

26 – 27 February 2026

# Analytical Microscopy in Earth and Planetary Sciences CONFERENCE PROGRAMME

Hybrid Conference



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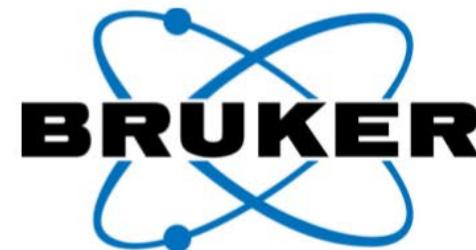
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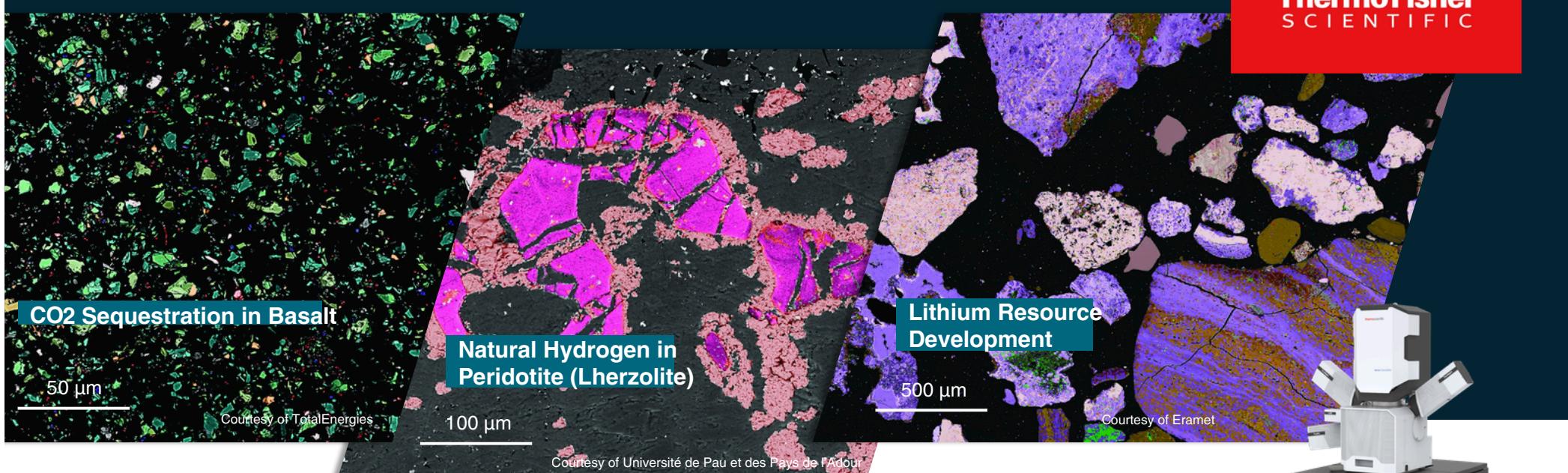
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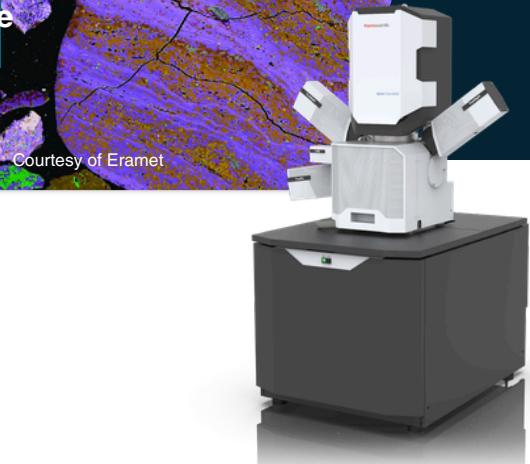




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**Thursday 26 February 2026**

