



Thursday 13<sup>th</sup> and Friday 14<sup>th</sup> July 2017

## New Frontiers in Colloid Science

Nicholson Building

### Agenda – Thursday 13<sup>th</sup>

- 08:30 Registration and refreshments
- 09:00 *Welcome*  
**Tim Softley**, University of Birmingham  
**Dwaipayan Chakrabarti**, University of Birmingham and **Vinothan Manoharan**, Harvard University
- 09:30 **Daan Frenkel**, University of Cambridge  
*Self-assembly and health: the bad news is the good news*
- 10:00 **Stefano Sacanna**, New York University  
*Shape-Reconfigurable Colloids*
- 10:30 **Daniela Kraft**, Leiden University  
*Reconfigurable colloidal structures*
- 11:00 Refreshment break
- 11:30 **David Wales**, University of Cambridge  
*Exploring Energy Landscapes: New Frontiers for Colloids*
- 12:00 **Roy Johnston**, University of Birmingham  
*Energy Landscapes of Nano-hydrated Anions*
- 12:20 **Qian Chen**, University of Illinois at Urbana Champaign  
*Direct Imaging of Crystallization Kinetics and Interfacial Fluctuations of Nanoparticle Superlattices*
- 12:50 Lunch and Poster viewing session



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- 14:00 **Peter Dowding**, Infineum UK Limited  
*Challenges involving additive competition in the formulation of lubricant additives*
- 14:30 **Zhenyu Jason Zhang**, University of Birmingham  
*Nanotribology of Soft Matter at Interface*
- 14:50 **Eric Robles**, Procter and Gamble  
*Technical Challenges in Characterising Complex Colloidal Systems in Consumer Goods Industry*
- 15:20 **Zhibing Zhang**, University of Birmingham  
*Understanding the mechanical strength of functional microcapsules, their adhesion on fabric surface and barrier properties for developing consumer products*
- 15:40 **Melanie Britton**, University of Birmingham  
*Using MRI to Understand the Interplay between Structure and Rheology in Colloidal Systems*
- 16:00 Refreshment break
- 16:30 **Paul Luckham**, Imperial College London  
*The Formation of Reversible Particle - Polymer Gels under Extensional Shear*
- 17:00 Group Discussions
- 17:45 Close



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### Agenda – Friday 14<sup>th</sup>

- 08:45 Refreshments
- 09:00 **Mike Cates**, University of Cambridge  
*Guided Assembly of Self-Propelled Colloidal Particles*
- 09:30 **Wilson Poon**, University of Edinburgh  
*Painting with bacteria: Using E. Coli for templated supra-colloidal self-assembly*
- 10:00 **Julia Yeomans**, University of Oxford  
*Confining active turbulence*
- 10:30 **Zorana Zeravcic**, ESPCI, Paris  
*Towards Living Matter with Colloidal Particles*
- 11:00 Refreshment break
- 11:30 **Tim Albrecht**, Imperial College London  
*Surface effects during translocation of double-stranded DNA in solid-state nanopores*
- 12:00 **Jim Tucker**, University of Birmingham  
*Functional Photo-active and Redox-active Nucleic Acid Derivatives*
- 12:20 **Shuang Zhang**, University of Birmingham  
*Metamaterials for topological photonics*
- 12:40 **Paramaconi Rodriguez**, University of Birmingham  
*Expanding the boundaries of cathodic corrosion: The effective preparation of metal alloy nanoparticles and mixed oxides and their use as active electrocatalyst and photocatalyst*



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### Agenda – Friday 14<sup>th</sup>

- 13:00 Lunch and Poster viewing session
- 14:00 **Dirk Aarts**, University of Oxford  
*Directed self-assembly of Janus rods*
- 14:30 **Dave Smith**, University of Birmingham  
*A computational method for micro- and nano-scale structures in flow*
- 14:50 **Daniele Vigolo**, University of Birmingham  
*Continuous Isotropic-Nematic Transition in Amyloid Fibril Suspensions Driven by Thermophoresis*
- 15:10 **Francisco Fernandez-Trillo**, University of Birmingham  
*Peptide Chemistry and Nanotechnology to Synthesise Targeted and Responsive Antimicrobial Particles*
- 15:30 **Gi-Ra Yi**, Sungkyunkwan University  
*Colloidal Mesoporous Silica Nanoparticles as Strong and Degradable Adhesives for Biological Tissues*
- 16:00 Refreshments, Group discussions, and Closing remarks
- 17:00 Close