

**Monday 10 July 2017**

11:30 Refreshments & registration											
12:00 Lunch											
12:45 Welcome & Introduction Andrew Cooper and Matthew Rosseinsky											
13:00 <b>K05: Gas Separations in Metal-Organic Frameworks</b> Long, Jeff											
14:00 Time to move between theatres											
Theme	Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials	
Session chair	TBC			TBC		TBC		TBC		TBC	
14:10	Keynote	K01	Materials discovery via computed energy-structure-function landscapes Day, Graeme	K02	Chemistry at a Point: Emergent Nanomaterials Irvine, John	K03	Third generation solar cells from laboratory to factory; developing a scale-up route for perovskite solar cells to turn buildings into power stations Watson, Trystan	K04	Protein engineering of multi-functional biomaterials for regenerative medicine Heilshorn, Sarah	NC_13	Interfacing Inorganic Nanocrystals with Biological Systems via Surface Ligand Design Mattoussi, Hedi
14:40	Contributed oral	EE01	Computational investigation of the Li+ ion dynamics in the new perovskite La3Li3W2O12 Dyer, Matthew	MD01	Welding molecular crystals Adolf, Cyril		Photocatalytic water purification aimed at rural India Robertson, Neil	SM01	Self-sorted photoresponsive multi-component hydrogels Draper, Emily	NC01	Synthesis of enzyme responsive surfaces-towards a smart cell-material interface Canning, Anne
15:00	Contributed oral	EE02	Molecular modelling of conjugated polymer photocatalysts for hydrogen evolution Pearce, Drew	MD02	Luminescent gold(I)-thiophenolate coordination polymers as phase change materials and precursors for the formation of multifunctional nanocomposites Demessence, Aude	MEO02	Monodisperse perovskite colloidal nanocrystals for applications in energy storage and flexible electronics Caruntu, Gabriel	SM02	Towards a biofunctional polypeptide-based hydrogel suitable for bioprinting Giliomee, Johnel	NC02	Design, synthesis, 2D self-assembly and host-guest properties of phenylene-vinylene tectons at the liquid-HOPG interface Kreher, David
15:20	Contributed oral	EE03	Identifying the next generation of solar absorbers using lessons learned from the success of CH3NH3PbI3 Scanlon, David	MD03	Computational design of photocatalytic metal-organic frameworks Grau-Crespo, Ricardo	MEO03	Development of extremely high two photon absorbing transition metal dichalcogenides MoS2 quantum dots for multicolor two-photon cancer imaging Ray, Paresch	SM03	Bifunctional nanoparticles mediated cell-material interactions and controlled drug delivery Kehr, Nermin Seda	NC03	Aqueous assisted self-templated synthesis of organophosphonitridic hollow structures Pappas, George
15:40 Refreshments											
	Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials	
16:20	Contributed oral	EE04	Photocurable polymeric coatings for improved stability and multifunctionality in solution-processable photovoltaics Griffini, Gianmarco	MD04	Towards materials "beyond graphene" – irreversible, covalent chemistry in 2D Bojdys, Michael	MEO04	Structure and geometrically frustrated magnetism of layered oxide-stannide compounds Söhnel, Tilo	SM04	Block copolymer self-assembly roadmap: predict, synthesize, characterize Ianiro, Alessandro	NC04	Photothermal application of NIR plasmonic thermoresponsive nanogels Glitscher, Emanuel
16:40	Contributed oral	EE05	Interfacial charge transfer in nanocarbon-inorganic hybrid photocatalysts Cherevan, Alexey	MD05	Linking structure and function to design porous organic materials Chen, Linjiang	MEO05	Effect of electron count and chemical complexity in the Ta-Nb-Hf-Zr-Ti high-entropy alloy superconductor von Rohr, Fabian	SM05	Understanding the spectral features and optical properties of self-assembled materials based on low molecular-mass organic gelators Zwijnenburg, Martijn	NC05	Tuneable Ag@SiO2 core-shell nanocomposites for broad spectrum antibacterial applications Isaacs, Mark
