I·M3 SEC

Future Materials, Minerals & Mining Conference 2025

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10 NOVEMBER 2025

I·M3 Institute of Materials, Minerals & Mining

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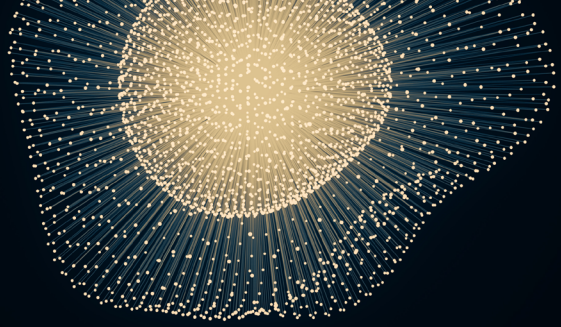
Welcome to

Future Materials, Minerals & Mining Conference 2025



It is our great pleasure to welcome you to the 2025 Future Materials, Minerals & Mining conference, organised by the IOM3 Student & Early Career Group.

Building on the success of previous editions held in Leeds, Birmingham and Coventry, this year's conference continues our commitment to providing a platform for student and early career professionals to showcase their innovative and forward-thinking work. The event brings together participants from across academia and industry, both in the UK and internationally, reflecting the diversity and creativity of our community.

Today's programme features a full and engaging agenda, including technical presentations, an interactive panel on career progression, poster sessions, and a display of the 2025 Image Competition shortlisted entries. We are also delighted to conclude the day with our annual Art Lecture, presented this year by Sophie Boons, who will explore the fascinating topic of *Neo-gemstones*®.

This event would not be possible without the generous support of our sponsors. We extend our sincere thanks to The Worshipful Company of Armourers & Brasiers, the East Midlands Materials Society, the Coventry & Warwickshire Materials Society, and the Midlands Packaging Society. Their contributions play a vital role in supporting the professional growth and development of our student and early career network.

To all delegates, we thank you for your participation and enthusiasm. We encourage you to share ideas, build connections, and explore new collaborations, whether within your field or beyond. You never know where an inspiring conversation might lead.

We wish you an engaging, rewarding, and inspiring conference experience.

Dr Michael Kenyon MIMMM | Conference co-Chair & Vice-Chair, IOM3 SEC Group
Hannah Hilton-Tapp | Conference co-Chair

About the SEC Group

The SECC represents the views of student, younger and early career members to the Institute's Executive Boards and Advisory Council. We aim to represent the diverse range of members by ensuring Council representatives cover the different disciplines, regions and career pathways of student and early career members.

Since the Committee was founded in 1967 (as the Younger Members' Committee), we have developed a range of events to encourage networking and early career members' involvement with IOM3.

Our greatest successes to date include the Young Persons' Lecture Competition, Matopoly, Professional Development events and Future Materials Conference. While we have been successful in the past, we aim to provide more events in the future. These include regular informal networking opportunities, along with new skills seminars, conferences and regional events.

bit.ly/IOM3_SECC

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The Worshipful Company of Armourers & Brasiers

The Armourers & Brasiers' Company is one of the largest private sponsors of education and research in Materials Science in the UK. It is a livery company of the City of London, tracing its origins back to 1322. The Company's home, Armourers' Hall, has occupied the same site since 1346. The Armourers & Brasiers were engaged in the control and development of the armour and brass trades in London from medieval times until the industrial revolution, ensuring quality control, supporting the training of apprentices and encouraging manufacturing innovation. From its beginnings the Company engaged in philanthropy. In earlier centuries this was largely for the welfare of its members and their dependents but since Victorian times it has increasingly targeted its charitable giving towards science education and research, with a particular focus on Materials Science. Currently it gives over £220,000 each year for this purpose, mainly in small grants to numerous beneficiaries ranging from primary schools through to universities. In July 2020 the Company through its charitable arm the Gauntlet Trust, gave its largest ever gift to established the Armourers & Brasiers Chair in Materials Science at Imperial College to mark its 700th Anniversary in 2022.

www.armourershall.co.uk/

Midlands Packaging Society | MPKgS

The Midlands Packaging Society is an Affiliated Local Society of the Institute of Materials, Minerals & Mining (IOM3).

