

# Polymerisation and depolymerisation chemistry: the second century

8–10 September 2025 | Oxford, UK



## Faraday Discussions

### Monday 8 September

|       |                                                                                                                                                                                                                     |
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| 11:30 | Registration with lunch served from 11:45                                                                                                                                                                           |
| 12:45 | <b>Welcome and introductions</b><br><i>Chair of Scientific Committee</i>                                                                                                                                            |
| 12:55 | <b>Outline of Discussion format</b><br><i>Royal Society of Chemistry Publishing Editors</i>                                                                                                                         |
| 13:00 | <b>Introductory Lecture – Spiers Memorial Lecture</b> (Session chair: TBC)<br>Marc Hillmyer<br><i>University of Minnesota, USA</i>                                                                                  |
|       | <b>Session 1: Novel feedstocks</b><br>(Session chair: TBC)                                                                                                                                                          |
| 14:00 | <b>TBC</b><br>Henri Cramail<br><i>Laboratoire de Chimie des Polymères Organiques, France</i>                                                                                                                        |
| 14:05 | <b>Blending PHBV with P(3HB-co-4HB) for superior thermal stability, mechanical strength, and environmental degradation</b><br>Katja Loos<br><i>University of Groningen, The Netherlands</i>                         |
| 14:10 | <b>Synthesis and ring-opening (co)polymerization of lactones derived from the cotelomerization of isoprene, butadiene, and CO<sub>2</sub></b><br>Ian Tonks<br><i>University of Minnesota, USA</i>                   |
| 15:30 | Refreshments                                                                                                                                                                                                        |
|       | <b>Session 1 cont: Novel feedstocks</b><br>(Session chair: TBC)                                                                                                                                                     |
| 16:00 | <b>Synthesis of renewable non-isocyanate polyurethanes from algae oil and its fatty acid methyl esters</b><br>Christopher Kozak<br><i>Memorial University of Newfoundland, Canada</i>                               |
| 16:05 | <b>Polyglycerol resin towards sustainable 3D-Printing</b><br>Vincenzo Taresco<br><i>University of Nottingham, UK</i>                                                                                                |
| 16:10 | <b>Chemical recycling of polylactide by microwave-assisted hydrolysis</b><br>Mina Mazzeo<br><i>Università di Salerno, Italy</i>                                                                                     |
| 16:15 | <b>An old tool to obtain new polymers from renewable resources: [OSSO]-type Titanium-Catalysed Ethylene Copolymerisation with Myrcene</b><br>Carmine Cappichione<br><i>Università degli Studi di Salerno, Italy</i> |
| 16:20 | Discussion                                                                                                                                                                                                          |
| 18:00 | Lightning presentations – (by invitation of the Scientific Committee)                                                                                                                                               |
| 18:15 | Poster session and drinks reception                                                                                                                                                                                 |
| 19:45 | Close                                                                                                                                                                                                               |

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## Tuesday 9 September

|       |                                                                                                                                                                                      |
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|       | <b>Session 2: Catalysis</b><br>(Session chair: TBC)                                                                                                                                  |
| 09:00 | <b>TBC</b><br>Kyoko Nozaki<br><i>The University of Tokyo, Japan</i>                                                                                                                  |
| 09:05 | <b>TBC</b><br>Sonja Heeres-Pawlis<br><i>RWTH Aachen University, Germany</i>                                                                                                          |
| 09:10 | <b>Tailoring the physical properties of macromolecules via stereocontrolled polymerizations using olefin metathesis</b><br>Quentin Michaudel<br><i>Texas A&amp;M University, USA</i> |
| 09:15 | Discussion                                                                                                                                                                           |
| 10:30 | Refreshments                                                                                                                                                                         |
|       | <b>Session 2 continued: Catalysis</b><br>(Session chair: TBC)                                                                                                                        |
| 11:00 | <b>Selective transesterification mediated by lanthanum complexes in the copolymerization of lactide and delta-valerolactone</b><br>Rachel Platel<br><i>Lancaster University, UK</i>  |
| 11:05 | <b>Compounds with substituted proline scaffolds as catalysts for ROCOP reactions</b><br>Debashis Chakraborty<br><i>Indian Institute of Technology Madras, India</i>                  |
| 11:10 | <b>Automated estimation of lactone ring opening energetics</b><br>Charles Romain<br><i>Imperial College London, UK</i>                                                               |
| 11:15 | Discussion                                                                                                                                                                           |
| 12:30 | Lunch                                                                                                                                                                                |
|       | <b>Session 3: Closing the loop – the chemistry of depolymerisation, polymer recycling and environmental degradation</b><br>(Session chair: TBC)                                      |
| 13:45 | <b>Revisiting the thermodynamics of ring-opening polymerization</b><br>Karin Odellius<br><i>KTH Royal Institute of Technology, Sweden</i>                                            |
| 13:50 | <b>High purity monomer recovery via direct depolymerisation</b><br>Derek Irvine<br><i>University of Nottingham, UK</i>                                                               |
| 13:55 | <b>Understanding how to improve the properties of post-consumer high density polyethylene recyclate</b><br>Tom McDonald<br><i>University of Manchester, UK</i>                       |
| 14:00 | <b>Introducing weak linkages into polyolefin chains via post-polymerization modification</b><br>Arnaud Thevenon<br><i>Utrecht University, The Netherlands</i>                        |
| 14:05 | Discussion                                                                                                                                                                           |
| 15:45 | Refreshments                                                                                                                                                                         |
|       | <b>Session 3 cont: Closing the loop – the chemistry of depolymerisation,</b>                                                                                                         |

