Elements*, online access to MinSoc journals, reduced rates for attending MinSoc and SIG (special interest group) meetings and will have the right to apply for society and SIG funding. Not bad! The society will send its usual promotional material to departments throughout Britain and Ireland, but we invite any member to contact us if you would like some extra material for distribution to your students.

Membership (for students and others) isn't just about what the society can do for you, of course; it's about belonging to a group of like-minded scientists and about the contributions made by members to other members. Society meetings are one example of where we build our community, where students and early career researchers present their work, learn more about the work of others and build those invaluable links which will sustain them (research collaboration, employment opportunities, and more) in the years to follow.

Membership ... Just do it. ☺

SOCIETY BURSARIES 2019

Student bursaries have been awarded to: James Crosby (University of Cambridge, UK), S. Farsang (University of Cambridge) and L. Townsend (University of Manchester, UK).

New in 2019: please note that there will be two rounds of student bursaries each year from 2019. See details at https://www.minersoc.org/postgraduate-bursaries.html

Senior bursaries have been awarded to: T. Barrett (The Open University, UK), J. Darling (University of Portsmouth, UK) and L. Newsome (University of Exeter, UK).

Reports will appear on the society website in due course (https://www.minersoc.org/bursary-report.html).

MEETING REPORT: 3rd INTERNATIONAL CRITICAL METALS CONFERENCE

The 3rd International Critical Metals Conference was organized by the Mineralogical Society's Applied Mineralogy Group and was held 30 April–2 May 2019 at the Surgeons Hall in Edinburgh (Scotland).

Very enjoyable day in the field preceding the Critical Metals Conference. Photo includes the leaders K. Goodenough and E. Deady.

Seventy scientists gathered in the late spring sunshine in Edinburgh to discuss critical metals. The organizers took an interesting approach to building the programme, with speakers on three main themes:

- Critical metals for low carbon transport
- Responsible sourcing of critical metals
- Geology and resources of critical metals

The third of these was perhaps the most familiar ground for mineral scientists, but the work presented in themes 1 and 2 was fascinating, and the meeting gave an excellent opportunity for the broader community to meet, including representatives from non-governmental organizations (NGOs), materials scientists, geo-ethics experts, as well as the more usual (as far as MinSoc is concerned) mineralogy and exploration folks.

This unique blend of disciplines allowed the conference to take a holistic approach to some of the biggest questions facing critical metals: the role these metals will play in future decarbonisation, where those resources will come from and how can they be exploited in a sustainable manner. Talking points on the nature of criticality and how it is a very subjective topic were evident as delegates from more than 15 countries were present. Our keynote speakers were David Merriman, Jacqui Murray, James McQuilken, Kathryn Goodenough and Paul Nex and our Early Career Researcher keynote was Anouk Borst. All provided excellent overviews and talking points on some of the current issues. The opportunity to speak to representatives from different parts of the critical metals supply chain was invaluable and, based on the buzz at breaks and the conference dinner, networking abounded!

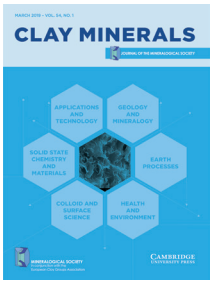
Highlights from the conference included significant discussion on battery raw materials and where those metals were going to be sourced. Discussion was fruitful for all involved and great links were made between organisations which would not typically be present in the same room. Particular comments from delegates included the appreciation of the sustainable development talks in the middle of the conference where the message from people on the ground was conveyed to both end users and geologists.

MINERALOGICAL MAGAZINE

A special issue of *Mineralogical Magazine* will appear in 2020 arising out of papers presented during the meeting and by authors who could not attend but whose work is in this area. If this is your area of interest, please feel free to submit a paper to the critical metals 2019 special issue by going to https://www.editorialmanager.com/minmag/default.aspx.

A copy of the programme plus abstracts volume and copies of many of the presentations are available at https://www.minersoc.org/3rd-international-critical-metals-conference-report.html.

OPEN ACCESS IN *CLAY MINERALS*



In the December 2018 issue of *Clay Minerals*, four open access papers were published. Three of these were funded by the Swiss National Cooperative for the Disposal of Radioactive Waste (NAGRA). Read these papers and more at https://www.cambridge.org/core/journals/clay-minerals.

