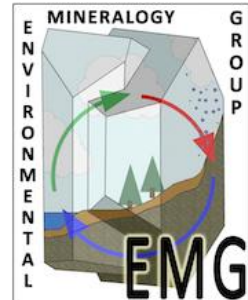




The Environmental Mineralogy Explorer

The Biannual Newsletter from the Mineralogical Society's Environmental Mineralogy Group



Edited by: Latham Haigh

April 2025 Issue 6

Bursary Call

The next call for the EMG Bursary Scheme is approaching with the closing date for this cycle being **2nd May 2025**. We offer bursaries for both PhD students and Early Career Researchers.

PhD students can apply for up to **£300** for development activities and ECRs can apply for up to **£1000** to facilitate new pilot research with the expectation of publication and/or further research funding. Winners will also be provided with a **year's membership to the mineralogical society!** For full details, visit our website at minersoc.org/emg-bursary

Environmental Mineralogy Photo Competition

We are still accepting entries to our annual photo competition! The competition is open to all in EM from students to professors and everything in between. Whether your photo is out in the field, under the microscope or something weird and wonderful you have found in the lab, we would love to see what you see!

To enter, submit your photos alongside an explanation of what your picture is showing to emg@minersoc.org. **The deadline for entry has been extended to Friday 20th June**

Here's an example from one of our committee members, showing a fault line from within the tunnels of the Finnish intermediate and low level radioactive waste repository!



Present Your Work at the EMG Research In Progress Meeting!

This year's Research In Progress meeting will be held at the **University of Sheffield (June 24th – 25th)** with this year's theme:

From The Laboratory To The Field

We're welcoming all work in the field of environmental mineralogy with our theme specific topics being **Laboratory techniques that underpin environmental chemistry research and, Field work showing EM in action!** Other key themes for the RiP include **Environmental Processes, Contaminants and (radio)chemistry.**



**University of
Sheffield**

HENRY
ROYCE
INSTITUTE

The RiP is **free to attend** and kindly supported by the Henry Royce Institute. It will also include a tour of the Royce Discovery Centre at the University of Sheffield and the Immobilisation Science Laboratory.

We welcome everyone across the field of EM to present current work including laboratory technicians, Masters and PhD students, early career researchers and, researchers in industry. The RiP is an excellent opportunity to meet fellow scientists in a friendly environment and discuss ongoing work! The format will be a midday start on the 24th with an informal meal in the evening followed by an early afternoon finish on the 25th.

Registration details will be available in due course via our mailing list and website.

Save the Date 24th – 26th June 2026 Minsoc 150th Anniversary Conference

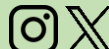
Mark your calendars! The Mineralogical Society of Great Britain and Ireland is celebrating its 150th anniversary in 2026 with an exciting conference at the **University of Manchester** from **June 24th-26th, 2026**. All their special interest groups will be there, presenting exciting sessions on Mineralogy, Petrology, and Geochemistry. Keep an eye out for more details soon!



minersoc.org/emg



EMG@minersoc.org



[@EMG_minsoc](https://www.instagram.com/EMG_minsoc)

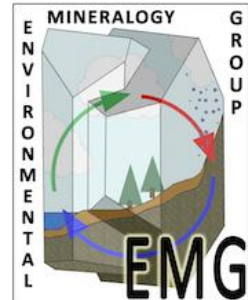


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What Do YOU Want To See Here?

We at the EMG committee want to make sure we are providing content and information that you are interested in! If you have any opinions as to what we should be writing about or promoting, we would very much appreciate you participating in our survey! Simply click or scan the QR code to partake. The survey is anonymous unless you express interest in us contacting you, so feel free to provide any feedback!

We want to produce a newsletter that is informative and interesting to all of our readers and your feedback can help shape the EMG Explorer!



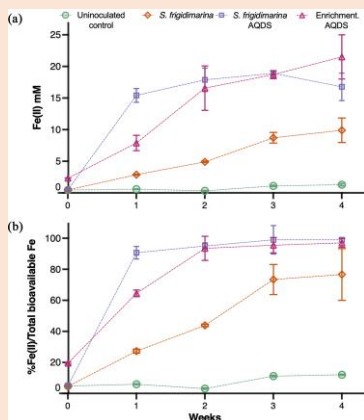
Publications

Research Highlight

Microbial reduction of Fe(III)-bearing solids recovered from hydraulic fracturing flowback water: Implications for wastewater treatment
doi.org/10.1180/gbi.2024.11

In this study, published in the Minsoc Journal "Geo-Bio Interfaces" Natali Hernandez-Becerra and team investigate the microbial reduction of Fe(III)-containing solids from hydraulic fracturing flowback water from Bowland shale (UK). The mineralogy was shown to consist of akaganeite and Ba-celestine that were shown to be electron acceptors for Fe(III) reducing microbial communities in anaerobic conditions.

Bacterial communities showed capability to reduce Fe(III) forming ankerite as well as potential amorphous phases. This work provides insight into how Fe(III) bearing sludges alongside bacterial communities offer a potential avenue for improving waste water treatment and toxic waste remediation.



New Publications

- Biosynthesis Parameters Control the Physicochemical and Catalytic Properties of Microbially Supported Pd Nanoparticles doi.org/10.1002/sml.202311016
- Low molecular weight organic acids stabilise siderite against oxidation and influence the composition of iron (oxyhydr)oxide oxidation products doi.org/10.1039/D4EM00363B
- A comparative study of the high-pressure structural stability of zirconolite materials for nuclear waste immobilisation doi.org/10.1016/j.rinp.2024.107704
- Biogenic pyrite and metastable iron sulfides: Emerging formation pathways and geological and societal relevance doi.org/10.1180/gbi.2024.9
- Nanoparticulate and colloidal uranium and plutonium in spent nuclear fuel storage pond effluents doi.org/10.1016/j.jhazmat.2025.137629

If you would like your (or a colleague's) publication featured in the Environmental Mineralogy Explorer newsletter don't hesitate to drop us a line at: EMG@minersoc.org



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