

Polymerisation and depolymerisation chemistry: the second century

8–10 September 2025 | Oxford, UK



Faraday
Discussions

Monday 8 September

11:30	Registration with lunch served from 11:45
12:45	Welcome and introductions <i>Chair of Scientific Committee</i>
12:55	Outline of Discussion format <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory Lecture – Spiers Memorial Lecture (Session chair: Charlotte Williams) Marc Hillmyer <i>University of Minnesota, USA</i>
	Session 1: Novel feedstocks (Session chair: Antoine Buchard)
14:00	Efficient room-temperature synthesis of crosslinked polyhydroxyurethanes from 5-membered cyclic carbonates without solvent or catalyst Henri Cramail <i>Laboratoire de Chimie des Polymères Organiques, France</i>
14:05	Blending PHBV with P(3HB-co-4HB) for superior thermal stability, mechanical strength, and environmental degradation Katja Loos <i>University of Groningen, The Netherlands</i>
14:10	Synthesis and ring-opening (co)polymerization of lactones derived from the cotelomerization of isoprene, butadiene, and CO₂ Ian Tonks <i>University of Minnesota, USA</i>
14:15	Discussion
15:30	Refreshments
	Session 1: Novel feedstocks (Session chair: Steve Howdle)
16:00	Ocean biomass-derived feedstocks for non-isocyanate polyurethane synthesis Christopher Kozak <i>Memorial University of Newfoundland, Canada</i>
16:05	Polyglycerol resin towards sustainable 3D-Printing Vincenzo Taresco <i>University of Nottingham, UK</i>
16:10	Chemical recycling of polylactide by microwave-assisted processes Mina Mazzeo <i>Università di Salerno, Italy</i>
16:15	An old tool to obtain new polymers from renewable resources: [OSSO]-type titanium-catalysed ethylene and myrcene copolymers Carmine Capacchione <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 (odd numbers) and drinks reception
19:15	Close

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	Session 2: Catalysis (Session chair: Antoine Buchard)
09:00	Efficient and controlled ring-opening copolymerization of cyclohexene oxide with cyclic anhydrides catalyzed by proline-based chiral alkyl Al(III) compounds <i>Debashis Chakraborty</i> Indian Institute of Technology Madras, India
09:05	Dual-selective polymerization: achieving chemoselectivity and stereoselectivity in a single catalytic system <i>Yunqing Zhu</i> <i>Tongji University, China</i>
09:10	Tailoring the physical properties of macromolecules via stereocontrolled polymerizations using olefin metathesis <i>Quentin Michaudel</i> <i>Texas A&M University, USA</i>
09:15	Discussion
10:30	Refreshments
	Session 2 continued: Catalysis (Session chair: Charlotte Williams)
11:00	Synthesis and characterization of stable nickel(II) complexes bearing long alkyl chains <i>Kyoko Nozaki</i> <i>The University of Tokyo, Japan</i>
11:05	Unleashing the power of non-toxic zn-guanidine catalysts for sustainable lactide polymerization through smart modeling <i>Sonja Heeres-Pawlis</i> <i>RWTH Aachen University, Germany</i>
11:10	Selective transesterification mediated by lanthanum complexes in the copolymerization of lactide and delta-valerolactone <i>Rachel Platel</i> <i>Lancaster University, UK</i>
11:15	Discussion
12:30	Lunch
	Session 3: Closing the loop – the chemistry of depolymerisation, polymer recycling and environmental degradation (Session chair: Andrew Dove)
13:45	More than ring-strain: revisiting the definition of enthalpy in ring-opening polymerization <i>Karin Odelius</i> <i>KTH Royal Institute of Technology, Sweden</i>
13:50	Improved 2PP additive manufacturing build/process quality via the use of hyperbranched pre-polymer <i>Derek Irvine</i> <i>University of Nottingham, UK</i>
13:55	Post-polymerisation oxyfunctionalisation of styrene and butadiene-based (Co-)polymers using a homogeneous manganese catalyst <i>Arnaud Thevenon</i> <i>Utrecht University, The Netherlands</i>
14:00	Discussion

15:15	Refreshments
	Session 3 cont: Closing the loop – the chemistry of depolymerisation, polymer recycling and environmental degradation (Session chair: Matthew Becker)
15:45	Is solvent based dissolution and precipitation an effective pretreatment for enzymatic depolymerisation of poly(ethylene terephthalate)? Bruce Lichtenstein <i>University of Portsmouth, UK</i>
15:50	On-demand manufacture of circular 3D printing resins Arianna Brandolese <i>University of Birmingham, UK</i>
15:55	Borane-catalyzed cyclodepolymerization of CO₂ derived polycarbonates Francesca Kerton <i>Memorial University of Newfoundland, Canada</i>
16:00	Developing novel biodegradable biopolymers with superior barrier properties for use within the drinks industry Katrina Entwistle <i>University of Bath, UK</i>
16:05	Discussion
17:45	Lightning presentations – (by invitation of the Scientific Committee)
18:00	Poster session (even numbers) and refreshments
19:00	Conference dinner

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Wednesday 10 September

	Session 4: Polymerisation processes and computational methods to control structure (Session chair: Theoni Georgiou)
09:00	Thermodynamics of Ring-Opening Polymerisation Informatics Collection (TROPIC): A database to enable polymer chemical recycling Charles Romain <i>Imperial College London, UK</i>
09:05	AI/ML optimization workflows in polymer synthesis: Towards autonomous laboratories Rigoberto Advincula <i>University of Tennessee, USA</i>
09:10	Understanding depolymerization kinetics of Poly (butyl methacrylate) using flow chemistry Tanja Junkers <i>Monash University, Australia</i>
09:15	Discussion
10:30	Refreshments
	Session 4 cont: Polymerisation processes and computational methods to control structure (Session chair: Antoine Buchard)
11:00	Thermally and base-triggered 'debond-on-demand' crosslinked polyurethane adhesives Wayne Hayes <i>University of Reading, UK</i>
11:05	Self-assembled poly(L-lactide)-based platelets prepared via seeded growth Rachel O'Reilly <i>University of Birmingham, UK</i>
11:10	Discussion
12:00	Concluding remarks lecture (Session chair: Charlotte Williams) Stefan Mecking <i>University of Konstanz, Germany</i>
12:30	Acknowledgements and presentation of poster prizes
12:45	Close of meeting and lunch

All timings are in BST

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