17:00	Contributed oral	EE06	Highly efficient hydrogen formation by a nickel-molybdenum catalyst-modified silicon micropillar array Huskens, Jurriaan	MD06	Designing with defects in metal-organic frameworks Cliffe, Matthew	MEO06	Carrier generation and electronic properties of a single-component pure organic metal Kobayashi, Yuka	SM06	Directly synthesised covalent amide frameworks Stewart, Dave	NC06	Tuning vacancy in ultrasmall nanoparticles for multimodal imaging and therapy of cancer Li, Zhen
17:20	Contributed oral	EE07	N-annulated PDIs for organic electronics: synthesis, electronic and structural characterization, and utility as electron acceptors in organic solar cells Welch, Gregory	MD07	Accelerated discovery of two new structure types in a complex inorganic phase field Collins, Chris	MEO07	Complex magnetic order induced by corner- and edge-sharing CuCl6-octahedra in a two-dimensional hybrid Kamminga, Machteld	SM07	Synthesis of hydroxyapatite nanoparticles by sol-gel methods, on spores and in 3D-printed Ca2+-crosslinked PVA hydrogels and their use in bone regeneration Sermon, Paul	NC07	Selective gas sensors based on organooxotin-based and tin oxide-based materials Lee, Szu-Hsuan
17:40 Poster Session											
19:10 Close											

Tuesday 11 July 2017

09:00											
PL02: Rational Design of High Performance Thermoelectrics Kanatidis, Mercuri											
10:00											
Time to move between theatres											
Theme		Energy & Environment		Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials	
Session Chair		TBC		TBC		TBC		TBC		TBC	
10:10	Keynote	K06	The Versatility of Mesoscopic Solar Cells Hagfeldt, Anders	K07	Tuning Metal-Organic Frameworks properties towards enhanced catalytic performances: Advances in combined experimental-computational approaches Mielot-Draznieks, Caroline	K08	Magnetocaloric Materials: Function, Rapid Preparation, and Rational Screening Seshadri, Ram	K09	Porphyrin Boxes: More Than a Porous Organic Cage Kim, Kimoon	K10	In Situ Transmission X-ray Microscopy of Nanoscale Electrochemical Systems Ryan, Mary
10:40	Contributed oral	EE_08	Battery chemistry based on fluoride ions? Clemens, Oliver	MD_08	Engineered silicon substrates to study crystal nucleation Bejarano-Villafuerte, Angela	MEO_08	Ag <sub>2</sub> Cu <sub>3</sub> Cr <sub>2</sub> O <sub>8</sub> (OH) <sub>4</sub> : a new bidimensional silver-copper mixed-oxhydroxide with in-plane ferromagnetic coupling Muñoz-Rojas, David	SM_08	Bioprinting technology for the removal of blood cancer cells from acute myeloid leukaemia patients Paunov, Vesselin	NC_08	High-temperature superconductivity in space charge zones of lanthanum cuprate induced by two-dimensional doping Baiutti, Federico
11:00	Contributed oral	EE_09	Hyperporous carbons from hypercrosslinked polymers Lee, Jet-Sing	MD_09	Light-Harvesting Antennae using the Host-Guest Chemistry of Mesoporous Organosilica Jarmen, Ben	MEO_09	SION-1 and SION-2: a comprehensive study on how to engineering the optical response in metal-organic frameworks Tiana, Davide	SM_09	A new actuator technique by controllably buckling polyelectrolyte hydrogel thin layer Xu, Ben	NC_09	Ordered mesoporous cerias prepared by a new nanocasting method Baker, Richard
11:20 Refreshments											
Theme		Energy & Environment		Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials	
Session Chair		TBC		TBC		TBC		TBC		TBC	
