

Programme

Monday 9 September	
12:00	Registration and Lunch
	Session I Chair: Joao Cabral
13:45	Welcome from the Chair of the PPG Committee and Local Organisation Nigel Clark , University of Sheffield, UK
14:00	Invited: Exploring the physics, materials science, and biological implications of polyelectrolyte complexation Matthew Tirrell, University of Chicago, USA
14:35	Colloidal polymer binders in synthetic biofilms for wastewater treatment Joseph Keddie , University of Surrey, UK
14:50	Environmental effects on the spatio-temporal evolution of plasma-wrinkled PDMS thin films Zain Ahmed , Imperial College London, UK
15:05	Functional polymer surfaces that resist Bio-fouling Andrew Parnell , University of Sheffield, UK
15:20	Observation of molecular motions in crystalline polymer surfaces using the diffracted x-ray blinking method Rena Inamasu , The University of Tokyo, UK
15:35	Exploring the impact of clay additives on the performance of a water-based reversible adhesive Adriana Sierra Romero , Newcastle University, Uk
15:50	Tea Break
	Session II Chair: Valeria Arrighi
16:20	DPOLY/PPG Exchange Lecture: Beyond alignment: novel mechanisms for controlling block copolymer phase behavior using magnetic fields Michelle Calabrese , University of Minnesota, USA
16:55	Studying the structure of liquid crystal elastomers using small- and wide- angle x-ray scattering Emily Cooper , University of Leeds
17:10	Counterion-solvent properties: how they influence the structure and solubility of carboxymethylcellulose Can Hou , RWTH Aachen, Germany
17:25	Polymer Opals 20 years on; current and future directions for shear-nanoassembly in soft-matter media Chris Finlayson , Aberystwyth University, UK

17:40	Understanding liquid crystal elastomer behaviours polymerised with flow chemistry Jiancong Xu , University of Leeds, UK
18:00	Poster Session
19:00	Drinks Reception
20:00	End of Day 1
Tuesday 10 September	
08:00	Registration, Coffee and Pastries
	Session III Chair: Chris Finlayson
09:00	Invited: Active Polymers in Biology Tanniemola Liverpool , University of Bristol, UK
09:35	Influence of solvent type and counterion on the viscosity and conformation of polyelectrolytes in solution Anish Gulati , RWTH Aachen University, Germany
09:50	Hidden symmetry in polymer field theory and its implications for self-consistent field theory and field-theoretic simulation Jaeup Kim , UNIST, South Korea
10:05	Equilibrium and dynamical polymer networks for flow Kristian Muller-Nedebock , Stellenbosch University, South Africa
10:20	Polymer dynamics in active nematic turbulence Zahra Valei , The University of Edinburgh, UK
10:35	Wetting, adsorption, and desorption behaviour of single polymer chains: a closer look Vasileios Koutsos , The University of Edinburgh, UK
10:50	Coffee Break
	Session IV Chair: Ali Nedoma
11:25	Invited: Capturing the structural evolution and mechanics of protein assemblies during network formation Lorna Dougan , University of Leeds, UK
12:00	Breath Figure Assembly on Evaporating Polymer Solution Droplets in Levitation Joao Cabral , Imperial College London, UK
12:15	A biodegradable scaffold for bioelectronic applications Mark Geoghegan , Newcastle University, UK
12:30	The effects of substrate glass transition temperature and hydrophobic heterogeneities on the wetting dynamics of a model infant milk formula Solomon Melides , University of Surrey, UK
12:45	Characterization of water adhesion on hydrophobic electrospun polymer fibers Gabriele Livi , University of Edinburgh, UK

13:00	Hydrogels for solar-driven water purification Rodney Priestley , Princeton University, USA
13:15	New methodology for anisotropic nanoparticles characterization by Depolarized Light Scattering measurements: length and diameter determination of rod-like nanoparticles Hanna Anop , Cordouan Technologies, France
13:30	Group Photo and Lunch
	Session V Chair: Paola Carbone
14:40	Invited: Optimising the performance of biodegradable polymers: design of fillers and plasticisers to tune polymer crystallization Karen Johnston , University of Strathclyde, UK
15:15	A comparison of crosslinking methods for the formation of atomistic crosslinked structures Kieran Harris , University of Manchester, UK
15:30	A framework for a high throughput screening method for polymeric systems using molecular dynamics Lois Smith , University of Manchester, UK
15:45	Quantifying the free volume distribution in acrosslinked epoxy coatings through a combined PALS and molecular dynamics simulation study Joe Orgill , University of Sheffield, UK
16:00	Electrospun polymer nanofibres for enhanced through-thickness electrical conductivity of CFRP composites Muhammad Waqas , The University of Edinburgh, UK
16:15	Tea Break
	Session VI Chair: Nigel Clarke
16:45	Telephone cord blister formation in solvent swollen elastomer films James Sharp , University of Nottingham, UK
17:00	Auxetic liquid crystal elastomers: fundamentals, applications and future outlook Thomas Raistrick , University of Leeds, UK
17:15	Solvent uptake in epoxy resins used as anti-corrosive coatings Francis Gurman , The University of Sheffield, UK
17:30	Topological understanding of degradability of polymer networks with cleavable strands or crosslinks Maciek Kopec , University of Bath, UK
17:45	Comfort Break
18:00	Founders Prize: Development of quantitatively accurate simulations for block copolymer materials Mark Matsen , University of Waterloo, Canada
19:00	Conference Dinner
22:00	End of Day 2