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|       | <b>polymer recycling and environmental degradation</b><br>(Session chair: TBC)                                                                                                                            |
| 16:15 | <b>Is solvent based dissolution and precipitation an effective pretreatment for enzymatic depolymerisation of poly(ethylene terephthalate)?</b><br>Victoria Bemmer<br><i>University of Portsmouth, UK</i> |
| 16:20 | <b>On-demand manufacture of circular 3D printing resins</b><br>Arianna Brandolese<br><i>University of Birmingham, UK</i>                                                                                  |
| 16:25 | <b>Borane-catalyzed depolymerization of polycarbonates</b><br>Francesca Kerton<br><i>Memorial University of Newfoundland, Canada</i>                                                                      |
| 16:30 | Discussion                                                                                                                                                                                                |
| 17:45 | Lightning presentations – (by invitation of the Scientific Committee) (TBC)                                                                                                                               |
| 18:00 | Poster session and refreshments (TBC)                                                                                                                                                                     |
| 19:30 | Conference dinner                                                                                                                                                                                         |

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**Wednesday 10 September**

|       |                                                                                                                                                           |
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|       | <b>Session 4: Polymerisation processes and computational methods to control structure</b><br>(Session chair: TBC)                                         |
| 09:00 | <b>Depolymerization of methacrylates via a combination of flow chemistry and in-line dialysis</b><br>Tanja Junkers<br><i>Monash University, Australia</i> |
| 09:05 | <b>Patterning and functionalising non-spherical nanoparticles</b><br>Rachel O'Reilly<br><i>University of Birmingham, UK</i>                               |
| 09:10 | <b>AI/ML optimization workflows in polymer synthesis: Towards autonomous laboratories</b><br>Rigoberto Advincula<br><i>University of Tennessee, USA</i>   |
| 09:15 | Discussion                                                                                                                                                |
| 10:30 | Refreshments                                                                                                                                              |
|       | <b>Session 4 cont: Polymerisation processes and computational methods to control structure</b><br>(Session chair: TBC)                                    |
| 11:00 | <b>Easy access to block copolymers via selective ring-opening copolymerization</b><br>Yunqing Zhu<br><i>Tongji University, China</i>                      |
| 11:05 | <b>Spatiotemporal growth of ultrathin polymer networks via frontal photopolymerization (FPP)</b><br>Ghifari Ridwan<br><i>Imperial College London, UK</i>  |
| 11:10 | <b>Sulfone chain-extended polyurethanes for use as debond-on-demand adhesi</b><br>Wayne Hayes<br><i>University of Reading, UK</i>                         |
| 11:15 | Discussion                                                                                                                                                |
| 12:30 | <b>Concluding remarks lecture</b> (Session chair: TBC)<br>Stefan Mecking<br><i>University of Konstanz, Germany</i>                                        |
| 13:00 | <b>Acknowledgements and presentation of poster prizes</b>                                                                                                 |
| 13:15 | <b>Close of meeting and lunch</b>                                                                                                                         |

All timings are in BST

Please note that this is a draft programme and timings may change.