

Monday 4 July 2011

Registration

10:00 - 12:30 Renold Building, Registration Area

Lunch

12:30 - 13:30

Welcome: Prof Dame Nancy Rothwell, President & Vice Chancellor of the University of Manchester
Prof Stephen Yeates, President of RSC Materials Chemistry Division

Plenary: Jean-Marie Lehn

13:30 - 14:30 Renold Building, C16 Chair: Professor Peter Budd

Plen01 Dynamic MATERIALS Towards Functional Adaptive Materials
13:30 PLENARY Jean-Marie Lehn
ISIS - Universite de Strasbourg, Strasbourg, France

Parallel 1 Session 1: Advanced Technologies and Nanomaterials

14:30 - 16:00 Renold Building, C16 Chair: Dr Martin Heeney

ATN_O01 Self-assembled nano-functions for printed electronics
14:30 KEYNOTE Takao Someya¹, Tsuyoshi Sekitani¹, Ute Zschieschang², Hagen Klauk²,
Takanori Fukushima^{1,3}, Takuzo Aida^{1,3}
¹The University of Tokyo, Tokyo, Japan, ²MPI, Stuttgart, Germany, ³RIKEN, Wako, Japan

ATN_O02 Graphene: the Ideal Electrode Material
15:00 Robert Dryfe, Ian Kinloch, Ernie Hill, Konstantin Novoselov, Anna Valota,
Jeffrey Martin, Adam Cooper
University of Manchester, Manchester, UK

ATN_O03 Simple and scalable route for the 'bottom-up' synthesis of few-layer graphene
15:15 platelets and thin films
Karl Coleman, Christopher Herron, Rebecca Edwards
Department of Chemistry, Durham University, South Road, Durham, UK

ATN_O04 Novel Graphene Sheets Functionalized with Poly(N-isopropylacrylamide) via
15:30 Click Chemistry and Their Application on Drug Delivery
Yongzheng Pan, Hongqian Bao, Nanda Gopal Sahoo, Lin Li
Nanyang Technological University, Singapore, Singapore

ATN_O05 A Facile Way to Control the Number of Walls in Carbon Nanotubes through the
15:45 Synthesis of Exposed-Core/Shell Catalyst Nanoparticles
Choi Kyungmin, Kang Jeungku
KAIST, Daejeon, Republic of Korea

Parallel 2 Session 1: Energy and Sustainability

14:30 - 15:45 Renold Building, C9 Chair: Dr Peter Slater

ES_O01 Thermoelectric materials for energy conversion
14:30 KEYNOTE Bo Brummerstedt Iversen
Aarhus University, Aarhus, Denmark

ES_O02 Titanium-embedded Layered Double Hydroxides as Highly Efficient Water
15:00 Oxidation Photocatalysts under Visible Light
Yeob Lee, Jung Hoon Choi, Hyung Joon Jeon, Kyung Min Choi, Jeung Ku Kang
Korea Advanced Institute of Science and Technology, Daejeon, Republic of Korea

ES_O04
15:15 On board H₂ production by dehydrogenation of Jet A-1 surrogate hydrocarbon mixture on Pt-Sn/ γ -Al₂O₃ catalyst.
Carlo Resini¹, Gilles Taillades¹, Jacques Roziere¹, Carlo Lucarelli², Stefania Albonetti², Angelo Vaccar², Kan-Ern Liew³, Alexander Ohnesorge³, Ilenia Gabellini⁴, David Wails⁴
¹CNRS-University of Montpellier 2, Montpellier, France, ²University of Bologna, Bologna, Italy, ³EADS Deutschland GmbH, Munich, Germany, ⁴Johnson Matthey, Reading, UK

ES_O05
15:30 A New Microporous Polystyrene Sulfonic Acid Catalyst with High Activity Towards Free Fatty Acid Esterification in Biodiesel Production
Eko Andrijanto, Rob Brown
University of Huddersfield, Huddersfield, UK

Parallel 3 Session 1: Life and Health

14:30 - 16:00

Renold Building, C2

Chair: Professor Fiona Meldrum

LH_O01
14:30 KEYNOTE The Coiled-Coil Connection
Alexander Kros
Leiden University, Leiden, The Netherlands

LH_O02
15:00 RESPONSIVE BIOHYBRID MICROGELS BASED ON THE E3/K3 HETERODIMERIC COILED COIL
Harald Wutzel, Harm-Anton Klok
École polytechnique fédérale de Lausanne, Laboratoire des Polymères, Lausanne, Switzerland

LH_O03
15:15 Design of and Application of Glycopolymers for Therapeutics: Understanding and Inhibiting Infection
Matthew I. Gibson
University of Warwick, Coventry, UK

LH_O04
15:30 Development of polymer systems to aid retinal cell transplantation.
Andrew Treharne¹, Heather Thomson², Andrew Lotery^{2,3}, Martin Grosse¹
¹School of Chemistry, University of Southampton, Southampton, UK, ²Division of Clinical Neurosciences, School of Medicine, University of Southampton, Southampton, UK, ³Southampton Eye Unit, Southampton General Hospital, Southampton, UK

LH_O05
15:45 Structure Variation and Evolution in Microphase Separated Grafted Diblock Copolymer Films
I W Hamley, V Castelletto, Ben O'Driscoll
University of Reading, Reading, UK

Parallel 4 Session 1: Soft Matter

14:30 - 16:00

Renold Building, D7

Chair: Dr Michael Sommer

SM_O01
14:30 KEYNOTE Processing of macromolecular complex architectures
Natalie Stingelin
Imperial College London, London, UK

SM_O02
15:00 Tacticity Directed Solution Self-Assembly in Small Molecule Organic Semiconductor - Polymer Blends
Stephen Yeates, Marie-Beatrice Madec
University of Manchester, Manchester, UK

SM_O03
15:15 Synthesis and Characterization of Novel Donor-Acceptor Copolymers Based on fused Bithiazolopyrrole
Mohammed Al-Hashimi, Martin Heeney
Imperial collage, London, UK

SM_O04
15:30 NHC-based (N-Heterocyclic Carbene) Catalytic Systems for the Synthesis of Triarylamine Polymers Containing Fused Heterocyclic Rings
Reiner Sebastian Sprick¹, Mario Hoyos Nunez², Oscar Navarro², Michael L. Turner¹
¹University of Manchester, Manchester, Lancs, UK, ²University of Hawaii at Manoa, Honolulu, Hawaii, USA

SM_O05
15:45 Low energy gap carbazole-based polymers and their photovoltaic properties
Ahmed Iraqi¹, Hunan Yi¹, Abdelqader Imragaa¹, Abdulaziz Al Ghamdi¹, Mohd S. Sarjadi¹, David Mohamad², Darren Watters², James Kingsley², David G. Lidzey²
¹Department of Chemistry, The University of Sheffield, Sheffield, South Yorkshire, UK, ²Department of Physics & Astronomy, The University of Sheffield, Sheffield, South Yorkshire, UK

