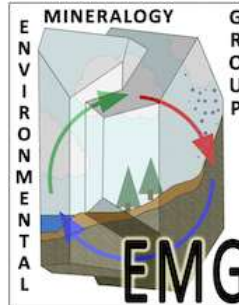




# The Environmental Mineralogy Explorer

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



Edited by: Latham Haigh

March 2024 Issue 4

## Bursary Call

The next call for the EMG Bursary Scheme is approaching with the closing date for this cycle being **26<sup>th</sup> April 2024**. We offer bursaries for both PhD students and Early Career Researchers.

PhD students can apply for up to **£300** for development activities such as workshops and to also aid in facilitating collaboration and networking opportunities.

ECRs can apply for up to **£1000** to facilitate new pilot research with the expectation of publication and/or further research funding.

Over a dozen bursaries have been awarded by the committee with several of them being the basis of fellowship applications.

For full details, visit our website at [minersoc.org/emg-bursary](https://minersoc.org/emg-bursary).

## EMG and RSC Radiochemistry Joint Research In Progress Meeting



This year, the environmental mineralogy committee are pleased to announce that we will be holding our research in progress meeting at the University of Manchester alongside the Royal Society of Chemistry Radiochemistry special interest group. This year's RIP is kindly sponsored by Nuclear Waste Services and National Nuclear Laboratory

This year's event is titled:

**"Environmental Contaminant Mobility: Mineralogy and Radiochemistry"**



The event will be held from the **15<sup>th</sup> to the 16<sup>th</sup> of July**

## Researcher Spotlight



The EMG Committee are launching a new series of researcher spotlights where researchers tell us about their work and their careers in environmental mineralogy.

Our first spotlight is on Dr Clare Thorpe, EPSRC Dorothy Hodgkin Fellow at the University of Sheffield.

Dr Thorpe is a researcher currently working on the effects of complex environments on the behaviour of glassy materials, particularly applied in the context of radioactive waste disposal. Dr Thorpe is also a past recipient of the EMG early career bursary. For the full spotlight interview, visit the EMG website.

If you are interested in participating in our researcher spotlight interviews, contact the EMG committee at [EMG@minersoc.org](mailto:EMG@minersoc.org)

## New LinkedIn Group

EMG now have a [LinkedIn page](#)!

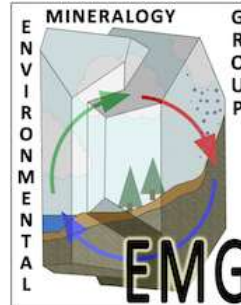
We will be posting about upcoming events held by EMG and sharing mineralogy related content.





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## Meet The Committee



**Luke Townsend**  
Committee Chair  
Nuclear Waste Services



**Tom Neill**  
Treasurer  
Research Fellow  
University of Manchester



**Kath Rothwell**  
Secretary  
Lecturer in Environmental  
Geochemistry  
University of Bristol



**Rick Kimber**  
Communications Officer  
Research Fellow  
University of Manchester



**Aislinn Boylan**  
Industry Representative  
National Nuclear  
Laboratory



**Latham Haigh**  
Student Representative  
PhD Student  
University of Sheffield



**Lucian Staicu**  
Ordinary Member  
Principal Investigator  
University of Warsaw



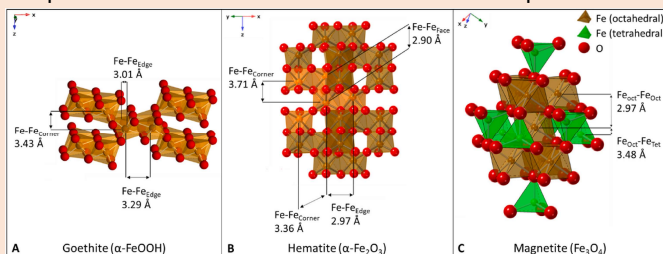
**You?**  
The committee are looking for  
members!  
Email: [EMG@minersoc.org](mailto:EMG@minersoc.org)

## Publications

### Research Highlight

**Incorporation of actinides into iron (oxyhydr)oxides:  
A long-term environmental barrier to radionuclide  
migration**

In this work, Dr Olwen Stagg reviews the research into the behaviour of key radionuclides in the disposal of radioactive wastes in Fe-based mineral species, particularly with respect to structural incorporation of these actinides (U, Pu, Np, Am). The present understanding of structural incorporation of actinide species in these minerals such as goethite and hematite using X-ray spectroscopic methods is covered in depth. Understanding the behaviour of these minerals is key to underpinning the safe long-term safety of disposal environments for radioactive waste disposal.



<https://doi.org/10.1016/j.apgeochem.2023.105830>

### New Publications

- Fabrication, defect chemistry and microstructure of Mn-doped UO<sub>2</sub>  
<https://doi.org/10.1038/s41598-023-50676-2>
- A New Approach for Investigating Iron Mineral Transformations in Soils and Sediments Using <sup>57</sup>Fe-Labeled Minerals and <sup>57</sup>Fe Mössbauer Spectroscopy  
<https://doi.org/10.1021/acs.est.3c00434>
- Allotropy of selenium nanoparticles: Colourful transition, synthesis, and biotechnological applications  
<https://doi.org/10.1111/1751-7915.14209>
- Process Development of Zirconolite Ceramics for Pu Disposition: Use of a CuO Sintering Aid  
<https://doi.org/10.3390/ceramics6010041>

*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](mailto:EMG@minersoc.org)*