



## PAT 2017 – conference programme

Note - talk duration. Plenary talks: 45'. Invited talks (in bold): 30'. Regular talks: 20'. For all: max 5' for additional questions.

**Sunday, 10/9/2017.** Registration (with reception) opens, 17.00-19.00, University Place (the Drum, see last page)

### Monday, 11/9/2017

Time starting	Session A (Room 2.220)	Session B (Room 2.218)	Session C (Room 2.219)	Time starting
9.00	<i>Welcome</i> (Nicola Tirelli, Cameron Alexander, Avi Domb)			
9.15	<b>Plenary Rigoberto Advincula</b> (Case Western Res U) <i>Electropolymerized molecularly imprinted polymer (E-MIP) sensors</i> (Theatre A)			9.15
	<b>Polymer synthesis</b>	<b>Health and Bio</b>	<b>Physical properties and processing</b>	
10.10	<b>Harm-Anton Klok</b> (EPFL) <i>Polymers at hard and soft surfaces</i>	<b>Joens Hilborn</b> (U Uppsala) <i>Hyaluronan hydrogels for bone formation</i>	<b>Wim Thielemans</b> (TU Leuven) <i>Surface modified cellulose nanocrystals: gateway to materials with unique properties</i>	10.10
10.45	<b>Break</b>			10.45
11.05	<b>Lee Fielding</b> (U Manchester) <i>Synthesis of polyacid-functionalized diblock copolymer nano-objects via polymerization-induced self-assembly</i>	<b>Alex Zelikin</b> (U Aarhus) <i>Medicinal polymer chemistry: from polymer design to therapeutic benefit and back</i>	<b>Andreas Mautner</b> (U Vienna) <i>Cellulose Nanopaper Characteristics and their Influence on Composite Properties</i>	11.05
11.40	<b>Helen Willcock</b> (U Loughborough) <i>Towards new applications for responsive polymer particles</i>	<b>Rosa Catania</b> (U Nottingham) <i>Towards targeting of Salmonella-infected macrophages using bespoke glycoliposomes</i>	<b>Steve Edmondson</b> (U Manchester) <i>Matrix-free graphene oxide nanocomposites by surface-initiated polymerisation</i>	11.40
12.05	<b>Tom McDonald</b> (U Liverpool) <i>Dual-stimuli responsive injectable nanogel/solid drug nanoparticle nanocomposites for the long-term sustained release of poorly soluble drugs</i>	<b>Patricia Monteiro</b> (U Nottingham) <i>Crosslinked redox-responsive micelles for treatment of triple negative breast cancer</i>		12.05
12.30	<b>Lunch</b>			12.30





13.45	<b>Plenary Andreas Lendlein</b> (Helmholtz-Teltow) <i>Enabling alternative stimuli in shape-memory polymers</i> (Theatre A)			13.45
	Polymer synthesis	Health and Bio	Physical properties and processing	
14.40	<b>Jean-Francois Lutz</b> (U Strasbourg) <i>Digital polymers: a new class of man-made macromolecules</i>	<b>Avi Domb</b> (HU Jerusalem) <i>Implantable biodegradable polymers for drug delivery and tissue separation and marking</i>	<b>Kevin Treacher</b> (AstraZeneca) <i>Materials science of advanced drug delivery systems: future generations of medicines?</i>	14.40
15.15	Break			15.15
15.35	<b>Giuseppe Mantovani</b> (U Nottingham) <i>Sweet immunomodulators</i>	<b>Annalisa Palange</b> (IIT) <i>Polymeric nanoconstructs: in silico design, microfluidic testing and murine biodistribution</i>	<b>Simon Haas</b> (U Nottingham) <i>Microfluidic biomaterials - Reactive polymeric surfactants for chemical library diversity</i>	15.35
16.10	<b>Bassem Sabagh</b> (Postnova) <i>Polymer, particle, vesicle? - The new challenge for analytical separation technologies in polymer characterisation</i>	<b>Amanda Pearce</b> (U Nottingham) <i>Chemistries for self-assembling polymer-drug nanoparticles</i>	<b>Max Drobot</b> (Syrris) <i>Microfluidic technology for the reproducible and controlled production of polymer microparticles</i>	16.10
16.35	<b>Nicholas Warren</b> (U Leeds) <i>Critical dependence on molecular weight of the thermo-responsive properties of diblock copolymer worms</i>	<b>Nadine Barna</b> (U Vienna) <i>Polystyrene encapsulated DNA nanoparticles for subsurface tracer technology</i>	<b>Ana Leticia Braz</b> (U Nottingham) <i>The main challenges of polymeric particles development and their physical characterization</i>	16.35
17.00	<b>Serena Agostini</b> (Malvern) <i>Analysis of challenging polymers – Characterisation of molecular weight and structure by the latest advanced multi-detector GPC system</i>	<b>Calum Ferguson</b> (U Leeds) <i>A new class of bioinsecticides via the complexation of double-stranded RNA with pH-responsive block copolymers</i>	<b>Tobias Rudolph</b> (Helmholtz-Teltow) <i>Miniaturized polymeric micro-cuboids prepared from crystallizable copolymer networks investigated on the nano- and micro-level</i>	17.00
17.25	End of the day			17.25