Coffee

16:00 - 16:30

Parallel 1 Session 1: Advanced Technologies and Nanomaterials

16:30 - 17:45

Renold Building, C16

Chair: Dr Martin Heeney

ATN_O06
16:30 Clusters incorporation on functionalized nano-carbon supports
Deborah Vidick, Sophie Hermans, Michel Devillers
Université catholique de Louvain, Louvain-la-Neuve, Belgium

ATN_O07
16:45 Carbon nanotube-reinforced porous Al₂O₃ nanocomposites filters
Hamed Parham, Yanqiu Zhu
University of Exeter, Exeter/Devon, UK

ATN_O08
17:00 compatibilizing effect of poly[styrene-co-(glycidyl methacrylate)] in single walled carbon nanotube-polycarbonate composites
Robin Anderson¹, Jingwen Guan¹, Behnam Ashrafi², Karen Stoeffler³, Benoit Simard¹
¹NRC-Steacie Institute for Molecular Sciences, Ottawa, ON, Canada, ²NRC-Institute for Aerospace Research, Ottawa, ON, Canada, ³NRC-Industrial Materials Institute, Boucherville, QC, Canada

ATN_O09
17:15 Atom Transfer Radical Polymerization of Styrene in the Presence of Montmorillonite Nanolayers
Hossein Roghani-Mamaqani¹, Vahid Haddadi-Asl^{1,2}, Mohammad Najafi², Mehdi Salami-Kalajahi^{1,2}
¹Amirkabir University of Technology, Tehran, Iran, ²Research Institute of Petroleum Industry, Tehran, Iran

ATN_O10
17:30 Rubber nanocomposite - prospective material for completely hyper-elastic pressure sensors
Juris Zavickis¹, Maris Knite¹, Valdis Teteris¹, Velta Tupureina¹, Gatis Podins¹, Artis Linarts¹, Juris Adams¹, Guillaume Malefan²
¹Riga Technical University, Institute of Technical Physics, Riga, Latvia, ²University of Toulon and the Var, Institute of Sciences and Engineering, Toulon and the Var, France

Parallel 2 Session 1: Energy and Sustainability

16:30 - 17:45

Renold Building, C9

Chair: Dr Peter Slater

ES_O06
16:30 The effect of sulphur containing impurities on the catalytic conversion of biogas over supported nickel catalysts
Elizabeth Norris, John Staniforth, Richard Darton, Mark Ormerod
Birchall Centre for Inorganic Chemistry, Materials Chemistry and Sustainable Energy Group, Keele University, Staffordshire, UK

ES_O07
16:45 The influence of O₂ addition on the H₂S tolerance of nickel and ceria-doped nickel catalysts for the catalytic reforming of biogas
David. J Nixon, R. Mark Ormerod, John. Z Staniforth
Materials Chemistry and Sustainable Technology Research Group, Keele University, Staffordshire, UK

- ES_O08
17:00
Microwave induced de-hydrochlorination and pyrolysis of poly(vinyl chloride) (PVC) for the recovery of chemicals and energy.
Steven Goodman, Geoffery Fowler
Imperial College London, London, UK
- ES_O09
17:15
Reclaiming rubber fillers by microwave devulcanization of tyres
Eliana Athanassiades¹, Karl Smith¹, Martyn Bennett², Geoffrey Fowler¹
¹*Imperial College London, London, UK*, ²*ARTIS, West Melksham, Wiltshire, UK*
- ES_O10
17:30
Sustainable Anaerobic Adhesive Technology Development
David Birkett
Henkel, Dublin, Ireland

Parallel 3 Session 1: Life and Health

16:30 - 17:45

Renold Building, C2

Chair: Professor Fiona Meldrum

- LH_O06
16:30
Responsive Polymers for Biopolymer and Cell Delivery
Cameron Alexander¹, Francisco Fernandez-Trillo¹, Johannes Magnusson¹, Sebastian Spain¹, Racha Cheikh Al-Ghanami¹, Felicity Heath¹, Aram Saeed¹, Kevin Shakesheff¹, Kristofer Thurecht²
¹*University of Nottingham, Nottingham, UK*, ²*Australian Institute for Bioengineering and Nanotechnology, Brisbane, Australia*
- LH_O07
17:00
Novel polymeric nanogels with specific recognition properties as enzyme-mimics
Marina Resmini, Paolo Bonomi, Davide Carboni
Queen Mary University of London, London, UK
- LH_O08
17:15
Water-dispersible organic nanoparticles and controlled release
Neil Grant, Lei Qian, Adham Ahmed, Steve Rannard, Andrew Cooper, Haifei Zhang
University of Liverpool, Liverpool, UK
- LH_O09
17:30
Magnetic Nanoparticles as MRI Contrast Agents and for Selective Targeting of Cells
Thomas Schladt¹, Kerstin Schneider¹, Filipe Natalio¹, Heiko Bauer¹, Bahar Nakhjavan¹, Stefan Weber¹, Jürgen Brieger², Laura Schreiber², Wolfgang Tremel¹
¹*Johannes Gutenberg-Universität, Mainz, Germany*, ²*Universitätsklinik, Johannes Gutenberg-Universität, Mainz, Germany*

Parallel 4 Session 1: Soft Matter

16:30 - 17:45

Renold Building, D7

Chair: Dr Natalie Stingelin

- SM_O06
16:30
Electro-optic and fluorescence studies of soluble polar TCNQ chromophores in polymeric host systems.
Marek Szablewski¹, Lewys Curteis¹, Lars-Olof Palsson²
¹*Durham University, Centre for Materials Physics, Department of Physics, Durham, UK*, ²*Durham University, Department of Chemistry, Durham, UK*
- SM_O07
16:45
Following the kinetics of a chemical reaction in ultrathin supported films of soft materials by reliable mass density determination with x-ray reflectivity
Eero Kontturi, Aapo Lankinen
Aalto University, Helsinki, Finland
- SM_O08
17:00
Phosphorescent copper (I) complexes for organometallic light emitting devices
Paolo Coppo¹, Immaculada Andres-Tomé¹, Christopher J. Winscom¹, Paul Harris¹, John Fyson¹, Tommaso Marcellì²
¹*Brunel University, Uxbridge, UK*, ²*Politecnico di Milano, Milano, Italy*

SM_O09
17:15

Well-defined, defect-free and endfunctionalised poly(3-hexylthiophene) via external initiation of Grignard metathesis polymerisation
Michael Sommer¹, Wilhelm Huck¹, Hartmut Komber², Volodymyr Senkovskyy², Roman Tkachov², Anton Kiriya², Richard Friend³, Sven Huettnner³
¹Melville Laboratory for Polymer Synthesis, Cambridge, UK, ²Leibniz-Institut für Polymerforschung, Dresden, Germany, ³Optoelectronics Group, Cambridge, UK

SM_O10
17:30

Fluorinated poly(arylenevinylene)s for electroluminescence and photovoltaics
Gianluca M. Farinola¹, Francesco Babudri¹, Antonio Cardone², Carmela Martinelli¹, Francesco Naso¹, Vita Pinto¹, Giovanni Bruno³, Maria Losurdo³, Andrea Reale⁴, Luigi Salamandra⁴
¹Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy, ²CNR ICCOM, Bari, Italy, ³CNR IMIP, Bari, Italy, ⁴Dipartimento di Ingegneria Elettronica, Università di Roma Tor Vergata, Roma, Italy

