

## MC8: Advancing Materials by Chemical Design

2 – 5 July 2007, University College London, UK

### Contributed abstracts for poster presentation

THEME: BIOMATERIALS

- P01**            **Polymeric ampholytes as models of biosilicification agents**  
Vadim V Annenkov\*, Elena N Danilovtseva and Stanislav N Zelinskii  
*Russian Academy of Sciences, Russia*
- P02**            **Models for the nucleation and growth of calcium carbonate**  
Dmytro Antypov\*, Colin Freeman, Mingjun Yang, John Harding, David Cooke,  
James Elliott, Dorothy Duffy, Mike Gillan, Jennifer Lardge, Mike Allen, David  
Quigley, Mark Rodger and Tiffany Walsh  
*University of Cambridge, UK*
- P03**            **Rational design of inorganic nanoparticle conjugates for biomedical applications**  
Neus G Bastús\*, Silvia Pujals, Ernest Giralt and V F Puntès  
*Institut Catala de Nanotecnologia, Spain*
- P04**            **Tunable stimuli-responsive polymeric platforms: chemical structuring and bio-functionalization**  
Edmondo M Benetti\*, Melba E Navarro, Szczepan Zapotoczny and G Julius Vansco  
*University of Twente, The Netherlands*
- P05**            **Magnetite synthesis on micro-composites made of bentonite and xanthan**  
Dragoljub D Bilanovic\*, Timothy J Kroeger and Nancy A Burnham  
*Bemidji State University, U.S.A.*
- P06**            **Micro-algae and materials: bio-controlled synthesis of metallic nanoparticles**  
Roberta Brayner\*, Chakib Djediat, Claude Yepremian, Thibaud Coradin, Jacques Livage, Alain Coute and Fernand Fievet  
*Université Paris, France*
- P07**            **Taking a leaf from nature (super-repellency)**  
S A Brewer\* and C A Stone  
*DSTL Porton Down, UK*
- P08**            **Nanoparticulate silver for microbiological applications**  
Joanna J Buckley\*, Adam F Lee, Karen Wilson and Bryan Greener  
*University of York, UK*
- P09**            **Structure activity relationship studies of pyrazolone adduct with indan derivative of mannich bases for cox-1 and cox-2 inhibition**  
Jugal D Gandhi\*, Dhruvo Jyoti Sen, Dipenkumar G Patel, Chintankumar R Bhavsar, Mohit K Dholaria, Nihar H Joshi and Indermeet Singh Anand  
*North Gujarat University, India*
- P10**            **Synthesis and applications of fluorinated amphiphiles as gene nanovectors**  
Christine Gerardin\*, Andreea Banu and Nicolas Dupuy  
*Université Nancy, France*

- P11**      **Interaction of synthetic biomimetic nano-hydroxyapatite and nano-hydroxyapatite/alendronate with myoglobin**  
Michele Iafisco\*, Barbara Palazzo, Giuseppe Falini, Michele Di Foggia, Stefania Nicolis, Luigi Casella and Norberto Roveri  
*Alma Mater Studiorum University of Bologna, Italy*
- P12**      **Interactions of biofunctionalized nanoparticles with artificial membranes**  
Jessica Irrgang\* and Christof M Niemeyer  
*Universitat Dortmund, Germany*
- P13**      **Bioisosteric correlation approach of indanone and pyrazolone rings for cyclooxygenase inhibition *in-vivo***  
Saumil P Jani\*, Jugal D Ghandhi, Nihar H Josji and Mohit K Dholaria  
*Hemchandracharya North Gujarat University, India*
- P14**      **ssDNA templated self-assembly of chromophores**  
Pim G A Janssen\*, Albertus P H J Schenning and E W Meijer  
*Eindhoven University of Technology, The Netherlands*
- P15**      **Self-assembled fibrous gels from modified di-peptides for 3D cell-culture**  
Vineetha Jayawarna\*, Julie E Gough and Rein V Ulijn  
*University of Manchester, UK*
- P16**      **Engineered nanoparticle/aptamer conjugates: applications in proteomics and biosensing**  
Christopher Johnson\*, Thao Le and Tony Cass  
*Imperial College London, UK*
- P17**      **Structural characterization of octapeptide systems**  
A Konstantopoulos\*, A Saiani and A Miller  
*University of Manchester, UK*
- P18**      **Photocatalytic activity of quantum dot-biomolecule nanohybrids**  
Vidya Lakshmi Rajendran\*, Eduardo Torres, Binil itty Ipe and Christof M Niemeyer  
*Universitat Dortmund, Germany*
- P19**      **Targeting thrombosis with peptide functionalized nanoparticles**  
F Lerouge\*, O Melnyk, J -O Durand, L Raehm and M Smaïhi  
*IEM, Université Montpellier II, France*
- P20**      **Engineering of light-responsive bio-inorganic nanomaterials using photo-isomerizable coiled-coil peptides**  
R Osborne\*, A Laromaine, M Murugesan and M M Stevensa  
*Imperial College, UK*
- P21**      **Electrochemically assisted deposition of nano-structured hydroxyapatite coatings as a novel method to prepare drug-eluting devices**  
Barbara Palazzo\*, Silvia Manara, Michele Iafisco, Marco Lelli, Carlo Bruno, Francesco Paolucci and Norberto Roveri  
*Alma Mater Studiorum University of Bologna, Italy*
- P22**      **Estimation of the potency of oxidase enzyme on higher homologous series of mannich base**  
Dipenkumar G Patel\*, Mohit K Dholaria, Jugal D Gandhi, Chintankumar R Bhavsar, Saumil P Jani and Dhrubo Jyoti Sen  
*North Gujarat University, India*