12:00	Contributed oral	EE_10	Energy storage mechanisms and comprehensive structural characterisation of mixed-metal complex oxides Griffith, Kent	MD_10	Surface-assisted polyaromatic frameworks: when 'top down' and 'bottom up' strategies meet Larkin, Eugene	MEO_10	Molecular design and device architecture of novel solution-processable emitting oligomers for green, red and blue OLEDs Brieg, Benjamin	SM_10	Multifunctional ultrashort antimicrobial peptide nanomaterials for biomedical applications Laverty, Garry	NC_10	Colloidal nanoparticles as catalysts – design and immobilization Collins, Gillian
12:20	Contributed oral	EE_11	The dynamic character of a phase transition in Li <sub>5-x</sub> La <sub>2</sub> Nb <sub>2</sub> O <sub>12</sub> garnets: a concerted lithium and proton diffusion mechanism? Sanjuán, Marie Luisa	MD_11	Tuning colour and understanding its origin in co-crystallised organics: a spectroscopic and computational study Pallipurath, Anuradha	MEO_11	MoO <sub>x</sub> -modified PEDOT:PSS as anode interlayer in organic optoelectronics Morbidoni, Maurizio	SM_11	Stimuli-responsive Biomaterials for Drug Delivery and Tissue Engineering Hardy, John	NC_11	Protein Bioprinting of Magnetic Nanoparticle Arrays from Solution Stamland, Sarah
12:40	Contributed oral	EE_12	Characterisation of the Growth of Alkali Metal Peroxides and Superoxides at the Cathode Interface of the Alkali-Metal Oxygen Battery Aldous, Iain	MD_12	Recyclable hard vitrimers depending on reversible dynamic bonds Chen, Mao	MEO_12	Tailor-made organic semiconductors for bioelectronic applications Nielsen, Christian	SM_12	One drop at a time: Mechanochemically induced colour change via inkjet printing Willis-Fox, Niamh	NC_12	Liquid phase exfoliation of layered double hydroxides Carrasco Andrés, Jose Alberto
13:00 Lunch and posters											
Theme		Energy & Environment		Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials	
Session Chair		TBC		TBC		TBC		TBC		TBC	
14:30	Keynote	K11	A short review on the search for thermoelectric oxides and chalcogenides Hébert, Sylvie	K12	Design of High-Performance Earth-Abundant Multinary Chalcogenide Absorbers for Solar Energy Conversion Mitzl, David	K13	Conjugated Polymers in Active Devices: The Impact of Molecular Structure and Thin Film Formation on Application Platforms Reynolds, John	K14	Design and construction of peptide-based material from the bottom up Woolfson, Dek	K15	Biomimetic Supramolecular Hydrogel Networks Mediated by Cucurbit[8]uril Scherman, Oren
15:00	Contributed oral	EE_13	Novel candidate SnS <sub>2</sub> S <sub>2</sub> thermoelectric materials: a first-principles study Skelton, Jonathan	MD_13	Low-cost high-throughput screening of all inorganic materials Davies, Daniel	MEO_13	Two-dimensional spin liquid behaviour in the triangular-honeycomb antiferromagnet, TbInO <sub>3</sub> Clark, Lucy	SM_13	Fabrication of living soft matter by symbiotic growth of unicellular microorganisms Dek, Anupam	NC_13	Interfacing Inorganic Nanocrystals with Biological Systems via Surface Ligand Design Mattioussi, Hedi
15:20	Contributed oral	EE_14	Formation of artificial solid electrolyte interphase by radiolysis Varene, Fanny	MD_14	Computational design of transparent conducting oxide ZnO:Zn Jackson, Adam	MEO_14	Covalent approaches for tunable optical properties in organic-inorganic ureasil hybrids Meazzini, Ilaria	SM_14	Stabilising the twist-bend nematic phase via hydrogen bonding Martinez-Felipe, Alfonso	NC_14	Synthesis and characterisation of fluorescent carbon fibers Denney, Clara
15:40	Contributed oral	EE_15	Novel approaches to luminescent solar concentrator design using organic-inorganic hybrid waveguides Evans, Rachel	MD_15	Tight-binding approach to polaron states in fullerene adducts Rice, Beth	MEO_15	Magnetoelectric coupling and room temperature magnetic order in polar corundum GaFeO <sub>3</sub> Pitcher, Michael	SM_15	Supracolloidal self-assembly of atomically precise gold nanoparticles Nonappa	NC_15	Colloidal Ag <sub>2</sub> S <sub>2</sub> nanocrystals: synthesis and use in environmentally friendly solar cells Bernechea, Maria