Welcome Reception & Poster Session 1

17:45 - 19:00

Foyer & Exhibition Area, Renold Building

Tuesday 5 July 2011

Plenary: Omar Yaghi

09:00 - 10:00 Renold Building, C16 Chair: Professor Matthew Rosseinsky

Plen02 Combining Heterogeneity with Uniformity in Metal-Organic Frameworks
09:00 Omar Yaghi
PLENARY UCLA, Los Angeles, USA

Parallel 1 Session 2: Advanced Technologies and Nanomaterials

10:00 - 11:00 Renold Building, C16 Chair: Dr Ahmed Iraqi

ATN_O18 Intelligent Routes to the Controlled Synthesis of Nanomaterials
10:00 John De Mello
KEYNOTE Imperial College London, London, UK

ATN_O12 Inkjet Printing Functional Materials: Stability of Lines and Coffee Staining
10:30 Brian Derby, Jonathan Stringer, Rui Dou, Tianming Wang
University of Manchester, Manchester, UK

ATN_O13 Flow-Induced Polymer Degradation during Ink-Jet Printing
10:45 Stephen Yeates¹, Khalid Alamry¹, Jeffrey Odell²
¹University of Manchester, Manchester, UK, ²Bristol University, Bristol, UK

Parallel 2 Session 2: Energy and Sustainability

10:00 - 11:00 Renold Building, C9 Chair: Professor Colin Greaves

ES_O11 Solid state electrochemical conversion of clean electrons to fuels
10:00 George Tsekouras, Kui Xie, Xiangling Yue, John Irvine
KEYNOTE University of St Andrews, St Andrews, UK

ES_O12 A new layered perovskite as promising Co-free cathode for IT-SOFC.
10:30 Antoine Demont¹, M. F. Thomas¹, M Dyer¹, R Sayers¹, M Tsiamtsouri¹, H Niu¹, G. R. Darling¹, A Daoud-Aladine², J. B. Claridge¹, M. J. Rosseinsky¹
¹University of Liverpool, Liverpool, UK, ²Rutherford Appleton Laboratory, Didcot, UK

ES_O13 Oxyanion doping in perovskite-type fast ion conductors: preparation of new phases and enhancement of oxide ion/proton conductivity
10:45 J. Felix Shin, Kevin Joubel, Peter R. Slater
University of Birmingham, Birmingham, UK

Parallel 3 Session 2: Life and Health

10:00 - 11:00 Renold Building, C2 Chair: Professor Helmut Coelfen

LH_O10 On amorphous mineral precursor phases in biomineralization
10:00 Lia Addadi, Yael Politi, Julia Mahamid, Steve Weiner
KEYNOTE Weizmann Institute of Science, Rehovot, Israel

LH_O11 Defects and interfaces in biological and biomimetic minerals
10:30 Roland Kroeger¹, Nikkita Lawton¹, Yi-Yeoun Kim², Fiona Meldrum²
¹University of York, York, UK, ²University of Leeds, Leeds, UK

LH_O12 Bioengineering Single Crystal Growth
10:45 Ching-Hsuan Wu, Alexander Park, Derk Joester
Northwestern University, Evanston, IL, USA

Parallel 4 Session 2: Crystalline Solids

10:00 - 11:00 Renold Building, D7 Chair: Dr Martin Attfield

CS_O01 Functional Metal-Organic Framework Materials
10:00 Joseph Hupp
KEYNOTE Northwestern University, Evanston, IL, USA

- CS_O02 Title: Metalation of Metal Organic Frameworks (MOFs)
10:30 William Morris, Omar Yaghi
University of California Los Angeles, Los Angeles, Ca, USA
- CS_O03 Separation of Gas Mixtures Using Metal Organic Frameworks Membranes and
10:45 Composites
Seda Keskin
Koc University, Istanbul, Turkey

Coffee

11:00 - 11:30

Parallel 1 Session 2: Advanced Technologies and Nanomaterials

11:30 - 12:15 Renold Building, C16

Chair: Dr Ahmed Iraqi

- ATN_O14 synthesis and characterisation of gold nitride films at high temperature, high
11:30 pressure
Ross Little¹, Abel Brieva¹, Luis Alves¹, Yuriy Butenko¹, Michael Hunt³, Alex Goncharov², Lidija Siller¹
¹Newcastle University, Newcastle upon Tyne, UK, ²Carnegie Institution of Washington, Washington DC, USA, ³Durham University, Durham, UK
- ATN_O15 Aerosol assisted chemical vapour deposition of titanium dioxide thin films from
11:45 methanolic solutions of titanium tetraisopropoxide; substrate and aerosol selective deposition of rutile or anatase
CYNTHIA EDUSI, Geoffrey Hyett, Gopinathan Sankar, Ivan Parkin
UNIVERSITY COLLEGE LONDON, LONDON, UK
- ATN_O16 Growth, characterization and application of epitaxial alkaline-earth fluorides thin films
12:00 by mocvd
Andrey Blednov, Sergey Samoilenkov, Vadim Amelichev, Kirill Napolskii, Vasilii Lebedev, Andrey Kaul
Moscow State University, Moscow, Russia

Parallel 2 Session 2: Energy and Sustainability

11:30 - 12:30 Renold Building, C9

Chair: Professor Colin Greaves

- ES_O14 A Multinuclear Solid State NMR and GIPAW DFT Study of the Interstitial
11:30 Conduction-Ion Species in Apatite Solid Oxide Fuel Cell Materials of the Generic Form $\text{La}_{8+x}\text{M}_{2-x}(\text{XO}_4)_6\text{O}_2$ (M = Ba, Bi, Ca, Y, Sr; X = P, Si, Ge).
Gregory Rees
University of Warwick, Department of Physics, Coventry, West Midlands, UK
- ES_O15 Mo doping in BSCF for use as cathode materials in intermediate temperature Solid
11:45 Oxide Fuel Cells
Maria Tsiamtsouri¹, Z Deng¹, Z Xu¹, Y Breard², R Sayers¹, A Demont¹, M. R. Li¹, C. P. Ireland¹, H Niu¹, J. B. Claridge¹, M. J. Rosseinsky¹
¹University of Liverpool, Liverpool, UK, ²Université de Caen, Caen, France
- ES_O16 New approaches towards lithium nitride anode materials in secondary batteries
12:00 Nuria Tapia Ruiz¹, S Gopukumar³, C Nithya³, Ronald Smith², J Sobha³, Duncan Gregory
¹University of Glasgow, Chemistry Department, Joseph Black Building, Glasgow, UK, ²ISIS Pulsed Neutron and Muon Source, Science and Technology Facilities Council, Rutherford Appleton Laboratory, Didcot, UK, ³Central Electrochemical Research Institute, Karaikudi, India
- ES_O17 Nanostructured materials for Li-ion batteries
12:15 Yu Ren, Valentina Gentili, Sergio Brutti, Laurence Hardwick, Yuri Andreev, Rob Armstrong, Yuan Wang, Peter Bruce
School of Chemistry, University of St Andrews, St Andrews, UK