- P23**      **A novel technique for nanosensor delivery through cellular membranes**  
Vesselin N Paunov\* , Karen Fisher, Rhodri Jones and Jonathan W Aylott  
*University of Hull, UK*
- P24**      **Fabrication of water-soluble magnetic nanoparticles using a simple reduction method**  
Nguyen T K Thanh, Le T Lu, Ian Robinson\*, Le D Tung, Simon Lee, Jon P Goff, Bien Tan, Andrew I Cooper and David G Fernig  
*University of Liverpool, UK*
- P25**      **Creating hydrogels from self-assembling peptides**  
A Saiani\*, A Mohammed, A Konstantopoulos, L Caront and A Miller  
*University of Manchester, UK*
- P26**      **Synthesis and characterization of amino acid (L-aspartic acid, L-asparagine, L-glutamic acid, L-glutamine) schiff bases and their manganese(III) complexes**  
Iffet Sakiyan\*  
*Ankara University, Turkey*
- P27**      **CNS stimulation effect of semisynthetic adduct of caffeine with schiff's base of pyrazolone and pyrazolo-pyrimidine nucleus**  
Mruga H Shah\*, Dipesh A Chaudhari, Dhruvo Jyoti Sen and Jigna S Shah  
*Hemchandracharya North Gujarat University, India*
- P28**      **Biomolecular functionalized monolayer protected clusters of gold (AuMPCs): synthesis and cellular uptake studies**  
Ndabenhle M Sosibo\*, Neerish Revaprasadu and Robert T Tshikhudo  
*University of Zululand, South Africa*
- P29**      **Structural effects of sugar acids on collagen-based mineralization matrices**  
Alina Stetco\* and Erika F Merschrod S  
*Memorial University of Newfoundland, Canada*
- P30**      **Synthesis of long bilayered silica nanotubes by synergetic octapeptide self-assembly and templated mineralization**  
Christophe Tarabout\*, Emilie Pouget, Erik Dujardin, Celine Valery, Maite Paternostre, Alain Moreac, Valerie Marchi-Artzner, Annie Cavalier, Anne Renault and Franck Artzner  
*Universite Rennes 1, France*
- P31**      **Design of new drugs based on cisplatin-gold nanoparticles conjugates**  
Socorro Vázquez-Campos\*, Neus G Bastús, Francisco Romero, Carmen Sotelo, Francisca García, Oscar Gallego, Agustina García, Fernando Domínguez and Víctor F Puentes  
*Institut Catala de Nanotecnologia, Spain*
- P32**      **In vitro release kinetics of an antibiotic from biomimetic Hydroxyapatite carriers for targeted drug delivery applications**  
R Vijayaraghavan\* and S Sasikumar  
*Vellore Institute of Technology University, India*
- P33**      **Thermo-reversible fibrillar hydrogel from disulfide reduced lysozyme**  
H Yan\*, A Saiani, J Gough and A F Miller  
*University of Manchester, UK*

