

29th & 30th June 2022
NEC, Birmingham, UK

SHOW GUIDE

The UK's Advanced
Technology & Innovation Show

INSIDE: Show App, Floorplan & Exhibitor List, Conference
Agenda, Show Features, Visitor Information and More!

CONFERENCE OVERVIEW

Each of our four co-located expos feature a dedicated stage of content focused on high-value manufacturing industries and their applications. These sectors together represent billions of pounds worth of opportunity and market growth for both UK and international businesses.

The Advanced Materials Show and Ceramics UK conferences' blended programme features two tracks tackling the challenges and opportunities in materials innovation and materials industrialisation respectively. This includes sessions on composites, coatings, lightweighting materials, sustainability and additive manufacturing - with applications and case studies featured in aerospace, automotive, construction and semiconductors amongst others.

The co-located and concurrent Battery Cells & Systems Expo and Vehicle Electrification Expo conference has one theatre dedicated to battery development, with discussions on everything from cell chemistry and pack design to fast charging, recycling and second life. The second theatre is set to tackle broader electrification and manufacturing strategy such as sustainability, supply chain and skills. Alongside this, the theatre will feature bus/truck electrification and powertrain-focused design and development sessions and include electric motors, powertrain design and power electronics

All our theatres will provide ample opportunity for interactive panel discussions, Q&A sessions and on stage interviews to allow everyone to have their questions and ideas voiced and answered with peers. Attendees can expect to enjoy a lively and constructive set of discussions at a time when these sectors are booming and look set to grow exponentially in the coming years.



Olivia Ryan-Hill
Conference Director
Event Partners



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CONFERENCE AGENDA

DAY 1 - WEDNESDAY 29TH JUNE - MORNING

9.30am - 10.45am

Theatre A

Track 1

Keynote: Placing Sustainability at the Heart of Advanced Materials Fabrication and Application

Frazer Barnes, Chairman and CTO, **Gen 2 Carbon Ltd** (*Chair*)

Annalisa Gigante, Board Member, **Henry Royce Institute**

Dr. Geoff Mackey, Sustainability and Corporate Affairs Director, **BASF**

Dr. Bruce Adderley, Challenge Director Transforming Foundation Industries, **Innovate UK**, part of **UKRI**

11.15am - 12.30pm

Theatre A

Track 1

Keynote: How Have the Past Two Years Impacted the Direction of Innovation?

James Baker, CEO, **Graphene @ Manchester** (*Chair*)

Dr. Laura Baker, Head of Product Development, **Tata Steel**

Dr. Steven Harris, Director of Partnerships, **BAE Systems**

Tony Kinsella, CEO, **Lucideon**

Landon Mertz, CEO, **Cerion Nanomaterials**

DAY 1 - WEDNESDAY 29TH JUNE - AFTERNOON

13.45pm - 15.00pm

Theatre A

Track 1


The Role of Advanced Materials Innovation in Mitigating Carbon Emissions

Dr. Ania Jolly, Head of Research and Business Engagement, **Henry Royce Institute** (*Chair*)

Michelle Lynch, Director, **Enabled Future**

Dr. Hydra Rodrigues, Technology Analyst, **IDTech EX**

Dr. Jack Turner, Senior Technical Scientist, **Promethean Particles**



Download our app to
connect with speakers
and see the detailed
conference sessions



CONFERENCE AGENDA

DAY 1 - WEDNESDAY 29TH JUNE - AFTERNOON

13.45pm - 15.00pm

Theatre B

Track 2

Improving Agility in Materials Manufacturing Process Innovation

Dr. Craig Dawson, Graphene Application Development Manager, **Graphene Engineering Innovation Centre** (*Chair*)

Dr. David Pearmain, Business Manager - Flash Sintering, **Lucideon**

Dr. Jibran Khaliq, Programme Leader and Senior Lecturer in Mechanical and Automotive Engineering, Department of Mechanical & Construction Engineering, **Northumbria University**

Daniel Steitz, Founder and CIO, **NovoMOF**

Prof. David Nowell, Professor of Machine Dynamics and Director, **Rolls-Royce University Technology Centre, Imperial College London** / Fellow, **IMEchE** / Fellow, **The Institute for Materials, Minerals and Mining**

15.15pm - 16.30pm

Theatre A

Track 1

Developing Durable Non-Toxic Coatings for Corrosive Environments

Prof. Allan Matthews, Director of the Digitalised Surfaces Manufacturing Network, **The University of Manchester** (*Chair*)

Prof. Stuart Lyon, AkzoNobel Professor of Corrosion Control, **The University of Manchester**

Michelle Buckland, Group Commercial Director, **Teknos**

15.15pm - 16.30pm

Theatre B

Track 2

Harnessing the Power of Additive Manufacturing in Advanced Materials

Sona Dadhanian, Technology Analyst, **IDTechEx** (*Chair*)