Parallel 3 Session 2: Life and Health

11:30 - 12:30 Renold Building, C2 Chair: Professor Helmut Coelfen

LH_O22 Bioactive Ceramics, Composites and Coatings
11:30 Serena Best
University of Cambridge, Cambridgeshire, UK

LH_O14 Biominerals - Natural Control Freaks
12:00 Maggie Cusack
University of Glasgow, Glasgow, UK

Parallel 4 Session 2: Crystalline Solids

11:30 - 12:30 Renold Building, D7 Chair: Dr Martin Attfield

CS_O04 Adsorption, storage and delivery of medically important gases in nanoporous materials
11:30 Russell Morris
University of St Andrews, St Andrews, UK

CS_O05 Nanoporous Molecular Crystals
11:45 Neil McKeown¹, Grazia Bezzu¹, Benson Kariuki¹, Madeleine Helliwell², David Allan³
¹Cardiff University, Cardiff, UK, ²University of Manchester, Manchester, UK, ³Diamond Light Source, Didcot, UK

CS_O06 Nanoporous organic cages - a modular alternative to nanoporous networks
12:00 Andrew Cooper¹, James Jones¹, Tom Hasell¹, Graeme Day², Kim Jelfs¹, Dave Adams¹, Xiaofeng Wu¹, Abbie Trewin¹, John Bacsa¹, Alexander Steiner¹
¹University of Liverpool, Liverpool, UK, ²University of Cambridge, Cambridge, UK

CS_O07 Porous Organic Frameworks for Catalytic Applications
12:15 Johannes Schmidt, Arne Thomas
Technische Universität Berlin, Berlin, Germany

Lunch & Poster Session 1

12:30 - 14:15

Parallel 1 Session 3: Advanced Technologies and Nanomaterials

14:15 - 15:45 Renold Building, C16 Chair: Dr John de Mello

ATN_O35 Some nanoparticles of potential use in photovoltaics: processing, economic considerations and potential for application
14:15 KEYNOTE Paul O'Brien
University of Manchester, Manchester, UK

ATN_O19 Complex Nanostructures from Layered Metal Chalcogenides
14:45 Aswani Yella, Faegheh Hoshyargar, Steffen Pfeiffer, Martin Panthöfer, Enrico Mugnaioli, Ute Kolb, Wolfgang Tremel
Johannes Gutenberg-Universität, Mainz, Germany

ATN_O20 Applications of DNA in Nanomaterials Chemistry
15:00 Andrew Houlton
Newcastle University, Newcastle upon Tyne, UK

ATN_O21 Synthesis of Inorganic Nanostructures at the Oil-Water Interface
15:15 John Thomas
School of Chemistry, The University of Manchester, Manchester, UK

ATN_O22 Pseudo-click chemistry to build Ionic Nanoparticle Networks: A way toward metamaterials
15:30 Marco Litschauer, Bernhard Basnar, Marie-Alexandra Neouze
Vienna University of Technology, Vienna, Austria

Parallel 2 Session 3: Energy and Sustainability

14:15 - 15:45 Renold Building, C9 Chair: Dr John Varcoe

ES_O23 Hydrogen Storage and Ionics in Complex Hydrides

14:15 Shin-ichi ORIMO

KEYNOTE *Tohoku University, Sendai, Miyagi, Japan*

ES_O19 Inorganic Nanoparticles for Energy Related Applications

14:45 Simona Hunyadi Murph

Savannah River National Laboratory, Aiken, SC, USA

ES_O20 Systematic Multiscale Modeling of Polymer/Fullerene Bulk Heterojunctions for Photovoltaic Applications

15:00

David Huang², Adam Moule¹, Roland Faller¹

¹UC Davis, Davis, CA, USA, ²University of Adelaide, Adelaide, South Austr, Australia

ES_O21 Efficient carrier multiplication in PbS nanoparticles: electronic, optical and surface properties.

15:15

Samantha Hardman¹, Darren Graham¹, Stuart Stubbs¹, Ben Spencer^{1,2}, Elaine Seddon¹, Ho-Ting Fung¹, Sandra Gardonio³, Fausto Sirotti⁴, Mathieu Sully⁴, Javeed Akhtar⁵, Paul O'Brien⁵, David Binks¹, Wendy Flavell¹

¹School of Physics and Astronomy and the Photon Science Institute, The University of Manchester, Manchester, UK, ²Cockcroft Institute, Daresbury Science and Innovation Campus, Warrington, UK, ³SuperESCA beamline, Sincrotrone Trieste, Basovizza, Trieste, Italy, ⁴TEMPO beamline, Société civile Synchrotron SOLEIL, Saint-Aubin - BP 48, Gif-sur-Yvette, France, ⁵School of Chemistry, The University of Manchester, Manchester, UK

ES_O22 Alkali Ion Conducting Crystalline Polymer Electrolytes

15:30

Chuhong Zhang, Peter G. Bruce

University of St Andrews, St Andrews, UK

Parallel 3 Session 3: Life and Health

14:15 - 15:45 Renold Building, C2 Chair: Dr Laurie Gower

LH_O15 CryoTEM in biomimetic mineralization: Transient phases and prenucleation clusters

14:15

Nico Sommerdijk

KEYNOTE *Eindhoven University of Technology, Eindhoven, The Netherlands*

LH_O16 From distinct short-range structures in additive-free amorphous calcium carbonate to its application in syntheses of functional materials

14:45

Denis Gebauer^{1,2}

¹University of Konstanz, Konstanz, Germany, ²Stockholm University, Stockholm, Sweden

LH_O17 *In vitro* Repairing of Mesocrystals in a Biomineral

15:00

Misako Kijima, Yuya Oaki, Hiroaki Imai

Keio University, Yokohama, Japan

LH_O18 Non-classical crystallization routes in organic model systems

15:15

Helmut Cölfen¹, Yuan Jinag²

¹University of Konstanz, Konstanz, Germany, ²Max-Planck-Institute of Colloids and Interfaces, Potsdam, Germany

Parallel 4 Session 3: Crystalline Solids

14:15 - 15:45 Renold Building, D7 Chair: Professor Russell Morris

CS_O08 Atomic interactions and thermoelectric activity of intermetallic compounds

14:15

Yuri Grin

KEYNOTE *Max-Planck-Institut für Chemische Physik fester Stoffe, Dresden, Germany*

- CS_O09 New Quaternary Metal-Rich Borides of the Double Perovskite Type: A combined
14:45 Experimental and Theoretical Study
Martin Hermus, Boniface Fokwa
RWTH Aachen University, Aachen, Germany
- CS_O10 Synthesis of Hybrid Ceria/Mesoporous Silica Nanocomposites
15:00 *Peter Dunne, Richard Walton, Anna Carnerup*
Department of Chemistry, University of Warwick, Coventry, UK
- CS_O11 NMR Studies of Ionic Liquids Confined in Mesoporous Silicas
15:15 *Catherine Cropper, Yaroslav Khimyak, Jonathan Iggo, Neil Winterton*
University of Liverpool, Liverpool, Merseyside, UK
- CS_O24 Ternary silicon germanium nitrides - A potential new class of tunable band gap
15:30 materials
Judy Hart, Neil Allan
University of Bristol, Bristol, UK