**P34 Nanocomposites of polydimethylsiloxane and surface modified kaolin**  
Yan Zhang\*, David Gittins, David Skuse, Terence Cosgrove, and Jeroen S van Duijneveldt  
*University of Bristol, UK*

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**P35 Halogen bonding influences the NLO properties of fluorinated chromophores in solution**  
Serena Biella\*, Elena Cariati, Alessandra Forni, Pierangelo Metrangolo, Franck Meyer, Giuseppe Resnati and Renato Ugo  
*Politecnico di Milano, Italy*

**P36 Solvent free synthesis of metal-phosphine complexes**  
Caroline J Bowen\* and Stuart L James  
*Queen's University of Belfast, Northern Ireland, United Kingdom*

**P37 Phase immiscibility of a polymer blend imaged by confocal microscopy**  
S A Brewer\* and M R Dennis  
*DSTL Porton Down, UK*

**P38 Electrodeposition at the solid/gas interface**  
Daren J Caruana\*, E Hadzifejzovic, J Stankovic, S Firth and P M McMillan  
*UCL, UK*

**P39 Synthesis, morphology, characterisation and co-crystallisation of pristine fullerites**  
Lok Cee Chong\*, David Cox, Yoji Miyajima, M Nanditha Dissanayake, Jeremy Sloan, Gabriele Wagner, Richard J Curry and S R P Silva  
*University of Surrey, UK*

**P40 Spiropirans on silicon surfaces. Control of the surface wetting behaviour by light**  
Davide Dattilo\*, Michele Maggini, Lidia Armelao, Giovanni Fois and Giampaolo Mistura  
*Universita di Padova, Italy*

**P41 Structure and properties of lanthanide-organic polymers with picolinic and glutaric acids**  
P I Girginova\*, F A A Paz, P C R Soares-Santos, L D Carlos, V S Amaral, J Klinowski, H I S Nogueira and T Trindade  
*University of Aveiro, Portugal*

**P42 Towards "2nd level" self-assembly**  
Nicola Giri\* and Stuart L James  
*Queen's University of Belfast, Northern Ireland, United Kingdom*

**P43 Achiral unsymmetric dimeric, bidentate ligand and their complexes with Cu(II) and Pd(II): synthesis and mesomorphism**  
Indudhara Swamy Shashikala\*, Channabasaveshwar V Yelamaggad, Doddamane S Shankar Rao, Geetha G Nair and Subbarao Krishna Prasad  
*University of York, UK*

**P44 Homochiral hydrogen-bonded metal organic frameworks**  
Michael J, Ingleson\*, John Bacsa and Matthew J Rosseinsky  
*University of Liverpool, UK*

- P45**      **Areodynamically assisted jets: a novel materials processing methodology**  
S Arumuganathar\*, S N Jayasinghe and N Suter  
*UCL, UK*
- P46**      **Solvent-free synthesis of MOFs**  
Ana Lazuen-Garay\*, Anne Pichon and Stuart L James  
*Queen's University of Belfast, Northern Ireland, United Kingdom*
- P47**      **Understanding molecular behaviour during crystallisation in accordance to polymorph generation**  
Z Mahmood\* and L Seton  
*Liverpool John Moores University, UK*
- P48**      **A chiral perylenebisimide (PBI) derivative: formation of micrometre scale fibres and aggregation study by fluorescence and NMR spectroscopy**  
Adam McGlone\*, Miriam Perez-Trujillo, David Amabilino and Juame Veciana  
*ICMAB (CSIC), Spain*
- P49**      **A new chiral porous framework based on 4,4'-bipyridine**  
Lenuta Sbircea\*, Stuart L James, Derek R Boyd and Narain D Sharma  
*Queen's University of Belfast, Northern Ireland, United Kingdom*
- P50**      **Polyoxometalate-containing amphiphiles: construction of supramolecular nanomaterials based on covalently functionalized Mn-anderson clusters**  
Yu-Fei Song\*, De-Liang Long and Leroy Cronin  
*University of Glasgow, Scotland*
- P51**      **Introducing functionality in polyoxometalate-based frameworks**  
Carsten Streb\*, Christopher Ritchie, De-Liang Long and Leroy Cronin  
*University of Glasgow, Scotland*
- P52**      **Multifunctional organic/inorganic hybrid templates for target materials creation by universal design**  
M Vantsyan\*, M Bobrov and G Popova  
*Mendeleyev University of Chemical Technology of Russia, Russia*
- P53**      **Donor-acceptor dendralenes**  
Thomas D J Westgate\* and Peter J Skabara  
*University of Manchester, UK*
- P54**      **Engineering microporous architectures: combining an evolutionary algorithm with predefined exclusion zones**  
Scott M Woodley\* and C Richard A Catlow  
*The Royal Institution of Great Britain, UK*