Tuesday, 12/9/2017

Time starting	Session A (Room 2.220)	Session B (Room 2.218)	Session C (Room 2.219)	Time starting
9.15	<b>Plenary</b> <b>Krisztof Matyjaszewski</b> (Carnegie Mellon U) <i>Polymers for advanced technologies by ATRP</i> (Theatre A)			9.15
10.10	<b>Polymer synthesis</b> <b>Sebastien Perrier</b> (U Warwick) <i>Molecular engineering for the design of nanostructured materials</i>	<b>Physical properties and processing</b> <b>Tao Xie</b> (Zhejiang U) <i>Dynamic covalent shape memory networks</i>	<b>Special session for EPSRC programme grants</b> Cameron Alexander (U Nottingham) <i>Introduction</i> <b>Kostas Kostarelos</b> (U Manchester) <i>Graphene and 2D material development in medicine</i>	10.10 10.15
10.45	<b>Break</b>			10.45
11.05	<b>Stan Slomkowski</b> (CMMS PAS) <i>Polystyrene core/polyglycidol rich shell spheroidal microparticles preparation, structure and their assemblies on hydrophilic surfaces</i>	<b>Alexander Bismarck</b> (U Vienna) <i>Printing flexible polymer energy-harvesting devices</i>	<b>Sebastian Sprick</b> (U Liverpool) <i>Chemical Synthesis of Transformative Extended Materials</i> <b>Cameron Alexander</b> (U Nottingham) <i>3D Biomaterials discovery</i>	11.05 11.35
11.40	<b>Axel Neffe</b> (Helmholtz-Teltow) <i>Clicked gelatin hydrogels - Multifunctional networks showing enzymatic surface degradation</i>	<b>Maria Balk</b> (Helmholtz-Teltow) <i>Complex movements enabled by triple-shape hydrogels</i>	<b>Anastasia Vogel</b> (U Liverpool) <i>Polymers for photocatalytic hydrogen generation</i>	12.05
11.55	<b>Gaston Primo</b> (Queen Mary U) <i>3DEAL: a tunable technique for the construction of anisotropic scaffolds</i>	<b>Rathanawan Magaraphan</b> (Chulalongkorn U) <i>Effect of sulfur content on properties of the dynamic vulcanized natural rubber and poly(lactic acid) blends</i>	<b>Nishant Singh</b> (U Nottingham) <i>New responsive materials from discovery approaches</i> <i>End</i>	12.20 12.35
12.40	<b>Lunch</b>			





