SYMPOSIUM:
Bionanotechnology (601)
Convener: Alejandra Palermo, Royal Society of Chemistry, UK
Co-organised by the Chinese Chemical Society, the Korean Chemical Society and the RSC

PROGRAMME

Wednesday morning, Room: Carron 2

10:30 **INTRODUCTION**
Dave Garner, RSC, UK
10:40 **KEYNOTE**
(S601_001) **Engineering biomimetic functionality in synthetic nano-systems**
Richard A.L. Jones, University of Sheffield, UK
11:15 (S601_002) **Structure confinement of carbon-based nanomaterials in vapour phase for nanoelectronic/photonic devices**
Hee Cheul Choi, Pohang University of Science and Technology, Korea
11:35 (S601_003) **DNA nanodevices based on *i*-motif structures**
Dongsheng Liu, National Centre for NanoScience and Technology, China
11:55 **KEYNOTE**
(S601_004) **Label-free biochemical imaging of single cells and tissues for new biomedical applications**
Dae won Moon, Korea Research Institute of Standards and Science, Korea
12:30 Lunch and Informal Networking

Wednesday afternoon, Room: Carron 2

14:00 (S601_005) **Bio-inspired nanomaterials for tissue regeneration and sensing**
Molly M. Stevens, Imperial College, London, UK
14:20 (S601_006) **Multifunctional magnetic nanoparticles for combined cancer imaging and therapy**
Sangyon Jon, Gwangju Institute of Science and Technology, Korea
14:40 **KEYNOTE**
(S601_007) **Novel cancer nanotechnology and nanosafety**
Yuliang Zhao, Chinese Academy of Sciences, China
15:20 Tea and Coffee
15:50 (S601_008) **Towards the integration of top-down and bottom-up fabrication methods - near field patterning of biomolecules**
Graham J. Leggett, University of Sheffield, UK
16:10 (S601_009) **Study of ligand-receptor interaction by single-molecule force spectroscopy**
Xiaohong Fang, Beijing National Laboratory for Molecular Sciences, China
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Wednesday, Hall 5

(P601_001) **Nanoreactors for sequential activity switching in multi step enzymatic processes.**
S.M. Minhaz Ud-Dean, University of Dhaka, Bangladesh

(P601_002) **Peptide-promoted mineralization of Cowpea mosaic virus**
Alaa Aljabali, John Innes Centre, UK

(P601_003) **Self assembly kinetics of stabilized magnetic nanoparticles on Si(Ti)O_2**
Farahnaz Ansari, Cranfield University, UK

(P601_004) **In situ visualization of gene expression using polymer-coated quantum dots-DNA conjugates**
Youngseon Choi, Institut Pasteur Korea, South Korea

(P601_005) **Stability of Watson-Crick and Hoogsteen base pairs of DNA under molecular crowding conditions**
Naoki Sugimoto, Konan University, Japan

(P601_006) **Gold nanoparticle with high payloads of gadolinium chelates as multifunctional CT-MRI contrast agent**
Yongmin Chang, Kyungpook National University, South Korea

(P601_007) **Micrometer- and nanometer scale photopatterning using 2-nitrophenylpropyloxycarbonyl (NPPOC) protected aminosiloxane monolayers**
Shahrul Alang Ahmad, University of Sheffield, UK

(P601_008) **Exploring the chemical derivatisation space of polyethylenimines for improved DNA delivery**
Liisa van Vliet, University of Cambridge, UK

(P601_009) **Strategies for retaining and enhancing the activity of biomolecules on quantum dot(s)**
Manish Gupta, University of Edinburgh, UK

(P601_010) **Magnetic patterning and contents release of magnetic nanoparticle-vesicle assemblies for smart biomaterials**
Kwan Ping Liem, University of Manchester, UK

SCIENTIFIC PROGRAMME Materials

SYMPOSIUM:
Chemistry for Electro-Optic Displays (602)
Convener: Ian Sage, QinetiQ, UK

PROGRAMME

Tuesday morning, Room: Dochart 2

Session Chair: John W. Goodby, University of York, UK

10:30 **KEYNOTE**
(S602_001) **Synthesis and properties of electroactive conjugated polymers**
Andrew B. Holmes, University of Melbourne, Australia
11:10 (S602_002) **The conversion of monoclinic Y_2O_3:Eu to red emitting cubic Y_2O_3:Eu nanoparticles and the properties of YAG:Ce nanoparticles**
Jack Silver, Brunel University, UK
11:30 (S602_004) **Polymer electronic nanodevices working at 20MHz**
Aimin M. Song, University of Manchester, UK
11:50 (S602_005) **The design and evaluation of arylamine polymers for use in pOLEDs**
Mary J. McKiernan, Cambridge Display Technology, UK
12:10 Close of oral session
12:30 Lunch and Informal Networking

Tuesday afternoon, Room: Dochart 2

Session Chair: Ian Sage, Qinetiq, UK

14:00 **KEYNOTE**
(S602_006) **Polymers behind the scenes: display enhancement by micro-, nano- and molecular structured polymers**
Dirk J. Broer, Eindhoven University of Technology, Netherlands
14:40 (S602_007) **Molecular design and nano-engineering of materials for displays and photonics**
John W. Goodby, University of York, UK
15:00 (S602_008) **Conjugated azomethines: easily prepared electrochromic materials with tuneable properties**
W. G. Skene, Université de Montréal, Canada
15:20 Tea and Coffee
15:50 (S602_009) **Alignment and electro-optic effects of functionalized metal and semiconductor nanoparticles in nematic and smectic liquid crystal hosts**
Torsten Hegmann, University of Manitoba, Canada
16:10 (S602_010) **Aromatic polyazomethines in rotaxane architectures**
Aurica Farcas, Petru Poni Institute of Macromolecular Chemistry, Romania
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Tuesday, Hall 5

(P602_001) **Unravelling chiral ligand-capped gold nanoparticle chirality and exploiting their use as chiral dopants for liquid crystal applications**
Torsten Hegmann, University of Manitoba, Canada

(P602_002) **Porphyrin-based photo-sensitizer towards optoelectronic devices**
Patchanita Thamyongkit, Chulalongkorn University, Thailand

(P602_003) **Synthesis of bent-shaped azobenzene monomers: guest-host effects in liquid crystal with azo dye for optical image storage devices**
Lutfor Rahman, University Malaysia Sabah, Malaysia

(P602_004) **New bipyridylhydrozone-based metallomesogens**
Wen-Jwu Wang, Tamkang University, Taiwan

(P602_005) **Pixel-isolation wall of liquid crystal display based on the multi-component prepolymer system**
Shi-Joon Sung, DGIST, South Korea

(P602_006) **Anthracene-containing PPE-PPVs: Side chains effect on charge carrier mobility and photovoltaic response**
Daniel Egbe, Johannes Kepler University Linz, Austria

(P602_007) **Energy transfer in anionic fluorene-based conjugated polyelectrolytes**
Ana Teresa Marques, Universidade de Coimbra, Portugal

(P602_008) **Thin film transistors using chemical solution deposited InGaZnO active channel layers**
Dae-Hwan Kim, DGIST, South Korea

(P602_009) **Absorbing wavelength control of perylene diimide containing LCLCs by novel naphthalene benzimidazole compound**
Seunghan Shin, Korea Institute of Industrial Technology, South Korea

(P602_010) **Trace analysis of metals with AAS or with electrochemistry?**
Alena Manová, Slovak University of Technology, Slovakia

(P602_011) **Luminescent properties of some imidazole and oxazole based materials; photo-induced switching/aggregation**
Abiodun Eseola, Redeemer's University, Nigeria

SYMPOSIUM:
Soft Matter (603)
Convener: Carol Stanier, Soft Matter, UK

PROGRAMME

Wednesday afternoon, Room: Alsh 1

14:00 **KEYNOTE**
(S603_001) **Hyperbranched fluoropolymers: From antifouling marine coatings to cancer imaging and therapeutic agents**
Karen L. Wooley, Texas A&M University, USA
14:40 (S603_002) **Aggregates with biocontinuous interior morphologies from amphiphilic comb diblock coplymers**
Simon J. Holder, University of Kent, UK
15:00 (S603_003) **Facile preparation method for core-shell microspheres with controlled surface roughness**
Hirotaka Ihara, Kumamoto University, Japan
15:20 Tea and Coffee
15:50 (S603_004) **Preparation of cylindical co-micelles by crystallisation-driven polymerisation**
George R. Whittell, University of Bristol, UK
16:10 (S603_005) **Ultra-fast bursting of sensitive polymersomes induced by curling**
Min-Hui Li, Université Pierre et Marie Curie, France
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Thursday morning, Room: Alsh 1

10:30 **KEYNOTE**
(S603_006) **Soft glassy rheology of colloidal star polymers**
Dimitris Vlassopoulos, IESL-FORTH and University of Crete, Greece
11:10 (S603_007) **Spontaneous formation of nanostructured polymer-surfactant films**
Karen J. Edler, University of Bath, UK
11:30 (S603_008) **Nanostructures engineering *via* living radical polymerization**
Sébastien Perrier, University of Sydney, Australia
11:50 (S603_009) **Synthesis and characterization of glycopolymer brushes by surface-initiated ATRP**
Anca Mateescu, University of Crete, Greece
12:10 (S603_010) **Synthesis and self-assembly of well-defined block copolypeptides**
Neil R. Cameron, Durham University, UK
12:30 Lunch and Informal Networking

Thursday afternoon, Room: Alsh 1

14:00 **KEYNOTE**
(S603_011) **Soft material approaches to drug delivery morphologies and stem cell differentiation**
Dennis E. Discher, University of Pennsylvania, USA
14:40 (S603_012) **Amyloid peptide copolymers: Self-assembled nanostructures of bioactive materials**
Ian W. Hamley, University of Reading, UK
15:00 (S603_013) **Enzyme-driven dynamic peptide library**
Apurba K. Das, University of Strathclyde, UK
15:20 Tea and Coffee
15:50 (S603_014) **Nanoengineered materials for biomedical applications**
Georgina K. Such, University of Melbourne, Australia
16:10 (S603_015) **Designing protein self-assembly for tissue engineering applications**
Aline F. Miller, University of Manchester, UK
16:30 Close of oral session
17:00 Plenary Lecture (Clyde)

Friday morning, Room: Alsh 1

09:00 **KEYNOTE**
(S603_016) **Enzyme-instructed formation of nanofibers and hydrogels for biomedicine**
Bing Xu, Brandeis University, USA
09:40 (S603_017) **Controlled release of model dyes from supramolecular hydrogels formed from Fmoc-amino acids**
Dave J. Adams, University of Liverpool, UK
10:00 (P603_008) **Enclosure of chirally-oriented achiral dye induced by self-assembled lipid aggregates into polymer matrix**
Makoto Takafuji, Kumamoto University, Japan
10:20 Tea and Coffee
10:50 (S603_019) **Self assembled honeycomb materials**
Luke A. Connal, University of California, Santa Barbara, USA
11:10 (S603_020) **Aligned structures by directional freezing**
Haifei Zhang, University of Liverpool, UK
11:30 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Wednesday, Hall 5

(P603_001) **Designing hydrogel materials with mucosa-mimetic properties**
Vitaliy Khutoryanskiy, University of Reading, UK

(P603_003) **Towards Structure-Property Relationships in Dipeptide Hydrogels**
Dave Adams, University of Liverpool, UK

(P603_004) **Functionalised Materials By Surface Modification**
Mark Moloney, University of Oxford, UK

(P603_005) **NMR studies of polymerization reactions in a non-frozen liquid phase**
Harald Kirsebom, Lund University, Sweden

SCIENTIFIC PROGRAMME Materials

(P603_006) **Agent Based Modelling for Molecular Self-Organization**
Sara Fortuna, Warwick University, UK

(P603_007) **Fluorescent Mutiresponsive Micelles from Block Copolymers Synthesized via the RAFT Process**
Natthaporn Suchao-in, Chulalongkorn University, Thailand

(P603_009) **Crazing of polymers in the supercritical CO_2**
Elena Trofimchuk, M.V. Lomonosov Moscow State University, Russian Federation

(P603_010) **Thermodynamic interpretation of pH-induced swelling of polyelectrolyte gels**
Benjámin Gyarmati, Budapest University of Technology and Economics, Hungary

(P603_012) **Energetical and structural properties of aqueous solution of alcohols at the different concentrations**
Nataliya Atamas, Kiev Taras Shevchenko University, Ukraine

(P603_013) **Studying the interactions of drugs and hydrophobic model membranes using contact angle goniometry**
Marjukka Ikonen, Helsinki University of Technology, Finland

(P603_014) **Investigation of surface tension and Interaction between Anionic Surfactants (LAS, SLS) and Nonionic Surfactants (AE-7EO,AE-2EO)**
Behrooz Adib, Islamic Azad University, Iran

(P603_015) **Poly(aspartic acid)-gelatin co-networks**
Árpád Némethy, Budapest Universitiy of Technology and Economics, Hungary

(P603_016) **Unusual separation of carotene and tocopherol isomers using alternating copolymer-grafted silica stationary phase in HPLC**
Hirotaka Ihara, Kumamoto University, Japan

(P603_017) **From Supramolecular Chemistry to Nanotechnology: Assembly of 3D Nanostructures**
Xing Yi Ling, University of California, Berkeley, USA

(P603_018) **Efficiency studies of caffeine molecularly imprinted poly (vinyl alcohol) films**
Catalin Croitoru, Transilvania University of Brasov, Romania

(P603_019) **Asymmetric Microstructure Based on Stepwise Colloidal Lithography**
Gang Zhang, State Key Lab of Supramolecular Structure and Materials, China