16:00	Contributed oral	EE_16	Nanostructured organic semiconductors for metal-free and visible light photocatalysis Zhang, Kai	MD_16	Designing Low Molecular Weight Hydrogels Adams, Dave	MEO_16	Carbon dots and fluorescence: the ideal FRET pair for the fabrication of a precise and fully reversible ammonia sensor Toncelli, Claudio	SM_16	Watching block copolymers self-assembly with liquid phase transmission electron microscopy Patterson, Joseph	NC_16	Iron oxide nanoparticle-wax composite capsule coatings for drug delivery in the gastrointestinal tract Bear, Joseph
16:20 Refreshments											
17:00 PL03: Magnetism and magnetic oxides; manganites and magnetite revisited Atfield, Paul											
18:00 Poster reception											
19:30 Close											

Wednesday 12 July 2017

PL04: Structure-property-function relationships in molecular electronic materials and devices											
Nelson, Jenny											
Time to move between theatres											
Theme		Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials
Session Chair		TBC			TBC		TBC		TBC		TBC
10:10	Keynote	K16	Converting Powders into Functional Materials Bishop, Peter	K17	Small Molecules for Large-Area Applications Loo, Lynn	K18	Synthetic Manipulation of Hybrid Perovskites for Dimensionality Control, Enhanced Functionalities and New Application Domains Ogale, Satish	K19	Biomolecules for Non-Biological Things: 1-D and 2-D Materials Construction through Peptide Design and Solution Assembly Pochan, Darrin	K20	Coordination polymer materials with hierarchical pore space from molecular hosts Hardie, Michael
10:40	Contributed oral	EE_17	Recent developments in Polymers of intrinsic Microporosity (PIMs) for membrane applications Budd, Peter	MD_17	Nature of cation dynamics in hybrid formate perovskites Svane, Katrine		Talk TBC Gimenez-Lopez, Maria	SM_17	Self-assembled structures of BODIPY dyes: application in cancer therapy Fernandez, Gustavo	NC_17	Base metal nanoparticles: liquid-phase synthesis of TiO and GdO nanoparticles Feldmann, Claus
11:00	Contributed oral	EE_18	Sulfur polymers for mercury capture Hasell, Tom	MD_18	Ordered mesoporous functional materials with gyroidal architectures and tuneable pore sizes for photocatalysis and bioengineering Eder, Dominik	MEO_18	Optimising paramagnetic magnetocaloric coordination frameworks for low field applications Saines, Paul	SM_18	Dual-stimuli responsive injectable nanogel/solid drug nanoparticle nanocomposites for the long-term sustained release for poorly soluble drugs McDonald, Tom	SM_11	Bioinspired nanomaterials for environmental remediation Patwardhan, Siddharth
11:20 Refreshments											
Theme		Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials
Session Chair		TBC			TBC		TBC		TBC		TBC
12:00	Contributed oral	EE_19	Nanocarbon materials extend the application of phase change materials Zheng, Zhaoliang	MD_19	Designed synthesis of metal-organic frameworks and their composites for molecular separation and sensing applications Grecea, Stefania	MEO_19	Transparent ceramics synthesized by full crystallization from glass Allix, Mathieu	SM_19	Engineering microbial responses with synthetic polymers Fernandez-Trillo, Francisco	NC_19	Routes toward robust nanomaterials – expanding the potential applications of functional materials Crick, Colin