	Polymer synthesis	Physical properties and processing	Special session for EPSRC programme grants	
13.45	<b>Sophie Guillaume</b> (U Rennes) <i>Monomer/catalyst tuning for selective ring-opening polymerization to deliver tailored polyhydroxyalkanoates (PHAs) architectures</i>	<b>Andrea Pucci</b> (U Pisa) <i>Novel organic fluorophores for high efficiency luminescent solar concentrators</i>	<u>Alessandra Travanut</u> (U Nottingham) <i>Synthesis of photo-responsive nanoparticles for drug delivery via multi-component reactions</i>	13.45
14.20	<b>Marc Behl</b> (Helmholtz-Teltow) <i>Robot-assisted synthesis of alternating multiblock copolymers based on oligo(<math>\epsilon</math>-caprolactone)/oligoTHF</i>	<u>Sebastian Sprick</u> (U Liverpool) <i>Conjugated polymers for photocatalytic hydrogen evolution</i>	<u>Cath Aitchison</u> (U Liverpool) <i>Conjugated polymer aggregates for photocatalytic hydrogen evolution</i>	14.00
			<u>Avishek Pal</u> (U Manchester) <i>Prospects of 2D materials based membrane for healthcare technology</i>	14.15
			<u>Leon Newman</u> (U Manchester) <i>Can graphene oxide sheets be considered biodegradable materials?</i>	14.30
			<u>Dara O'Brien</u> (U Nottingham) <i>Towards the synthesis of novel, renewable carvone-based monomers and polymers for biomedical applications</i>	14.45
			<u>Balakrishna Ananthoju</u> (U Manchester) <i>To be communicated</i>	15.00
			Discussion and concluding comments (N. Tirelli and C. Alexander)	15.15
15.00	Poster session			15.00
17.00	Award & Prize winner talk Stan Slomkovski (CMMS PAS)			17.00
19.15	Reception (MOSI, Main building (Revolution), see last page)			19.15
19.45	Social dinner (MOSI, Main building (Revolution))			19.45







Wednesday, 13/9/2017

Time starting	Session A (Room 2.218)	Session B (Room 2.220)	Time starting
9.15	<b>Plenary</b> <b>Eugenia Kumacheva</b> (U Toronto) <i>Nanopatterning with homopolymers: from planar substrates to nanoparticles</i>		9.15
	<b>Physical properties and processing</b>	<b>Health and Bio</b>	
10.10	<b>Guy Mechrez</b> (Volcani Centre) <i>New nanocomposite chemoresistive sensor for ethylene detection: highly tunable porosity and electrical resistance for high sensing performances</i>	<b>Alvaro Mata</b> (Queen Mary U) <i>Designing active soft matter through order/disorder synergies</i>	10.10
10.45	<b>Break</b>		10.45
11.05	<b>Dirk Grijpma</b> (U Twente) <i>Biodegradable PCL-b-PTMC-b-PCL triblock copolymers and nano-hydroxyapatite composites for use in extrusion-based additive manufacturing</i>	<b>Alberto Saiani</b> (U Manchester) <i><math>\beta</math>-sheet forming peptides: from self-assembly to functional biomaterials</i>	11.05
11.40	<b>John Torkelson</b> (Northwestern U) <i>Melt reprocessable polymer networks and network composites with full property recovery associated with cross-link density after multiple recycling steps</i>	<b>Teruyuki Komatsu</b> (Chuo University) <i>Protein nano- and micro-tubes as functional biomaterials</i>	11.40
12.05	<b>Bohao Zhang</b> (Imper Coll) <i>A novel interleaved carbon fibre/epoxy composite offering easy repair of interlaminar damage</i>	<b>Sherif Elsharkawy</b> (Queen Mary U) <i>Elastin-like polymers as an avenue for hierarchical biomineralization</i>	12.05
12.30	<b>Lunch</b>		12.30
	<b>Physical properties and processing</b>	<b>Health and Bio</b>	
13.45	<b>Paola Carbone</b> (U Manchester) <i>How Pluronic block copolymers interact and modulate the response of lipid membranes to mechanical stress</i>	<b>Steve Rannard</b> (U Liverpool) <i>Overcoming drug bioavailability issues with branched polymer stabilised nanoemulsions</i>	13.45
14.20	<b>Thomas Swift</b> (U Bradford) <i>Poly(acrylic acid) solutions - 50 years of use. What could we possibly not know yet?</i>	<b>Simon Holder</b> (U Kent) <i>New amine-based silicones with intrinsic anti-fungal activity: inhibiting biofilm growth</i>	14.20
14.45		<b>Mary Chan-Park</b> (NTU Singapore) <i>Combating multi-drug resistance bacteria with polymer coatings and hydrogels</i>	14.45
15.10	<b>Wrap-up &amp; end of the conference</b>		15.10