THEME: NANOMATERIALS

- P55**      **Effect of substrate temperature and *in situ* CdCl<sub>2</sub> treatment on the properties of CdS grown by MOCVD**  
V Barrioz\*, D Lamb and S J C Irvine  
*University of Wales, Bangor, UK*
- P56**      **Synthesis, morphology, characterisation and co-crystallisation of pristine fullerenes**  
Lok Cee Chong\*, David Cox, Yoji Miyajima, M Nanditha Dissanayake, Jeremy Sloan, Gabriele Wagner, Richard J Curry and S R P Silva  
*University of Surrey, UK*

- P57 Mimics of nacre? Aluminium polyoxocations/ polymer composites: a model study**  
Olivier Deschaume\*, Agathe Fournier and Carole C Perry  
*Nottingham Trent University, UK*
- P58 Structural transformation of vanadium pentoxide nanotubes during the hydrothermal treatment**  
A V Grigorieva\*, E A Goodilin, V V Volkov and Yu D Tretyakov  
*Lomonosov Moscow State University, Moscow*
- P59 One-step organic synthesis of monodisperse water-soluble magnetic nanoparticles**  
Ian Robinson\*, Cameron Alexander, Le T Lu, Le D Tung, Simon Lee, Jon P Goff, David G Fernig and NTK Thanh  
*University of Liverpool, UK*
- P60 Temperature dependence of transient low coordinated sites on Au nanocrystallites supported on the MgO(100) surface**  
K P McKenna\*, P V Sushko and A L Shluger  
*UCL, UK*
- P61 Tailored TiO<sub>2</sub>(110) surfaces and their reactivity**  
C L Pang\*, O Bikondoa, D S Humphrey, A C Papageorgiou, R Ithnin, G Cabailh, Q Chen, C A Muryn, H Onishi, and G Thornton  
*University College London, UK*
- P62 Cell specific targeting of multifunctional  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles through surface binding of dsRNA**  
W Tremel\*, I Shukoor, F Natalio, H A Therese, H J Schild, H -C Schröder and W E G Müller  
*Johannes Gutenberg-Universität Mainz, Germany*
- P63 Electrochemically deposited three-dimensionally ordered macroporous metals**  
R Zhu\*, M P Ryan, and D W McComb  
*Imperial College London, UK*
- P64 Electrochemical generation and properties of nanoparticles of metals and metalpolymers**  
T Agladze\* and U Batsikadze  
*Georgian Technical University, Georgia*
- P65 Sol-Gel synthesis of porous membrane and characterization**  
N Agoudjill\*, N Benmouhoub and A Larbot  
*USTHB, Algeria*
- P66 Multicoated opals and inverse opals for optically amplified photochemistry**  
I Alessandri\*, M Zucca, E Bontempi and L E Depero  
*University of Brescia, Italy*
- P67 Synthesis and fluorescence properties of derivatized gold nanoparticles**  
Gionata Battistini\*, Luca Prodi, Marco Montalti and Nelsi Zaccheroni  
*University of Bologna, Italy*
- P68 Photophysical properties of pyrene doped silica nanoparticles during their growth**  
Sara Bonacchi\*, Marco Montalti, Luca Prodi, Enrico Rampazzo and Nelsi Zaccheroni, *University of Bologna, Italy*