- We support the activities of the Packaging Group (formally the Packaging Society), which is a technical community within IOM3.
- We link professionals in packaging development, design, manufacture, packer / filler, retail, sustainability and recovery to promote the sharing of knowledge and best practice across the food & drink, cosmetics & toiletries, pharmaceutical with other industrial and commercial sectors.
- We promote the science, technology and benefits of packaging materials and components including the supply chain processes.

Globally and within the UK, government interventions into packaging is unprecedented with legislation such as the Plastic Tax, Extended Producer Responsibility (EPR), Deposit Return Scheme (DRS), carbon emission reductions, green washing and product labelling. Advice seems to be everywhere – do use / don't use some materials e.g. paper v plastic or alternatives e.g. compostable and, of course, the drive to better design for the future in a circular economy and reduce waste. We are here to provide objective information, offering packaging support and advice.

midlandspackagingsociety.org/

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East Midlands Materials Society

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East Midlands Materials Society | EMMS

East Midlands Materials Society is proud to support the SEC Group Future Materials, Minerals and Mining Conference.

EMMS is a Local Society affiliated to IOM3 which has technical meetings in Derby, Leicester, Lincoln, Loughborough and Nottingham and has been in existence since 1950. We have also run successful conferences with the last one taking place last June on tribology.

We are fortunate to receive support from Rolls-Royce and the Universities of Derby, Leicester, Lincoln, Loughborough Nottingham and Nottingham Trent. Our attendees include people from local industry, research institutes, colleges and the universities. We do much to support our local students, sponsoring many of them to become members of IOM3. We also refund travel expenses for students travelling to meetings and give financial support for students to attend and present papers at conferences. We also support local schools, co-sponsoring local IOM3 school events.

We have met the challenge of running virtual events. As part of our annual programme, we now include virtual only talks in the winter months and, for talks we hold physically, these are live streamed as well. Holding meetings virtually has allowed participation of those that find it difficult to physically attend. Virtual only meetings allow us to have international speakers. Last season we had a talk on carbon capture materials from a Professor at the North Carolina State University.

Most of our committee members have full-time careers, so we run the society with a minimum number of virtual committee meetings, doing most of our business by electronic communication. We are a lean, well run Local Society, making a significant contribution to the region.

We are also delighted that we have been awarded the IOM3 Local Society of the Year 2024.

bit.ly/IOM3_EMMS

Coventry & Warwickshire Materials Society

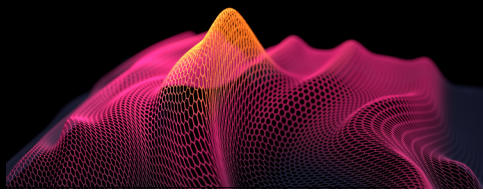
Affiliated with I·M3

Coventry & Warwickshire Materials Society (CWMS)

CWMS organise meetings that provide informative talks on diverse subjects relevant to materials and which contribute to continuing professional development for IOM3 members.

www.iom3.org/group/coventry-warwickshire-materials-society-cwms.html

Programme at a glance



8.30	**Registration & coffee**
9.00	**Welcome & Opening remarks** Dr Michael Kenyon MIMMM
9.05	**KEYNOTE:** ***Designing Sustainable Multifunctional Polymer Composites for a Smart and Resilient Future*** Dr Yi Liu MIMMM | Loughborough University
9.35	**SESSION 1 | Chair: Dr Ilija Rasovic MIMMM | Chair, IOM3 SEC Group**
	System of a Down Under: Lessons from the Australian system for strength grading recovered timber Marlene Cramer | Edinburgh Napier University
	Graphene Enhanced Elastomer Nanocomposites for Industrial and Artificial Intelligence Applications Christian Nwosu | National Graphene Institute & Department of Materials, The University of Manchester
	Predicting Copper Prospectivity with Plate Tectonic Reconstructions and Artificial Intelligence Dr Edward Clennett | Birkbeck, University of London
10.35	**Break & networking**
11.00	**KEYNOTE:** ***IOM3 Policy: How can I influence change?*** Rachel Stonehouse MIMMM | Head of Policy at IOM3
11.30	**SESSION 2 | Chair: Dr Ilija Rasovic MIMMM | Chair, IOM3 SEC Group**
	Seaweed-derived coating application to paper as an alternative to plastic food packaging Jennifer Woods*, Qiuyun Liu & Graham Ormondroyd | BioComposites Centre, Bangor University
	Speciation, Distribution & Paragenesis of Carbonate Minerals at the Ikkari Gold Deposit, Finland: Implications for Block Modelling Megan-Mia de Kock*, Tim Wright, Mark Roberts, Diana Brookshaw & Craig Hartshome | Mine Environment Management
	Carburisation for Decarbonisation Oscar Stephenson, Sally-Anne Hale & Paul French | Aalberts Surface Technologies
	Dynamic Pressure-Sensitive Adhesion in Liquid Crystal Elastomers *Mohand Saed* & Lichang Lu | University of Cambridge*

