



EMERALD ISLE
CONFERENCE
ON SUSTAINABLE
CHEMISTRY &
ENGINEERING

9-11 April 2025

Belfast



QUEEN'S
UNIVERSITY
BELFAST

Conference Programme

Sponsored by



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Day One – 9th April 2025

11:00 Registration

13:00 Welcome and Introduction
Panagiotis Manesiotis, Haresh Manyar, Andrew Marr, Patricia Marr

13:20 Global Thought Leaders Panel Discussion
Chairs - Andrew Marr, Patricia Marr

15:20 *The 40 Shades of Green Chemistry*
Paul Anastas
Yale University
Chair - Andrew Marr

16:00 Coffee Break

16:30 *TBC*
Julie Zimmerman
Yale University
Chair - Patricia Marr

17:10 Delegate Information Session
Haresh Manyar

17:20 Reception - Poster Session and Exhibitors
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19:00 Day One - Close

20:00 Conference Delegate Banquet



Day Two – 10th April 2025

08:50 Welcome and Introduction

Session Chair - Patricia Marr

09:00 *Teaching Green Chemistry in a Changing World*
Martyn Poliakoff
University of Nottingham

09:40 *Bio-Based Platform Chemicals from Local Plant Oils by Selective Semi-Hydrogenation and Homogeneous Catalysis*
Thomas Seidensticker
TU Dortmund

10:00 *Accelerating Development of Green Chemistry Technologies Through Cross-Sector Collaboration*
Adelina Voutchkova
ACS Green Chemistry Institute

10:40 Coffee Break

Session Chair - Andrew Marr

11:00 *From Flexible to Adaptive: Dynamic Systems to Control the Performance of Catalysts*
Walter Leitner
Max Planck Institute for Chemical Energy Conversion

11:40 *Sustainable Chemistry & Engineering for Education, Outreach and Recruitment*
Kevin Morgan
Queen's University Belfast



12:00	<i>Electrochemical Biomass Depolymerization: Will Complex Catalysts Trigger High Product Selectivity?</i> Adam Slabon Bergische Universität Wuppertal
	Flash Session One
	James Metcalf <i>Atmospheric Degradation of New "Green" Solvents</i>
12:20	Philippa Jacob <i>Machine Learning for Polymer Biodegradability</i> Víctor Sans Sangorrín <i>Digital Synthetic Platforms for the Efficient Capture and Valorisation of Carbon Dioxide into Added Valued Chemicals</i>
12:50	<i>Sustainable Monomers and Polymers</i> Steve Howdle University of Nottingham
13:10	Lunch Session Chair - Gosia Swadzba-Kwasny
14:00	<i>Sustainability: Who Gives a Cr*p?</i> Mike George University of Nottingham
14:40	<i>Small but Feisty: How Singapore Turns CO2 Problems into Greener Solutions</i> Bella Institute of Sustainability for Chemicals, Energy and Environment (ISCE ²)
15:00	<i>New Ways of Building Carbon Chains - From Fischer Tropsch to New Synthetic Routes</i> Andreas J. Vorholt Max Planck Institute for Chemical Energy Conversion



15:20	<i>Genes to GMP: How API Manufacture is 'Going Green' with Engineered Enzymes</i> Stefan Mix Almac
15:40	Coffee Break
16:00	<i>Biobased Reversible Photo-Responsive Polymers for Useful Applications</i> Antonio Patti Monash University
16:20	<i>Ionic Liquids Technology for Polyurethane Foam Waste Depolymerization</i> Pedro Lozano Rodriguez University of Murcia
	Session Chair - Haresh Manyar
16:40	Flash Session Two Jane Mueller <i>IN Silico Informed metaGenomic Harvesting Technology - (INSIGHT) - How a Smart Platform Can Accelerate the Timelines of Genes-to-GMP</i> Thomas Freese <i>Photochemical Production of Bio-Based Building Blocks as Acrylate Replacements</i> Shanika Yadav <i>Inspiring Innovation in Green Chemistry - Startup Support Network KOALA</i>
17:10	<i>Crude Glycerol – Microbial Substrate for Production of Intermediates and Recombinant Enzymes</i> Martin Rebroš Slovak University of Technology
17:30	<i>Green Catalytic Chemistry for the Energy Transition</i> Johannes A. Lercher TU München



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18:10 Poster Session and Exhibitors
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19:30 Day Two - Close



Day Three – 11th April 2025

08:50 Welcome and Introduction

Session Chair – Gary Sheldrake

09:00 *Hotspot Driven Research in Green and Sustainable Chemistry*
Philip Jessop
Queen's University at Kingston

Flash Session Three

09:40

Elisa Isabel García-López	<i>Carbon Nitride Based Composites Photocatalysts Prepared with Materials Arising from Spent Li-Batteries for the Photoreforming of Biomass Residues</i>
Sarmad Ahmad Qamar	<i>Bioplastics from 'Annurca' Apple Cellulose Doped with Polyphenolic Compounds for 'Active' Food Packaging Applications</i>
Neil Robinson	<i>Measuring Nuclear Spin Dynamics in Sustainable Engineering Systems</i>

10:10 *Recent Developments in Asymmetric Synthesis and Catalysis*
Pat Guiry
University College Dublin

10:50 Coffee Break



Session Chairs – Adelina Voutchkova, Isamir Martinez

ACS GCI Pharmaceutical Roundtable Workshop
Green Chemistry Tools and Metrics to Design Sustainable Processes

	Nathan McCormack	Ipsen
11:10	David Entwistle	Codexis
	Isamir Martinez	ACS GCI
	Adelina Voutchkova	ACS GCI

13:10 Lunch

Session Chair – Haresh Manyar

14:00 *Mechanochemistry and Aging-Based Methods as Novel Tools to Transform Biopolymers into High Value Materials*
Audrey H. Moores
McGill University

14:40 *The Journey from Lab to Industry – A Sustainable Recycling Technology for Rare Earth Magnets*
Peter Nockemann
Queen's University Belfast

15:00 *Catalysis and Sustainability from Atom to Planetary Scale*
Javier Pérez-Ramírez
ETH Zurich



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Session Chair – Panagiotis Manesiotis

15:40

Poster and Flash Prizes

Sponsored by Royal Society of Chemistry and ACS Publications

16:00

Conference Close

Chris Johnson

Department for Science, Innovation and Technology