<b>0930 – 1000</b>	Registration & Coffee	
<b>1000 – 1010</b>	Welcome Address	Natasha Stephen, Geological Society of London
<b>1010 – 1100</b>	<b>Keynote:</b> Precise quantitative mineral analysis by EDS-SEM	Johan Lissenberg, <i>Cardiff University</i>
<b>SESSION ONE</b>		
<b>1100 – 1120</b>	No WDS? No Problem! Why Do Geoscientists Continue to Overlook EDS?	George Stonadge, <i>Oxford Instruments</i>
<b>1120 – 1140</b>	Element mapping of the lawsonite to epidote transition	Sara Hanel, <i>University of Minnesota</i>
<b>1140 – 1200</b>	From Sparse Measurements to Full Maps: Machine Learning Prediction of Mineral Phase Data	Julia Schmitz, <i>MaP - Microstructure and Pores GmbH, Germany</i>
<b>1200 -1210</b>	Automated Mineralogy as a part of complex analytical workflows	Marek Dosbaba, <i>Tescan</i>
<b>1210 – 1230</b>	Break	
<b>SESSION TWO</b>		
<b>1230 – 1250</b>	Quantifying Facies-Controlled Pore Connectivity in Heterogeneous Porous Media with Alloy Intrusion Porosimetry (AIP)	Joyce Schmatz, <i>MaP - Microstructure and Pores GmbH &amp; Julia Schmitz</i>
<b>1250 – 1310</b>	SEM-BEX Mapping on Unprepared and Uncoated Samples: did we find the oldest extraterrestrial zircons?	Alexandra Stavropoulou, <i>Oxford Instruments</i>
<b>1310 – 1330</b>	The Importance of being oriented: a review of thirty years of Electron Backscatter Diffraction research in Earth and Planetary Sciences	John Wheeler, <i>University of Liverpool</i>
<b>1330 - 1430</b>	Lunch	
<b>COMMUNITY UPDATES</b>		
<b>1430 – 1445</b>	High resolution structural and chemical analysis at the electron Physica Sciences Imaging Centre	Chris Allen, <i>ePSIC</i>
<b>1445 – 1500</b>	Imaging & Characterisation at the Henry Royce Institute: Facilities and Access	Alexander Massey, <i>Henry Royce Institute</i>
<b>1500 – 1515</b>	The Space Nanomaterials atom probe (SNAP) providing an atoms eye view of the Solar System	Luke Daly, <i>University of Glasgow</i>
<b>1515 – 1530</b>	An Update for the Microscopy Community from EPSRC	Neil Robinson, <i>EPSRC UKRI</i>
<b>1530 – 1600</b>	Break	
<b>1600 – 1610</b>	Automated Mineralogy: Faster, Smarter geological insights with MapsMin	Salomé Larmier, <i>Thermo Fisher Scientific</i>

Continued on the next page...

# Buehler machines used in petrography and electron microscopy (EBSD)

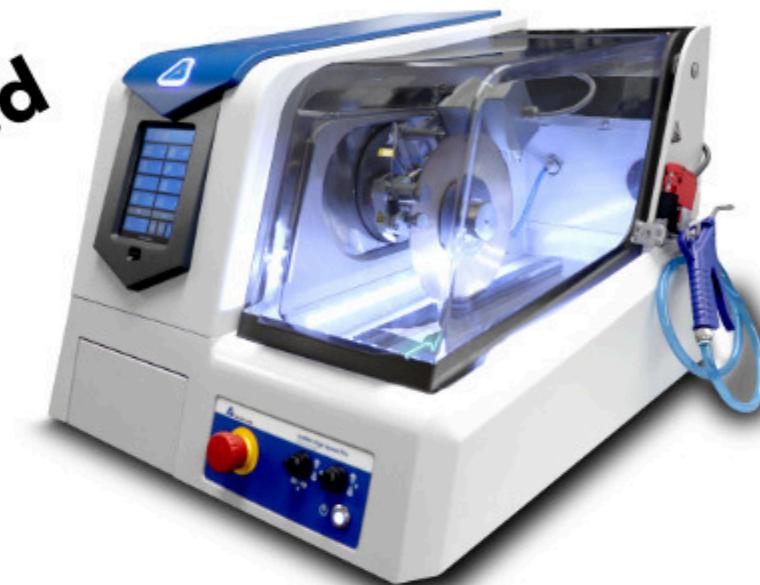
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## VIRTUAL POSTER SESSION

1610 – 1620	Resolving Mixed Spinel Signatures with EPMA Element Mapping in Metasomatized Peridotites	Danielle Carr, <i>University of Texas at Arlington</i>
1620 – 1630	The Macroscopic and microscopic mineralisation controlled by the Yanshanian movement surface in the Xitian area, Hunan Province, South Central China	Hongyuan Zhang, <i>China University of Geosciences (Beijing)</i>
1630 – 1640	High-resolution Scanning Electron Microscopy Imaging in Mudstone Thin Sections with Different Metallisation Alternatives	Mateus A Rodrigues, <i>Fluminense Federal University</i>
1640 – 1655	Lighting session	
1655 - 1830	Poster session & Drinks Reception	