Dror Danai, Chief Business Officer, **XJet**

Martin Mann, Head of Sales, **Lithoz**

Arnaud Roux, Business Development Manager, **3DCeram**

Sherry Ghanizadehm, Ceramic Additive Manufacturing Technology Lead, **The Manufacturing Technology Centre - MTC**

Dr. Glenn Lamming, Research Scientist, **UK-CPI**

CONFERENCE AGENDA

DAY 2 - THURSDAY 30TH JUNE - MORNING

9.30am - 10.45am

Theatre A

Track 1

Transportation Lightweighting for Planet and Profit

Dr. Klaudio Bari, Principal Lecturer in Mechanical and Material Engineering, **University of Wolverhampton** (*Chair*)

Clare Sibley, Head of Quality & Manufacturing Engineering, **Williams Racing**

Alan Banks, UK Lightweight Innovations Manager, **Ford**

John Phipps, Business Development Manager, Advanced Materials Division, North Europe, **3M**

9.30am - 10.45am

Theatre B

Track 2

Making Materials Manufacturing Sustainable

Dr. Andrew McDermott, Technical Director, **British Ceramic Confederation** (*Chair*)

Dr. Thomas Werninghaus, Senior Business Development Manager, **Kyocera**

Rob Munro, Industrial Associate - Institute for Manufacturing, **University of Cambridge**

Dr. Ben Walsh, Deputy Challenge Director, Transforming Foundation Industries, **Innovate UK, part of UKRI**

Dr. Beenish Siddique, Founder and CEO, **AEH Innovative Hydrogel**

11.15am - 12.30pm

Theatre A

Track 1

Sustainability and the Semiconductor Dimension - Breaking the 'Smaller, Faster, Cheaper' Innovation Mantra

Prof. Mo Missous, Professor of Semiconductor Materials and Devices, **Manchester University** (*Chair*)

Andy Sellars, Strategic Development Director, **CSA Catapult**

Caroline O'Brien, CEO, **Kubos Semiconductors**

Dr. Hugh Glass, Technology Owner, **Paragraf**

Dr. Anwsha Fernandes, Senior Materials Engineer, **Dynex Semiconductor Ltd**

11.15am - 12.30pm

Theatre B

Track 2

The Growing Role of Digital Tools in New Materials Development and Commercialisation

Dr. Sean Kelly, Senior Project Manager, **Nanotechnology Industries Association** (*Chair*)

Dr. Joel Strickland, Materials Research Scientist, **Intellegens**

Jason Teng, Partner, UK and Europe - Patent Attorney, **Potter Clarkson LLP**

Andy White, Business Development Manager, **UK-CPI**

Alexander Reip, Chief Technical Officer, **Oxford NanoSystems**

CONFERENCE AGENDA

DAY 2 - THURSDAY 30TH JUNE - AFTERNOON

13.45pm - 14.45pm

Theatre A

Track 1

Enabling Durable Urban Development with Smarter Materials

Adrian Nixon, Director and Editor, **Nixene Publishing and Nixene Journal** (*Chair*)
Vighnesh Daas, Director - Innovation and Sustainable Construction, **JP Concrete**
James Baker, Chief Executive Officer, **Graphene@Manchester**
Alexandre de Toledo Corrêa, General Manager, **Gerdau Graphene**
Aled Roberts, CEO, **Deakin Bio-hybrid Materials**

13.45pm - 14.45pm

Theatre B

Track 2

Building Better Investment, Innovation and Skills Partnerships

Dr. Andy Wynn, CEO, **TTIP Global** (*Chair*)
Dr. Nessima Kaabeche, Coach For Women, **STEM**
Sarah Chapman, Chair, 3M EMEA Technical Women's Leadership Forum, **3M**
Rachel Timmins, Policy Manager, **British Ceramics Confederation**
Dr. Sarah Connolly, Innovation Technologist - Transforming Foundation Industries, **Innovate UK**

15.15pm - 16.30pm

Theatre A

Track 1

Meeting Next-Generation Composites and Polymer Application Requirements

Dr. James Myers, Head of R&D – Aerospace / Composite Applications, **Victrex**
Prof. Krzysztof Koziol, Professor of Composites Engineering, Head of Enhanced Composites and Structures Centre, **Cranfield University**
Marc Jacobs, CEO, **Molecular Plasma Group**
Rachel Weare, Lead Engineer | Automotive Composites Research Centre, **Warwick University**

15.15pm - 16.30pm

Theatre B

Track 2

Developing Consistent Materials with Advanced Characterisation Innovation

Terrance Barkan CAE, Executive Director, **Graphene Council** (*Chair*)
Dr. Andrew Elliot, Materials Specialist, **Carl Zeiss**
Dr. Fernando Castro, Head of Materials Science, **National Physical Laboratory**
Alex Van Den Bossche, Managing Director, **Grindosonic**

SPECIAL FEATURES - WHAT'S ON?

