

RSC Postgraduate Symposium on Nanotechnology

Friday 14th December 2012

Room 124, School of Chemical Engineering
University of Birmingham, United Kingdom

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| 9:30 – 10:00 | Registration & Coffee |
| | <i>Session I – Chair: Alex Robinson</i> |
| 10:00 – 10:05 | Welcome Introduction |
| 10:05 – 10:35 | Invited Lecture: Kenneth Dawson, University College Dublin, Ireland <i>Engineered Nanoscale Interactions with Living Organisms</i> |
| 10:35 – 10:50 | Mhairi Harper, University of Strathclyde, UK <i>Novel detection of MRSA using Surface enhanced Raman scattering (SERS)</i> |
| 10:50 – 11:05 | Alice Pranzetti, University of Birmingham, UK <i>Switchable Charged Surfaces to Regulate Bacterial Adhesion</i> |
| 11:05 – 11:20 | Flash Presentation Session (A. King, J. Mazzolini, K. Abualnaja, L. Green) |
| 11:20 – 11:40 | Coffee Break |
| | <i>Session II – Chair: Zoe Schnepf</i> |
| 11:40 – 12:10 | Invited Lecture: Philip Moriarty, University of Nottingham, UK <i>Mechanical Atom Manipulation</i> |
| 12:10 – 12:25 | K. Adam Rahnejat, University College London, UK <i>STM Manipulation of Acetophenone on Si(001)</i> |
| 12:25 – 12:40 | Robert Davies, Cardiff University, UK <i>The surface chemistry and Nanostructure of Graphite as a Model Catalyst Support: The Effects of Acid Treatment.</i> |
| 12:40 – 13:00 | Flash Presentation Session (E. Nowak, G.A. Bhaduri, G. Smith, G Rance, J. Bailey) |
| 13:00 – 14:00 | Lunch |
| | Poster Session |
| 14:00 – 15:30 | (programme overleaf) |
| 15:30 – 15:45 | Coffee Break |
| | <i>Session III – Chair: Paula Mendes</i> |
| 15:45 – 16:00 | Stephen Hodge, Imperial College London, UK <i>Electrochemical Processing of Single-Walled Carbon Nanotubes and related materials</i> |
| 16:00 – 16:15 | Sang Young Noh, University of Warwick, UK <i>Mechanisms of Nanoparticle Transit across Biomimetic Polymer Membranes: Effect of Nanoparticle Size and Hydrophobicity</i> |
| 16:15 – 16:30 | C. Blanco-Andujar, University College London, UK <i>Understanding the Formation Pathway of Iron Oxide Nanoparticles</i> |
| 16:30 – 16:45 | Maria Lebedeva, University of Nottingham, UK <i>Fullerene-Salen Metal Complexes: A Route to Tuneable Multi-electron Systems</i> |
| 16:45 – 17:15 | Invited Lecture: Matthew Gibson, University of Warwick, UK <i>Functionalised Gold Nanoparticles for Probing Biological Barriers and for Glycomics</i> |
| 17:15 – 17:30 | Talk and Poster Prizes |
| 17:30 | Hot buffet |