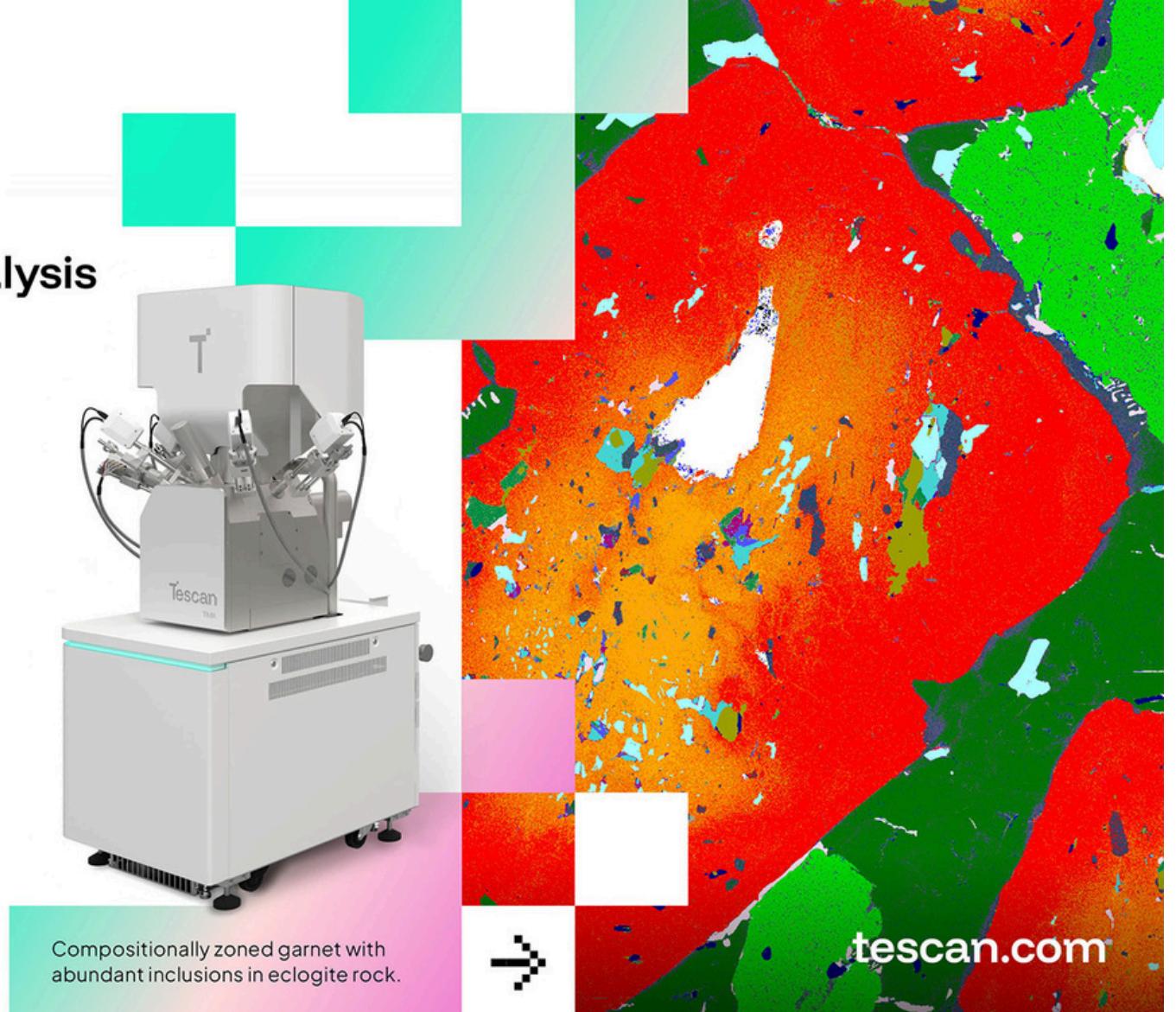
## Posters

Resolving Mixed Spinel Signatures with EPMA Element Mapping in Metasomatized Peridotites	Danielle Carr, <i>University of Texas at Arlington (Virtual)</i>
Telling the time with SEM-EDS: Application of quantitative EDS to diffusion chronometry	Joe Gardener, <i>University of Liverpool</i>
The macroscopic and microscopic mineralization controlled by the Yanshanian movement surface in the Xitian area, Hunan Province, South Central China	Hongyuan Zhang, <i>China University of Geoscience, Beijing (Virtual)</i>
Quantifying Porosity and Mineralogy in Rock Samples through Integrated SEM/EDS and Machine Learning Approaches	Joyce Schmatz, <i>MaP - Microstructure and Pores GmbH</i>
High-resolution Scanning Electron Microscopy Imaging in Mudstone Thin Sections with Different Metallization Alternatives	Renan de Melo Correia Lima / Mateus A. Rodrigues, <i>Fluminense Federal University (Virtual)</i>