Coffee

15:45 - 16:15

Plenary: Michael Graetzel

16:15 - 17:15 Renold Building, C16 Chair: Dr Peter Slater

Plen03 The advent of mesoscopic solar cells
16:15 *Michael Grätzel*
PLENARY *Ecole Polytechnique Fédérale, Lausanne, Switzerland*

Wednesday 6 July 2011

Plenary: Seth Marder

09:00 - 10:00 Renold Building, C16

Chair: Dr Martin Heeney

Plen04 Development of Materials for Organic Electronics
09:00 Seth Marder¹, Stephen Barlow¹, Jean-Luc Bredas¹, Song Guo¹, Antoine Kahn³, Sang
PLENARY Bok Kim¹, Bernard Kippelen², Swagat Mohapatra¹, Laxman Pandey¹, Lauren
Polander¹, Yabin Qi³, Chad Risko¹, Tissa Sajoto¹, Brian Seifried¹, Shree Tiwar²,
Qing Zhang¹
¹Georgia Institute of Technology, School of Chemistry and Biochemistry, Center for
Organic Photonics and Electronics, Atlanta, GA, USA, ²Georgia Institute of
Technology, School of Electrical and Computer Engineering, Center for Organic
Photonics and Electronics, Atlanta, GA, USA, ³Princeton University, Department of
Electrical Engineering, Princeton, NJ, USA

Parallel 1 Session 4: Advanced Technologies and Nanomaterials

10:00 - 11:00 Renold Building, C16

Chair: Dr Simon Higgins

ATN_O23 Polymer Solar Cells: New Materials, Tandem Devices and 3D Morphology
10:00 Rene Janssen
KEYNOTE Eindhoven University of Technology, Eindhoven, The Netherlands

ATN_O29 Continuously tuneable optical filters from self-assembled block copolymer blends
10:30 Andrew Parnell¹, Andrew Pryke¹, Oleksandr Mykhaylyk¹, Jonathan Howse¹, Ali
Adawi², Nicholas J Terrill³, J. Patrick A. Fairclough¹
¹University of Sheffield, Sheffield, South Yorkshire, UK, ²University of Hull, Hull, UK,
³Diamond Light Source, Oxfordshire, UK

ATN_O25 Following phase separation in polymer thin films for solar cells
10:45 Alan Dunbar, Tao Wang, Andrew Parnell, David Lidzey, Richard Jones
University of Sheffield, Sheffield, UK

Parallel 2 Session 4: Soft Matter

10:00 - 11:00 Renold Building, C9

Chair: Professor Frank Scheffold

SM_O11 Cucurbiturils at the interface between supramolecular chemistry and materials
10:00 science
KEYNOTE Oren Scherman
University of Cambridge, Cambridge, UK

SM_O12 Biocatalytic Assembly of Supramolecular Materials
10:30 Rein Ulijn, Sangita Roy
University of Strathclyde, Glasgow, UK

SM_O17 Tuneable Mechanical Properties in Low Molecular Weight Hydrogels
10:45 Dave Adams, Lin Chen, Jaclyn Raeburn, Sam Sutton, David Spiller
University of Liverpool, Liverpool, UK

Parallel 3 Session 4: Life and Health

10:00 - 11:00 Renold Building, C2

Chair: Professor Molly Shoichet

LH_O19 Bio-inspired Materials Based Strategies for Regenerative Medicine
10:00 Molly Stevens
KEYNOTE Imperial College London, London, UK

LH_O21 Double Crosslinked pH-Responsive Microgels for Intervertebral Disc Repair: Design
10:30 and Properties
Ruixue Liu, Amir Milani, Tony Freemont, Brian Saunders
University of Manchester, Manchester, UK

Parallel 4 Session 4: Crystalline Solids

10:00 - 11:00 Renold Building, D7

Chair: Professor Juri Grin

- CS_O12
10:00 "Hot" surprises: electronic ordering above room temperature in the presence of frustration.
KEYNOTE Paolo G. Radaelli, Alex Hearmon, Lucian Pascut, Radu Coldea
Clarendon Laboratory, Department of Physics, Oxford University, Oxford, UK
- CS_O13
10:30 Chemical manipulation of the structure and properties of MSb₂O₄ (M = transition metal)
Ryan Bayliss, James Cumby, Ben de Laune, Mariana Whitaker, Colin Greaves
University of Birmingham, Birmingham, UK
- CS_O14
10:45 Unit cell level assembly of the n = 3 Ruddlesden-Popper Manganite La₂Sr₂Mn₃O₁₀ by RHEED Monitored Pulsed Laser Deposition
Robert Palgrave, S.R.C. McMitchell, P Borisov, M.J. Rosseinsky
University of Liverpool, Liverpool, UK

Coffee

11:00 - 11:30

Parallel 1 Session 4: Advanced Technologies and Nanomaterials

11:30 - 12:30 Renold Building, C16

Chair: Dr Simon Higgins

- ATN_O26
11:30 Quantitative Luminescence Switching in CePO₄:Tb³⁺ by Redox Reaction
Mami Kitsuda, Shinobu Fujihara
Keio University, Yokohama, Japan
- ATN_O27
11:45 Novel Na-Y(Ln) heterometal-organic complexes as facile precursors for single source route to up-converting NaYF₄:Yb³⁺, Er³⁺/Tm³⁺ nanomaterials
Shashank MISHRA¹, Stéphane DANIELE¹, Erwann JEANNEAU², Gilles LEDOUX³, Marie-France JOUBERT³
¹IRCELYON, Villeurbanne, France, ²CDHL, Villeurbanne, France, ³LPCML, Villeurbanne, France
- ATN_O28
12:00 The use of a peptide based linker group to increase the SERRS signal from a nanoparticle dye system
Philip Drake, Hong-Wen Chang, Yuh-Jiuan Lin
ITRI, Hsinchu, Taiwan
- ATN_O24
12:15 Controlling the morphology of polymer-PbS nanocomposites using triggered aggregation
Rhys Rhodes, Paul OBrien, Brian Saunders
University of Manchester, Manchester, UK

Parallel 2 Session 4: Soft Matter

11:30 - 12:30 Renold Building, C9

Chair: Professor Frank Scheffold

- SM_O14
11:30 Designing Responsive Phoretic Swimmers
Stephen Ebbens¹, Jonathan Howse¹, Richard Jones¹, Anthony Ryan¹, Alireza Sadeghi¹, Ramin Golestanian²
¹Sheffield University, Sheffield, UK, ²Oxford University, Oxford, UK
- SM_O15
11:30 Self Assembling Peptide Based Materials for Drug Delivery Applications
David Roberts, Aline Miller, Alberto Saiani
University of Manchester, Manchester, UK
- SM_O16
11:45 Post-Assembly Modification by Anion Tuning of Supramolecular Gelators - Mechanisms and Applications
Gareth Lloyd¹, Jonathan Steed²
¹Cambridge University, Cambridge, UK, ²Durham University, Durham, UK