- P69 Thermal transformation of metal oxides into metal nitrides**  
Jelena Buha\*, Igor Djerdj, Markus Antonietti and Markus Niederberger  
*Max Planck Institute of Colloids and Interfaces, Germany*
- P70 Multifunctional and self-assembled fluorescent micro and nanocrystals**  
Michael Busby\*, Zoran Popovic, Hannes Kerschbaumer and Luisa De Cola  
*Westfälische Wilhelms-Universität Münster, Germany*
- P71 Topologically controlled growth of magnetic-metal-functionalized semiconductor oxide nanorods**  
Marianna Casavola\*, Vincenzo Grillo, Elvio Carlino, Cinzia Giannini, Fabia Gozzo, Miguel Angel Garcia, Liberato Manna, Roberto Cingolani and P Davide Cozzoli  
*Università del Salento, Italy*
- P72 Functionalised carbon nanotubes as filler in polymer matrices**  
Amit K Chakraborty\*, Christopher Herron and Karl S Coleman  
*University of Durham, UK*
- P73 Synthesis of molecular precursors to GaN QDs**  
Pietro Chirico\*, Andrew L Hector and Claire J Carmalt  
*University of Southampton, UK*
- P74 PEO coated silver nanoparticles with narrow size distributions**  
P Christian\*  
*University of Manchester, UK*
- P75 PEO coated CdS nanoparticles for toxicity testing**  
P Christian\*, Matthew B Sanders, Marion Sebire, Ioanna Katsiadaki, Brett P Lyons, Dave Sheahan, Jason M Weeks and Stephen W Feist  
*University of Manchester, UK*
- P76 Calculating material properties of clays through large-scale molecular dynamics**  
P V Coveney\*, J L Suter, M A Thyveetil and H C Greenwell  
*University College of London, UK*
- P77 Supramolecular nanosheets by 2D aggregation of organogelators**  
Riju Davis\*, Rudiger Berger and Rudolf Zentel  
*University of Mainz, Germany*
- P78 Zeolite-L nanocrystals and their potential use in devices**  
Luisa De Cola\*, Fabio Cucinotta and Gion Calzaferri,  
*Westfälische Wilhelms-Universität, Germany*
- P79 Size-dependant palladium catalysed suzuki cross-coupling chemistry**  
Peter J Ellis\*, Adam F Lee and Ian J S Fairlamb  
*University of York, UK*
- P80 Synthesis of pyramidal lead sulphide (PbS) thin films by employing liquid-liquid interface**  
Dongbo Fan\*, Peter John Thomas and Paul O'Brien  
*University of Manchester, UK*
- P81 Synthesis of mesoporous benzene-silica hybrids containing phosphine oxide ligands for rare-earth ions complexation**  
P Ferreira\*, J C Alonso and T S Petkova  
*University of Aveiro, Portugal*

- P82**            **Switchable materials for chemical and biological protection**  
C Fish\*, S Brewer, J Fletcher, I Holden, C Stone, C Willis and D Worrall  
*DSTL Porton Down, UK*
- P83**            **Purification of single walled carbon nanotubes**  
Sian Fogden\*, Raquel Verdejo and Milo Shaffer  
*Imperial College London, UK*
- P84**            **Different approaches to prepare carboranyl-containing organic-inorganic hybrid materials. Thermal and structural properties**  
A Gonzalez-Campo\*, R Nunez, C Vinas, F Teixidor and B Boury  
*Imperial College London, UK*
- P85**            **Controlling interlayer swelling in organo-clays**  
H C Greenwell\*, P Boulet, A A Bowden, P V Coveney and A Whiting  
*University of Wales, Bangor, UK*
- P86**            **Microwave-assisted synthesis of In<sub>2</sub>O<sub>3</sub>:Sn (ITO) nanocrystals and transparent, conductive coatings thereof**  
Elin Hammarberg\*, Anna Prodi-Schwab and Claus Feldmann  
*University of Karlsruhe, Germany*
- P87**            **A strategy for the controlled distribution of alkyl-coated nanoparticles in an epoxy network**  
C E Hoppe\*, I A Zucchi, M J Galante, R J J Williams, J Rivas and M A López-Quintela  
*University of Santiago de Compostela, Spain*
- P88**            **Designer functional anchor-buoy dispersants**  
Andrew M Howe\*, Trevor J Wear and Alan R Pitt  
*Kodak European Research, UK*
- P89**            **Self-organized organosilicas with chiral functionalities**  
Andreas Ide\*, Markus Antonietti and Arne Thomas  
*Max Planck Institute of Colloids and Interfaces, Germany*
- P90**            **Nano-structured calcium silicate: a new material and its applications**  
Jim H Johnston\*, Thomas Borrmann, James E Grindrod, Daniel Rankin, Andreas Zeller, Anita Schloffer, Mathew J Cairns and Andrew J Mcfarlane  
*Victoria University of Wellington, New Zealand*
- P91**            **The use of nano-structured calcium silicate phase change materials for thermal buffering in the packaging of temperature sensitive products**  
Jim H Johnston\*, James E Grindrod and Margaret Dodds  
*Victoria University of Wellington, New Zealand*
- P92**            **Periodic mesoporous organosilicas (PMOs) with hierarchical functionality characterised by solid-state NMR**  
James T A Jones\* and Yaroslav Z Khimyak  
*University of Liverpool, UK*
- P93**            **Hierarchical silica structures: formed by self-assembly during microcontact printing and spontaneous growth**  
Ahmed Khalil\* and Frank Marlow  
*Max-Planck-Institut For Coal Research, Germany*