(P603_020) **Effect of Fabrication Conditions on the Phase-Separated Structures of Mixed Langmuir-Blodgett Films**
Hirobumi Shibata, Tokyo University of Science, Japan

(P603_021) **Polymer Vesicles from Super Hydrophilic Homopolymers: A Matter of End Groups?**
Jianzhong Du, Cambridge University and Warwick University, United Kingdom

(P603_022) **Study of bioprotective sugars: Lessons from micelle model systems**
Tammy Ehiwe, University of Greenwich, UK

(P603_023) **Colloidal Crystal-Assisted Lithography for Preparation of 2D Patterned Arrays**
Bai Yang, State Key Laboratory of Supramolecular Structure and Materials, Jilin University, China

(P603_024) **Shear and extensional rheometry of hydrophobically modified polysaccharides in aqueous media**
Saumil Vadodaria, Glyndwr University, UK

(P603_025) **Managing the growth of aqueous semiconductor nanocrystals**
Hao Zhang, State Key Laboratory of Supramolecular Structure and Materials, Jilin University, China

(P603_026) **Application of layer-by-layer deposition for fabricating multilayered hydrogels covalently-linked to glass**
Vitaliy Khutoryanskiy, University of Reading, UK
(P603_027) **Investigation of B-sheet self-assembly mechanism of a peptide isolated from milk leading to hydrogel formation**
Marie-Michèle Guy, Laval University, Canada

(P603_028) **Surface-initiated growth of thin film hydrogels**
Petra Cameron, University of Bath, UK

(P603_029) **Liquid crystals of gold (I) N-heterocyclic carbene complexes**
Ivan Lin, National Dong-Hwa University, Taiwan

(P603_030) **Surface-initiated graft polymerization from the two-dimensional patterns of phase-separated mixed LB films**
Ryota Satomura, Tokyo University of Science, Japan

(P603_031) **Ionic Liquid Crystals of Ester Functionalized Imidazolium salts**
Ching-Wei Tseng, National Dong Hwa University, Taiwan

(P603_032) **Liquid Crystals of Gold(I) N-heterocyclic Carbene Complexes**
Ivan Lin, National Dong-Hwa University, Taiwan

(P603_033) **Stability of nanoparticles at ideal liquid-liquid interfaces**
David Cheung, University of Warwick, UK

(P603_034) **Liquid crystals of silver complexes derived from 1- and 4-1,2,4-triazole**
yi-Syong SU, National Dong-Hwa University, Taiwan

(P603_035) **Formation of protein coated microcrystals for drug delivery.**
Anna Jawor-Baczynska, University of Strathclyde, UK

(P603_036) **Direct synthesis and characterization of hybrid inorganic-organic materials by using several cross-linkers in the presence of *n*-hexadecylamine as surfactant**
zeid Alothman, King Saud University, Saudi Arabia

(P603_037) **Post-polymerisation crosslinking and functionalisation of hyperbranched polymers synthesised by CCCTP**
Jasmin Menzel, University of Warwick, UK

(P603_038) **Co-existing lamellar phases formed by mixtures of polymer - surfactant complex salts with water and long chain alcohols**
Watson Loh, Universidade Estadual de Campinas, Brazil

(P603_039) **Correlation length of cold-set beta-lactoglobulin gel**
Komla Ako, France

(P603_040) **Cross-linked poly(aspartic acid) based hydrogels**
András Szilágyi, Budapest University of Technology and Economics, Hungary

(P603_041) **The multiple morphologies of pH-responsive block copolymers: from asymmetric vesicles and octopi to highly branched wormlike micelles**
Adam Blanazs, University of Sheffield, UK

SYMPOSIUM:
Adaptive Nanomaterials (MC9) (604)
Convener: Mathias Brust, University of Liverpool, UK

PROGRAMME

Monday morning, Room: Boisdale 2

Session Chair: Mathias Brust, University of Liverpool, UK

10:30 **KEYNOTE**
(S604_001) **Engineering the nanoparticle-biomolecule interface**
Vincent M. Rotello, University of Massachusetts, Amherst, USA
11:10 (S604_002) **Adaptive chemistry of enzymes (PLA2) studied at the nanoscale**
Thomas Bjørnholm, Copenhagen University, Denmark
11:30 (S604_003) **Gold nanoparticles, peptides and cells: the dynamic picture**
Raphaël Lévy, University of Liverpool, UK
11:50 (S604_004) **Towards the development of adaptive nanostructured platforms**
Silvia Scarmagnani, Dublin City University, Ireland
12:10 (S604_005) **Cell membrane penetrating nanoparticles**
Francesco Stellacci, MIT, USA
12:30 Lunch and Informal Networking

Monday afternoon, Room: Boisdale 2

Session Chair: Thomas Bjørnholm, Copenhagen University, Denmark

14:00 **KEYNOTE**
(S604_006) **Adaptive porous molecules**
Andrew I. Cooper, University of Liverpool, UK
14:40 **AWARD WINNER (RSC Laurie Vergnano Award 2008)**
(S604_007) **Mechanically interlocked architectures *via* active-metal template strategies**
Kevin D. Hänni, University of Edinburgh, UK
15:20 Tea and Coffee
15:50 **AWARD WINNER (RSC Meldola Medal and Prize 2008)**
(S604_008) **Hollow nanostructures from self-assembled metalloblock copolymers**
Rachel K. O'Reilly, University of Cambridge, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Monday, Hall 5

(P604_001) **Environmentally-responsive nanoporous colloidal films**
Ilya Zharov, University of Utah, USA

(P604_002) **Water-dispersible organic nanoparticles by solvent evaporation**
Haifei Zhang, University of Liverpool, UK

(P604_003) **Experimental study on effect of different parameters on size and shape of triangular silver nanoparticles prepared by a simple and rapid method in aqueous solution**
Sattar Ghader, Shahid Bahonar University of Kerman, Iran

(P604_005) **Potential of modified nanosilicic with hemin as a biocatalyst enzyme model**
Forogh Adhami, Islamic Azad University, Iran

(P604_006) **Thermal conductivity enhancement of zinc oxide nanofluids**
Majid Moosavi, Ferdowsi University of Mashhad, Iran

(P604_007) **Highly Luminescent NIR Type-II /Type-I quantum dot structures**
Katayune Presland, The University of Manchester, UK

(P604_008) **Molecular schizophrenics as sensors and actuators**
Robert Byrne, National Centre of Sensor Research, Republic of Ireland

(P604_009) **Carbon nanotube membranes: Tailoring properties using functional materials**
Luke Sweetman, University of Wollongong, Australia

SCIENTIFIC PROGRAMME Materials

(P604_010) **Influence of hydrogen peroxide on physico-chemical properties of Sm^{3+} doped ceria sample**
Balaji Mandal, Bhabha Atomic Research Centre, India

(P604_011) **Interfacing bioresponsive hydrogels with LCD technology to detect protease activity**
Louise Birchall, University of Strathclyde, UK

(P604_012) **Solvothermal synthesis producing GaN and InN**
Pietro Chirico, University of Southampton, UK

(P604_013) **Immobilization of ZnS and CdS nanoparticles on the surface of modified Bentonite**
Mohmmad Ebrahim Sedaghat, Isfahan University of Technology, Iran

(P604_014) **Influence of ionic strength on hydrophobicity of bacterial surfaces**
James McQuillan, University of Otago, New Zealand

(P604_015) **Sophorolipids as capping and capping/reducing agents for the synthesis of water dispersible metal nanoparticles**
Prasad Bhagavatula, National Chemical Laboratory, India

(P604_016) **Interactions of endothelial cells with gold nanoparticles**
Antonios Kanaras, University of Southampton, UK

(P604_017) **Adaptive bio-optics: the role of dynamic protein assembly in cephalopod camouflage**
Andrea Tao, University of California, San Diego, USA

(P604_018) **Formation mechanism of porous polycaprolactone nanofibers prepared by electrospinning**
Daniela Lubasova, Technical University of Liberec, Czech Republic

(P604_019) **Graphene-like materials based on covalent organic frameworks**
Félix Zamora, Universidad Autónoma de Madrid, Spain

(P604_020) **The synthesis of novel calix[4]arene tetraacrylates and their potential use as macrocyclic platforms in the development of static and dynamic combinatorial libraries using reversible imine formation.**
Adam Le Gresley, Kingston University, UK

(P604_021) **Synthesis and functionalization of quantum dots for biological applications**
Ana Sofia Miguel, ITQB, Portugal

(P604_022) **Controllable fabrication of carbon nanotubes**
Shimei Jiang, State Key Laboratory of Supramolecular Structure and Materials, Jilin University, China

(P604_023) **Selective colorimetric sensing of geometrical isomers of dicarboxylates in water by using functionalized gold nanoparticles**
Kyung Mi Kim, Pohang University of Science and Technology, South Korea

(P604_024) **Dynamic self assembly in inorganic cluster systems: from nanoscale cluster frameworks to self-fabricating materials**
Geoffrey Cooper, University of Glasgow, UK

(P604_025) **Photopatterning, ethcing and derivatization of self assembled monolayers of phosphonic acid on the native oxide of titanium**
Graham Leggett, University of Sheffield, UK

(P604_026) **ZnO nanofluids: green synthesis, characterization, and antibacterial activity**
Elaheh Goharshadi, Ferdowsi University of Mashhad, Iran

(P604_027) **Poly(Methyl Methacrylate)/ZnO nanocomposites using zno particles synthesized by the polyol method**
Alojz Anžlovar, National Instutute of Chemistry, Slovenia

(P604_028) **Cyclodextrin covered fluorescent organic nanotubes for biosensory platform**
Jeong Hun Lee, Inha University, South Korea

(P604_029) **Green synthesis of ZnO nanostructures in a room-temperature ionic liquid 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide**
Elaheh Goharshadi, Ferdowsi University of Mashhad, Iran

(P604_030) **Photoresponsive mesoporous silica nanoparticles with cycodextrin gate keepers**
Saehee Kim, Inha University, South Korea

(P604_031) **Chemical strategies for the assembly of nanoparticles**
Weerakanya Maneeprakorn, The University of Manchester, UK

(P604_032) **Role of processing parameters in the preparation of high molecular weight Poly(vinyl carbazole) web by electrospinning**
Young Jae Lee, Yeungnam University, South Korea

(P604_033) **Trialkoxysilanes as ligands for the *in-situ* incorporation of Pd(II) complexes in MSU type silica support**
A.I. Carrillo, University of Alicante, Spain

(P604_034) **Al and Ce incorporation in mesostructured silica helixes**
A.I. Carrillo, University of Alicante, Spain

(P604_035) **Synthesis of interconnected silica microspheres**
Javier Garcia Martínez, University of Alicante, Spain

(P604_036) **Supramolecular organizations of a decapeptide**
Celine Valery, Ipsen, Spain

(P604_037) **Fabrication of nanostructures by scanning near-field photolithography**
Shuqing Sun, National Centre for Nanoscience and Technology, China

(P604_038) **Luminescent polymeric colloidal crystals**
Quan Lin, Jilin University, China

SYMPOSIUM:
Biomaterials (MC9) (605)
Convener: Cameron Alexander, University of Nottingham, UK

PROGRAMME

Wednesday afternoon, Room: Boisdale 1

14:00 **KEYNOTE**
(S605_001) **Designing materials that influence stem cell biology**
Kevin E. Healy, University of California, Berkeley, USA
14:40 (S605_002) **Synthesis and characterisation of peptide-polymer conjugates for regenerative medicine**
Aline F. Miller, University of Manchester, UK
15:00 (S605_003) **Porous polymeric scaffolds for three-dimensional cell culture**
Neil R. Cameron, Durham University, UK
15:20 Tea and Coffee
15:50 (S605_004) **Nanoengineered assembly of bioinspired capsules**
Angus P.R. Johnston, University of Melbourne, Australia
16:10 (S605_005) **Natural / synthetic polymer conjugates *via* living radical polymerization**
Sébastien Perrier, University of Sydney, Australia
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Thursday morning, Room: Boisdale 1

10:30 **KEYNOTE**
(S605_006) **Nanomedicine for drug delivery across epithelial barriers**
Claus-Michael Lehr, University of Saarland, Germany
11:10 (S605_007) **Enzyme triggered synthesis and gelation of ionic peptides**
Jean-Baptiste Guilbaud, University of Manchester, UK
11:30 (S605_008) **Mannans act as a natural glue: Cellulose-mannan interactions in plant cell walls**
Laurence Melton, University of Auckland, New Zealand
11:50 (S605_009) **Biomimetic morphogenesis and structure of calcite statoliths (Otoconia): An approach towards deeper understanding of a bio-sensor and its function**
Rüdiger Kniep, Max-Planck-Institut für Chemsische Physik fester Stoffe, Germany
12:10 (S605_010) **Bio-inspired chemo-mechanical polymer nanocomposites**
Stuart J. Rowan, Case Western Reserve University, USA
12:30 Lunch and Informal Networking

POSTER SESSION

18:00 – 20:00
Wednesday, Hall 5

(P605_001) **Nylon 6,6 biohydrolysis with different protease enzymes**
Mazeyar Parvinzadeh, Islamic Azad University, Iran

(P605_002) **Recovery of Pb^{2+} using a novel biomaterial derived from maize plant**
Jonathan Okonkwo, Tshwane University of Technology, South Africa

(P605_003) **Poly(ethylene oxide)-based star polymers for ionic channel applications**
Philippe Guégan, Université d'Evry Val d'Essonne, France

(P605_004) **Simultaneous swelling and degradation of crosslinked PEG-PLLA networks**
Andrew Whittaker, The University of Queensland, Australia

(P605_005) **Surface functionalised PolyHIPEs for 3D cell culture**
Caroline Zeyfert, Durham University, UK