Wednesday 11 September	
08:00	Coffee and Pastries
	Session VII Chair: TBC
09:00	Invited: Entropic phase-separation in polymer grafted nanoparticle blends Alamgir Karim , University of Houston, USA
09:35	The effect of solvent quality on porous Poly(2,6-diphenyl-p-phenylene oxide) formation Mihai-Andru Anghelie , Imperial College London, UK
09:50	Relaxation dynamics in poly(methyl methacrylate)/poly(4-tert-butylstyrene) systems produced via thermal initiated random co-polymerization Stavros X. Drakopoulos , Princeton Materials Institute, Princeton University, USA
10:05	Testing the theory of Akcasu et al. for the time evolution of the scattering intensity during polymeric spinodal decomposition and dissolution using simulated scattering data Matthew Jones , Department of Physics and Astronomy, University of Sheffield, UK
10:20	Optically white porous polyethylene manufacture via thermally induced phase separation Liva Donina , Imperial College London, UK
10:35	Optimizing the performance of NMC622 Battery half-coin cells by using amphiphilic aqueous binders to modulate the percolation of carbon black Chirag Patel , University of Sheffield, UK
10:50	Coffee Break
	Session VIII Chair: Valeria Arrighi
11:20	Binder matters! Balancing viscosity with molecular weight in lithium-ion battery cathodes Alisyn Nedoma , University of Sheffield, UK
11:35	Reprogrammable 3d printed liquid crystal elastomer actuators Meg Coleman , University of Leeds, UK
11:50	Equilibrium and non-equilibrium behaviour in thin-film mixtures of polymers and small-molecule organic electronic materials Anthony Higgins , Swansea University, UK
12:05	The microstructure formation in multifunctional electrolytes using small angle neutron scattering Natasha Shirshova , Department of Engineering, Durham University, UK
12:20	Conductive Polymer Binders for Lithium-Ion Batteries Laurence Middlemiss , The University of Sheffield, UK
12:35	Multi-scale model of the conductivity of diblock copolymer system filled with conductive fillers Alexander Chervanyov , University of Münster, Germany

12:50	Closing Remarks
13:00	Lunch and removal of posters
14:00	Conference Closes and Depart

Posters

P1	Physical Properties of chitosan with varying degrees of deacetylation Solomon Melides , University of Surrey, UK
P2	Equilibrium and non-equilibrium behaviour in polymer/small-molecule mixtures for organic photovoltaic (opv) applications Oliver Anyanor , Swansea University, UK
P3	The role of internal strain in a nematic liquid crystal elastomer Emily Cooper , University of Leeds, UK
P4	Dissolution of wool yarns by 1-ethyl-3-methylimidazolium acetate studied with time-temperature superposition Amjad Alghamdi , University of Leeds, UK
P5	Investigating the influence of crosslinker concentrations on the phase templating of liquid crystal elastomers Alanoud H. Al Suwaidan , University of Leeds, UK
P6	Utilising microorganisms encapsulated within hydrogels for agricultural applications Thomas Wallis , University of Sheffield, UK
P7	Thermomechanical recycling of PET based textiles Zara Standring , Heriot-Watt University, UK
P8	Modelling polymer crystalline microstructure and gas barrier properties Ville Remsu , University of Strathclyde, UK
P9	Optimisation of frontal photopolymerisation for non-planar material assembly Muhammad Ghifari Ridwan , Imperial College London, UK
P10	Machine learning-enhanced metadata analysis for identifying polymer compositions Sunny Chaudhary , University of Southampton, UK
P11	Using coupled phase field models to understand microstructures induced by dual transition processes Shing Wan , University of Sheffield, UK
P12	Enhancing electrical properties of epoxy resins using bio-based modifiers Orestis Vryonis , University of Southampton, UK
P13	Hyperbranched polymer drug delivery vehicle Andrews Pasick , University of Sheffield
P14	Multiplexed microfluidic setup for analysing interaction of complex blend of triacylglycerols with surface active agents Zain Ahmed , Imperial College London, UK
P15	Nanophotonic taste buds for biomedical applications Rebecca Setford , University of Glasgow, UK
P16	Development of new sustainable adhesives promoting recycling using reversible conductive polyelectrolyte adhesion Bassam Aljohani , Newcastle University, UK

P17	Mechanical characterization of PDMS samples with varying prepolymer molar mass Abdulraheem Alrefai , Newcastle University, UK
P18	Unravelling capsule formation mechanisms in interfacially initiated PEGDA hydrogels Joseph Keddie , University of Surrey, UK
P19	Structure and rheology of semicrystalline dissociative polyurethanes Thomas Jackson , University of Sheffield, UK