## Poster Session

### Health and Bio

1. Roberto **Donno** (IIT) *Nanomanufacturing through microfluidic-assisted nanoprecipitation: advanced analytics and structure-activity relationships*
2. Richard **England** (Astrazeneca) *Polyoxazoline-modified lysine dendrimers as carrier molecules to improve the therapeutic index of SN-38, the active metabolite of irinotecan*
3. Farah **El Mohtadi** (U Manchester) *The Antioxidant Effects of Polysulfide Systems & Their Inhibitory Action against Osteoclast Differentiation & Activity*
4. Alfredo **Gravagnuolo** (U Manchester) *Bio-adhesive proteins from fungi: biotechnological production, self-assembly and applications*
5. Moeka **Kureishi** (Chuo U) *Exchange Transfusion with Red Blood Cell Substitute "Hemoglobin-Albumin Cluster" into Anesthetized Rats*
6. Enrique **Lallana Ozores** (U Manchester) *Chitosan / hyaluronic acid nanoparticles for RNA delivery.*
7. Christopher **Leon-Valdivieso** (U Manchester) *Mechanically-tailored fibrin matrices for wound healing applications*
8. Elisa **Mele** ((U Loughborough) *Advanced wound dressings based on nanofibres embedding therapeutic plant extracts*
9. Yoko **Nakai** (Chuo U) *Self-Propelled Protein Microtubes with an Interior Surface Composed of Pt Nanoparticles*
10. Kazuki **Osada** (Chuo U) *Synthesis and O<sub>2</sub>-Binding Property of Cys-93( $\beta$ ) Substituted Intramolecular Crosslinked Hemoglobins*
11. Felix **Reisbeck** (Freie U Berlin) *Synthesis of dPG-based Nanogels as Carriers for Vaccines*
12. Julio **Rios de la Rosa** (U Manchester) *Hyaluronic acid as a targeting agent*
13. Iwan **Roberts** (U Manchester) *Contraction and alignment of bioengineered anchored fibrin constructs as functional skeletal muscle models*
14. Guogao **Zhang** (Zhejiang U) *Exploring Dynamic Equilibrium of Diels-Alder Reaction for Solid State Plasticity in Remoldable Shape Memory Polymer Network*

### Physical properties and processing

15. E E **Abdel-Hady** (Minia U) *Catalytic Activity of the Co/Cu Carbon Nanofibers Electrode for Methanol electrooxidation*
16. Julio **Aguilar-Tadeo** (U Manchester) *Simulation of reduced graphene oxide-reinforced chitosan/polydimethylsiloxane bio-inspired morphing composite*
17. Erhan **Bat** (ODTÜ) *Fabrication of Poly(PEGMA) Grafted Graphene Oxide and Polysulfone Based Porous Films via Breath Figure Method*
18. Erhan **Bat** (ODTÜ) *Production of Reduced Graphene Oxide and Polymer based Aerogels for Oil-Water Separations*
19. Gianvito **Caputo** (IIT) *Green synthesis of long chain polyesters from agro-wastes catalyzed by SnO<sub>2</sub> nanoparticles*
20. Di **Chen** (Zhejiang U) *A pore structure photolithography based on dynamically crosslinked hydrogels*
21. Evi **Christodoulos** (U Thessaloniki) *Porous dressings of chitosan/modified chitosan IPNs for topical wound delivery of chloramphenicol*
22. Mahran **Daief** (HU Jerusalem) *Polyelectrolytes for the purification of industrial wastewater*
23. Richard **d'Arcy** (IIT) *The effect of branching (star architecture) on poly (D, L-lactide)(PDLLA) degradation and drug delivery*





24. Moran **Haim Zada** (HU Jerusalem) *Stable Polyanhydride Synthesized from Ricinoleic acid and Sebacic acid*
25. Clara **Hedegaard** (Queen Mary U) *A self-assembly based supramolecular bioink with hierarchical control as a new biofabrication tool*
26. Matthias **Heuchel** (Helmholtz-Teltow) *Morphological analysis of surface functionalized porous poly(ether imide) microparticles by mercury porosimetry*
27. Giuseppe **Iasilli** (U Pisa) *Vapochromic polyketone films based on aggregation induced enhanced emission*
28. Stephen **Quinn** (U Manchester) *Blow spinning of poly(vinylidene fluoride): mechanical, morphological and structural effects*
29. Aneela **Sabir** (U Punjab) *Polymer matrix membranes (PMM) modified with electrospun woven fibres/ carbon nanofibers by nanofiltration for boron rejection*
30. Marzieh **Tamaddondar** (U Manchester) *Network-PIM-1 as a novel filler for incorporation into PIM-1-based mixed matrix membranes (MMMs)*
31. Giacomo **Tedeschi** (IIT) *Self-plasticized cellulose acetate oleate mixed ester: improving of hydrodynamic and barrier properties*
32. Umesh **Waware** (Qatar U) *Electrical and Dielectric behaviour of thin films of Poly(aniline-co-m-fluoroaniline)*
33. Alex **Wright** (U Kent) *Poly High Internal Phase Emulsions For The Effective Encapsulation of Chemical Warfare Agents*
34. Ze-Fan **Yao** (Peking U) *Unravelling Solution-State Supramolecular Structures of A Donor-Acceptor Polymer and Their Influences on Solid-State Morphology and Charge Transport Properties*
35. Deniz **Yerlesti** (Yildiz U) *Phosphorous containing flame retardant polymers*