(P605_006) **New polypeptide materials from NCA polymerisation**
Gregory Hunt, Durham University, UK
(P605_007) **Covalent enzyme immobilization onto emulsion – templated porous polymers**
Scott Kimmins, Durham University, UK

(P605_008) **Effect of solvent quality on the solution properties of assemblies of amphiphilic diblock copolymers as potential ^{19}F MRI agents**
Andrew Whittaker, The University of Queensland, Australia

(P605_009) **Directed laboratory evolution of biomineralizing enzymes**
Lukmaan Bawazer, University of California, Santa Barbara, USA

(P605_010) **Thermogelling polymers for drug delivery and tissue engineering applications**
Xian Jun Loh, Institute of Materials Research and Engineering, Singapore

(P605_011) **Synthesis and characterisation of PEG-copolymers for drug delivery applications**
Abid Iftikhar, Liverpool John Moores University, UK

(P605_012) **Ti_5O_9, a Magneli Phase used as stimulation electrode in the neuron growth**
Maria Canillas Pérez, Instituto de Cerámica y Vidrio, CSIC, Spain

SCIENTIFIC PROGRAMME Materials

(P605_013) **Encapsulation and release of α-chymotrypsin in poly(glycerol adipate-co-ω pentadecalactone) microparticles**
Hesham Tawfeek, Liverpool John Moores University, UK

(P605_014) **Fluorescence sensing of aliphatic amines and diamines with Anthracene - bas(CATFA)**
Hyena Lee, Postech, South Korea

(P605_015) **Chemical decoration of polysialic acid using "click" chemistry**
Yi Su, Leibniz Universität Hannover, Germany

(P605_016) **Preparation and characterization of biodegradable superporous hydrogels**
Kun Young Yuk, Chungnam National University, South Korea

(P605_017) **Characterisation of hydroxyapatite and dicalcium phosphate using X-ray fluorescence spectrometry**
Alan Ryder, National University of Ireland, Galway, Republic of Ireland

(P605_018) **Miniaturised electrochemical biosensor based lactate diffusive transport measurement in collagen gels and validation of simulation models**
Zimei Rong, Queen Mary University of London, UK

(P605_019) **Covalent functionalization of Polymethylpentene for applications in the field of tissue engineering**
Lena Möller, Institut für Organische Chemie, Leibniz Universität Hannover, Germany
(P605_020) **Molecular dynamics simulation of BMP-2 and its interaction with a hydrophobic surface**
Augusto Oliveira, TU Dresden, Germany
(P605_021) **Biomaterials for Bio-Photovoltaic solar cells**
Rebecca Thorne, University of Bath, UK

(P605_022) **Study of protein deposition on co-polymers with different wetabilities by confocal fluorescence microscopy**
Denisio Togashi, National University of Ireland, Galway, Republic of Ireland

(P605_023) **Synthesis of nanoscale phosphate-degradable polymer composites**
Stephanie Kelly, University of Glasgow, UK

(P605_024) **Optimisation of polymer scaffolds for ocular cell transplantation**
Andrew Treharne, University of Southampton, UK

(P605_025) **Preparation and characterization of radiopaque Poly(vinyl alcohol)/Poly(vinyl pivalate/ vinyl acetate) microspheres containing silver iodide complexes**
Won Seok Lyoo, Yeungnam University, South Korea

(P605_026) **Glycopolymer functionalised gold nanoparticles: A new strategy towards synthetic anti-cancer vaccines**
Alison Parry, Durham University, UK

(P605_027) **Non-invasive magnetic release of cell stimuli from vesicle gels**
Felicity Leng, University of Manchester, UK

(P605_028) **Study of Na^+ transport across an agar sBLM between two aqueous solutions**
Rui Campos, Durham University, UK

(P605_029) **Gold nanoparticles for the delivery of anti-cancer drugs**
Samia Saleemi, University of Liverpool, UK

SYMPOSIUM:
Computational Nanoscience (MC9) (606)
Convener: Nick Besley, University of Nottingham, UK

PROGRAMME

Thursday morning, Room: Carron 2

Session Chair: Jeffrey C. Grossman, University of California, Berkeley, USA

10:30 **KEYNOTE**
(S606_001) **Nanoparticles, DNA, sensing and theory**
George C. Schatz, Northwestern University, USA
11:10 (S606_007) **Semi-empirical van der Waals corrections to the density functional description of solids and molecular structures**
Timothy Lillestolen, University of Nottingham, UK
11:30 (S606_003) **Hydrogen in metal cluster cages: weak bonding and reactions in confined spaces**
Fedor Y. Naumkin, University of Ontario Institute of Technology, Canada
11:50 (S606_004) **Interface-stabilized phases of metal-on-oxide nanodots**
Alessandro Fortunelli, University of Pisa, Italy
12:10 (S606_005) **The growth and structure inorganic nanotubes**
Mark Wilson, University of Oxford, UK
12:30 Lunch and Informal Networking

Thursday afternoon, Room: Carron 2

Session Chair: Nick Besley, University of Nottingham, UK

14:00 **KEYNOTE**
(S606_006) **New materials for energy conversion: insights from calculations and implications for experiments**
Jeffrey C. Grossman, University of California, Berkeley, USA
14:40 (S606_002) **Energy landscapes: From clusters to biomolecules**
David J. Wales, University of Cambridge, UK
15:00 (S606_008) **Electronic coupling matrix elements from charge constrained DFT calculations**
Jochen Blumberger, University of Cambridge, UK
15:20 Tea and Coffee

15:50 (S606_009) **Crystal structures from nothing - new materials from random numbers**
Christopher J. Pickard, University of St Andrews, UK
16:10 (S606_010) **Modelling charge transport in soft materials**
Alessandro Troisi, University of Warwick, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Friday morning, Room: Carron 2

Session Chair: Christopher J. Pickard, University of St Andrews, UK

09:00 **KEYNOTE**
(S606_011) **Quantum algorithms for functionalized nanostructures**
James R. Chelikowsky, University of Texas, Austin, USA
09:40 (S606_012) **Designing patchy particles to self assemble**
Jonathan P. K. Doye, University of Oxford, UK
10:00 (S606_013) **Simulating the self-assembly of DNA nanostructures**
Thomas E. Ouldridge, University of Oxford, UK
10:20 Tea and Coffee
10:50 (S606_014) **CNT@Imogolite: A coaxial nanocable**
Agnieszka Kuc, Jacobs University, Germany
11:10 (S606_015) **Nanoconfined fluids undergoing steady and unsteady flow: Application to nanopumping devices and carbon nanotubes**
Jesper S. Hansen, Swinburne University of Technology, Australia
11:30 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Thursday, Hall 5

(P606_001) **Computational Study of Acidity Property of Hydrogen on The Carbon With SP3 Hybrid in Cyclopentadiene, 9-Phenylfluorene, Indene and Fluorene in Gas Phase**
Sara Ahmadi, Firoozabad Islamic Azad University, Iran

(P606_002) **Dynamics of vibrational excitation in the C_{60} single molecule transistor**
Aniruddha Chakraborty, University of Oregon, USA

(P606_003) **Buckled nano rod - a two state system and its dynamics**
Aniruddha Chakraborty, University of Oregon, USA

(P606_004) **Carbon aurides and hyper-aurides: unusual hybridization in carbon and other properties**
Fedor Naumkin, UOIT, Canada

(P606_005) **π-π Interactions between single-walled carbon nanotubes and aniline**
Walter Fabian, Karl-Franzens Universitaet Graz, Austria

(P606_006) **Mechanical Properties of Peptides and Coiled-Coil Myosin II fragment**
Igor Neelov, Institute of Macromolecular Compounds, Russian Federation

(P606_007) **Modelling of the cluster-nature solvent features of single-wall carbon nanohorns**
Francisco Torrens, Universitat de Valencia, Spain

(P606_008) **Mechanical properties of hybrid inorganic-organic materials**
Monica Kosa, ETH, Zurich, Switzerland

(P606_009) **A method to rapidly predict the injection rate in dye sensitized solar cells**
Daniel Jones, University of Warwick, UK

(P606_010) **Fragment molecular orbital studies of luciferase from the Japanese firefly *Luciola cruciata***
Bruce Milne, University of Coimbra, Portugal

(P606_011) **Carbon nanotube electrodes: Quantum chemical calculation of the charge transfer rate through the nanotube sidewall.**
Jack Sleigh, University of Warwick, UK

(P606_012) **On the Electronic Basis of Bistability in the Dawson Cluster $[Mo_{18}O_{54}(SO_3)_2]^{4-}$**
Mohan Janakiraman, University of Glasgow, UK

(P606_013) **Self-assembly of polycarboxylic acids into two-dimensional molecular networks: a theoretical study**
Natalia Martsinovich, University of Warwick, UK

SYMPOSIUM:
Crystal Engineering (MC9) (607)
Conveners: Stuart James, Queen's University, Belfast, UK and Jamie Humphrey, CrystEngComm

PROGRAMME

Monday morning, Room: Alsh 1

Session Chair: Lee Brammer, University of Sheffield, UK

10:30 **KEYNOTE**
(S607_001) **Is polymorphism an anathema to crystal engineering?**
Joel Bernstein, Ben-Gurion University of the Negev, Israel
11:10 (S607_002) **Chiral discrimination and chirality transfer in the annealing assisted mechanochemical reaction of transition-metal coordination compounds and co-crystal formation**
Reiko Kuroda, University of Tokyo, Japan
11:30 (S607_005) **Molecular probes for the analysis of surface chemistry of drug polymorphs**
Tracy O. Ehiwe, University of Greenwich, UK

SCIENTIFIC PROGRAMME Materials

11:50 (S607_004) **Non-porous organic solids capable of dynamically resolving mixtures of diiodoperfluoroalkanes**
Pierangelo Metrangolo, Politecnico di Milano, Italy
12:10 (S607_003) **Explosives under extreme conditions – pressure- and temperature-induced polymorphism in energetic materials**
Colin R. Pulham, University of Edinburgh, UK
12:30 Lunch and Informal Networking

Monday afternoon, Room: Alsh 1

Session Chair: Reiko Kuroda, University of Tokyo, Japan

14:00 **KEYNOTE**
(S607_006) **Chemistry and applications of soft porous crystals of coordination polymers**
Susumu Kitagawa, Kyoto University, Japan
14:40 (S607_007) **Hydrogen storage in porous metal-organic frameworks**
Myunghyun Paik Suh, Seoul National University, Korea
15:00 (S607_008) **Flexibility and dynamics in metal-organic frameworks**
Lee Brammer, Sheffield University, UK
15:20 Tea and Coffee
15:50 (S607_010) **Gallium-sulphide supertetrahedral clusters as building blocks of hybrid frameworks**
Paz Vaqueiro, Heriot-Watt University, UK
16:10 (S607_009) **Reactivity and sorption in flexible amino-acid based open-framework materials**
Matthew J. Rosseinsky, University of Liverpool, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Monday, Hall 5

(P607_001) **Effects of particle size on packing of sodium chloride during tablet compression**
Mahibub Kanakal, USM, Malaysia

(P607_002) **Representation of material balance for fractional crystallization of reciprocal salt pair systems: KNO_3 production case study**
Sattar Ghader, Shahid Bahonar University of Kerman, Iran

(P607_003) **Dicarboxylate coordination polymers incorporating kinked or flexible diimines: nanobarrels, highly-connected topologies, and self-penetrated networks**
Robert LaDuca, Michigan State University, USA

(P607_004) **Engineering polyoxometalate-based hybrid inorganic-organic networks**
Thomas McGlone, Glasgow University, UK

(P607_005) **Polymorphism and polymorphic transformation of DL-methionine crystals**
Lek Wantha, Suranaree University of Technology, Thailand

(P607_006) **3D-nets in crystal engineering: why we should bother**
Lars Öhrström, Chalmers University of Technology, Sweden

(P607_007) **On the relative stability of the pyrazinamide polymorphs**
Ermelin da Eusébio, University of Coimbra, Portugal

(P607_008) **Rapid microwave synthesis and purification of porous covalent organic frameworks**
Lyndsey Ritchie, University of Liverpool, UK

(P607_009) **Synthesis of crystalline nano-cages for gas storage**
Shashikala Swamy, University of Liverpool, UK

(P607_010) **On the coordination chemistry of (*E*)-1-(2-pyridylimino)-2-(2-pyridyl)isoindoline: synthesis, spectroscopy, and structural characterization of mono- and dinuclear complexes of group 12 metals**
Rodrigo Bitzer, Universidade Federal do Rio de Janeiro, Brazil

(P607_011) **An unprecedented investigation of the coordination chemistry of (*E*)-1-(2-pyridylimino)-2-(2-pyridyl)isoindoline. Preparation, spectroscopy and structural characterization of new pallada- and platinacyclopropanes**
Rodrigo Bitzer, Instituto de Química - Universidade Federal do Rio de Janeiro, Brazil

(P607_012) **Synthesis, characterization of 2D and 3D metal-organic frameworks based on Ag(I) and flexible tetranitrile ligands**
Célia Ronconi, Universidade Federal do Rio de Janeiro, Brazil

(P607_013) **Synthesis and crystal structures of Zn(II)–containing coordination polymers with extended rigid N,N' bidentate ligands**
Tolulope Fasina, University of Lagos, Nigeria

(P607_014) **Similarities in the solid state structures of pyridine-2,6-dicarboxylates and 1,8-naphthyridine-2,7-dicarboxylates**
Andrew Bailey, University of Southampton, UK

(P607_015) **Effect of shear flow on polymorphism, morphology and particle size in pharmaceutical crystallization**
Katarzyna Sypek, University of Strathclyde, UK

(P607_016) **Liquid-assisted grinding: one-step room-temperature construction of coordination polymers, soft inclusion materials and porous MOFs**
Tomislav Friščić, University of Cambridge, UK