12.50	**Lunch & Networking**
14.00	**KEYNOTE:** ***The Plastic process*** Daniel Warren CEng MIMMM | Styrene Packing & Insulation Ltd
14.30	**KEYNOTE:** ***Discover Materials*** Dr Chris Hamlett | Discover Materials Ambassador
15.00	*IOM3 Membership* Jamie Graham MIMMM| IOM3 Membership Development Manager
15.30	**Break & Poster presentations**
16.00	**KEYNOTE:** ***From Holey Surfaces to Hairy Spheres (with a sprinkling of perspective in between)*** Dr Matthew Wadge MIMMM | Manchester Metropolitan University
16.30	**Chair: Dr Michael Kenyon MIMMM | Vice-Chair, IOM3 SEC Group**
	Motivation, career progression and sector challenges Dr Yi Liu MIMMM | Loughborough University Daniel Warren CEng MIMMM | Styrene Packing & Insulation Ltd Dr Matthew Wadge MIMMM | Manchester Metropolitan University Dr Chris Hamlett | Discover Materials Ambassador
17.25	**Closing remarks** Dr Michael Kenyon MIMMM & Dr Ilija Rasovic MIMMM
17.30	**Drinks**

Programme & Abstracts

8.30 **Registration/Coffee**

9.00 **Welcome & Opening remarks**
Dr Michael Kenyon MIMMM

9.05 **KEYNOTE: *Designing Sustainable Multifunctional Polymer Composites for a Smart and Resilient Future***
Dr Yi Liu MIMMM | Loughborough University

In this talk, Dr Yi Liu will reflect on her academic career journey to introduce research advances in sustainable and multifunctional polymer composites. She will highlight key milestones in developing materials that balance performance, recyclability, and broader sustainability goals. Alongside the technical narrative, she will share experiences, lessons learned, and practical advice for early career researchers, offering perspectives on building a resilient and impactful research career in materials science.

9.35 **SESSION 1 | Chair: Dr Ilija Rasovic MIMMM | Chair, IOM3 SEC Group**

System of a Down Under: Lessons from the Australian system for strength grading recovered timber
Marlene Cramer | Edinburgh Napier University

Timber is a renewable yet not infinite resource. With rising timber demands and increasing pressures on forests due to climate change, pests, and diseases, we need to rethink our timber supply chains to become more circular and prioritise reuse before recycling and incineration. The structural reuse of timber, however, is not yet possible at scale because no grading standards for recovered timber exist in the UK. In order to develop such standards (on UK or European level), we need to address a number of challenges: Species, origin and history of the wood are unknown, and aging or degradation during the timbers first use might have decreased its properties. While these challenges are discussed by researchers in Europe, an Interim Industry Standard on the strength grading of (tropical) hardwoods has been in use on the other side of the world for more than a decade. The IOM3 provided me with a Grant to Support Knowledge Exchange to travel to Australia and learn first-hand from the authors of the standard and researchers at the University of Queensland on how recovered timber is graded and which research went into the development of the standard. The standard assumes that strength reduces due to duration of load effects during the service life of the timber, while stiffness remains largely unchanged. The assumption is based on rather small-scale test series and historic research on softwoods, and, while probably safe, is debated by industry stakeholders who would like to see a smaller reduction in design properties.