SM_O13 Supramolecular handcuff on surfaces: A versatile platform for smart materials
12:00 Feng Tian, Oren Scherman
University of Cambridge, Cambridge, UK

Parallel 3 Session 4: Life and Health

11:30 - 12:30 Renold Building, C2

Chair: Professor Molly Shoichet

LH_O13 Mineralization of native and pathological mammalian tissues: the perspective from
11:30 solid-state NMR spectroscopy
Melinda Duer¹, David Reid¹, Jeremy Skepper¹, Roger Brooks¹, Serena Best¹,
Richard Farndale¹, Graham Jackson³, Allen Rodgers³, Catherine Shanahan²
¹University of Cambridge, Cambridge, UK, ²King's College London, London, UK,
³University of Cape Town, Cape Town, South Africa

LH_O23 Synthesis and Characterisation of Biologically Important Amorphous Metal
12:00 Pyrophosphates

Colin Slater¹, Danielle Laurencin^{2,3}, Mark Smith², Liam Grover⁴, Joseph Hriljac¹,
Adrian Wright¹

¹School of Chemistry, University of Birmingham, Birmingham, UK, ²Department of
Physics, University of Warwick, Coventry, UK, ³Institut Charles Gerhardt de
Montpellier, Montpellier, France, ⁴Department of Biochemical Engineering, University
of Birmingham, Birmingham, UK

LH_O24 ORTHOGONAL COUPLING OF QUANTUM DOT-PEPTIDE CONJUGATES FOR
12:15 THE MULTIPLEXED EVALUATION OF ENZYME ACTIVITY

Stuart B Lowe^{1,2}, John A G Dick^{1,2}, James E Ghadiali^{1,2}, Bruce E Cohen³, Molly M
Stevens^{1,2}

¹Department of Materials, Imperial College London, London, UK, ²Institute of
Biomedical Engineering, Imperial College London, London, UK, ³Biological
Nanostructures Facility, The Molecular Foundry, Lawrence Berkeley National
Laboratory, Berkeley, California, USA

Parallel 4 Session 4: Crystalline Solids

11:30 - 12:15 Renold Building, D7

Chair: Professor Juri Grin

CS_O15 New perovskite-structure oxides containing Fe with unusual oxidation states and
11:30 oxygen coordination

KEYNOTE Yuichi Shimakawa
Kyoto University, Kyoto, Japan

CS_O17 Controlling the Morphology of Mixed Metal Oxide Catalysts by Microwave
12:00 Calcination of Precursors

Rob Brown, Gareth Parkes, Hannah Cross
University of Huddersfield, Huddersfield, UK

Lunch & Poster Session 2

12:30 - 14:15

Parallel 1 Session 5: Advanced Technologies and Nanomaterials

14:15 - 15:45 Renold Building, C16

Chair: Professor Rene Janssen

ATN_O30 RECENT ADVANCES IN ORGANIC ELECTRONICS

14:15 Fred Wudl, Ali Mohebbi, Mingfeng Wang, Alessandro Varotto, Toan Pho
KEYNOTE UCSB, Santa Barbara, USA

ATN_O31 Conductivity Enhancement of Water-dispersed Polyaniline/poly(4-styrenesulfonate)
14:45 and Application into Flexible Organic Thin Film Transistor

Sung Hyun Kim, Kigook Song
Kyung Hee University, Youngin, Republic of Korea

- ATN_O32 15:00 Transition metal complexes for molecular semiconducting materials in field-effect transistors
Maxwell Reinhardt, Neil Robertson
University of Edinburgh, Edinburgh, UK, UK
- ATN_O33 15:15 Development of TiO₂-nanowire field-effect transistor: biomolecules encapsulation via electrochemical polymerization of a low-conductivity polymer
Chi-Chang Lin¹, Yung-Ming Chu², Hsien-Chang Chang²
¹Department of Chemical and Materials Engineering, Tunghai University, Taichung, Taiwan, ²Institute of Biomedical Engineering, National Chen Kung University, Tainan, Taiwan
- ATN_O34 15:30 3d-4f Molecular Nanomagnets as Cooling Materials
Yan-Zhen Zheng, Richard Winpenny
The Univeristy of Manchester, Manchester, UK

Parallel 2 Session 5: Soft Matter

14:15 - 15:45 Renold Building, C9

Chair: Dr Oren Scherman

- SM_O23 14:15 Optics and scattering in complex dielectric structures
Frank Scheffold
University of Fribourg, Fribourg, Switzerland
- KEYNOTE
- SM_O19 14:45 Nanostructured Polymer-Surfactant Films for Encapsulation/Release
Karen J. Edler, Matthew J. Wasbrough, James A. Holdaway
University of Bath, Bath, BANES, UK
- SM_O20 15:00 Real time observation of phase separation in spin coated polymer blends using stroboscopic interference microscopy.
Jonathan Howse¹, Stephen Ebbens¹, Alan Dunbar¹, Andrew Parnell¹, Paul Topham²
¹Sheffield Univeristy, Sheffield, UK, ²Aston University, Birmingham, UK
- SM_O21 15:15 Fabrication of Artificial Living Multicellular Organisms by Polyelectrolyte Mediated Assembly and Magnetically Responsive Templates
Vesselin Paunov³, Javier García-Alonso², Rawil Fakhrullin^{1,3}
¹University of Hull, Hull, UK, ²The Natural History Museum, London, UK, ³Kazan State University, Kazan, Russia
- SM_O22 15:30 *In vitro* synthesis and stabilization of amorphous calcium carbonate (ACC) nanoparticles within liposomes
Chantel Tester, Derk Joester
Northwestern University, Evanston, IL, USA

Parallel 3 Session 5: Life and Health

14:15 - 15:45 Renold Building, C2

Chair: Dr Melinda Duer

- LH_O25 14:15 Three-dimensional Chemically Patterned Hydrogels Guide Cell Fate
Molly Shoichet¹, Yukie Aizawa², Ryan Wylie²
¹University of Toronto, Departments of Chemical Engineering & Applied Chemistry, Chemistry, Institute of Biomaterials & Biomedical Engineering, Donnelly Center, Toronto, Ontario, Canada, ²University of Toronto, Department of Chemical Engineering & Applied Chemistry, Donnelly Center, Toronto, Ontario, Canada
- KEYNOTE
- LH_O26 14:45 Cellulose nanowhiskers for muscle tissue engineering
James Dugan, Steve Eichhorn, Julie Gough
University of Manchester, Manchester, UK
- LH_O27 15:00 Activation of cellulosic substrates via surface modifications
Ilari Filpponen¹, Eero Kontturi¹, Sami Nummelin², Henna Rosilo², Laura Taajamaa¹, Orlando Rojas^{3,1}, Olli Ikkala², Janne Laine¹
¹Aalto University, Department of Forest Products Technology, Espoo, Finland, ²Aalto University, Department of Applied Physics, Espoo, Finland, ³North Carolina State

University, Department of Forest Biomaterials, Raleigh, USA

LH_O28
15:15 Customized Self-Assembling Peptide Hydrogels for Dental Tissue Engineering
Kerstin Galler¹, Gottfried Schmalz¹, Rena D'Souza², Jeffrey Hartgerink³
¹University of Regensburg, Regensburg, Germany, ²Baylor College of Dentistry, Dallas, Texas, USA, ³Rice University, Houston, Texas, USA