(P607_017) **The EPSRC national crystallographic synchrotron service- early experiences with station i19 at diamond light source**
Ross Harrington, Newcastle University, UK

(P607_018) **Solid-state NMR and X-ray analysis of structural transformations in organic solids and pharmaceutical co-crystals formed by hydrogen-bond mediated molecular recognition**
Gunther Brunklaus, Max-Planck Institute for Polymer Research, Germany

(P607_019) **New Complexes of Copper(II) with 1-Aminocyclopropane-1-carboxylic acid**
Nenad Judaš, University of Zagreb, Croatia

SYMPOSIUM:
Green Material Synthesis (MC9) (608)
Convener: Adam Lee, University of York, UK

PROGRAMME

Friday morning, Room: Dochart 2

Session Chair: Adam Lee, University of York, UK

09:00 **KEYNOTE**
(S608_001) **Green metal processing**
Andrew Abbott, University of Leicester, UK
09:40 (S608_002) **Nanotubular self-assembly of *n*-dodecylamine/TEOS/water mixtures mediated by metal nanoparticles**
Rafael Luque, Universidad de Córdoba, Spain
10:00 (S608_003) **Solvent-free synthesis of metal-organic frameworks in ball mills**
Stuart L. James, Queen's University Belfast, UK
10:20 Tea and Coffee
10:50 (S608_004) **Hierarchical composites based on renewable, biodegradable components**
Jonny J. Blaker, Imperial College, UK
11:10 (S608_005) **Renewable raw materials from food processing to obtain fine chemicals**
M.A. Martin-Luengo, Instituto de Ciencia de Materiales de Madrid, Spain
11:30 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Thursday, Hall 5

(P608_001) **Synthesis, characterization, and applications of water-soluble tantalum and niobium precursors**
Ai-Dong Li, Nanjing University, China

(P608_002) **Ultrasonic accelerated Betti reaction in ionic liqids**
Mohammad Reza Poor Heravi, Payame Noor University, Iran

(P608_003) **Synthesis 4-hydroxycoumarin derivatives by Selectfluor™F-TEDA-BF_4**
Mohammad Reza Poor Heravi, Payame Noor University, Iran

(P608_004) **An efficient synthesis of 13-argio-5H-dibenzo[b,i]xanthene-5,7,12,14(13H)-tetraone derivatives using Selectfluor™ promoted by ionic liquids at ambient conditions under ultrasound irradiatin**
Mohammad Reza Poor Heravi, Payame Noor University, Iran

(P608_006) **Organic syntheses in ionic liquids: a comparative study with green chemistry protocol**
Anjali M. Rahatgaonkar, THINQ Pharma, USA

(P608_007) **Production of activated carbon from plant wastes**
Metin Açikyildiz, Ataturk University, Turkey

(P608_008) **Solid–supported potassium ferrate as mild and versatile reagent for the deprotection of silyl ethers under solvent – free conditions**
Dadkhoda Ghazanfari, Islamic Azad University, Iran

(P608_009) **4-aminopyridinium dichromate supported on silica gel as a mild and versatile oxidant for the oxidation of alcohols under solvent-free conditions**
Dadkhoda Ghazanfari, Islamic Azad University, Iran

(P608_010) **Controlling the features of nano-particles under continuous flow conditions**
Colin Raston, The University of Western Australia, Australia

(P608_011) **Activity of amino functionalized mesoporous solid bases in the microwave assisted Michael reaction**
Alina Balu, Universidad de Cordoba, Spain

(P608_012) **A greener route to metal selenide and telluride nanoparticles**
Neerish Revaprasadu, University of Zululand, South Africa

(P608_013) **Solvent-free, efficient and high regioselective conversion of epoxides to symmetrical and unsymmetrical *vic*-dihalides using chlorodiphenylphosphine and N-halosuccinimides**
Ghasem Aghapour, Damghan University of Basic Sciences, Iran

(P608_014) **Preparation, characterization, of the Ta-doped ZnO nanoparticles and their photocatalytic activity**
Ai-Dong Li, Nanjing University, China

(P608_015) **Synthesis and characterisation of Au-CdSe hybrid nanoparticles capped with cysteine**
Rajasekhar Pullabhotla, University of Zululand, South Africa

(P608_016) **Preparation and characterization of $BiNbO_4$ photocatalytic powders by a citrate method**
Ai-Dong Li, Nanjing University, China

(P608_017) **Ultrarapid, high-power microwave synthesis of silicon carbide (SiC).**
Lucia Carassiti, University of Glasgow, UK

SCIENTIFIC PROGRAMME Materials

(P608_018) **Microwave-Assisted Synthesis of Curcurbit[n]urils**
Oliver Sutcliffe, University of Strathclyde, UK

(P608_019) **Synthesis of renewable and sustainable resource-derived furan-based adhesive materials and their application to cationic photo-curing**
jin Ku Cho, Korea Institute of Industrial Technology, South Korea

(P608_020) **Poly vinylpyrrolidone (PVP) effect on photochemical synthesis of silver nanoparticles**
Tahereh Saber, Sharif University of Technology, Iran

(P608_021) **Valuation of bio-based monomers : synthesis of new polyesters**
Pierre-Jean Roumanet, Université d'Evry, France

(P608_022) **Novel modifiers for the plasticization of Starch**
Andrew Ballantyne, University of Leicester, UK

(P608_023) **Synthesis of platinum-cellulose nanocomposites in a water/ supercritical CO_2 biphasic system.**
Karima Benaissi, The University of Nottingham, UK

(P608_024) **Catalytic performance of mixed-addenda heteropolyanions as solid catalysts in lactonization of various diols**
Ali Gharib, Islamic Azad University, Iran

SYMPOSIUM:
Solid State (609)
Convener: Edmund Cussen, University of Strathclyde, UK

PROGRAMME

Tuesday morning, Room: Alsh 1

10:30 **KEYNOTE**
(S609_001) **From heat to electricity: Bulk thermoelectric nanostructures**
Mercouri Kanatzidis, Northwestern University, USA
11:10 (S609_002) **Electron and hole doping studies of the high-T_c parent material NdFeAsO**
Jan-Willem G. Bos, University of Edinburgh, UK
11:30 (S609_003) **Structural studies of low doped lithium nitridometallates, $Li_{3-x-y}M_xN$ (M=Mn, Fe, Co, Ni, Cu).**
Donnie K. Carmichael, University of Glasgow, UK
11:50 (S609_004) **Preparation and characterisation of the ternary nitride-fluoride $Ce_2MnN_3F_{2-\delta}$**
Maria G. Francesconi, University of Hull, UK
12:10 (S609_005) **Magnetic properties of FePt nanoparticles assembled on Al_2O_3**
Oktay Yildrim, University of Twente, The Netherlands
12:30 Lunch and Informal Networking

Tuesday afternoon, Room: Alsh 1

14:00 **KEYNOTE**
(S609_006) **Targetted synthesis of inorganic materials**
Matthew J. Rosseinsky, University of Liverpool, UK
14:40 (S609_007) **CMR in cuprates?**
Abbie C. Mclaughlin, University of Aberdeen, UK
15:00 (S609_008) **A symmetry-reversing metal-insulator transition in the high pressure perovskite $PbRuO_3$**
Jennifer A. Rodgers, University of Edinburgh, UK
15:20 Tea and Coffee
15:50 (S609_009) **Iron and Oxygen – the perfect match**
Elaine A. Moore, The Open University, UK
16:10 (S609_010) **Polyoxometalate-based metal-oxide nanostructures**
Carsten Streb, University of Glasgow, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Wednesday morning, Room: Alsh 1

10:30 **KEYNOTE**
(S609_011) **Recent developments in hybrid inorganic-organic framework materials**
Anthony K. Cheetham, University of Cambridge, UK
11:10 (S609_012) **Spontaneous patterning of functional porous and composite materials**
Ram Seshadri, University of California, Santa Barbara, USA
11:30 (S609_013) **Computational high throughput prediction and identification of Covalent Organic Frameworks**
Abbie Trewin, University of Liverpool, UK
11:50 **AWARD WINNER**
(S609_014) **Computer modelling as a tool in the chemistry of materials**
C. Richard A. Catlow, University College, London, UK
12:30 Lunch and Informal Networking

POSTER SESSION

18:00 – 20:00
Tuesday, Hall 5

(P609_001) **Reductin of complex oxides in hydrogen containing atmosphere: formation of hydride-oxide phases or water incorporation?**
Elena Konysheva, University of St Andrews, UK

(P609_002) **Vanadosilicate zeolites: microporous magnets?**
Russell F. Howe, University of Aberdeen, UK

(P609_003) **Improved quality of CdS films by CVD method**
Paul O'Brien, University of Manchester, UK

(P609_004) **Cobalt sulfide nanostructes from single molecular precursors**
Karthik Ramasamy, University of Manchester, UK

(P609_005) **High pressure synthesis and structre of $NdZrO_2N$**
Minghui Yang, University of Edinburgh, UK

(P609_006) **Trends in oxypnictide superconductors: insights provided by the late rare earth metals**
George Penny, University of Edinburgh, UK

(P609_007) **Synthesis, spectroscopy, and crystal structure of Cr, Mo, and W tetracarbonyl compleses bearing 2,3-bis(2-isopropylphenylimino)butane**
Rodrigo Bitzer, Instituto de Química - Universidade Federal do Rio de Janeiro, Brazil

(P609_008) **Stress analysis of a high fill-factor micromachined bolmeter for thermal imaging applications**
Mohammed Elwan, Military Technical College, Egypt

(P609_009) **Synthesis and decomposition of novel single-source precursors for MOCVD of bismuth oxide thin films**
Savio Moniz, University College London, UK

(P609_010) **Ordered crystalline mesoporous oxides as catalysts for CO oxidation**
Peter Bruce, University of St Andrews, UK

(P609_011) **Evaluation of phase equilibria in 12-Salt six-component reciprocal systems**
Elena Gryzlova, Russian Academy of Sciences, Russian Federation

(P609_012) **Bistable oxidation states in inorganic frameworks**
Leroy Cronin, University of Glasgow, UK

(P609_013) **Ionic conductivity, structure and oxide ion migration pathway in fluorite-based $Bi_8La_{10}O_{27}$**
Ivana Evans, Durham University, UK

(P609_014) **Absence of long-range magnetic ordering at the metal-insulator transition in $Hg_2Ru_2O_7$**
Rocío Ruiz-Bustos, Parque Científico y Tecnológico de Albacete, Spain

(P609_015) **Quantum magnetism of $Co_4(BO_2)_6O$**
Hiroyuki Hagiwara, Chuo University, Japan

(P609_016) **Synthetic methods of altering the porosity and solubility of gypsum and the *in-situ* measurement with time and position resolved EDXRD**
Robin Fisher, University of Warwick, UK

(P609_017) **Some properties of selected $PbO\text{-}Ga_2O_3\text{-}P_2O_5$ glasses**
Jiří Schwarz, University of Pardubice, Czech Republic

(P609_018) **Hexagon-preserving carbon foams as graphene-based nanostructures**
Agnieszka Kuc, Jacobs University Bremen, Germany

(P609_019) **Magnetic anisotropy of single crystal $Cu_3SO_4(OH)_4$**
Shigeo Hara, Chuo University, Japan

(P609_020) **Endohedral fullerenes as potential cryorelaxors agents**
Francesco Cuda, University of Southampton, UK

(P609_021) **A novel expansion mode of polyoxovanadate clusters: synthesis, crystal structure and properties of $\{[Cu(H_2O)(C_5H_{14}N_2)_2]_2[V_{16}O_{13}(Cl)]\} \cdot 4(C_5H_{16}N_2)$**
Adam Wutkowski, University of Kiel, Germany

(P609_022) **Structural analysis and magnetic properties of $Ln_{18}Li_8Fe_5O_{39}$ (Ln=La, Pr, Sm)**
Katsuyoshi Oh-ishi, Chuo University, Japan

(P609_023) **Piezoelectric AlN thin films by plasma enhanced chemical vapor deposition**
Gustavo Sánchez, Facultad de Ingeniería, Uruguay

(P609_024) **The oxyarsenides $Sr_4M_2Fe_2As_2O_6$ (M=Sc, Cr, V) as parent compounds of new superconducting materials**
Karolina Kasperkiewicz, University of Edinburgh, UK

(P609_025) **The stepwise mechanism and templating effects in the mechanosynthesis of coordination polymer inclusion compounds and porous MOFs**
Tomislav Friščić, University of Cambridge, UK

(P609_026) **Synthesis of magnetoelectric nanocomposites through the efficient assembly of BTO and CFO nanoparticles**
Matthew J. Rosseinsky, University of Liverpool, UK

(P609_027) **Microporous organic polymers with varying surface functionality**
Robert Dawson, University of Liverpool, UK

(P609_028) **Quantitative ion exchange in the solid state: H^+ and Li^+ mobility in the layered perovskites $H_{1-x}Li_xLaTiO_4$**
Thomas Yip, University of Strathclyde, UK

(P609_029) **Heteronuclear pyridine 2,3-dicarboxylate complexes as precursors to mixed oxides**
Alina Balu, Universidad de Cordoba, Spain

(P609_030) **Structural studies in the $Li_3N\text{-}Mg_3N_2$ system by powder neutron diffraction**
Robert Hughes, University of Glasgow, UK

(P609_031) **Novel metal-chalcogenide nanomaterials**
Saleem Denholme, Glasgow University, UK

(P609_032) **Structural and electronic properties response upon rare-earth doping of SrFeAsF**
Christina Drathen, University of Edinburgh, UK

