

Monday 8 September

Room WG08 University of Bradford

10.00 **Registration**

Room WG08 University of Bradford + tea

11.45 Lunch

12.40 **Welcome**

Bio-pharma & Med Tech

M1 12.45 UNIK Biotherapeutics Ltd – harnessing antibody-drug conjugate platform technology for transformative healthcare solutions

Klaus Pors, Institute of Cancer Therapeutics, University of Bradford

M2 13.00 Polycaprolactone-based Shape Memory Polymers and their Medical Functionalization

Zhenbo Ning, Beijing University of Chemical Technology

M3 13.15 Nanofiber Scaffolds for nerve regeneration and wound healing

Jiajia Xue, Beijing University of Chemical Technology

M4 13.30 PDPatch: Disrupting Wound Care with Smart, Portable Photodynamic Therapy

Ibrahim Khot, University of Bradford

M5 13.45 Characterization of Chinese medicinal materials via quantitative X-ray microtomography

Yangling Xue, Shanghai Synchrotron Radiation Facility, Shanghai Advanced Research Institute, Chinese Academy of Sciences

M6 14.00 Development of an antibacterial membrane for the management of bacterial vaginosis

Farshid Sefat, Polymer IRC, University of Bradford

KM7 14.15 Functionalization of block copolymers for anticancer drug delivery

Zhihua Gan, Beijing University of Chemical Technology

14.30 **Tea/Coffee & Posters/ Exhibition**

KM8 15.00 Spatial interaction of pharmaceutical particles and human tissue/organs

Jiwen Zhang, Shanghai Institute of Materia Medica Chinese Academy of Sciences

M9 15.15 Multifunctional composites and nanotopographies for cell instructive and antibacterial medical devices

Maria Katsikogianni, Faculty of Life Sciences/ Polymer IRC, University of Bradford

M10 15.30 Mechanically robust and highly swellable microneedle array for the treatment of acute gouty arthritis

Can Peng, Anhui University of Chinese Medicine

M11 15.45 Incorporating Antibiotic Functional Highly Branched Polymers into Responsive Interpolymer Networks to Create Agglutination Based Microbiology Sensors

Tom Swift, University of Bradford

M12 16.00 Process Analytical Technology for cocrystal manufacturing in melt extrusion processing

Anant Paradkar, Pharmaceutical Engineering Science, Polymer IRC, University of Bradford

16.15 **Laboratory Demonstrations, Polymer IRC & Norcroft Building**

- 17.30

18.30 Azuma Chinese Restaurant – informal meal together

9.00 VIP/Strategy Session

Prof Li Guangxian/Prof Phil Coates - welcome
Prof Sherif El-Khamisy, Pro Vice Chancellor, University of Bradford
Mr Mingqin Ding, Minister Counsellor Science & Technology, Chinese Embassy
Prof Dujin Wang, ICCAS Beijing/ Chari CAS
Prof Volker Altstadt, PPS President
Philip Law, BPF Director-General
Prof Li Guangxian – AMRI celebration
Prof Phil Coates

10.00 Group Photograph outside ICT Building**10.15 Coffee/Tea****Advanced Processing/ Process Structuring - 1**

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|------|-------|--|
| T1 | 10.45 | Micro-structure of die-drawn iPP/HDPE polymer blends
<i>Dong Lyu, Changchun Institute of Applied Chemistry Chinese Academy of Sciences</i> |
| T2 | 11.00 | Enhancing properties of PET by solid phase die drawing
<i>Davide Nocita, Polymer IRC, University of Bradford</i> |
| T3 | 11.15 | Shear-Induced Assembly of Nanoparticles at the Interface of Immiscible Polymer Blends
<i>Bing Li, Changchun Institute of Applied Chemistry Chinese Academy of Sciences</i> |
| T4 | 11.30 | Microinjection Molding of PVDF-Based Piezoelectric Nanocomposites and Sensing Microdevices
<i>Yinghong Chen, Sichuan University</i> |
| T5 | 11.45 | Mechanical properties of a non-crystalline polyimide prepared by ultrasonic micro-injection molding
<i>Tao Liao, Changchun Institute of Applied Chemistry Chinese Academy of Sciences</i> |
| T6 | 12.00 | Micro injection moulding of components with non-planar nanostructured surfaces: a study of moulding and ejection behaviour
<i>Ben Whiteside/ Max Babenko, Polymer IRC, University of Bradford</i> |
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| | 12.15 | Lunch /Posters
'Igloo' 360 degree visualisation visits (groups of ~10, inside WG08) |

Advanced Processing/ Process Structuring - 2

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|------|-------|---|
| KT7 | 13.30 | Polymer Powder Bed Fusion: Challenges and Opportunities
<i>Hesheng Xia, Sichuan University</i> |
| T8 | 13.45 | Assessment of the mechanical performance of 3D-printed polymers-An issue similar to the "Schrödinger Cat State"
<i>Xiang Lin, University of Science and Technology Beijing</i> |
| T9 | 14.00 | The development of injection moulding inserts using different materials and AM technologies
<i>Antonio Pontes, University of Minho, Portugal</i> |
| T10 | 14.15 | Preparation of PP based Neutron Shielding device via selective laser sintering
<i>Yijun Li, Sichuan University</i> |
| KT11 | 14.30 | Dimensional accuracy of 3D printed parts
<i>Roberto Pantani, University of Salerno, Italy</i> |
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| | 14.45 | Tea/Coffee/ Posters |