Graphene Enhanced Elastomer Nanocomposites for Industrial and Artificial Intelligence Applications

Christian Nwosu | National Graphene Institute & Department of Materials, The University of Manchester

Reinforcement of elastomer materials is at the core of their prospective utilisation as high-performing engineering materials for industrial and artificial intelligence (AI) advancement. This study explores the toughening of bio-friendly water-based elastomer (BWE) materials with sustainable graphene materials. Here, state-of-the-art advanced techniques such as Raman Spectroscopy, X-ray Diffraction (XRD), Fourier Transform Infrared (FTIR) Spectroscopy, Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM) and Optical Microscopy were employed to comprehensively analyse and study the graphene-elastomer nanocomposites produced, as well as the characterisation of the nanomaterials utilised in this work. Providing significant understanding on the graphene-BWE nanocomposites (G-BWEN) reinforcement mechanisms. Detailed mechanical analysis was undertaken through both static tensile and dynamic mechanical evaluations, with robust improvement in mechanical properties realised following graphene incorporation. Furthermore, thorough assessment of the G-BWEN thermal property behaviour indicates that graphene materials introduction strongly influences the thermal stability performance of the nanocomposites such as glass transition temperature and melting, with remarkable enhancement in thermal degradation resistance. Additionally, in-depth evaluation of the G-BWEN fracture mechanisms were explored in this research, offering deep insight on the dominant failure promoters obtainable in G-BWEN systems. Through detailed investigation conducted in this research as well as the improved mechanical and thermal property performance achieved here, efficient uptake of G-BWEN as reliable materials is assured for application in AI development for sensors, healthcare devices and soft robotics, as well as for use in industrial sectors like electronics, aerospace and automotive.

Predicting Copper Prospectivity with Plate Tectonic Reconstructions and Artificial Intelligence

Dr Edward Clennett | Birkbeck, University of London

Copper porphyry systems, which account for ~70% of global copper production, are known to be strongly controlled by plate tectonics. For example, tectonic parameters such as plate convergence rate, redox state, water content and crustal thickness have been suggested to be important in modulating the size of copper porphyry deposits; however, the relative importance of these factors is unclear. To account for these multiple factors, we extract tectonic parameters from plate reconstruction models and apply supervised machine learning algorithms to identify which parameters are most important in the recipe for copper porphyry formation in North America. We train and test the machine learning model on known copper porphyry systems and then search through the plate reconstructions to identify other regions with similar tectonic conditions, which could open opportunities for greenfield mineral exploration in North America. To account for uncertainty in the plate tectonic history, we use three contrasting plate reconstructions with varying numbers and polarities of subduction in the region. We find that the probability of forming a copper porphyry deposit at a given location can differ by up to 90% depending on the plate reconstruction used, highlighting the importance of improving our understanding of plate tectonic history. However, results from all three models consistently show southern Mexico as having the highest probability of finding copper porphyry systems, suggesting that this underexplored area could be a promising location for future mineral exploration. This research highlights the potential of combining plate reconstructions with AI for practical applications of societal relevance.

10.35 Break & networking

11.00 KEYNOTE: *IOM3 Policy: How can I influence change?*
Rachel Stonehouse MIMMM | Head of Policy at IOM3

IOM3 helps shape government policy by drawing on the collective knowledge and experience of its members to drive positive change. This session will explore how IOM3 engages in policy conversations, why this matters and showcase recent examples. It will also break down how you can get involved, why your perspective matters and how contributing can support your professional development.

11.30 SESSION 2 | Chair: Dr Ilija Raovic MIMMM | Chair, IOM3 SEC Group

Seaweed-derived coating application to paper as an alternative to plastic food packaging
Jennifer Woods*, Qiuyun Liu & Graham Ormondroyd | BioComposites Centre, Bangor University

Flexible plastic films have dominated food packaging for over seven decades because of their exceptional barrier properties against gases and liquids. However, these films are typically composed of multiple polymer layers that make it challenging and uneconomical to separate for recycling, leading to increased environmental concerns. Recent research has therefore focused on sustainable alternatives such as coated paper systems. Paper alone exhibits poor barrier properties to oxygen, water, and grease due to its hydrophilic cellulose structure. To address this, surface coatings can be applied to improve both the physical and mechanical performance of paper. This research explores seaweed-derived alginate as a biobased barrier coating for paper to replace conventional plastic films in food packaging. Key performance parameters include resistance to water and grease—which is critical for maintaining food quality and shelf life. This research targets a water vapour transmission rate (WVTR) below 1 $g/m^2 \cdot day$ and water Cobb60 values below 10 g/m^2. The alginate coatings successfully reduced the WVTR of 87µm uncoated specialty paper from 21 $g/m^2 \cdot day$ to 10 $g/m^2 \cdot day$, outperforming the commercial benchmark glassine paper (27 $g/m^2 \cdot day$). Cobb testing showed a decrease from 27 g/m^2 for uncoated paper to 4 g/m^2 for alginate-coated samples, matching glassine's performance. These findings indicate that alginate coatings can provide significant water and grease resistance, supporting the development of renewable, recyclable, and biodegradable packaging materials. This work contributes to progressing sustainable solutions in food packaging and reducing dependence on synthetic plastics.