- P94**            **Synthesis and characterization of multifunctional hybrid silica particles**  
Hae Sung Kim\*, Chan Yoon Jung and Sang Man Koo  
*Hanyang University, South Korea*
- P95**            **Transient optical studies of electron transfer in quantum dot-based nanostructured molecular solar cells**  
Henry C Leventis\*, James R Durrant and Saif A Haque  
*Imperial College London, UK*
- P96**            **Nanoscale assembly of colloidal nanocrystals into optically active low dimensional epitaxial heterostructures**  
Manuel A Martins\*, S Pereira, T Trindade and I M Watson  
*University of Aveiro, Portugal*
- P97**            **Surface modification and characterization of carbon nanotubes: the key to enhanced composite performance**  
Robert Menzel\*, Mike Tran, Angelika Menner, Alexander Bismarck and Milo S P Shaffer  
*Imperial College London, UK*
- P98**            **The development of polymer-clay nanocomposites for improved anti-corrosion coating performance**  
L Mooring\*, G Cavalli and J Hay  
*University of Surrey, UK*
- P99**            **Synthesis and use of dialkyldiselenophosphinato metal complexes to deposit metal selenide thin films and nanoparticles**  
Chinh Q Nguyen\*, Mohammad Afzaal, Mohammad A Malik and Paul O'Brien  
*University of Manchester, UK*
- P100**           **Silver nanoparticles inks for use of ink-jet printing**  
Jin Chul Park\*, Jae Joon Lee and Sang Man Koo  
*Hanyang University, South Korea*
- P101**           **Carbon nanotubes for fire gas sensing applications**  
R Pearce\*, M Shaffer, A Lloyd Spetz, J Belmonte and J Shaw  
*Linköping University, Sweden*
- P102**           **Single-precursor synthesis of nanostructured ZnS polymorphs**  
Angela S Pereira\*, Protima Rauwel, Manuel A Martins and Tito Trindade  
*University of Aveiro, Portugal*
- P103**           **Mesoporous silica with large accessible pores templated by well-defined polystyrene-*b*-poly(ethylene oxide)-*b*-polystyrene triblock copolymers**  
Trang Phan\*, Emily Bloch, Denis Bertin, Philip Llewellyn and Virginie Hornebecq  
*Université d'Aix-Marseille I, France*
- P104**           **Transition metal amides and imides as precursors to metal nitride and carbonitride thin films via chemical vapour deposition**  
Stephen E Potts\*, Claire J Carmalt and Hywel O Davies  
*UCL, UK*
- P105**           **Hierarchical composites reinforced with carbon nanotube grafted fibres**  
Hui Qian\*, Alexander Bismarck, Emile Greenhalgh, Gerhard Kalinka and Milo S P Shaffer  
*Imperial College London, UK*

