

International Particle Technology Forum

30 September 2025

Hosted by:

RSC-PCIG and IChemE

NPL- IQST

Bushy Road, Teddington, TW11 0EL,
United Kingdom

Preface

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We are delighted to welcome you to this collaborative forum jointly organised by the Royal Society of Chemistry – Particle Characterisation Interest Group (RSC-PCIG), the Institution of Chemical Engineers (IChemE), and the National Physical Laboratory (NPL) – Institute of Quantum Standards and Technologies (IQST).

Hosted at the historic Bushy House, this event brings together leading minds from academia, industry, and research institutions to explore the forefront of particle and powder science. The forum is designed to foster meaningful dialogue, spark new collaborations, and share cutting-edge developments across three core themes:

- Particle Preparation – Techniques for creating particles with tailored properties
- Particle Characterisation – Advanced methods for measuring and analysing particle attributes
- Particle Processing – Challenges and innovations in mixing, milling, agglomeration, and beyond

This multidisciplinary forum reflects our shared commitment to advancing the science and engineering of particulate systems, which underpin technologies across pharmaceuticals, materials science, energy, and environmental sectors.

We extend our sincere thanks to all speakers, contributors, sponsors and attendees for making this event possible. Your participation is vital to the success of this forum, and we look forward to the insights and connections that will emerge throughout the day.

Warm regards,
The Organising Committee
RSC-PCIG | IChemE | NPL-IQST

Forum Program

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ISO Plenary

International Particle Technology Forum

Posters and Awards

8:00	●	Arrival, Registration and Coffee
9:00	●	Welcome & House Keeping Mr. Jordan Tompkins (Senior Scientist NPL)
9:10	●	Opening Plenary Talk Dr. Bajram Zeqiri (NPL Head of Science)
10:15	●	Break - Tea & Coffee
10:45	●	ISO TC24/SC4 Part II
12:00		Group Photo
12:10		Buffet Lunch & Sponsor Exhibition
13:00	●	Welcome Mr. Chris Williamson (Chair/ RSC-PCIG) Dr. Steve Ward- Smith (Co-Chair of Event Team/ RSC-PCIG)
13:15	●	Commercialising Particle Metrology - What Impact Metrology Has on the Market? Dr. Denis Koltsov Consultant/ Director, BREC Solutions
13:30	●	Shifting Particle Landscapes: Moving beyond D 50 Dr. John Gamble (Associate Scientific Director - Bristol Myers Squibb)
13:50	●	Illuminating the Invisible: Microparticle Insights with FTIR Microscopy Dr. Rhys Kelham (FTIR Field Application Specialist - Perkin Elmer)
14:10	●	Air Quality & Aerosol Metrology at NPL Mr. Jordan Tompkins (Senior Scientist NPL)
14:30	●	Flash Presentations (3 min/talk)
15:00	●	Break - Tea & Coffee
15:30	●	Early Career Researcher Talks (10 min/talk + 5min/Q&A)
16:30	●	Industry Talks (10 min/talk + 5min/Q&A)
17:45-19:30	●	Poster Exhibition, BBQ Dinner & Drink Session
18:30- 19:00	●	Awards Announcement Mr. Chris Williamson (Chair/ RSC-PCIG) Dr. Conrad Davies (Representative of IChemE)

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Flash Presentations

Session Chair

Dr Stefanos Mourdikoudis (University of Vigo)

14:30



Evaluation of Particle Interactions in Dry Powder Inhaled Formulations by Raman Spectroscopy and Micro-Computed Tomography

Dr Mridul Majumder (M2M Pharmaceuticals Ltd)

14:33



How Particle Shape Affects Battery Performance

Chao Zhang (Newcastle University)

14:36



Studies of Cerium Oxide Nanoparticles Aggregation and Dissolution Mechanisms from Nuclear Fuel Debris

Cong Chao (University College London)

14:39



CFD-DEM Modelling of Static Mixers in Circulating Fluidised Bed (CFB) Risers for Enhanced Heat Transfer Performance

Farid Jalili Jamshidian (University of Surrey)

14:42



Deciphering Structural Evolution of Metal Phthalocyanines during Sonocatalytic CO₂ Reduction Reaction

Yi Qin (University of Oxford)

14:45



Evaluation of Powder Triboelectric Properties: a Must Have for Material Optimization

Aurelien Neveu (Granutools Ltd.)

14:48



Drug Modelling for regular and irregular particles

Sadaf Maramizonouz (Newcastle University)

14:51



Powder Caking - Understanding Different Caking Behaviours and the Influence of Humidity Cycling

Hannah Maeve Buckland (Malvern Panalytical Ltd)

14:54



Most Reporting of Particle Sizing Methodologies Using Laser Diffraction is Useless:

Here's What you Should Report and Why.

Ben Lynch (Malvern Panalytical Ltd)

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Early Career Researcher Talks

Session Chair

Ms Karen Pardoe (RSC-PCIG Secretary)

15:30



In-Silico Analysis of API Particle Size and Drug Loading on Direct Compression Tablet Properties

Mohammad Salehian (CMAC, Uni. of Strathclyde)

15:45



Is There a "Right" Particle Size and Shape Measurement Tool?: A Comparative Study of Seven Online and Offline Devices on Nine Different Particle Populations

Oleksandr Prykhodko (Uni. of Manchester)

16:00



Particle Processing: Mixing, Milling, Agglomeration and other Processing Steps/Challenges

Mr Jack Grogan (University of Birmingham)

16:15



A Mechanistic Approach to Understanding Punch Sticking in Direct Compression

Ishwari Wale (Uni. of Strathclyde)

16:30



Formulation and Characterisation of Hydrocortisone Mini-Tablets for Chronic Inflammatory Diseases

Iswar Raja Vasugi (Aston University)

Session Chair

Dr Tien Thuy Quach (Aston University)

16:45



Automated Dynamic Image Analysis for Particle Size and Shape Classification in Three Dimensions

Sadegh Nadimi (Ocular Systems)

17:00



Characterising Nasal Sprays – Droplets and Particles vs. Allergies

John Ddungu (Malvern Panalytical Ltd)

17:15



Submicron O-PTIR with Raman & Fluorescence: a Multimodal Platform for Particle Characterization in Environmental, Pharma & Aerosol Science.

Mustafa Kansiz (Photothermal Spectroscopy Corp.)

17:30



The Good, the Bad and the Potato-Shaped – Morphological Characterisation of Polymer Particles

Jenny Burt (Malvern Panalytical Ltd.)

Industry Talks

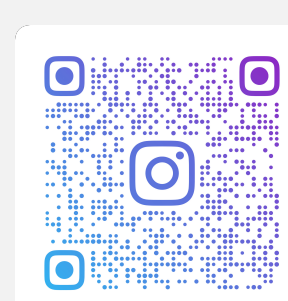
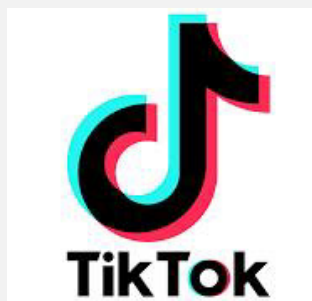
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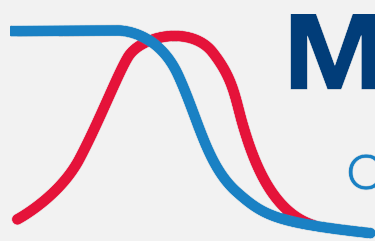
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