Speciation, Distribution & Paragenesis of Carbonate Minerals at the Ikkari Gold Deposit, Finland: Implications for Block Modelling

Megan-Mia de Kock*, Tim Wright, Mark Roberts, Diana Brookshaw & Craig Hartshome | Mine Environment Management

The Ikkari gold deposit, located in the Central Lapland Greenstone Belt of northern Finland, consists of a structurally complex volcano-sedimentary sequence that has undergone greenschist facies metamorphism and several hydrothermal alteration events. A variety of carbonate minerals are present - mainly dolomite, siderite, and calcite - which are important for evaluating the deposit's overall acid mine drainage (AMD) characteristics including acid-neutralising potential (NP). While calcium- and magnesium-rich phases (calcite and dolomite) can act as effective buffers to potential acidity, iron-bearing carbonates (e.g. siderite) can exhibit more complex net-buffering characteristics, depending on their oxidation state. This study investigates the speciation, paragenesis and distribution of these carbonate minerals to assess whether the mineral domains are more closely associated with ore and waste zones or with lithological units at Ikkari. Ca, Mg, and Fe served as the primary elements for carbonate identification. Whole-rock geochemistry alone is not suitable for carbonate phase identification due to the presence of silicates and oxides. Accordingly, representative samples were selected and analysed using a combined application of petrographic analysis, Raman spectroscopy, micro X-ray fluorescence, and thin section staining, alongside validation from X-ray diffraction (XRD) and scanning electron microscopy (SEM). Drill core samples were analysed to develop paragenetic sequences, and ternary Ca-Mg-Fe diagrams were used to classify the different carbonate assemblages. The outcome of this research intends to build a more comprehensive geological understanding to further support and inform the environmental characterisation block model and associated risk assessments.

Carburisation for Decarbonisation

Oscar Stephenson, Sally-Anne Hale & Paul French | Aalberts Surface Technologies

Heat treatment companies play in important role in supporting industries that manufacture goods/products which enable a transition to a decarbonized future. This sector provides services for products with metallic materials including: Tufftriding, salt bath treatments, carburisation, low-pressure carburization (LPC), sealed-oil quench (SQ) and vacuum heat treatments. This provides design authorities with services to improve material performance and enables the design and manufacture of goods for the road to Net-Zero. The industries which use goods from heat treatment includes: Motorsport, Aerospace, Oil & Gas, Defense, and Energy. The move for decarbonization involves the manufacture/development of either new or existing products to those with lower carbon footprints or with Net-zero capabilities. This includes how the potential material/process developments in other industries that bring once brought to market can be supported by heat treatment, and how the heat treatment industry is moving to reduce its carbon footprint with the development of new processes and investigative services. Whether this is through substantiation trails, utilizing existing processes, moving from SQ to LPC processes for carburization or the investigation of raw and processed material using hardness testing and microscopy.

Dynamic Pressure-Sensitive Adhesion in Liquid Crystal Elastomers
Mohand Saed* & Lichang Lu | University of Cambridge

Nematic liquid crystal elastomers (LCEs) are known for their exceptional viscoelastic dissipation and energy damping properties, which are believed to contribute to their unusually strong pressure-sensitive adhesion (PSA). In this study, we explore the mechanism behind this enhanced PSA by fabricating thin adhesive tapes with LCEs of different chemical formulations, analyzing their material and surface properties, and evaluating their adhesion performance through standard tests, including 90-degree peel, lap shear, and probe tack tests. Our results confirm that the LCE adhesive exhibits high adhesion strength and tackiness in the nematic phase, while showing low adhesion strength and tackiness in the isotropic phase. Furthermore, we demonstrate that by modifying the LCE polymer network architecture, it is possible to fine-tune the viscoelastic properties to meet the Dahlquist Criterion for ideal PSA, which requires a glass transition temperature around 0°C and a shear modulus of approximately 0.1 MPa at room temperature.