Parallel 4 Session 5: Crystalline Solids

14:15 - 15:45 Renold Building, D7

Chair: Professor Joseph Hupp

CS_O18
14:15 Zinc Oxide Scaffolds on MgO Nanocubes
Slavica Stankic¹, Andreas Sternig^{2,3}, Fabio Finocchi¹, Johannes Bernardi³, Oliver Diwald¹
¹Institut des Nanosciences de Paris, Paris, France, ²University of Erlangen-Nuremberg, Erlangen, Germany, ³Vienna University of Technology, Vienna, Austria

CS_O19
14:30 Effects of synthesis parameters on SAPO-34 morphology and adsorption properties for the CO₂/CH₄ separation
Maria Giovanna Buonomenna¹, Giovanni Golemme^{1,2}, Eloisa Sardella³, Piero Favia³, Federica Ciuchi⁴
¹Dipartimento di Ingegneria Chimica e dei Materiali, Università della Calabria, and INSTM Consortium, Rende, Italy, ²Istituto per la Tecnologia delle Membrane, ITM-CNR, Rende, Italy, ³Dipartimento di Chimica, Università di Bari, and Istituto di Metodologie Inorganiche e dei Plasmi, IMIP-CNR, Bari, Italy, ⁴Dipartimento di Fisica, Università della Calabria, Rende, Italy

CS_O20
14:45 Reversed Crystal Growth Route and Hollow Crystals
Heather Greer, Wuzong Zhou
University of St Andrews, St Andrews, UK

CS_O21
15:00 Crystal growth of the nanoporous zeolitic imidazolate framework ZIF-8 revealed by atomic force microscopy
Pak Moh, Pablo Cubillas, Michael Anderson, Martin Atfield
The University of Manchester, Manchester, UK

CS_O22
15:15 Catenated Cages: Chiral Recognition Between Triply Interpenetrated Catenanes
Tom Hasell, Tamoghna Mitra, James Jones, Xiaofeng Wu, Dave Adams, Andrew Cooper, John Bacsá, Alexander Steiner, Abbie Trewin
University of Liverpool, Liverpool, UK

CS_O23
15:30 Porous Organic Cages: Solid-State Porosity Switching and cocrystallisation
James Jones, Daniel Holden, Tamoghna Mitra, Tom Hasell, Dave Adams, Kim Jelfs, Abbie Trewin, John Bacsá, Alexander Steiner, Andrew Cooper
University of Liverpool, Liverpool, UK

Coffee

15:45 - 16:15

Plenary: Joanna Aizenberg

16:15 - 17:15 Renold Building, C16

Chair: Professor Fiona Meldrum

Plen05
16:15 Novel biomimetic "spiny" surfaces in medical applications
Joanna Aizenberg
PLENARY
Harvard University, Cambridge, USA

Poster Session 2

17:15 - 18:30 Foyer & Exhibition Area, Renold Building

Thursday 7 July 2011

Parallel 1 Session 6: Advanced Technologies and Nanomaterials

09:00 - 10:15 Renold Building, C16

Chair: Professor Steve Yeates

- ATN_O11
09:00
KEYNOTE
Microstructure, disorder and transport in organic semiconductors
Alberto Salleo
Stanford University, Stanford, USA
- ATN_O38
09:30
Solution Synthesis of New Thermoelectric Antimonide Nanophases and Their Structure Determination Using Automated Electron Diffraction Tomography
Christina Birkel¹, Gregor Kieslich¹, Martin Panthöfer¹, Tatiana Gorelik¹, Enrico Mugnaioli¹, Ute Kolb¹, Tania Weber², Jürgen Schmidt³, Raphael Hermann², Wolfgang Tremel¹
¹Johannes Gutenberg-Universität, Mainz, Germany, ²Forschungszentrum Jülich, Jülich, Germany, ³Fraunhofer-Institut für Fertigungstechnik, Dresden, Germany
- ATN_O37
09:45
Solid-solid interface formation in TiO₂ nanoparticle networks
Stefan Baumann^{1,3}, Michael Elser^{1,3}, Michael Auer¹, Johannes Bernardi³, Nicola Hüsing², Oliver Diwald¹
¹University of Erlangen-Nuremberg, Erlangen, Germany, ²University Salzburg, Salzburg, Austria, ³Vienna University of Technology, Vienna, Austria
- ATN_O39
10:00
Controlled Hydrothermal Synthesis of Complex Mixed Oxides For Catalysis Using Solution Redox Chemistry
Richard Walton
University of Warwick, Coventry, UK

Parallel 2 Session 6: Energy and Sustainability

09:00 - 10:30 Renold Building, C9

Chair: Professor Robert Slade

- ES_O18
09:00
KEYNOTE
Alkaline polymer electrolytes for clean energy technologies
Rong Zeng, Jamie Kizewski, Simon Poynton, Ngai Chan, Sam Murphy, Jennifer Handzel, John Varcoe
University of Surrey, Guildford, Surrey, UK
- ES_O24
09:30
Investigations of the ammines MX₂.nNH₃ (M=Mg, X=I,Cl,Br; n=1-6); potential hydrogen and ammonia stores
James Hanlon, Duncan Gregory
University of Glasgow, Glasgow, UK
- ES_O25
09:45
CO₂ capture in conjugated microporous polymers
Robert Dawson, Dave Adams, Andrea Laybourn, Yaroslav Khimyak, Andrew Cooper
University of Liverpool, Liverpool, UK
- ES_O26
10:00
Polymer blend and mixed matrix membranes for carbon dioxide capture and storage
Detlev Fritsch, Maria del Carmen Gutierrez, Dragutin Nedeljkovic, Jan-Roman Pauls
Helmholtz Zentrum Geesthacht, Geesthacht, Germany
- ES_O27
10:15
Composite membranes for gas separation applications from highly permeable polymers based on silicon-containing polynorbornene analogs
Fabio BAZZARELLI¹, Paola BERNARDO¹, Franco TASSELLI¹, Johannes C. JANSEN¹, Gabriele CLARIZIA¹, Maria Gringolts², Yuri Grinevich², Ludmila Starannikova², Yuri Yampolskiĭ²
¹Institute on Membrane Technology (ITM-CNR), Rende (CS), Italy, ²A.V.Topchiev Institute of Petrochemical Synthesis, RAS, 29 Leninsky Pr. 119991, Moscow, Russia