Poster Session

| No. | Name | Institution | Poster Title |
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| 1 FP | Gaurav Bhaduri | Newcastle University | Catalysis of reversible hydration of carbon dioxide using nickel nanoparticles for carbon capture and storage application. |
| 2 | Shei Sia Su | University of Birmingham | Production of Nanoparticles using Pulsed Electrical Discharge in Liquid |
| 3 FP | Luke Green | University College London | Large FePt nanoclusters: Synthesis, characterisation and elucidation of formation mechanism |
| 4 | Hanieh Yazdanfar | University of Leicester | Reversible solvent interaction of fluorescent silicon nanoclusters |
| 5 | Jill Newton | University of Birmingham | Nanoparticle Catalysts for Proton Exchange Membrane Fuel Cells |
| 6 FP | Emilia Nowak | University of Birmingham | Heat Transfer Coefficient of Nanofluids in different geometries |
| 7 | Faris Sinjab | University of Nottingham | Photochemical synthesis of silver nanoparticles with controllable shape and size for use in tip-enhanced Raman spectroscopy |
| 8 FP | Graham Smith | Imperial College London | Lead underpotential deposition as a method for characterising the specific surface area of nanoparticles and fuel cell electrodes. |
| 9 | Paul Sanderson | University of Birmingham | Measurement and identification of metallic nanoparticles in ambient air |
| 10 FP | Khamael Abualnaja | Newcastle University | Optical and Chemical Characterization of Erbium Doped Silicon Quantum Dots |
| 11 | Shi Su | Aston University | X-ray Photoelectron Spectroscopy analysis on Hydrogenated Plasma-Assisted Surface Purification of Detonation Nanodiamond Powder |
| 12 | Ana Belen Caballero Hernandez | University of Birmingham | Towards an enhancement of the therapeutic activity of classic platinum drugs by using gold nanoparticles as delivery vehicles |
| 13 FP | Anna King | University of Manchester | Development of nanotherapeutics for targeted drug delivery to the placenta |
| 14 | Lynda Harris | University of Manchester | Tumour homing peptides as tools for targeted delivery to the placenta |
| 15 | Juana Maria Delgado Saborit | University of Birmingham | Characterisation of human exposures to ambient nanoparticles - From Airborne exposures to Biological Effects (FABLE): the impact of nanoparticles (NPs) on health. |
| 16 | Philip Smith | University of Birmingham | Development and application of novel imaging methodologies to the study of the cellular uptake of manufactured nanoparticles |
| 17 | Sunil Claire | University of Birmingham | Multimodal nanosized agents based on Functionalised nanoparticles to target delivery in cells |
| 18 | Bhoomi Savla | University of Birmingham | Reducible Polypeptide Vectors for Gene Delivery |
| 19 | Robert Deller | University of Warwick | Cryopreservation of Cells using Peptidomimetic Macromolecules |
| 20 FP | Julie Mazzolini | University of | Cellular trafficking and potential cytotoxicity of cerium |

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| | | Birmingham | oxide nanoparticles into lung derived cells |
| 21 | Guy Dawson | University of Birmingham | Design and fabrication of high sensitivity electrochemical dna-based biosensors. |
| 22 | Caroline Biggs | University of Warwick | Smart Microarray Platforms for Understanding Biochemical Interactions |
| 23 | Lucienne Otten | University of Warwick | Label-Free Microarrays to Probe Host-Pathogen Interactions |
| 24 | Guanxiong Wang | University of Birmingham | Angular Multilevel Nanosieve Filter in Pressure Field: I Flow Property |
| 25 | David Farmer | University of Nottingham | Mass Sensing using Sub-Terahertz Vibrations in Thin Polymer Films |
| 26 FP | James Bailey | University of Nottingham | Thin film polymer photonics: Spin cast distributed Bragg reflectors |
| 27 | Raz Arif | Aston University | Exfoliation of Graphene in Organic Solvent |
| 28 | Adam Clancy | Imperial College London | Grafting to graphene using reductive functionalisation |
| 29 | Thomas Chamberlain | University of Nottingham | Single-walled carbon nanotubes as templates for the controlled formation of sulphur terminated graphitised nanoribbons |
| 30 | Sheng Hu | Imperial College London | Functionalisation of Carbon Nanotubes using a Solvent-free Thermo-activation Methodology for Respiratory Toxicity Investigation |
| 31 | William Arran Solomonsz | University of Nottingham | Controlling the Regioselectivity of the Hydrosilylation Reaction in Carbon Nanoreactors |
| 32 FP | Graham Rance | University of Nottingham | Carbon nanoreactors for catalysis in confined space |
| 33 | Dongxu Yang | University of Birmingham | Fullerene Based Molecular Resists for Next Generation E-beam and EUV Lithography |
| 34 | Farhan Hasan | University of Birmingham | Conductive Resists for Nanofabrication on Insulating Substrates |
| 35 | David Bowyer | University of Birmingham | Developing Conductive Organic Molecular Resists for Nanofabrication of Insulating Materials |
| 36 | Daniel Phillips | University of Warwick | Combining Thermal and Redox Responses to Trigger an “Isothermal” LCST Transition |
| 37 | Thomas Congdon | University of Warwick | Preparation and Activity of Synthetic ‘Antifreeze’ Macromolecules: Structure-Property relationships |
| 38 | Yangchun Xie | University of Birmingham | A Molecule-like Composite Nanostructure by Self-selective Growth |
| 39 | Asif Suleman | University College London | Understanding semiconductor defects through electrostatic effects of STM |
| 40 | David Cheneler | University of Birmingham | Critical length scale for nanometrology |
| 41 | Kitiphat Sinthiptharakoon | University College London | The study of subsurface As dopants below the Si(100):H surface using scanning tunneling microscopy |
| 42 | Yanping He | University of Birmingham | Characterization of Microcapsule Adhesion on Cellulose Film by a Flow Chamber Technique and AFM |
| 43 | Alaina Emmanuel | University of Warwick | <i>TBC</i> |