



Mineralogical Society of Great Britain and Ireland

www.minersoc.org

MINSOC STUDENT AWARD WINNERS 2019

At each Earth science and geology department in the UK and Ireland is a departmental representative of the Mineralogical Society of Great Britain and Ireland (MinSoc). That person can nominate for a MinSoc Student Award a second-year student who achieves the highest-ranking marks in mineralogy and petrology, or equivalent exam. The student can then receive free student membership of the MinSoc for two years, plus one of the society's recent book publications and a certificate. This year's winners are as follows:

- Kenneth Hurley, University College Cork (Ireland)
- Bernard Loughlin, Trinity College Dublin (Ireland)
- Ciaran Tierney, National University of Ireland, Galway (Ireland)
- Alix Harrow and Toby Brooks, University of Cambridge (UK)
- Emily Prosser, University College London (UK)
- Kristiina Joon, University of Oxford (UK)
- David Hughes, University of Exeter (UK)
- Neil Harrison, Durham University (UK)
- Jamie Foster, University of Cardiff (UK)
- Kieran Winfield, Keele University (UK)
- Ryan Jenkins, University of Southampton (UK)
- Thomas Green, University of Leicester (UK)
- Sian Kay Miller, University of Birmingham (UK)
- James McCann, University of Manchester (UK)
- Abigail Plimmer, University of Liverpool (UK)
- Thomas Pavey, University of Leeds (UK)
- Guy Cranfield, Imperial College London (UK)
- Jack Beckwith, Royal Holloway University of London (UK)
- Sarah Ledingham, University of Aberdeen (UK)
- Sam Woodcock, University of Bristol (UK)
- Rory Changleng, University of St. Andrews (UK)
- Matthew Staitis, University of Glasgow (UK)
- Sarah Willis, Newcastle University (UK)
- Alexandra Edwards, University of Portsmouth (UK)
- Hadeel Ahmed and Ali Bony-Kaya, University of Brighton (UK)
- Stuart Holley, University of Edinburgh (UK)
- Arjun Sreekumar, University of Plymouth (UK)
- Barbara Zanasi, Birkbeck College, London (UK)
- Jack Connor, University of Hull (UK)
- Guy Jones, University of Derby (UK)
- Nathan Bloom, University of East Anglia (UK)
- Elin Jennings, Aberystwyth University (UK)

Congratulations to them all ... and welcome to membership of the MinSoc!

MINERAL DEPOSITS STUDIES GROUP: ANNUAL MEETING 2020

The next Mineral Deposits Studies Group meeting will be held 6–8 January 2020 at the Natural History Museum, London. The Icebreaker Party will be held on Monday, January 6.

The event is being organized by Dr Jamie Wilkinson (Natural History Museum, London) and the London Centre for Ore Deposits and Exploration (LODE)



team; presentations will be in the Natural History Museum's Flett Lecture Theatre and Prof. John Dilles (Oregon State University, USA) will be a keynote speaker.

Dr Richard Sillitoe (Medgold Resources) will also present a workshop on 6th January prior to the Icebreaker entitled Porphyry Masterclass.

Further details will be posted on the Mineral Deposits Studies Group website: www.mdsg.org.uk.

VOLCANIC AND MAGMATIC STUDIES GROUP: ANNUAL MEETING 2020

The Volcanic and Magmatic Studies Group (VMSG) is pleased to announce that its 56th annual meeting will be held 7–9 January 2020 in Plymouth (UK).



This is a 2.5-day meeting, and registration will include attendance to the meeting, access to posters and talks, lunch (7 and 8 January), and mid-morning and afternoon refreshments. The conference dinner is included in the registration fee.

The conference venue is the Crowne Plaza Hotel on Plymouth Hoe.

Symposia are as follows:

1. Processes at Plate Margins (J. Barclay and M. Harris)
2. Magma Storage and Transport (M. Edmonds and A. Morris)
3. Timescales and Rates of Magmatic Processes (C. Petrone and P. Cole)
4. Intraplate Magmatism (M. Harris and S. Gibson)
5. Monitoring and Forecasting (J. Hickey and J. Johnson)
6. Hazard, Risk and Communication (J. Phillips and I. Manzella)
7. Research in Progress (P. Cole and A. Peach)

Keynote speakers are the following:

- Professor David Pyle, Oxford University and VMSG award winner.
- Professor Kathy Cashman, University of Bristol: "From Magma Storage to Eruption: New Questions for a New Decade".
- Dr Mike Cassidy, University of Oxford: "Explosive or Effusive? Investigating the Controls of Volcano Eruptive Style".
- Dr Johann Lissenburg, University of Cardiff: "Magma Processing in the Lower Oceanic Crust".
- Professor Costanza Bonadonna, Université de Genève (Switzerland): "Integrating Hazard, Exposure and Vulnerability for Risk Assessment and Management: The Case Study of Vulcano Island, Italy".

Workshop

A half-day workshop, entitled Communicating Volcano Science using Narratives and Storytelling, will be held at the Plymouth University's Sustainable Earth Institute, from 14:00 on 9 January (immediately after the meeting). The workshop will be led by Professor Iain Stewart (University of Plymouth) and Professor Jenni Barclay (University of East Anglia). The workshop is free but strictly limited to 40 participants.

Details available at: <https://www.plymouth.ac.uk/whats-on/volcanic-and-magmatic-studies-group-conference-2020>.

SOCIETY BURSARIES 2020

The MinSoc invites applications for a number of bursaries.