SCIENTIFIC PROGRAMME Materials

SYMPOSIUM:
Molecular Electronics and Magnetics (MC9) (610)
Convener: Euan Brechin, University of Edinburgh, UK

PROGRAMME

Monday morning, Room: Dochart 2

Session Chair: Mark Murrie, University of Glasgow, UK

10:30 **KEYNOTE**
(S610_001) **Multifunctionality and switching in magnetic molecular materials**
Eugenio Coronado, Universidad de Valencia, Spain

11:10 (S610_002) **Linking antiferromagnetic wheels: towards molecular qubits**
Victoria A. Milway, University of Manchester, UK

11:30 (S610_003) **Molecular nanomagnets for cooling applications**
Marco Evangelisti, Universidad de Zaragoza, Spain

11:50 (S610_004) **Twisting, bending, stretching: towards a magneto-structural correlation for $[Mn_3]$ and $[Mn_6]$ single-molecule magnets**
Ross Inglis, University of Edinburgh, UK

12:10 (S610_005) **Surface-confined coordination chemistry**
Mario Ruben, Institute of Nanotechnology, Germany

12:30 Lunch and Informal Networking

Monday afternoon, Room: Dochart 2

Session Chair: Leigh F. Jones, National University of Ireland, Galway, Republic of Ireland

14:00 **KEYNOTE**
(S610_006) **Molecular nanomagnets: towards molecular spintronics**
Wolfgang Wernsdorfer, Institut Néel, France

14:40 (S610_007) **Organizing TTF-based organogels through non covalent π-π interactions with SWCNTs**
David Canevet, Université d'Angers, France

15:00 (S610_008) **Functional coordination nanoparticles**
Laure Catala, Université Paris-Sud II, France

15:20 Tea and Coffee

Session Chair: Daniel J. Price, University of Glasgow, UK

15:50 (S610_009) **Electron transfer reaction within polyoxometalates embedded with redox active templates**
De-Liang Long, University of Glasgow, UK

16:10 (S610_010) **Perspectives in multi-functional single-molecule magnets and single-chain magnets**
Masahiro Yamashita, Tohoku University, Japan

16:30 Flash poster presentations

17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Monday, Hall 5

(P610_001) **New advances towards molecular wires based on Metal- Organic Frameworks**
Rubén Mas-Ballesté, Universidad Autónoma de Madrid, Spain

(P610_003) **Electrochemically driven sequential machines: an implementation of copper rotaxanes**
Ganga Periyasamy, University of Liege, Belgium

(P610_005) **Synthesis and magnetic properties of high nuclear lanthanoid-containing polytungstoarsenates(III)**
Firasat Hussain, University of Zurich, Switzerland

(P610_006) **Magneto-caloric effect in spin-degenerated molecular nanomagnets**
Marco Evangelisti, ICMA, CSIC - U. Zaragoza, Spain

(P610_007) **Synthesis and Characterization of a Nickel Compound From the Reaction of $Ni(cod)_2$ with $TCNQF_4$**
Adam Berlie, University of Durham, UK

(P610_008) **$[Mn_6]$ under pressure - a combined structural and magnetic study**
Euan Brechin, University of Edinburgh, UK

(P610_009) **Ground spin state manipulation of Mn^{III}_3 single-molecule magnets.**
E.K. Brechin, The University of Edinburgh, UK

(P610_010) **Towards a Magnetostructural Correlation for a Family of $[Mn_6]$ SMMs**
Euan. Brechin, The University of Edinburgh, UK

(P610_011) **Novel cage complexes of copper(II) phosphonates**
Gopal Kandasamy, The University of Manchester, UK

(P610_012) **Unusual switching behavior among electron configurations in iron(III) porphyrinoids**
Yoshiki Ohgo, School of Medicine, Toho University, Japan

(P610_013) **Ship in a bottle: tellurate in nanofunctional clusters**
Jun Yan, University of Glasgow, UK

(P610_014) **Doping of polyaniline by paramagnetic metal ions: An ordering effect of the applied magnetic field**
Oleg Dimitriev, Institute of Semiconductor Physics, Ukraine

(P610_015) **New family of chiral molecular conductors**
Nikola Chmel, University of Warwick, UK

(P610_016) **Coordination chemistry of heterometallic wheels**
Laura Carthy, The University of Manchester, UK

(P610_017) **Electronic structure/function relationship in metal nanowires: components for molecular electronics**
Vihar Georgiev, University of Glasgow, UK

(P610_018) **Electronic structure and magnetic properties of a trigonal prismatic $Cu^{II}6$ cluster**
Ekaterina Zueva, University of Glasgow, UK

(P610_019) **Spin cross-over coordination nanoparticles**
Florence Volatron, ICMMO, France

(P610_020) **Coordination network-based nanoparticles**
Yoann Prado, Universite Paris-Sud XI, France

(P610_021) **Structure de Di(4,4',5,5'-tetramethyl-1,3-dithia-1',3'-diselenafulvalene) Tetrafluoroborate : (TMDTSDF)2BF4**
Allal Mhanni, USTHB University, Algeria

SYMPOSIUM:
Molecular Machines and Devices (MC9) (611)
Convener: Graeme Cooke, University of Glasgow, UK

PROGRAMME

Thursday afternoon, Room: Boisdale 1

Session Chair: Graeme Cooke, University of Glasgow, UK

14:00 **KEYNOTE**
(S611_006) **DNA-based nano-machines for sensing, transporting and computing**
Itamar Willner, The Hebrew University of Jerusalem, Israel
14:40 (S611_002) **Catalysis and motion. Cavities, capsules and containers for catalysis**
Alan E. Rowan, Radboud University Nijmegen, The Netherlands
15:00 (S611_003) **Carbon nanotube solar energy conversion devices**
Dirk M. Guldi, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
15:20 Tea and Coffee
15:50 (S611_008) **Polyoxometalate-based functional nanospaces**
Leroy Cronin, University of Glasgow, UK
16:10 (S611_005) **Templates as molecular machines**
Harry L. Anderson, University of Oxford, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Friday morning, Room: Boisdale 1

Session Chair: Leroy Cronin, University of Glasgow, UK

09:00 **KEYNOTE**
(S611_001) **Synthetic molecular motors and machines**
David Leigh, University of Edinburgh, UK
09:40 (S611_007) **Messages from molecules: sensing and computing**
A. P. de Silva, Queen's University Belfast, UK
10:00 (S611_004) **Molecule-based logic gates and mechanical machines controlled by light**
Alberto Credi, Università degli Studi di Bologna, Italy
10:20 Tea and Coffee
10:50 (S611_009) **Synthesis and photophysical evaluation of novel lanthanide luminescent self-assembly structures and devices**
Thorri Gunnlaugsson, Trinity College Dublin, Republic of Ireland
11:10 (S611_010) **Molecular diodes and functional molecular wires**
Geoffrey J. Ashwell, Bangor University, UK
11:30 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Thursday, Hall 5

(P611_001) **Digital fluorescent pH sensors**
Seiichi Uchiyama, The University of Tokyo, Japan

(P611_002) **Loading hydrogen cargo within virus like molecular capsules**
Colin Raston, The University of Western Australia, Australia

(P611_003) **Design and Development of self-replicating rotaxanes**
Nurul Izzaty Hassan, University of St Andrews, UK

(P611_004) **A microfluidic bragg grating sensor for monolayer detection at a surface**
Richard Parker, University of Southampton, UK

(P611_005) **Synthesis and analysis of a naphthalene modified phenanthridine**
Catherine Maclean, University of Glasgow, UK

(P611_006) **A synthetic small molecule that can walk down a track**
Max von Delius, University of Edinburgh, UK

(P611_007) **Doubly-threaded [3]rotaxanes from a single active template binding site**
Paul McGonigal, The University of Edinburgh, UK

(P611_008) **A binaphthalene-based bis(CATFA) receptors for chiral discrimination of α-amino acids**
Sunderraman Sambasivan, Pohang University of Science and Technology, South Korea

(P611_009) **Chiroptical binaphthopyrane switch**
Martin Putala, Comenius University in Bratislava, Slovakia

(P611_010) **Synthesis, characterization and photophysical examination of a novel molecular rotor composed of a closely spaced donor-acceptor system incorporating the BODIPY fluorophore.**
Sophie Clift, University of Newcastle Upon Tyne, UK

SCIENTIFIC PROGRAMME Materials

SYMPOSIUM:
Organic Electronics (MC9) (612)
Convener: Peter J. Skabara, University of Strathclyde, UK

PROGRAMME

Wednesday morning, Room: Hall 1

Session Chair: Peter J. Skabara, University of Strathclyde, UK

10:30 **KEYNOTE**
(S612_001) **Fullerenes for organic electronics**
Nazario Martín, Universidad Complutense de Madrid, Spain
11:10 (S612_002) **Thiophene-based materials for organic solar cells - photovoltaics of the third generation**
Peter Baüerle, University of Ulm, Germany
11:30 (S612_003) **Molecular engineering of π-conjugated systems based on chalcogenothiophene units**
Pierre Frère, Université d'Angers, France
11:50 (S612_004) **Novel conducting luminescent thin film materials from electrooxidised indolo[3,2,1-jk]carbazoles**
Andrew R. Mount, University of Edinburgh, UK
12:10 (S612_005) **Carbazole-based low energy gap polymers and their photovoltaic properties**
Ahmed Iraqi, University of Sheffield, UK
12:30 Lunch and Informal Networking

Wednesday afternoon, Room: Hall 1

Session Chair: Simon Higgins, University of Liverpool, UK

14:00 **KEYNOTE**
(S612_006) **Spanning the spectrum: donor-acceptor concepts in conjugated oligomers and polymers**
John R. Reynolds, University of Florida, USA
14:40 (S612_007) **Exploiting dual fluorescence in fluorene copolymers for PLED applications including white light emission**
Martin R. Bryce, University of Durham, UK
15:00 (S612_008) **Novel polyselenophenes. Synthesis, study and applications**
Michael Bendikov, Weizmann Institute of Science, Israel
15:20 Tea and Coffee
15:50 (S612_009) **Light-emitting oligomers and polymers based on spiro(fluorene-9,9'-xanthenes)**
Igor F. Perepichka, University of Central Lancashire, UK
16:10 (S612_010) **New 3π-2spiro derivatives for organic electronics**
Cyril Poriel, Université de Rennes, France
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Thursday morning, Room: Hall 1

Session Chair: Michael Bendikov, Weizmann Institute of Science, Israel

10:30 **KEYNOTE**
(S612_011) **Organic semiconductor-polymer dielectric nanocomposites: influence of the guest-host interactions on OFET characteristics**
Stephen G. Yeates, University of Manchester, UK
11:10 (S612_012) **A remarkable medium effect on the single molecule conductance of some oligothiophenes**
Simon J. Higgins, University of Liverpool, UK
11:30 (S612_013) **Making conjugated polymers wires and 2D polymers by surface confined reactions**
Dmitrii F. Perepichka, McGill University, Canada
11:50 (S612_014) **Controlling aggregation of anionic conjugated polyelectrolytes with surfactants and metal ions**
Hugh D. Burrows, Universidade de Coimbra, Portugal
12:10 (S612_015) **Novel nickel dithiolenes for molecular and polymeric optoelectronic materials**
Simon Dalgleish, University of Edinburgh, UK
12:30 Lunch and Informal Networking

Thursday afternoon, Room: Hall 1

Session Chair: Dmitrii F. Perepichka, McGill University, Canada

14:00 **KEYNOTE**
(S612_016) **Development of semiconducting thienothiophene polymers**
Iain McCulloch, Imperial College London, UK
14:40 (S612_017) **Dye-sensitized solar cells: an overview**
Laurence M. Peter, University of Bath, UK
15:00 (S612_018) **3D nano-structure templating for hetero-junction organic photovoltaics**
Stefan Schumann, University of Warwick, UK
15:20 Tea and Coffee
15:50 (S612_019) **Investigating azadipyrromethenes for organic photovoltaic**
Roland Gresser, TU Dresden, Germany
16:10 (S612_020) **A new redox stable low band gap conjugated polymer based on an EDOT-BODIPY-EDOT repeat unit for organic solar cell applications**
Filipe Vilela, University of Strathclyde, UK
16:30 Close of oral session
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Wednesday, Hall 5

(P612_001) **Diquat-based nonlinear optical chromophores**
John Fielden, University of Manchester, UK

(P612_002) **Novel metal-template assembled highly-functionalized cyanoporphyrazine ytterbium and vanadium complexes for potential photonic and optoelectronic applications**
Ilya Grigoryev, G.A. Razuvaev Institute of Organometallic Chemistry, Russian Federation

(P612_003) **Synthesis and characterization of novel liquid-crystalline azo-dyes bearing two azobenzene units linked by well-defined oligo (ethylene glycol) spacers**
Ernesto Rivera, Instituto de Inbvestigaciones en Materiales UNAM, Mexico

(P612_004) **Conducting LB films based on novel tetrathiafulvalene(TTF) derivatives**
Chunyang Jia, University of Electronic Science and Technology of China, China

(P612_005) **Gas phase investigation of a push-pull chromophore and its potential to the electric field induced NLO**
Iran Sheikhshoaie, Shahid Bahonar University of Kerman, Iran

(P612_006) **Polytriarylamines with on-chain crystal violet moieties**
Ines Dumsch, Bergische Universität Wuppertal, Germany

(P612_007) **Two novel cyclopentadithiophene-based alternating copolymers as potential donor components for high-efficiency bulk-heterojunction-type solar cells**
Seyfullah Yilmaz, Bergische Universität Wuppertal, Germany

(P612_008) **C3-symmetric discotic liquid crystalline materials for molecular electronics: versatile synthesis and self-organization**
Xinliang Feng, Max Planck Institute for Polymer Research, Germany