12.50 **Lunch & Networking**

14.00 **KEYNOTE: *The Plastic process***
Daniel Warren CEng MIMMM | Styrene Packing & Insulation Ltd

Dan's journey with polymers may have started back at university with an academic bias, but in recent years through his work at Farrat and Styrene, as with many others he has noticed the volume of conversations around sustainability, plastic pollution and environmental harm grow. The 'process' of polymers and plastics does not simply end after their creation, and a big-picture thinking mentality is needed to consider how these materials are treated at end-of-life as well as throughout their serviced application. This mentality applies as much to the humans handling and using them, as it does to the design of the materials and the systems surrounding them. This talk will dive into the human relationship with polymers, why they consistently make the headlines, and if the negative press attached to 'plastics' is truly deserved.

14.30 **KEYNOTE: *Discover Materials***
Dr Chris Hamlett | Discover Materials Ambassador

This presentation will give an overview of the Discover Materials group (a working group set up in 2018 to promote Materials Science and Engineering) and how the work of this group has engaged both school children and their parents and teachers and our progress to date. Some examples of the groups' activity will be introduced and also ways in which people can get involved via the Discover Materials Ambassador scheme.

15.00 ***IOM3 Membership***
Jamie Graham MIMMM | IOM3 Membership Development Manager

At whatever stage of your career you may be, we want you to feel part of the wider materials, minerals and mining community. Find out more about the plethora of membership benefits including funding, awards eligibility, professional registration and a lot more.

15.30 **Break & Poster presentations**

Quantifying the Structural Impact of Geometric Deviations in 3D Printed Geopolymer Concrete
Priyanshu Sinha, Muhammad Ittfaq, Dr Rakesh Gopinath & Dr Richard Ball | University of West England

Recycled Polypropylene Under Tension: Performance Challenges and Feedstock Strategies for Sustainable Plastics
Megan Clement, Prof Stuart Coles & Prof Kurt Debattista | Warwick Manufacturing Group

Seaweed-derived coating application to paper as an alternative to plastic food packaging
Jennifer Wood, Qiuyun Liu & Graham Ormondroyd | BioComposites Centre, Bangor University

Strong and Reversible Pressure-sensitive Adhesives Enabled by Liquid Crystal Elastomers via Chain-Transfer Reactions
Lichang Lu & Mohand Saed | University of Cambridge

Coupling stress and microstructural evolution of steam oxidised EBCs
Dr Dan Scotson, Hilmi Paksoy & Esma Yilmaz | University of Manchester

Unravelling Creep Cavitation Mechanisms in Ta-Modified CSEF Steels via Plasma FIB Serial Sectioning and 3D Electron Microscopy
Dr Yuki Zhang, Stuart Robertson & Simon Hogg | Loughborough University

Understanding Interface Failure Mechanisms in Injection Overmoulded Composite Joints
Dr Jesus Molinar-Diaz, Andrew J Parsons & Lee T Harper | University of Nottingham

Wearable Body Temperature Sensing with Autonomous Self-regulated Joule Heating and Passive Cooling for Healthcare Applications
Hongxu Guo, Lichang Lu, Fiona Hatton, Lulu Xu & Yi Liu | Loughborough University

Investigating and monitoring surface degradation of Drop Hammer dies during service life
Christopher Foster | University of Sheffield

16.00 **KEYNOTE:** ***From Holey Surfaces to Hairy Spheres (with a sprinkling of perspective in between)***
Dr Matthew Wadge MIMMM | Manchester Metropolitan University

In this talk, Dr. Matthew Wadge shares a candid and personal account of his academic journey, weaving together the milestones and experiences that have shaped his career to date. He reflects on successes, challenges, and opportunities that have influenced his path, including an open and honest discussion about navigating academic life while managing mental health struggles. Alongside this personal narrative, Dr. Wadge will present an overview of his research into biomedical titanate surfaces: porous materials designed to enhance bone healing, while simultaneously eliminating bacteria without relying on antibiotics.

Chair: Dr Michael Kenyon MIMMM | Conference co-Chair & Vice-Chair, IOM3 SEC Group

16.30 ***Motivation, career progression and sector challenges***
Dr Yi Liu MIMMM | Loughborough University
Daniel Warren CEng MIMMM | Styrene Packing & Insulation Ltd
Dr Matthew Wadge MIMMM | Manchester Metropolitan University
Dr Chris Hamlett | Discover Materials Ambassador

IOM3 members from different disciplines and at different career paths discuss challenges and benefits of planning their career.