Advanced Processing/ Process Structuring - 3

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|------|-------|---|
| KT12 | 15.15 | Bridging Finite Element Simulations and Experimental Design to Establish Part Morphology and Mechanics for Sustainable Application of Hybrid Injection Moulding
<i>Ludwig Cardon, University of Ghent, Belgium</i> |
| T13 | 15.30 | Type IV Hydrogen Storage Vessels: Liner-Boss processing challenges by rotational moulding
<i>Carla Martins, University of Minho, Portugal</i> |

KT14	15.45	Composites of Polymers and 2D Nanomaterials by Reactive Extrusion <i>Tony McNally, Warwick University</i>
T15	16.00	Optimising PBF-LB process parameters for advanced polymer composites manufacturing <i>Ana Carina Lopes, University of Minho, Portugal</i>
	16.15	break
Advanced Processing/Circular Economy		
KT16	16.20	The Struggle for Sustainability: Pathways Toward a Circular Economy for Multi-Material, Multi-Component Products <i>Clemens Holzer, Montan Universität Leoben, Austria</i>
T17	16.35	High-value recycled rubber: Characterising the performance of S3M devulcanized rubber following revulcanization <i>Rob Innes, Polymer IRC, University of Bradford</i>
T18	16.50	Reinforcement of Polyamide-Based Filaments with Recycled Chopped Carbon Fibers Extracted via Solvolysis <i>Ioannis Papadopoulos, Technical University of Athens, Greece</i>
T19	17.05	PLA Stereocomplex formation by twin screw extrusion <i>Adrian Kelly, Polymer IRC, University of Bradford</i>
T20	17.20	An Approach for Enhanced Material Performance While Decreasing Environmental Impacts? <i>Zahra Shahroodi, Montan Universität Leoben, Austria</i>
	17.35	Morphology of branched polymers in aqueous media <i>Steve Rimmer, Polymer IRC, University of Bradford</i>
	17.50	end
	19.00	Conference Banquet, Great Victoria Hotel

Wednesday 10 September

Room WG08 University of Bradford

Advanced Polymer Materials - 1

KW1	9.00	Molecular weight and distribution dependency of crystallization and mechanical properties in semi-crystalline polymers <i>Yongfeng Men, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences</i>
W2	9.15	New long chain polyamide 1012 and its elastomer <i>Xia Dong, Institute of Chemistry Chinese Academy of Sciences, Beijing</i>
W3	9.30	Multimodal perception triboelectric nanogenerators with designed shape memory recovering biopolymer chains embedded in helical biometric material extrusion sensor shapes. <i>Ning Zhu, University of Ghent, Belgium</i>
W4	9.45	Light-Driven Dynamic Liquid Crystal Elastomer Soft Robots <i>Xili Lu, Sichuan University</i>
W5	10.00	Polymorph Selection of Polybutene-1 under Compressed CO ₂ <i>Ying Lu, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences</i>
W6	10.15	Self-powered Smart Tire Based on Triboelectric Nanogenerators <i>Wenjie Wu, South China University of Technology</i>
	10.30	Tea/Coffee & Posters/ Exhibition

Advanced Polymer Materials - 2

KW7	11.00	Investigation on Formation Mechanism and Application Research of Microsphere Materials <i>Dali Gao, Sinopec Beijing Research Institute of the Chemical Industries</i>
W8	11.15	Designing smart nanomaterials for advanced therapeutic applications <i>Arathy Sasikala, Pharmaceutical Engineering Science, University of Bradford</i>
W9	11.30	3D Nanopatterned Stimuli-Responsive Polymeric Interfaces <i>Jin Ge, Xi'an JiaoTong University</i>
W10	11.45	EMI Shielding Polymer Foams with Heterogeneous Structure via Supercritical Carbon Dioxide Foaming <i>Xia Liao, Sichuan University</i>

- W11 12.00 Off-center Mechanochemistry of Block Copolymers
Hang Zhang, Xi'an JiaoTong University
- W12 12.15 Radiation modified polytetrafluoroethylene (PTFE) technology and application
Xiaolong Gao, Beijing University of Chemical Technology

12.30 **Lunch & Exhibition, Posters**
'Igloo' 360 degree visualisation visits (groups of ~10, inside WG08)

(13.00-13.30 AMRI Board Meeting Room WG45)

Characterisation

- W13 14.00 Sensitive and low dose X-ray imaging for biomedical applications
Tiqiao Xiao, Shanghai Synchrotron Radiation Facility, Shanghai Advanced Research Institute, Chinese Academy of Sciences
- W14 14.15 Chain structure of impact polypropylene resins
Xiangling Ji, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences
- W15 14.30 How Steels and Surface Coatings Affect Wear Performance in Injection Molding
David Zidar, Montan Universität Leoben, Austria
- W16 14.45 Structural performance study on solid-phase grafted polypropylene
Juan Li, Sinopec Beijing Research Institute of the Chemical Industries
- W17 15.00 Multiscale simulation study on the fracture mechanical properties of polymer composite materials.
Yangyang Gao, Beijing University of Chemical Technology
- W18 15.15 Bradford Digitisation Hub
Jason Jones, University of Bradford
- W19 15.30 Closing comments: Polymers are good for you
Phil Coates

15.40 **Tea/Coffee**

Workshop: Creating and Taking Opportunities Together

17.00 end

17.30 *Coach leaves for invited guests*
18.30 *Event for invited guests, to honour Jane Coates*
21.30 *Coach returns to Bradford*