(P612_009) **Charge carrier dynamics in organic semiconductors studied by microwave conductivity**
Akinori Saeki, Osaka University, Japan

(P612_010) **Open-chain compounds containing two and four 1,3-dithiole-2-thione-4,5-dithiolate units linked by disulfide bonds**
Nadia Comerlato, Universidade Federal do Rio de Janeiro, Brazil

(P612_011) **Rigidity and planarity in π-conjugated materials: poly(3,4-ethylenedithioselenophene) compared to its thiophene analogue**
Yair Wijsboom, Weizmann Institute of Science, Israel

(P612_012) **Interaction of polyaniline with tetraalkylammonium hydroxides**
Oleg Dimitriev, Institute of Semiconductor Physics, Ukraine

(P612_013) **Anthracene dopping effects on thin films properties of substituted lutetium phthalocyanine**
Aseel Hassan, Sheffield Hallam University, UK

(P612_014) **Electrochemical polymerisation of N-arylated and N-alkylated EDOT-substituted pyrrolo[3,4-c]pyrrole-1,4-dione (DPP) derivatives: influence of substitution pattern on optical and electronic properties**
Kai Zhang, Intitute of Physical Chemistry, University of Cologne, Germany

(P612_015) **[(Bis-calix[4]arene-*p*-phenylene ethynylene)-*alt*-(*m*-phenylene ethynylene)] copolymer: synthesis and optical properties**
José Prata, Instituto Superior de Engenharia de Lisboa, Portugal

(P612_016) **Synthesis and properties of novel PPE-calix[4]arene-based copolymer incorporating phenothiazine**
José Prata, Instituto Superior de Engenharia de Lisboa, Portugal

(P612_017) **Conductive peptide nanotube networks via enzyme triggered self-assembly**
Haixia Xu, The University of Manchester, UK

(P612_018) **Highly fluorescent chalcones based on novel coumarin chromophore for organic electronics applications: a synthetic perspective**
Amit Jagtap, Institute of Chemical Technology, India

(P612_019) **Synthesis and characterisation of isophorone bridged chromophores for Non Linear Optics**
Amit Jagtap, Institute of Chemical Technology, India

(P612_020) **Novel Polyfurans**
Michael Bendikov, Weizmann Institute of Science, Israel

(P612_021) **Synthesis and properties of poly(cyclopentadithiophene)s for use in organic field effect transistors**
Masaki Horie, The University of Manchester, UK

(P612_022) **The synthesis and characterisation of novel organic conjugated molecules based on EDOT and thienothiophene units**
Greg McEntee, University of Strathclyde, UK

(P612_023) **Small molecules based on cyclopentadithiophenes**
Helen Wright, University of Manchester, UK

(P612_024) **Synthesis, physical properties and FET characteristics of aryl substituted pentacenes and pentacene-5,12-diones**
Jun-ichi Nishida, Tokyo Institute of Technology, Japan

(P612_025) **Singlet-singlet energy transfer in self-assembled systems of ionic fluorene-co-1,4-phenylene copolymers and charged porphyrins**
Sara Pinto, Universidade de Coimbra, Portugal

(P612_026) **Convenient methods for preparing π - conjugated linkers as building blocks for modular chemistry**
Miroslav Ludwig, University of Pardubice, Czech Republic

SCIENTIFIC PROGRAMME Materials

(P612_027) **Charge-transfer chromophores based on imidazole**
Jiří Kulhánek, University of Pardubice, Czech Republic

(P612_028) **Fluorine protected carbazole-based polymers for application in photovoltaic cells**
Hunan Yi, University of Sheffield, UK

(P612_029) **Synthesis and testing of fast switching electrochromic conjugated polymers**
Sandeep Kaur, University of Strathclyde, UK

(P612_030) **Rational design of conducting polymers: systematic study of structure-property relations in oligothiophenes**
Natalia Zamoshchik, Weizmann Institute of Science, Israel

(P612_031) **Theoretical study of doped polythiophenes**
Natalia Zamoshchik, Weizmann Institute of Science, Israel

(P612_032) **Low energy gap polymers and their photovoltaic properties**
Richard Johnson, University of Sheffield, UK

(P612_033) **Highly efficient π-conjugated donor-acceptor organic sensitizers for DSSCs**
Chulhee Kim, Inha University, South Korea

(P612_034) **Structure determination of a porphyrin aggregate**
Marie Hutin, University of Oxford, UK

(P612_035) **Carbazole-based "double cable" polymers for application in photovoltaic cells**
Abdulaziz Al Ghamdi, University of Sheffield, UK

(P612_036) **Novel oligomers based on dibenzothiophene-S,S-dioxide and their photophysics**
Kathryn Moss, Durham University, UK

(P612_037) **Synthesis and characterisation of chalcogen analogues based on EDOT – Trimers and their Polymers**
Diego Cortizo Lacalle, University of Strathclyde, UK

(P612_038) **Multiscale modelling of polymer semiconductors: charge transport, microstructure and phase behaviour**
David Cheung, University of Warwick, UK

(P612_039) **A new hybrid tetrathiafulvalene derivative: fusing electroactive small molecules and oligomers**
Iain Wright, University of Strathclyde, UK

(P612_040) **Electrochemical, spectroelectrochemical and comparative studies of novel organic conjugated material based on a TTF isomer**
John Forgie, University of Strathclyde, UK

(P612_041) **Π-Conjugated copolymers of thiophene, benzothiadiazole and fluorene for polymer solar cells: a comparison between alternate and random monomer concatenation**
Riccardo Po, ENI S.p.A. Italy

(P612_042) **Synthesis and characterisation of new diindenothienothiophene (DITT) based materials**
Irina Afonina, University of Strathclyde, UK

(P612_043) **Organic semiconductors of biomass origin**
Mallet Charlotte, CIMA, France

(P612_044) **Modelling charge transport in poly(3-hexylthiophene)**
David McMahon, University of Warwick, UK

(P612_045) **Well defined star shaped oligofluorenes with truxene core as a gain media for lasing applications**
Alexander Kanibolotsky, University of Strathclyde, UK

(P612_046) **New organic semiconductors based on threaded molecular wires**
Giuseppe Sforazzini, Oxford University, UK

SYMPOSIUM:
Catalysis for Energy (MC9) (613)
Convener: Graham Hutchings, University of Cardiff, UK

PROGRAMME

Tuesday morning, Room: Boisdale 2

Session Chair: Justin Hargreaves, University of Glasgow, UK

10:30 **KEYNOTE**
(S613_001) **Title TBC**
Enrique Iglesia, University of Califonia Berkeley, USA

11:10 (S613_002) **The use of inelastic neutron scattering to characterise the active phase of iron Fischer-Tropsch catalysts**
Neil G. Hamilton, University of Glasgow, UK

11:30 (S613_003) **Catalysis for lower emissions from Diesel (D)-Biodiesel (BD) emulsion-fuelled engines**
Paul A. Sermon, University of Surrey, UK

11:50 (S613_004) **An aerosol catalyst that improves diesel performance**
Trevor R. Griffiths, Redston Trevor Consulting Ltd., UK

12:10 (S613_005) **Sustainable conversion of biogas over supported Nickel Catalysts**
R. Mark Ormerod, Keele University, UK

12:30 Lunch and Informal Networking

Tuesday afternoon, Room: Boisdale 2

Session Chair: David Lennon, University of Glasgow, UK

14:00 **KEYNOTE and AWARD WINNER (RSC Centenary Lectureship 2009-2010)**
(S613_006) **Catalysts preparation: practice and concepts**
Michel Che, Institut Universitaire de France and Université Pierre et Marie Curie, France

14:40 (S613_007) **Towards new nitrogen transfer catalysts**
Stuart M. Hunter, University of Glasgow, UK
15:00 Close
15:20 Tea and Coffee
15:50 (S613_009) **Catalytic conversion of bio-ethanol to energy and useful chemicals**
John Staniforth, Keele University, UK
16:10 (S613_010) **Catalytic supercritical water gasification of wet biomass: an in-situ XAS study**
Frédéric Vogel, Paul Scherrer Institut, Switzerland
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Tuesday, Hall 5

(P613_001) **The synthesis of methanol from methane and oxygen with Cu-Zn-Al catalyst in a dielectric barrier discharge: Thermochemistry analysis and experimental results**
Antonius Indarto, Bandung Institute of Technology, Indonesia

(P613_002) **Production of hydrogen by steam reforming of biomass derived products on nanocrystalline ceria supported catalysts**
Marina Yakimova, TIPS RAS, Russian Federation

(P613_003) **Binary catalysts based on platinum for intermediate temperature hydrogen – air fuel cells with phosphoric acid electrolyte**
Michael Tarasevich, Institute of Physical Chemistry and Electrochemistry named by A.N. Frumkin, Russian Federation

(P613_004) **Electric and morphology characterisation of powders of $LaMnO_3$ for PEMFC of high temperature synthesized by combustion**
Laura Villaseca, CSIC, Instituto de Ceramica y Vidrio, Spain

(P613_005) **The influence of synthesis route on basicities and catalytic activities of mixed oxides from layered double hydroxides**
Hannah Cross, University of Huddersfield, UK

(P613_006) **Silica-alumina deactivation**
James A. Anderson, University of Aberdeen, UK

(P613_007) **Dehydration of glycerol to acrolein over supported niobia catalysts**
N Shiju, University of Huddersfield, UK

SYMPOSIUM:
Energy Materials: Batteries and Fuel Cells (MC9) (614)
Convener: Saiful Islam, University of Bath, UK

PROGRAMME

Wednesday afternoon, Room: Boisdale 2

Session Chair: Saiful Islam, University of Bath, UK

14:00 **KEYNOTE**
(S614_001) **New mechanisms of Li+ extraction/ insertion in $Li_xFe_yPO_4$ powders**
Christian Masquelier, Université de Picardie Jules Verne, France
14:40 (S614_002) **Electrical properties of $LiFePO_4$**
Jordi J. Biendicho, University of Sheffield, UK
15:00 (S614_003) **Defects, dopants and crystal morphology of phosphate materials for lithium ion batteries**
Craig A.J. Fisher, Japan Fine Ceramics Center, Japan
15:20 Tea and Coffee
15:50 (S614_004) **Silicate-based cathode material for lithium-ion batteries**
Kinson C. Kam, Uppsala University, Sweden
16:10 (S614_005) **Advanced polymeric electrolytes for lithium battery and solar cell applications**
Harry R. Allcock, Pennsylvania State University, USA
16:30 Close of oral session
17:00 Plenary Lecture (Clyde)

Thursday morning, Room: Boisdale 2

Session Chair: John T.S. Irvine, University of St Andrew's, UK

10:30 **KEYNOTE**
(S614_006) **Chemical routes to nanostructured fuel cell electrodes**
Sossina M. Haile, California Institute of Technology, USA
11:10 (S614_007) **TEM study of the BSCF perovskite decomposition at intermediate temperature**
Konstantin Efimov, Leibniz Universität Hannover, Germany
11:30 (S614_008) **Ordered 3-D macroporous composite cathodes for solid oxide fuel cells**
Ying An, Imperial College London, UK
11:50 (S614_009) **Unravelling the structural changes on interstitial anion incorporation in apatite-type silicates/germanates**
Peter R. Slater, University of Birmingham, UK
12:10 (S614_010) **Proton conductivity in $Sm_{1.92}Ca_{0.08}B_2O_{7-\delta}$ and $Sm_2B_{1.92}Y_{0.08}O_{7-\delta}$, (B = Ti, Ce and Sn) Pyrochlores**
K. E. J. Eurenius, University of Gothenburg, Sweden
12:30 Lunch and Informal Networking

SCIENTIFIC PROGRAMME Materials

Thursday afternoon, Room: Boisdale 2

Session Chair: Craig A.J. Fisher, Japan Fine Ceramics Center, Japan

14:00 **KEYNOTE**
(S614_011) **Title TBC**
Linda Nazar, University of Waterloo, Canada
14:40 (S614_012) **Catalysts for Li/O_2 batteries**
Laurence J. Hardwick, University of St Andrew's, UK
15:00 (S614_013) ***In situ* neutron diffraction of $Li_4Ti_5O_{12}$**
Jean-François Colin, Paul Scherrer Institut, Switzerland
15:20 Tea and Coffee
15:50 (S614_014) **Designing a new ionomer from scratch – pushing polyporns to the limit**
Andrew M. Herring, Colorado School of Mines, USA
16:10 (S614_015) **Hybrid colloidal proton-conducting membranes for fuel cells**
Ilya Zharov, University of Utah, USA
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

Friday morning, Room: Boisdale 2

Session Chair: Peter R. Slater, University of Birmingham, UK

09:00 **KEYNOTE**
(S614_016) **Tuning defect chemical variations in strontium titanate to control SOFC anode functionality**
John T.S. Irvine, University of St Andrew's, UK
09:40 (S614_017) **Methane reduction of nickel based catalysts and the effect of sulphur-containing gases**
John Staniforth, Keele University, UK
10:00 (S614_018) **Advances in materials for alkaline membrane fuel cells**
John R. Varcoe, University of Surrey, UK
10:20 Tea and Coffee
10:50 (S614_019) **Structure-properties correlation in SSI materials through advanced characterization techniques**
Lorenzo Malavasi, University of Pavia, Italy
11:10 (S614_020) **Application of $La_2Mo_2O_9$-based materials in solid oxide fuel cell**
Julien Jacquens, Université du Maine, France
11:30 Plenary Lecture (Clyde)

POSTER SESSION

18: 00 – 20:00
Thursday, Hall 5

(P614_001) **Charge carrier motion and reaction by continuous time random walk and impedance analysis**
Robert Schiller, Central Research Institute for Physics, Atomic Energy Research Institute, Hungary