- P106 Tungsten oxide and tungsten oxide-titania thin films prepared by aerosol assisted deposition; use of preformed solid nanoparticles**  
Uzma Qureshi\* and Ivan P Parkin  
*UCL, UK*
- P107 Functionalised nanoparticles for multiphotonic bio-imaging of tumoral cells**  
Laurence Raehm\*, Valerie Lebret, Jean-Olivier Durand, Monique Smahi, Nicolas Nerambourg, Martinus H V Werts, Mireille Blanchard-Desce, Catherine Dubernet, Delphine Methy and Etienne Duguet  
*Universite Montpellier II, France*
- P108  $Zn_3(PO_4)_2$  – synthesis and luminescence of amorphous nanoparticles**  
Marcus Roming\* and Claus Feldmann  
*University of Karlsruhe, Germany*
- P109 Laser Beam Induced Current (LBIC) investigation of solar cells with different etchants and contracting metals**  
R L Rowlands\*, S J C Irvine and V Barrioz  
*University of Wales, Bangor, UK*
- P110 Novel hybrid materials of cellulose fibres and doped ZnS nanoparticles**  
Aaron C Small\* and James H Johnston  
*Victoria University of Wellington, New Zealand*
- P111 New routes for the chemical modification of carbon nanotubes**  
Anil Suri\*, Amit K Chakraborty and Karl S Coleman  
*Durham University, UK*
- P112 Nanostructured metal nitrides**  
Arne Thomas\*, Anna Fischer, Frederic Goettmann and Markus Antonietti  
*Max Planck Institute of Colloids and Interfaces, Germany*
- P113 Chemical speciation effects on the crystal growth of  $BiVO_4$**   
Tito Trindade\*, Sandra G Cruz, Marcia C Neves and Madalena Caldeira  
*University of Aveiro, Portugal*
- P114 Morphology and magnetotransport properties of the Nd-Ba-Mn nanocomposites**  
S V Trukhanov\*, A V Trukhanov and H Szymczak  
*The National Academy of Sciences, Belarus*
- P115 Tailoring the activity of Ti-based photocatalysts by playing with surface morphology and silver doping**  
M J Uddin\*, F Cesano, S Bertarione, F Bonino, G Spoto, S Bordiga, D Scarano and A Zecchina  
*University of Turin, Italy*
- P116 Enhanced bio-activity of nano zinc oxide - an antimicrobial study**  
R Vijayaraghavan\* and N Padmavathy  
*Vellore Institute of Technology University, India*
- P117 Titanium dioxide nanorod polymer composite materials**  
Uros Vukicevic\*, Sabina Chyla, Dr A Bismarck and Dr M Shaffer  
*Imperial College London, UK*

- P118**      **Production and nanopatterning of ultra-thin metal oxide films, by scanning probe lithography**  
 Scott M D Watson\* and Karl S Coleman  
*Durham University, UK*
- P119**      **Synthesis of phosphorus nanotubes and other phosphorus nanostructures**  
 Richard Winchester\*, Max Whitby and Dr Milo P Shaffer  
*Imperial College London, UK*
- P120**      **Removal of arsenic by magnetite (Fe<sub>3</sub>O<sub>4</sub>) nanocrystals made from edible oils and rust**  
 Cafer T Yavuz\*, J T Mayo, Carmen Suchecki, Jessica Cox, Arjun Prakash, William W Yu, Joshua C Falkner, Sujin Yean, Li Li Cong, Angelina Tran, Amy T Kan, Mason Tomson and Vicki L Colvin  
*Rice University, USA*
- P121**      **A real-time study of the reversible supramolecular assembly of functionalized nanoparticles onto and from molecular printboards**  
 Xing Yi Ling\*, Laurent Malaquin, David N Reinhoudt, Heiko Wolf and Jurriaan Huskens  
*University of Twente, The Netherlands*

THEME: SOFT MATTER

- P122**      **Multiple lengthscale patterning of ferrocenylsilyl (block co) polymers by top down methods**  
 C Acikgoz\*, M A Hempenius, G J Vancso and J Huskens  
*University of Twente, The Netherlands*
- P123**      **Material properties of ferroelectric liquid crystals as probed by the Landau potential**  
 P Archer\* and I Dierking  
*University of Manchester, UK*
- P124**      **Dynamical structural transition from a frustrated smectic liquid crystal state**  
 P Archer\* and I Dierking  
*University of Manchester, UK*
- P125**      **Development of anisotropic dichroic particles and corresponding mesogenic stabiliser**  
 Judith Brown\*, Susanne Klein and Charl F J Faul  
*University of Bristol, UK*
- P126**      **Rationally designed lipidic mesophases for membrane protein crystallization**  
 M Caffrey\*, L Misquitta, Y Misquitta, V Cherezov, O Slattery, J M Mohan, D Hart, M Zhalnina and W A Cramer  
*University of Limerick, Ireland*
- P127**      **Synthesis and characterization of clay-supported anilinium activators for the "in reactor" preparation of polyolefin nanocomposites**  
 D C Calabro\*, M Afeworki, S E Jakubowicz, J W Johnson, J F Brody and A Malek  
*ExxonMobil Research and Engineering Co., USA*
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