- Effects of clay-mineral type and content on the hydraulic conductivity of bentonite–sand mixtures made of Kunigel bentonite from Japan. Masanori Kohno, Yoshitaka Nara, Masaji Kato, Tsuyoshi Nishimura.
- Experimental study on the influence of preliminary desiccation on the swelling pressure and hydraulic conductivity of compacted bentonite. Lin Zhi Lang, Wiebke Baille, Snehasis Tripathy, Tom Schanz.

- Interactions of bentonite with metal and concrete from the FEBEX experiment: mineralogical and geochemical investigations of selected sampling sites. S. Kaufhold, R. Dohrmann, K. Ufer, F. Kober.

Also published as an open access paper in this issue was:

- Phase and structural features of tubular halloysite (7 Å). Victor A. Drits, Boris A. Sakharov, Stephen Hillier.

2018 IMPACT FACTORS

Both of our journals received a significant boost in terms of impact factors this year. *Clay Minerals* rating has improved from 1.219 to 1.787. *Mineralogical Magazine*'s rating has jumped from 1.744 to 2.212. A huge thanks to everyone who helps to make this happen: the editors, the associate editors, the reviewers, the publishing team and, most of all, of course, the authors and readers.

GSA TOPICAL SESSION SUPPORTED BY THE MINSOC

"Volcanism, Impacts, and Phanerozoic Mass Extinctions: Discovering a Common Cause and Planning for the 6th Mass Extinction"

Phanerozoic mass extinctions have long been attributed to continental flood basalt provinces, but directly correlating the two has remained difficult without extinction evidence between eruptions. Major advances over the past few years are based on the geochronology of eruptions and mass extinctions; mercury-in-sediments as a proxy for volcanism, climate change, environmental stress and the resultant ocean acidification driven by volcanism; and the geochemical analysis of rare earth elements in boundary clays. A large impact is only attributed to the end-Cretaceous mass extinction but its environmental effects and relationship to Deccan Traps (India) volcanism are currently uncertain and under investigation. This Geological Society of America topical session explores evidence that reveals the common cause of major mass extinctions in Earth's history and furthers our understanding of the environmental catastrophe looming in our future – the 6th mass extinction. Details at the conference site: https://community.geosociety.org/gsa2019/home.

CODE OF CONDUCT AT MEETINGS

The Society has published a code of conduct for those who attend Society conferences and other events.

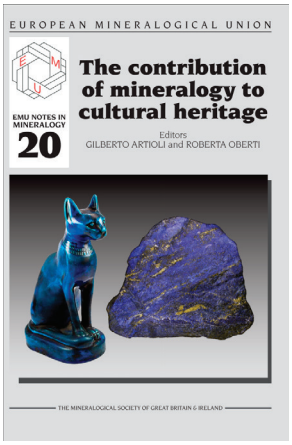
This draws heavily on internationally agreed policies, e.g. that published by the American Geosciences Institute and others who are acknowledged here. The international community largely agrees that such policies are long overdue. Here is the opening paragraph:

"The Mineralogical Society is a learned society, which, through its members, has a duty in the public interest to provide a safe, productive and welcoming environment for all participants and attendees of our meetings, workshops, and events regardless of age, gender, sexual orientation, gender identity, race, ethnicity, religion, disability, physical appearance, or career level."

Read the rest of the document at https://www.minersoc.org/code-of-conduct.html.

The policy will be used in association with all future events and delegates registering for events will be asked to confirm that they have read the document before completing the registration process.

NEW BOOK IN THE EMU SERIES AVAILABLE



The Contribution of Mineralogy to Cultural Heritage by Gilberto Artioli and Roberta Oberti is an open access book made available courtesy of the European Mineralogical Union. Read/download it at: https://www.minersoc.org/emu-notes-20.html. Hard copies are also available for sale from the MinSoc online bookshop.

This book reviews the role of modern mineralogy and highlights the diverse and important contributions that it makes to the study of materials and processes relevant to cultural heritage. It is argued that mineralogy lies in a very special position in between Earth and materials sciences, and that mineralogists have a profound perception of the structural and chemical complexity of natural materials. Potentially, mineralogists manage the necessary knowledge of both the ancient and recent geological and physico-chemical processes which produced the raw materials used by humans, and of the analogue processes used to transform them into artefacts. It is thus highly appropriate that a volume in the EMU series acknowledges some of the recent contributions of mineralogy to the investigation of human history, art and technology. The chapters contributed recognize the important contributions of mineralogy to the valorization, characterization, interpretation and conservation of the cultural heritage.

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