(P614_002) **Mesoporous electrodes for Li-ion batteries**
Yu Ren, University of St Andrews, UK

(P614_003) **Room temperature methane storage in semi-clathrate hydrate materials**
Benjamin Carter, University of Liverpool, UK

(P614_004) **Study of $GdBaCo_{2-x}MxO_{5+d}$ (M = Fe, Ni ; x = 0.1, 0.2, …, 2.0) as novel SOFCs cathode materials**
Yang Hu, Laboratoire SPMS, Ecole Centrale Paris, France

(P614_005) **Oleylamine-mediated synthesis of monodisperse Pd-composite nanoparticles for catalytic formic acid oxidation**
Vismadeb Mazumder, Brown University, USA

(P614_006) **Synthesis and magnetic properties of nanosize $LiNi_{1/3}Mn_{1/3-}Co_{1/3}O_2$ used as cathode materials for lithium ion batteries.**
Ashraf Abdel-Ghany, National Research Center, Egypt

(P614_007) **Novel doped CeO_2 anodes for IT- solid oxide fuel cells using hydrocarbon fuels**
Shidong Song, University of St Andrews, UK

(P614_008) **Preparation and performance of SOFC electrolytes from samaria doped ceria nanopowders**
Marcin Kosinski, University of St Andrews, UK

(P614_009) **Bipolar plate free compact mixed reactant fuel cells**
Rong Zeng, University of Surrey, UK

(P614_010) **PdCoPt/C system for using in fuel cells**
Viktor Andoralov, Institute of Physical Chemistry and Electrochemistry named by A.N. Frumkin, Russian Federation

(P614_011) **The effect of polytyramine substrate on the electrocatalytic properties of platinum nanoparticles**
Tanța Spătaru, Institute of Physical Chemistry, Romania

(P614_012) **Electrical conductivity and mechanical properties of polymer composites pyrolyzed at high temperatures**
Jimsher Aneli, Iv. Javakhishvili Tbilisi State University, Georgia

(P614_013) **Effect of the technological factors on electric conductivity of filled silicon rubbers**
Omari Mukbaniani, Iv. Javakhishvili Tbilisi State University, Georgia

(P614_014) **Metastability and temperature dependence of solid solution limit in aliovalently substituted $La_2Mo_2O_9$ fast oxide-ion conductors**
Philippe Lacorre, C.N.R.S., France

(P614_015) **Conductive diamond as Pt catalyst support for fuel cell applications**
Nicolae Spătaru, Institute of Physical Chemistry, Romania

(P614_016) **Interstitial oxide ion conductivity of $La_{1+x}Sr_{1-x}Ga3O_{7+x/2}$ (x=0-0.64)**
Christopher Thomas, University of Liverpool, UK

(P614_017) **Direct electron transfer of methanol dehydrogenase with carbon nanotubes**
Petri Kanninen, Helsinki University of Technology, Finland

(P614_018) **Hollow fibre solid oxide fuel cells**
Uttam Doraswami, Imperial College London, UK

(P614_019) **VO_4^{3-} polyanion substitution into Li_2FeSiO_4: a DFT-study**
Anti Liivat, Tartu University/Uppsala University, Sweden

(P614_020) **Synthesis of olivine structured LiFePO4/C composite in polyol medium**
Jaekook Kim, Chonnam National University, South Korea

SYMPOSIUM:
Hydrogen Storage (MC9) (615)
Convener: Duncan Gregory, University of Glasgow, UK

PROGRAMME

Monday morning, Room: Alsh 2

10:30 **KEYNOTE**
(S615_001) **"Can we make a materials difference to a sustainable energy future?"**
Peter P. Edwards, University of Oxford, UK
11:10 (S615_002) **The application of metal organic framework materials as hydrogen storage materials**
Ashleigh J. Fletcher, University of Strathclyde, UK
11:30 (S615_003) **High surface area amorphous microporous poly(aryleneethynylene) networks using tetrahedral carbon- and silicon-centred monomers**
Ev Stőckel, University of Liverpool, UK
11:50 (S615_004) **Comparison study of effects of Ti and Ni on dehydrogenation properties of $NaAlH_4$**
Y. Song, Harbin Institute of Technology at Weihai, China
12:10 (S615_005) **Metal borohydrides for energy storage**
Shin-ichi Orimo, Tohoku University, Japan
12:30 Lunch and Informal Networking

Monday afternoon, Room: Alsh 2

14:00 **KEYNOTE**
(S615_006) **From metallic to complex hydrides**
Andreas Züttel, EMPA, Switzerland
14:40 (S615_007) **Dehydrogenation reactions at $LiNH_2$/LiH interface: an *ab-initio* study**
C. S. Cucinotta, ETHZ, Switzerland
15:00 (S615_008) **Amide–borohydrides for reversible hydrogen storage: problems, progress and prospects**
Paul A. Anderson, University of Birmingham, UK
15:20 Tea and Coffee
15:50 **AWARD WINNER (RSC Beilby Medal and Prize 2008)**
(S615_009) **Gas absorption within organic microporous materials**
Neil B. McKeown, Cardiff University, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Monday, Hall 5

(P615_001) **Palladium nanoparticles loaded into conjugated microporous polymer *via* supercritical processing as a new route to hydrogen spillover materials**
Tom Hasell, University of Liverpool, UK

(P615_002) **Hydrogen sorption properties of mechanically activated magnesium with activated carbon**
Tsveta Mandzhukova, Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, Bulgaria

(P615_003) **Hydridoirida-β-diketones as efficient homogeneous catalysts for the hydrolysis of ammonia-borane or amine-borane adducts to produce hydrogen**
Maria Garralda, UPV/EHU, Spain

(P615_004) **Mg – based composites for H_2 storage optimized for the realization of an industrial prototype.**
Chiara Milanese, University of Pavia, Italy

(P615_005) **A highly porous MOF containing a novel organosilicon linker – a promising material for hydrogen storage**
Michael Fröeba, University of Hamburg, Germany

(P615_006) **Metal-organic frameworks based on metal-organic polyhedra: structures, stabilities and gas sorption behaviours**
Myoung Soo Lah, Hanyang University, South Korea

(P615_007) **Effects of transition metal carbides and gas impurities on hydrogen storage properties of Mg-based materials**
Svetlin Mitov, University of East Anglia, UK

(P615_008) **High throughput approach to synthesising porous organic cages for gas storage**
Stephen Shakespeare, University of Liverpool, UK

(P615_009) **Kinetic studies of hydrogen isotope exchange over a palladium substrate *via* time-resolved dilatometry**
Linda Bulmer, AWE, UK

(P615_010) **Sieverts' measurements of H_2 and D_2 uptake by palladium and palladium-silver alloys**
Linda Bulmer, AWE, UK

SCIENTIFIC PROGRAMME Materials

(P615_011) **Calorimetrically determined specific heat capacity of beta phase palladium hydride (deuteride)**
Andrew Bailey, AWE, UK

(P615_012) **Thermal diffusivity and conductivity of beta phase palladium hydride(deuteride)**
Andrew Bailey, AWE, UK

(P615_013) **A comparison study of the Lithium nitride phases - potential hydrogen storage materials**
Natalie Sorbie, University of Glasgow, UK

(P615_014) **Chromium oxide intermetallic diffusion barrier for hydrogen permselective palladium membrane reactor**
Supawan Tantayanon, Chulalongkorn University, Thailand

SYMPOSIUM:
Nanomaterials for Energy Conversion (MC9)
Convener: Mathias Brust, University of Liverpool, UK

PROGRAMME

Tuesday morning, Room: Alsh 2

Session Chair: Thomas Nann, University of East Anglia, UK

10:30 **KEYNOTE**
(S616_001) **Control of the morphology of hybrid CdSe nanocrystals/ pi-conjugated polymers nanocomposites for solar cells applications**
Frédéric Chandezon, CEA-Grenoble, France
11:10 (S616_002) **Novel solar cells based on nanoantennae**
Michael Giersig, Helmholtz Centre for Materials and Energy, Germany
11:30 (S616_003) **A simple chemical approach for PbTe nanowires with enhanced thermoelectric properties**
Qingyu Yan, Nanyang Technological University, Singapore
11:50 (S616_004) **Use of single molecular precursors for cadmium telluride and lead chalcogenide structures**
Kibriya Ahmad, University of Manchester, UK
12:10 (S616_005) **Structurally-constrained Cu(I) bipy complexes for dye-sensitised solar cells**
Neil Robertson, University of Edinburgh, UK
12:30 Lunch and Informal Networking

Tuesday afternoon, Room: Alsh 2

Session Chair: Michael Giersig, Helmholtz Centre for Materials and Energy, Germany

14:00 **KEYNOTE**
(S616_006) **Towards non-toxic, luminescent nanoparticles**
Thomas Nann, University of East Anglia, UK
14:40 (S616_007) **N- and p- type InAs quantum dots for solar energy conversion**
Scott M. Geyer, Massachusetts Institute of Technology, USA
15:00 (S616_008) **Controlling charge storage in well defined platinum nanoparticles**
Kevin J. Major, University of North Carolina at Charlotte, USA
15:20 Tea and Coffee
15:50 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Tuesday, Hall 5

(P616_002) **Formation mechanism of porous anodic metal oxides**
Wuzong Zhou, University of St Andrews, UK

(P616_003) **The production of flexible transparent conducting films comprised of multi-walled carbon nanotubes**
Kuan-Jiuh Lin, National Chung-Hsing University, Taiwan

(P616_004) **A mesoporous metal from nanoparticle-block copolymer self-assembly**
Scott Warren, Ecole Polytechnique Federale de Lausanne, Switzerland

(P616_005) **Nb_2O_5 nanobelts: Synthesis and applications**
Mingdeng Wei, Fuzhou University, China

(P616_006) **Deposition of CIS and CIGS thin films and nanoparticles from diisopropyldiselenophosphinatometal precursors**
Sajid Malik, University of Manchester, UK

(P616_007) **Preparation of mesostructured titania particles modified with phthalocyanine in the pores**
Hirobumi Shibata, Tokyo University of Science, Japan

(P616_008) **Biomimetic silicon tip arrays for broadband antireflective and self-cleaning surfaces**
Junhu Zhang, State Key Laboratory of Supramolecular Structure and Materials, China

(P616_009) **Deposition of indium sulfide thin films by aerosol-assisted chemical vapor deposition.**
Hazoor Shad, University of Manchester, UK

(P616_010) **CdSe and CdSe/CdS nanoparticles from single molecular precursors in microfluidic reactor**
Mohammad A. Malik, The University of Manchester, UK

(P616_011) **Synthesis of PbS low dimensional structures from single source precursor**
Javeed Akhtar, The University of Manchester, UK

(P616_012) **Measurement of thermal conductivity of Fe_3O_4 nanofluids**
Maryam Abareshi, Ferdowsi University of Mashhad, Iran

(P616_013) **Hierarchical carbon materials prepared by nanocasting using bimodal silica as hard template**
Javier García Martínez, University of Alicante, Sri Lanka

(P616_014) **Nanocrystalline $CuInS_2$ film with embedded indium nanoclusters**
Enrique Quiroga Gonzalez, University of Kiel, Germany

(P616_015) **Supercritical fluid deposition of fuel cell electrocatalysts**
Shee-Yen Ang, University of Nottingham, UK

(P616_016) **Acid-Base functionalized mesoporous silica for biodiesel production**
Eko Andrijanto, The University of Huddersfield, UK

(P616_017) **Fuel cell electrocatalyst fabrication by direct reduction of metal salts using cellulose nanocrystals**
Lee Johnson, The University of Nottingham, UK

(P616_018) **EPR studies of nitrogen doped titania**
Russell Howe, University of Aberdeen, UK

SYMPOSIUM:
Developing Polymer Materials (617)
Convener: Chris Ober, University of Cornell, USA and Wilhelm Huck, University of Cambridge, UK

PROGRAMME

Wednesday morning, Room: Boisdale 1

Session Chair: Christopher Ober, Cornell University, USA

10:30 **KEYNOTE**
(S617_001) **From polymer self-assembly to materials**
Ulrich Wiesner, Cornell University, USA

11:10 (S617_002) **Electronically active block copolymers**
Henri Cramail, Université de Bordeaux, France

11:30 (S617_003) **Directed assembly of block copolymer materials**
Padma Gopalan, University of Wisconsin-Madison, USA

11:50 (S617_004) **Direct patterning templates by POSS containing block copolymers**
Teruaki Hayakawa, Tokyo Institute of Technology, Japan

12:10 (S617_005) **Synthesis and characterization of novel block copolymers by controlled radical polymerizations**
Dhamodharan Raghavachari Iyengar, Indian Institute of Technology Madras, India

12:30 Lunch and Informal Networking

POSTER SESSION

18:00 – 20:00
Wednesday, Hall 5

(P617_001) **SBA-15 nanomaterials as sorbents of toxic metal ions**
Mariusz Barczak, Maria Curie-Sklodowska University, Poland

(P617_002) **Synthesis of Epoxy Ferrite Nanocomposites in supercritical Carbon Dioxide**
Tithi Agarwal, GB Pant University Pant Nagar India, India

(P617_003) **Mechanical properties development of sodium alginate films with additives by UV-radiation processing**
Mohammad Mollah, Bangladesh Atomic Energy Commission, Bangladesh

(P617_004) **Hydrogen-bonding building blocks for supramolecular polymer assembly**
Andrew Wilson, University of Leeds, UK

(P617_005) **Thermocontrolled release of nano- and microparticles from hydrophilic macroporous polymers**
Neil Grant, University of Liverpool, UK

(P617_006) **The effect of radiation-induced crosslinking on mechanical and physical properties of electron beam irradiated polyamide-6 film**
Yousef Jahani, Iran Polymer and Petrochemical Institute, Iran