12:20	Contributed oral	EE_20	Extrusion: an efficient technique for the manufacture of organic compounds and materials Crawford, Deborah	MD_20	Synthesis of composite Janus particles by sequential layering deposition for visible-light photocatalytic water-splitting Rome, Bertrand	MEO_20	Hydrate Formation and Loss on the Hybrid Perovskite Methyl Ammonium Lead Iodide Naderi, Majid	SM_20	Nanoscale mechanics controls stem cell adhesion and expansion at the surface of non viscous liquids Gautrot, Julien	NC_20	Magnetically activated adhesives Davies, Gemma-Louise
12:40	Contributed oral	EE_21	Molecular donors for high performance organic solar cells Jones, David	P101	In-situ processes of transformation of organic-inorganic hybrid nanostructures based on TiO2 Boytsova, Olga	MEO_21	Chemical composition and defect analysis of Al-Nb co-doped rutile TiO2 Chen, Hua	SM_21	Light Triggered Nitric Oxide Release from N-Nitroso Porous Organic Polymers Gregg, Sharon	NC_21	Dendronized superparamagnetic nanoparticles as tools for MRI, efficient in vivo cancer targeting and magnetic hyperthermia treatment NGuyen, Dinh-Vu
13:00 Lunch and posters											
Theme		Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials
Session Chair		TBC			TBC		TBC		TBC		TBC
14:30	Keynote	K21	Layered Na-Mn oxides for high-capacity rechargeable battery Komaba, Shinichi	K22	Interfacial Assembly and Engineering of Ordered Functional Mesoporous Materials for applications Zhao, Dongyuan	K23	$\pi$ -Conjugation in 2D Polymers Perepichka, Dmitri	K24	Title TBC Duer, Melinda	K25	Bio-Inspired Approaches to Nanocomposite Single Crystals Meldrum, Fiona
15:00	Contributed oral	EE_22	Multifunctional porous materials and membranes for energy and sustainability Song, Qilei	MD_22	Crystallisation of new families of ruthenates and iridates from water: discovery of functional oxides with magnetic and electrocatalytic properties Walton, Richard	MEO_22	Bismuth based double perovskites – an alternative approach for lead free hybrid perovskite Wei, Fengxia	SM_22	New developments in porous liquids James, Stuart	NC_22	Scaleable synthesis and applications of conjugated polymer nanoparticles Turner, Michael
15:20	Contributed oral	EE_23	Why do hybrid perovskite solar cell materials degrade more rapidly in wet air? Eames, Christopher	MD_23	Synthesis of Metal Carbonyl Clusters in Ionic Liquids Wolfe, Silke	MEO_23	Self-assembled microcavities from conjugated macromolecules and polymers for optical and laser applications Yamamoto, Yohei	SM_23	Using gold nanoparticles to probe the structural changes of a pH-responsive hydrogel Saunders, Brian		Sodium ion batteries; materials to cell Kendrick, Emma
15:40	Contributed oral	EE_24	Atomic layer deposition of phase-pure multinary oxides for solar water splitting Stefik, Morgan	MD_24	Informatics feedback loop for multi-component molecular material discovery Robertson, Karen	MEO_24	Towards exciplex emission from structurally complementary donors and acceptors – a unimolecular synthetic approach to a bimolecular phenomenon Wright, Iain	SM_24	Silk and silk composites for biomedical application Plowright, Robyn	NC_24	Antifouling/antibacterial coatings containing modified mesoporous silica nanoparticles with dual effect Michalidis, Marios
16:00	Contributed oral	EE_25	Synthesis of Mn/Co/Ti layered double hydroxide for highly efficient photocatalytic degradation of aqueous Bromocresol Green Roy Chowdhury, Priyadarshi	MD_25	Solid state manufacture of compositionally complex alloys Doughty, Gregory	MEO_25	Unconventional magnetic order in GeFe2O4 below TN = 8.6 K Perversi, Giuditta	SM_25	Design of advanced double-network hydrogels with hydrophilic polyurethane Fei, Bin	NC_25	New possibilities for the nanoscale engineering of complex oxide thin films McMittell, Sean
16:20 Refreshments											