DAY 1 - Wednesday 29th June 2022

ROUND TABLES

Location: Stand 18-406

Sessions: 3.00pm – 4.30pm

Join these sessions to understand the latest in graphene development, the impact it is making across multiple sectors, its sustainability considerations, and learn how to design, implement, scale up and apply graphene.

Table 1: What are the Material Barriers and Enablers to Reaching Net Zero Targets?

Host: Ivan Buckley, Business Development Director, University of Manchester



Table 2: How to Decide on the Best Graphene Material for your Specific Application

Host: Manju Gunawardana, CEO, Ceylon Graphene Technologies



Table 3: Understanding the Environmental Impact of Graphene Related Materials

Host: Ranjith Divigalpitiya, Chief Scientific Officer, HydroGraph Clean Power



Table 4: The Stigma of Graphene: Discussing the Barriers to Entry and Path to Adoption

Host: Kevin Keith, CTO, MITO Material Solutions



Table 5: The Industrial Graphene Supply Chain: Applications at Scale

Host: Terrance Barkan, Executive Director, The Graphene Council



Sessions will be followed by a dedicated networking drinks reception. This is an exclusive opportunity to get to grips with the current and future graphene landscape.

DAY 2 - Thursday 30th June 2022



INTELLECTUAL PROPERTY SEMINAR

Location: Stand 18-406

Join Withers & Rogers on Thursday 30th June 12.00pm – 1.00pm

Expect an overview of the ways in which you can leverage commercial benefit from your innovations, including how to identify the intellectual property (IP) you have in your business, how to protect your IP assets, and how to use it to further your business goals. For example, looking at the tax benefits available, strategic use of IP to protect and improve your market position, and what to do with IP that is not core to your business.

Host: Gemma McGeough MSci, CPA, EPA, Patent Attorney, Withers & Rogers

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CO-LOCATED WITH:

MS&T22
MATERIALS SCIENCE & TECHNOLOGY

October 9-13, 2022 | David L. Lawrence Convention Center, Pittsburgh, PA, USA

3,000+ ATTENDEES
150+ EXHIBITORS
50+ SPEAKERS

REGISTRATION IS OPEN

Join us at the world-class conference and exhibition this October in Pittsburgh

October 11 – 12, 2022

David L. Lawrence Convention Center, Pittsburgh, USA

Conference Highlights:

- Transforming Energy Storage with Innovative Materials
 - Disruptive Nanoscale Device and Sensor Applications
 - Advances in Protective Coatings for Industrial Applications
 - Overcoming the Challenges of Manufacturing and Integration at Increased Volumes
- And many more!

REGISTER FOR FREE

Organizing societies:



What does it take to successfully scale up a nanomaterial?

INDUSTRY INSIGHT

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Incredibly exciting nanomaterials are being developed by the brightest minds on the planet. These materials promise unprecedented new properties, lower costs and improved performance for almost every product and industry you can think of - with the potential to cement the foundations of a more sustainable, resource-efficient society, if handled correctly.

However, there are many challenges that need to be overcome for these novel nanomaterials to be used to their best potential. Not least of these is an issue of reputation and communication. Several pioneering companies that invested in the first generation of nanomaterials experienced product failures, making them less likely to reinvest without seeing them succeed at scale elsewhere - something of a chicken and egg scenario. Moreover, as is often the case, if a nanomaterial is designed in a lab with no end-use or application in mind from the very start, then they can find themselves in the unenviable position of providing a solution to a problem that doesn't exist.

Even when these market-led barriers are overcome, there are several technical challenges in scaling a nanomaterial that remain. These include integration, product line expansion, testing and process scale-up. Each of these stages requires careful thought at every level to achieve commercial product integration at an economically feasible level. When working with such complex materials at such a minute scale, technical success is not guaranteed, but it is possible, and several companies have demonstrated this.

To counter these challenges, renewed focus on customer needs together with careful communication and collaboration would enable improved design and innovation ecosystems that serve genuine needs in the market and a strong value proposition.

Our nanotechnology insight: 'What Does it Take to Successfully Scale up a Nanomaterial' is an introductory guide into the challenges and opportunities in this exciting industry, providing insight into avoiding the 'Valley of Death' in product scale-up. In discussion of everything from initial design and development, to commercial application, we spoke to sector leaders around the world to hear their thoughts on how the industry can improve the success rate of these potentially transformative materials.

**To read the full report, sign up to receive our newsletter at:
www.advancedmaterialsshow.com**