17.25 **Closing remarks**
Dr Michael Kenyon MIMMM & Dr Ilija Rasovic MIMMM

17.30 **Drinks**

ONLINE FINAL 2025

12.00 GMT, Thursday 27 November

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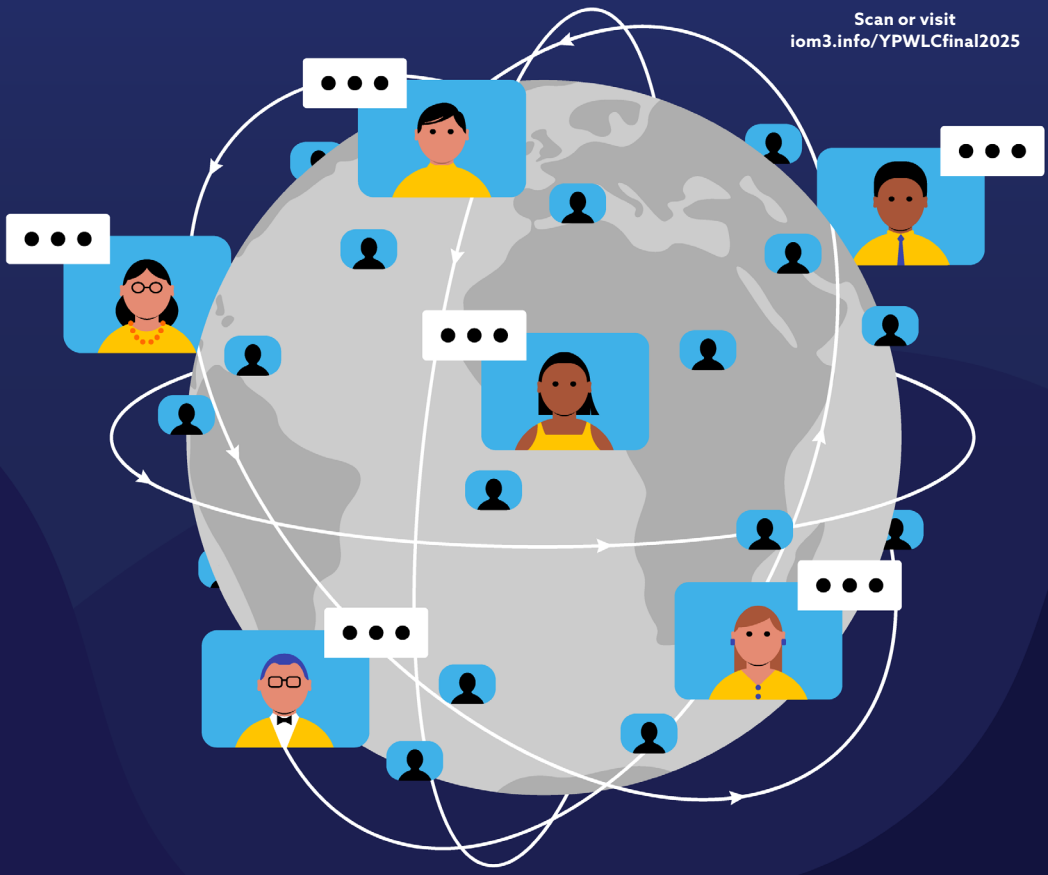

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ART LECTURE

Neo-gemstones®

10 November 2025, 6.30 – 8pm
Millennium Point, Birmingham

With crystal growing techniques having been around since the 19th century, man-made crystals now drive innovations in various industries. This has, however, not fully translated into the jewellery industry, where they continue to be the subject of great debate.

The lecture will provide an overview of Sofie Boons' PhD research titled *Neo-gemstones: An Alchemical Jeweller's Exploration of Lab-grown Crystals and Related Technologies, Proposing Innovations Whilst Challenging Context, Terminology, and Underlying Assumptions*.

STICK AROUND FOR OUR FREE ART LECTURE TONIGHT!

Find out more about awards, competitions and funding opportunities, upcoming events and recordings, relevant news SEC Committee opinion pieces and blogs, and all resources relevant to student and early career professionals.

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