Postgraduate Student Bursary

As part of its objective to advance knowledge of the science of mineralogy and its applications, the MinSoc awards a small number of bursaries to research postgraduate students. These bursaries are intended to allow students to develop, undertake, apply and communicate research in any area of the mineralogical sciences (including crystallography, geochemistry, petrology, environmental science and economic geology). By making these awards, the MinSoc also seeks to encourage the development of postgraduate researchers into the next generation of researchers in mineralogy. The president and council of the society, therefore, recommend and encourage that students registered for a postgraduate research degree in the disciplines of mineralogy, crystallography, petrology or geochemistry apply for a bursary award. Application deadlines and activity cut-off dates are given below.

DEADLINE: 1 May each year, e.g., 1 May 2019 for applications to fund activities taking place between 1 December 2019 and 1 December 2020

DEADLINE: 7 December each year, e.g., 7 December 2019 for applications to fund activities taking place between 1 May 2020 and 1 May 2021

More information and a form are available at:

<https://www.minersoc.org/postgraduate-bursaries.html>.

Senior Bursary

The purpose of the Senior Bursary awards is to support academic work by allowing attendance at overseas conferences and meetings; encouraging international collaboration in research of high merit; or supporting fieldwork.

The deadline for receipt of applications is **15 January** each year.

A decision will be made by the Awards Committee, with its announcement to be made by no later than **1 March** each year.

More information, and a form, are available at:

<https://www.minersoc.org/senior-bursary.html>.

Hazel Prichard Student Bursary

The Mineralogical Society of Great Britain & Ireland and the Geological Society are pleased to announce the Hazel Prichard Student Bursary. This bursary, funded by Hazel's family, honours the achievements of Professor Hazel Prichard (1954–2017; formerly of Cardiff University) in the mineral sciences.

The deadline for applications is **15 February** each year.

A bursary of up to £3,000 is available to support an undergraduate or MSc student.

More information available at: <https://www.minersoc.org/hazel-prichard-student-bursary.html>

Below is a report by Joana Lluch (University of St. Andrews) who was the first winner (2019) of the Hazel Prichard Student Bursary.

"Because of funding from IOM3 and as the winner of the inaugural Hazel Prichard bursary, I was able to travel to the Groote Eylandt mine in Australia, engage in the mine workflow and take samples to perform geochemical studies for my master's dissertation project which redefined completely the genetic model for this deposit. The Prichard bursary is named in honour of Dr Hazel Prichard, formerly of Cardiff University, and is awarded jointly by the Mineralogical Society of Great Britain & Ireland and the Geological Society in conjunction with their



Joana Lluch, St. Andrew's University (UK).

special interest groups: the Applied Mineralogy Group and the Mineral Deposits Studies Group. The Groote Eylandt (GE) manganese deposit is one of the most important sedimentary Mn deposits in the world, located on the Carpentaria Basin, Australia. The deposit is divided into two sub-basins, the northern one (NB), with pisolitic and massive ore, and the southern one (SB), with disseminated carbonaceous ore. The pisolitic NB ore represents deposition on the swash intertidal zone whereas the S Bore was deposited in the subtidal zone. This study shows that the NB ore is not as supergene as previously thought and still conserves primary geochemistry. The deposit shows enrichment in heavy metals and REEs relative to PAAS (Post-Archaean Australian shale) values, with a potential economic source of the latter ones, with concentrations up to 619 ppm. The source of Mn and metals in GE is not continental runoff as previously thought. The deposit shows a Re–Os age of 93.22 ± 3.95 Ma, falling into the second great Oceanic Anoxic Event (OAE2) (~94.4 Ma to ~93.82 Ma) and in the highest Cretaceous sea-level recorded. This study points out the hydrothermal nature of the orebody and relates its formation to the emplacement of the Caribbean Large Igneous Province. Mn-rich beds are related to minimum detrital inputs reflected by a strong U, Co, Ni, Cu, Zn, Ba and REE enrichment relative to shale values and a strong positive Eu/Eu* anomalies. Redox-sensitive trace elements ratios such as V/(V + Ni) and U/Th together with the absence of Ce/Ce* anomalies show the strong stratification of the water column at the time of deposition from dysoxic to euxinic waters. The Os_i value for both basins is ~0.71, which reflects the return to radiogenic Os signatures at middle stages of the OAE2 after the dramatic drop produced at its onset. The GE genetic model needs to be redefined to a sedimentary hydrothermal-related OAE2 deposit."

MEMBERSHIP REMINDER

We encourage you to encourage your students to join the 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).

SOME RECENT CONTENT IN CLAY MINERALS

December 2019

Adsorption of crystal violet dye by a zeolite-montmorillonite nano-adsorbent: modelling, kinetic and equilibrium studies. M. Sarabadian, H. Bashiri, and S. M. Mousavi.

Natural tuff as an alternative for removing textile dyes (Asucryl red): adsorption properties, kinetic and equilibrium studies. B. Ayaden, N. Benabdeslam, N. Bouzidi, L. Mahtout, M. Bounouala, and M. Djoudi.

Optimization of ultrasonic-assisted copper ion removal from polluted water by a natural clinoptilolite nanostructure through a central composite design. Mohsen Sheydaei, A.B. Gasemsoltanlu, and A. Beiraghi.

Mineralogical study of raw clay samples from Dobrodo, Serbia. M. Milošević, P. Dabić, S. Kovač, L. Kaluđerović, and M. Logar.