Parallel 3 Session 6: Life and Health

09:00 - 10:30 Renold Building, C2

Chair: Dr Nico Sommerdijk

- LH_O29 09:00 KEYNOTE Mimicking bone formation using anionic polymeric process-directing agents
Taili Thula, Douglas Rodriguez, Laurie Gower
University of Florida, Gainesville/FL, USA
- LH_O30 09:30 From biomineralisation proteins to biomimetic nanomagnetic particles
Sarah Staniland
University of Leeds, Leeds, UK
- LH_O31 09:45 Mechanical Properties of Biomimetic Composite Crystals using Templated Polymers
Steve Eichhorn¹, Fiona Meldrum², Yi-Yeoun Kim², Luis Ribeiro¹
¹University of Manchester, Manchester, UK, ²University of Leeds, Leeds, UK
- LH_O32 10:00 Synthetic Calcite Spicules with Waveguiding Properties
Filipe Natalio, Timo Schüler, Enrico Mugnaioli, Ute Kolb, Werner Müller, Wolfgang Tremel
Johannes-Gutenberg-Universität, Mainz, Germany
- LH_O33 10:15 Synthesis of nanoscale calcium phosphate composites.
Stephanie Kelly, Duncan Gregory
University of Glasgow, Glasgow, UK

Parallel 4 Session 6: Soft Matter

09:00 - 10:30 Renold Building, D7

Chair: Professor Ullrich Steiner

- SM_O30 09:00 High Performance Polymer-silica Nanocomposites through the Sol-Gel Processing
Zahoor Ahmad, Ahmad Ali Karimi, Fakhreia Al-Sagheer
Kuwait University, Post Box. 5969, Safat-13060, Kuwait
- SM_O31 09:15 Cellulose as sustainable thickener in shower-gel
Saskia Lindhoud, Karen Edler
University of Bath, Bath, UK
- SM_O24 09:30 PAN-pyrene-micelle based sensors for metal ions
Robben Jaber
Bath University, Bath, UK
- SM_O25 09:45 Poly(3,4-ethylenedioxythiophene) materials with covalently-attached metal-phosphine complexes.
Simon Higgins¹, Velauthamurty Kuhamoorthy^{1,2}, Gamini Rajapakse², John Bacsa¹
¹University of Liverpool, Liverpool, UK, ²University of Peradeniya, Peradeniya, Sri Lanka
- SM_O26 10:00 Structure of high density polymer brushes: An integrated experimental and multiscale simulation study
Beste Bayramoglu, Ian Elliott, Roland Faller
UC Davis, Davis, CA, USA
- SM_O27 10:15 Prediction of bulk density and molecular packing in model dendrimers with different chain stiffness
Paola Carbone¹, Leo Lue²
¹University of Manchester, Manchester, UK, ²University of Strathclyde, Glasgow, UK

Coffee

10:30 - 11:00

Parallel 1 Session 6: Advanced Technologies and Nanomaterials

11:00 - 11:45 Renold Building, C16

Chair: Professor Steve Yeates

- ATN_O40
11:00 Peering into the black box: *In situ* X-ray SAXS/WAXS/PDF studies of the formation and growth of inorganic nanoparticles during near- or supercritical synthesis
Jacob Becker, Martin Bremholm, Christoffer Tyrsted, Brian Pauw, Kirsten Marie Ø. Jensen, Jakob Eltzholtz, Nina Lock, Mogens Christensen, Bo Brummerstedt Iversen
Aarhus University, Center for Materials Crystallography, DK-8000 Aarhus, Denmark
- ATN_O41
11:15 Biopolymer stabilized nanoparticles and application in photocatalytic water oxidations
Dominic Walsh¹, Yi-Yeoun Kim², Carolina Neudeck³, Fiona Meldrum²
¹*University of Bristol, Bristol, UK*, ²*University of Leeds, Leeds, UK*, ³*Max-Planck-Institut fuer Kohlenforschung, Muelheim an der Ruhr, Germany*
- ATN_O42
11:30 Nanoscale Hollow Spheres- Microemulsion-based Synthesis, Structure and Properties -
Claus Feldmann
Karlsruhe Institute of Technology, Karlsruhe, Germany

Parallel 2 Session 6: Energy and Sustainability

11:00 - 11:45 Renold Building, C9

Chair: Professor Robert Slade

- ES_O28
11:00 Novel mixed matrix membranes based on functionalised SBA-16 mesoporous oxide and a block copolymer of styrene and butadiene (SBS)
Maria Giovanna Buonomenna¹, Giovanni Golemme^{1,2}, Alfonso Policicchio³, Federica Ciuchi³, Raffaele Giuseppe Agostino³, Alberto Figoli³
¹*Dipartimento di Ingegneria Chimica e dei Materiali, Università della Calabria, and INSTM Consortium, Rende, Italy*, ²*Istituto per la Tecnologia delle Membrane, ITM-CNR, Rende, Italy*, ³*Dipartimento di Fisica, Università della Calabria, Rende, Italy*
- ES_O29
11:15 Nanocomposite and nanostructured PIM membranes for gas separation
Christopher Mason¹, Alexandra Bushell¹, Peter Budd¹, Martin Atfield¹, John Jansen², Fabio Bazzarelli², Paola Bernardo², Gabriele Clarizia², Janos Nagy³, Andrea Szabo³, Yuri Yampolski⁴, Ludmila Starannikova⁴
¹*university of manchester, manchester, UK*, ²*institute of membrane technology, rende, Italy*, ³*university of calabria, rende, Italy*, ⁴*russian academy of sciences, moscow, -*
- ES_O30
11:30 Composite Membranes of Metal Organic Frameworks (MOFs) in a Polymer of Intrinsic Microporosity
Alexandra Bushell¹, Peter Budd¹, Martin Atfield¹, Fabio Bazzarelli², Paola Bernardo², Johannes Carolus Jansen², Gabriele Clarizia², Ludmila Starannikova³, Yuri Yampolskii³
¹*The University of Manchester, Manchester, UK*, ²*Institute on Membrane Technology, Rende, Italy*, ³*A. V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russia*

Parallel 3 Session 6: Life and Health

11:00 - 11:45 Renold Building, C2

Chair: Dr Nico Sommerdijk

- LH_O34
11:00 Controlling crystal growth with organic molecules in aqueous systems
John Harding¹, Colin Freeman¹, Mingjun Yang², Susan Stipp², David Quigley³, Mark Rodger³
¹*University of Sheffield, Sheffield, UK*, ²*University of Warwick, Coventry, UK*, ³*University of Copenhagen, Copenhagen, Denmark*
- LH_O35
11:15 Development of Self-Organized Inorganic/Organic Hybrid Materials Inspired by Biomineralization
Takashi Kato
The University of Tokyo, Tokyo, Japan

Parallel 4 Session 6: Soft Matter

11:00 - 11:45 Renold Building, D7 Chair: Professor Ullrich Steiner

SM_O28 Amorphous nanoporous scrambled organic cages
11:00 Shan Jiang, Abbie Trewin, James Jones, Tom Hasell, Andrew Cooper
University of Liverpool, Liverpool, UK

SM_O29 Aqueous Dispersion Polymerisation: A New Paradigm for the Facile Synthesis of
11:15 Bespoke Organic Nanoparticles in Concentrated Solution

KEYNOTE Steve Armes
University of Sheffield, Sheffield, UK

Plenary: Kostantin Novoselov

12:00 - 13:00 Renold Building, C16 Chair: Professor Paul O'Brien

Plen06 Graphene: Materials in the Flatland

12:00 Konstantin Novoselov

PLENARY *University of Manchester, Manchester, UK*

Chair's Summary: Professor Peter Budd

13:00 - 13:10 Renold Building, C16