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The combined Automated Petrography and Microanalysis solution for Geoscientists

- Identify and quantify minerals automatically
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- Pinpoint locations of specific minerals
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- Estimate presence of elements not detected by EDS



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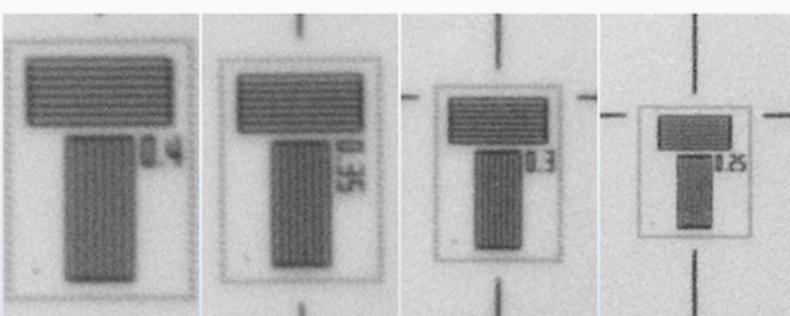
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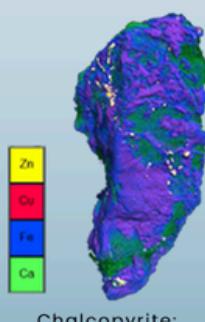
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Chalcopyrite:  
N90 Optional  
XRF Module



Roman Concrete:  
20um

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Friday 27 February 2026

0900 - 0930	Registration & Coffee	
0930 - 1000	Panel Discussion: Collaboration in Lab Management, challenges, opportunities, and the eternal quest for funding	
1000 - 1010	Improved geological phase discrimination using spherical indexing	Rene De Kloe, <i>Gatan/EDAX</i>
1010 - 1030	Microscopic Meteorites: Art, Science and Stories from space	Lorelei Robertson, <i>University of Nottingham</i>
1030 - 1050	Building a pilot open-access correlative rock microscope	Marco A. Acevedo Zamora, <i>Queensland University of Technology</i>
1050 - 1110	Lithium to Uranium: A New Analytical SEM for Environmental Research hosted by UCL Earth Sciences	Andy Thompson, <i>University College London</i>
1110 - 1150	Break	
<b>THEME THREE</b>		
1150 - 1210	Micro to nanoscale characterisation of olivine, wadsleyite and ringwoodite in the Catherwood L6 ordinary chondrite and implications for the evolution of high-pressure mineral assemblages in planetary materials	Lee White, <i>Open University</i>
1210 - 1230	Hydrothermal Alteration of Isle of Rum Peridotite – A Jezero Crater Analogue	Cesca Willcocks, <i>University of Leicester</i>
1230 - 1250	Constraints on Basaltic Volcanism on Vesta: Insights from Pb-Pb Isotope Systematics in Eucrites	Hayley Lowe, <i>University of Manchester (Virtual)</i>
1250 - 1410	Lunch & Sponsor Networking	
1410 - 1420	Light Element Chemical State Analysis with New Soft X-ray Grating for SEM	Calum Dickinson, <i>JEOL (UK) Ltd</i>
<b>THEME FOUR</b>		
1420 - 1440	Analysis of the CM chondrite meteorite Winchcombe by FIB-TOFSIMS and SEM-EDS as advanced complimentary techniques	Diane Johnson, <i>Cranfield University</i>
1440 - 1500	4D STEM and Correlative EDS Analyses of Planetary Materials	Niamh Topping, <i>University of Leicester (Virtual)</i>
1500 - 1520	Novel Combinations of Quantum Diamond Microscopy and Electron Probe Microanalysis Reveal Intricate Intergrowths in an Unusual Meteorite	Jennifer T. Mitchell, <i>University of Minnesota</i>
1520 - 1530	Title TBC	Bruker
1530 - 1600	Break	
<b>THEME FIVE</b>		
1600 - 1650	<b>Keynote:</b> Laser-induced breakdown spectroscopy (LIBS) as a tool for planetary exploration: From the macroscale to the microscale on Mars and beyond.	Candice Bedford, <i>Purdue University (Virtual)</i>
1650 - 1710	GSL Publications & closing words	

## Convenors:

**Natasha Stephen** (GSL & Imperial College London, UK)

**Cesca Willcocks** (University of Leicester, UK)

**Duncan Muir** (Cardiff University, UK)

**Jen Mitchell** (University of Minnesota, USA)

**THANK YOU**

**+44 (0) 20 7434 9944**

**conference@geolsoc.org.uk**



**The  
Geological  
Society**

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