### Polymer synthesis

37. Kaja **Borup Løvshall** (Aarhus U) *A simple method to synthesize self-immolative polymers with varying reporter molecules*
37. Yang **Lu** (Peking U) *5,5'-Diaza-indigo: an Electron-Deficient Building Block for Donor-Acceptor Conjugated Polymers*
38. Dara **O'Brien** (U Nottingham) *Towards the Synthesis of Novel, Renewable Carvone-Based Monomers and Polymers for Biomedical Applications*
39. Sam **Parkinson** (U Leeds) *Continuous-Flow Synthesis of Block Copolymer Nanoparticles via RAFT Dispersion Polymerisation*
40. Nishant **Singh** (U Nottingham) *2-Photon Degradable Hydrogels to Study Cell-Material Interactions*
41. Bassem **Sabagh** (Postnova) *Characterization of Biopolymers and Synthetic Polymers using Asymmetric Flow Field-Flow Fractionation (AF4) and Thermal Field-Flow Fractionation (TF3) coupled to Multi-Angle Light Scattering (MALS)*
42. Alessandra **Travanut** (U Nottingham) *Passerini multicomponent reaction: a versatile route for the synthesis of biodegradable monomers and polymers*





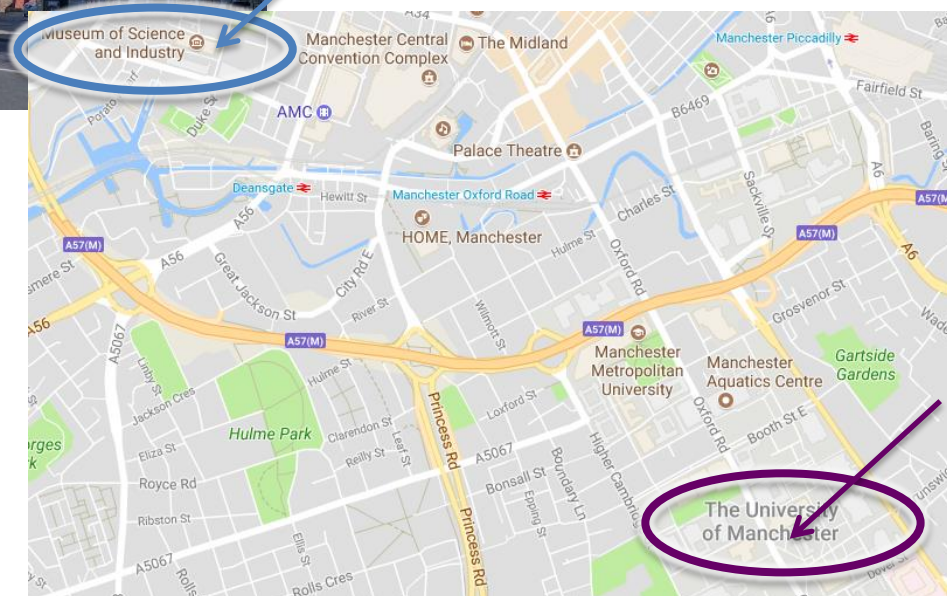


## LOCATION

### MOSI

Reception: Revolution gallery (ground floor, main building)

Dinner: Revolution gallery (ground floor, main building)



### University Place

Registration (Sunday): the Drum (ground floor)

Poster session: the Drum (ground floor)

Plenary talks: Theatre A

PAT award: Theatre A

Regular sessions: Rooms 2.218, 2.219, 2.220

Cloak room: Room 2.217

PAT board meeting (Tuesday 12.30-14): Room 3.214