17:00 PL05: Design and properties of topological Materials Felsler, Claudia											
18:00 Close											
19:00 Coaches to conference banquet											
19:30 Conference banquet (ticket holders only)											

Thursday 13 July 2017

PL06: Molecular design of polymeric nanocapsules											
Katharina Landfester											
Time to move between theatres											
Theme		Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials
Session Chair		TBC			TBC		TBC		TBC		TBC
10:10	Keynote	K26	Electrochemical energy storage via batteries: The importance of materials Tarascon, Jean-Marie	K12	Surface-bound Enzymatic Reactions Organize Microcapsules and Protocells in Solution Balazs, Ana	K28	Functional domain walls in ferroelastic oxides Noheda, Beatriz	K29	"Living" Crystallization-Driven, Seeded Growth Approaches to Functional Supramolecular Materials Manners, Ian	K30	Hard Templating and Self-Assembly for the Synthesis of Advanced Nanostructures Schuth, Ferdi
10:40	Contributed oral	EE_26	Tuning the electrical and dielectric properties of Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> perovskite by chemical doping Yang, Fan	MD_26	High-throughput workflow for the discovery and characterisation of organic cages Greenaway, Rebecca	MEO_26	Exploring the colour tunability and stability of organolead halide perovskite nanocrystals McKenna, Barry	SM_26	A new, coordination-polymers, approach to integrating semi-conducting properties with DNA materials Houlton, Andrew	NC_26	A new template free strategy to fabricate nanoreactors with internal porosity and its impact on the material properties Distaso, Monica
11:00 Refreshments											
Theme		Energy & Environment			Materials Design		Magnetic, Electronic & Optical Materials		Soft Matter & Biomaterials		Nanomaterials
11:40	Contributed oral	EE_27	Monolithic metal-organic framework: towards breaking DOE targets for methane uptake Moghadam, Peyman Z.		A Rational Design of Porous Organic Cages: A Computational Study of Xe/Kr Selectivity and C60 Fullerene Encapsulation Miklitz, Marcin	MEO_27	Photoinduced switching of a ferrocene-containing rotaxane crystal Horie, Masaki		DNA-based intercalating drug delivery systems Spain, Sebastian	NC_27	Spatially orthogonal chemical functionalisation of a hierarchical pore network for catalytic cascade reactions Parlett, Christopher
12:00	Contributed oral	EE_28	Advancements in solar-thermochemical air separation based on perovskite oxides Vieten, Josua	MD_28	Anionic silicate organic frameworks constructed from hexacoordinated silicon centers Roeser, Jérôme	MEO_28	New fluorescent materials based on sulfur anions Patureau, Pascaline	SM_28	Superstructure-Induced Chirality in 3D-Ordered Liquid Crystals of Achiral Molecules Ungar, Goran		Developing artificial proteins for magnetite nanoparticle production Rawlings, Andrea
12:20	Contributed oral	EE_29	3D design and additive manufacturing of photoactive polymers for solar energy harvesting Zhakeyev, Adilet	MD_29	Insight into metal-organic framework formation through in situ diffraction Wu, Yue	MEO_29	Polymerisable squaramide receptors for anion binding and sensing in aqueous media Manesiotis, Panagiotis	SM_29	Probing the surface chemistry of self-assembled peptide hydrogels using solution-state NMR spectroscopy Wallace, Matthew		Studying the Effects of Metallic Nanoparticles on Conversion Negative Electrode Materials using Solid-State NMR Johnstone, Karen
12:40 Time for delegates to move between theatres											
PL07: Stimuli-Responsive Smart Soft Materials Fabricated under Nonequilibrium Conditions											
Aida, Takuzo											
Chairs' summary											
13:50 Close of conference											
14:00											