(P617_007) **Reactive blending of thermoplastic polyurethane and polypropylene**
Pranut Potiyaraj, Chulalongkorn University, Faculty of Science, Thailand

(P617_008) **Novel approach for radioactive decontamination employing dual stimuli responsive polymers carrying N-aza crown ethers**
Dario Deli, University of Manchester, UK

(P617_009) **Coupling of PIM-1 with poly(ethylene glycol)**
Gul Laghari, University of Manchester, UK

(P617_010) **Modification of glassy carbon electrodes with PEDOT/PSS: a new approach for lead(II) determinations**
Carla Silva, University of Aveiro, Portugal

(P617_011) **Computational study on nanometer-scale side-wall roughness in chemically amplified resists of next-generation lithography**
Akinori Saeki, Osaka University, Japan

(P617_013) **UV protection of cellulosic fabrics treated with cyclodextrin derivative**
Aurelia Grigoriu, "Gheorge Asachi" Technical University, Romania

SCIENTIFIC PROGRAMME Materials

(P617_014) **Antimicrobial protection of cellulosic fabrics treated with cyclodextrin derivative**
Ana-Maria Grigoriu, "Gheorge Asachi" Technical University, Romania

(P617_015) **Synthesis and properties of nanoparticle-modified polymers from aqueous solutions**
Shamshiya Amerkhanova, E.A. Buketov Karaganda State University, Kazakhstan

(P617_016) **Polymeric nanofibers and tuning pore morphologies of macroporous materials *via* freeze drying**
Lei Qian, University of Liverpool, UK

(P617_017) **Frontal polymerization of acrylic monomers using Trigonox-23 as initiator**
Yessica Ramírez-Fuentes, Instituto de Investigaciones en Materiales, UNAM, Mexico

(P617_018) **Thermal frontal polmerization of 2-phenoxyethyl acrylate using Trigonox-23 as initiator**
Ernesto Rivera, Instituto de Investigaciones en Materiales, UNAM, Mexico

(P617_019) **MEH-PPV by microwave assisted ring opening metathesis polymerisation**
Michael Turner, University of Manchester (OMIC), UK

(P617_020) **Intrinsically microporous high-performance polymers**
Jens Weber, Max Planck Institute, Germany

(P617_021) **The oxidation of aniline with silver nitrate to polyaniline-silver composites**
Jaroslav Stejskal, Institute of Macromolecular Chemistry AS CR, Czech Republic

(P617_022) **Exchange reactions of poly(aryl ether ketone) (PAEK) dithioketals: synthesis of novel PAEK cyclic ketal structures**
Howard Colquhoun, University of Reading, UK

(P617_023) **Poly(N-isopropylacrylamide) gel beads prepared by suspension polymerization for the adsorption of fluorescently tagged hepcidin**
Vincenzo Abbate, King's College London, UK

(P617_024) **Infrared spectroscopy of conducting polymer nanotubes**
Miroslava Trchová, Institute of Macromolecular Chemistry, Czech Republic

(P617_025) **Novel hard-soft block copolymers by RAFT polymerization and their morphology control**
Je-Gwon Lee, Hanyang University, South Korea

(P617_026) **Study of the solution & thin film properties of the pH-sensitive graft copolymers**
Hye-Seung Jin, Chungnam National University, South Korea

(P617_027) **Properties of stimuli-responsive gel from vinyl copolymers**
Joon Ho Kim, Yeungnam University, South Korea

(P617_028) **Synthesis and thermal degradation behaviour of network carborane-siloxane polymers**
Alistair Apedaile, University of Strathclyde, UK

(P617_029) **Organometallics monomers synthesis and application to the elaboration of materials for laser targets.**
Stephane Cadra, CEA Le Ripault, France

(P617_030) **Synthesis of hyperbranched polymers *via* cobalt catalysed chain transfer and functionalisation by thiol-ene "click" chemistry**
Kayleigh McEwan, University of Warwick, UK

(P617_031) **Verdazyl mediated polymerisation**
Georgina Rayner, University of Warwick, UK

(P617_032) **New approach to the synthesis of amphiphilic biodegradable copolymers based on unsaturated sucrose esters**
Maria Teresa Barros, FCT da Universidade Nova de Lisboa, Portugal

(P617_033) **Functionalization of poly(methacrylic acid) macromonomers *via* the thiol-ene click reaction**
Guang-zhao Li, University of Warwick, UK

(P617_034) **A marriage of catalytic chain transfer polymerization (CCTP) and "double click" to glycopolymers**
Yanzi Gou, Warwick University, UK

(P617_035) **New method for direct synthesis of liquid polysulfide polymer using heavy end waste**
Behzad Shirkavand Hadavand, Institute for Colorants, Paint and Coatings (ICPC), Iran

SYMPOSIUM:
Polymer Molecular Characterisation (618)
Convener: Harald Pasch, University of Stellenbosch, South Africa and Taihyun Chang, Pohang University of Science and Technology, Korea

PROGRAMME

Tuesday morning, Room: Boisdale 1

Session Chair: Harald Pasch, University of Stellenbosch, South Africa

10:30 **KEYNOTE**
(S618_001) **Structure-property relations of complex branched polymers: starch structure and human health**
Robert G Gilbert, The University of Queensland, Australia

11:10 (S618_002) **Determination of polymeric excipient functionality related characteristics – an aid to pharmaceutical product development**
E. Meehan, AstraZeneca, UK

11:30 (S618_003) **Fractionation and characterization of macromolecules and their assemblies by analytical ultracentrifugation**
Christine Wandrey, Ecole Polytechnique Fédérale de Lausanne, Switzerland
11:50 (S618_004) **Strategies for studying branching and grafting in polymers produced by emulsion polymerisation**
Peter A Lovell, The University of Manchester, UK
12:10 (S618_005) **Separation of complex polymer systems by liquid chromatography under limiting conditions of enthalpic interactions**
Dušan Berek, Polymer Institute, Slovakia
12:30 Lunch and Informal Networking

Tuesday afternoon, Room: Boisdale 1

Session Chair: Christine Wandrey, Swiss Federal Institute of Technology, Switzerland

14:00 **KEYNOTE**
(S618_006) **Advanced 2D-NMR studies of fluoropolymers**
Peter L Rinaldi, Univeristy of Akron, USA
14:40 **(S618_007) Synthesis, isolation, and characterization of stereoregular uniform block, star, and cyclic polymethacrylates**
Tatsuki Kitayama, Osaka University, Japan
15:00 (S618_008) **Microstructural studies of synthetic polymers**
James H. Scrivens, University of Warwick, UK
15:20 Tea and Coffee
15:50 (S618_009) **Study of molecular structure and metastability of polymers: benefits and potentials of high-speed / High Performance DSC (HPer DSC)**
Vincent B F Mathot, Katholieke Universiteit Leuven, The Netherlands
16:10 (S618_010) **Controlling the mechanical properties of polymer films prepared using poly(butadiene/methacrylic acid) dispersions containing ZnO**
Orawan Pinprayoon, The University of Manchester, UK
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Tuesday, Hall 5

(P618_001) **The effect of organoclays on dyeability of nanocomposite films based on poly(ethylene terephatalate)**
Mazeyar Parvinzadeh, Islamic Azad University, Iran

(P618_002) **New synthetic routes to vinyl triazole monomers and polymers**
Kenichi Takizawa, Mitsubishi Chemical Group Science and Technology Research Center, Inc. Japan

(P618_003) **Application of softeners on cotton fibers using ultrasonic energy**
Mazeyar Parvinzadeh, Islamic Azad University, Shahre Rey Branch, Iran

(P618_004) **Thermaldegradation studies of alternating copolymers of maleic anhydride with vinyl acetate and isopropenyl acetate**
Shafique Arain, Shah Abdul Latif University Khairpur Mir's Sindh Pakistan, Pakistan

(P618_005) **Gamma and Alpha Radiation Induced Degradation of PVC**
Pavlina Schmitz, The University of Manchester, UK

(P618_006) **Theoretical approach to excess thermodynamic functions of some polymeric liquids**
Ali Berenji, Ferdowsi University of Mashhad, Iran

(P618_007) **Correlation of structural features in a polymer blend (observed by solid-state NMR) with the effect humidity has on permeability**
Stuart Brewer, Defence Science and Technology Laboratory (Dstl), UK

(P618_008) **Synthesis of polyacrylamide using inverse-emulsion polymerization and its application as sand dune stabilizer**
Mahmood Mohsin, UAE University, United Arab Emirates

(P618_009) **Synthesis of poly(ε-caprolactone) diols and block copolymers and their characterization by two dimensional liquid chromatography and MALDI-TOF-MS**
Hasnat Ahmed, Karl Franzens University Graz, Austria

(P618_010) **New polymeric additives as pour point depressants for Egyptian waxy crude oils**
Hussin Ismail, Egyptian Petroleum Research Institute, Egypt

(P618_011) **Modification of PVC with thio-urea & Mercaptoethanol and characterization by FT-IR/ TGA**
Ajay Singh, Uttaranchal Institute of Technology, India

(P618_012) **Characterization of the internal structure of raw and bleached flax fibers**
Aurelia Grigoriu, "Gheorghe Asachi" Technical University, Romania

(P618_013) **Swelling dynamics of cellulose acetate hydrogels crosslinked with 3,3´,4,4´-benzophenonetetracarboxylic di-anhydride**
Cláudio dos-Santos, UFOP-Brazil, Brazil

(P618_014) **Reactive hot melt polyurethane adhesives modified by acrylic copolymer nanocomposites**
Youn Bok Cho, University of Ulsan, South Korea

(P618_015) **The effects of molecular weight and reactive organoclay on the properties of reactive hot melt polyurethane adhesives**
Sang Hyop Choi, University of Ulsan, South Korea

SCIENTIFIC PROGRAMME Materials

(P618_016) **Prediction of excess thermodynamic functions and activity coefficients of some polymeric liquid mixtures using a new equation of state**
Elaheh Goharshadi, Ferdowsi University of Mashhad, Iran

(P618_017) **Rheological characterisation of poly(vinyl alcohol) gels in water/DMSO**
Emma Wright, Queens University Belfast, UK

(P618_018) **Swelling and tensile characterisation of poly(vinyl alcohol) films in water/DMSO**
Emma Wright, Queens University Belfast, UK

(P618_019) **Characterisation of star polymers by multi detector gel permeation chromatography**
James Burns, Warwick University, UK

(P618_020) **Characterization of composites of polyurethane with polyurethane powder from industrial residues**
Cláudio dos-Santos, UFOP-Brazil, Brazil

SYMPOSIUM:
Polymerisation Kinetics (619)
Convener: Michael Buback, Georg-August-Universität Göttingen, Germany

PROGRAMME

Monday morning, Room: Boisdale 1

Session Chair: Michael Buback, Georg-August-Universität Göttingen, Germany

10:30 **KEYNOTE**
(S619_001) **Glycopolymers *via* catalytic chain transfer polymerisation and double click reactions**
David M. Haddleton, University of Warwick, UK
11:10 **KEYNOTE**
(S619_002) **Kinetics and mechanism of RAFT polymerization: pulsed-laser methods, polymerizations from surfaces, and star polymerizations**
Philipp Vana, Georg-August-Universität Göttingen, Germany
11:50 (S619_003) **RAFT polymerization - how to make it better**
Graeme Moad, CSIRO Molecular and Health Technologies, Australia
12:10 (S619_004) **Large-molecule mass spectrometry: using a new technique to solve old problems in radical polymerization kinetics**
Gregory T. Russell, University of Canterbury, New Zealand
12:30 Lunch and Informal Networking

Monday afternoon, Room: Boisdale 1

Session Chair: Gregory T. Russell, University of Canterbury, New Zealand

14:00 **KEYNOTE**
(S619_005) **High temperature free-radical solution acrylic copolymerization: mechanisms and models**
Robin A. Hutchinson, Queen's University, Canada
14:40 (S619_006) **Determination of intramolecular chain transfer and midchain radical propagation rate coefficients for acrylates by pulsed laser experiments**
Anatoly N. Nikitin, Institute on Laser and Information Technologies of RAS, Russia
15:00 (S619_007) **Ionic liquid induced enhancement of propagation rate coefficients – the role of specific interactions**
Sabine Beuermann, Universität Potsdam, Germany
15:20 Tea and Coffee
15:50 **KEYNOTE**
(S619_008) **Free-radical polymerization of water-soluble monomers in aqueous solutions**
Igor Lacík, Polymer Institute of the Slovak Academy of Sciences, Slovakia
16:30 Flash poster presentations
17:00 Plenary Lecture (Clyde)

POSTER SESSION

18:00 – 20:00
Monday, Hall 5

(P619_001) **Amphiphilic AAEM block co-polymer micelles of cross-linked using di-amino PEGs**
Afsar Chowdhury, Manchester University, UK

(P619_002) **Synthesis and properties of polymers on the basis of elemental phosphorus**
Natalia Tarasova, D.Mendeleev University of Chemical Technology of Russia, Russian Federation

(P619_003) **The emulsion polymerization of each of vinyl acetate and butyl acrylate monomers using bis (2-ethylhexyl) maleate as a novel surfmer for improving the physicomechanical properties**
Khaled Shaffei, Helwan University, Egypt

(P619_004) **Degradation by hydrolysis in aqueous sulfuric acid of poly(Є-caprolactam) at moderately high pH**
Consolación Manteca Diego, Universidad Politécnica de Madrid(UPM), Spain

(P619_005) **Preparation and use of bis (2-hydroxy-3-allyl) m-phenyllen benzamide as a chelating agent for metal ions**
Nasir Ahmad Rajabi, Islamic Azad University -Central Tehran Branch, Iran