



Strasbourg (France)

E-MRS 2005 Spring Meeting
May 31 – June 3, 2005

SYMPOSIUM I

**Advanced functional nanomaterials – from
nanoscale objects to nanostructured inorganic
and hybrid materials**

Symposium Organizers :

Markus Antonietti, MPI, Postdam, Germany

Bruno Chaudret, LCC, Toulouse, France

Marc Drillon, IPCMS, Strasbourg, France

Jean Etourneau, ICMCB, Bordeaux, France

Clément Sanchez, LCMC, Paris, France

Mas Subramanian, DuPont, Wilmington, USA

Papers to be published in
Progress in Solid State Chemistry

E-MRS 2005 Spring Meeting

SYMPOSIUM I

Tuesday, May 31, 2005
Mardi 31 mai 2005

Morning
Matin

Session I : Nanoporous materials

Session chairs :

- I-I.01** 9:00 -Invited- DESIGN AND FUNCTIONALITY OF INORGANIC-ORGANIC COMPOSITE MICRO AND MESOPOROUS MOLECULAR SIEVES
Avelino Corma
- I-I.02** 9:45 -Invited- ASSEMBLING MOLECULAR SPECIES INTO 3D FRAMEWORKS: COMPUTATIONAL DESIGN AND STRUCTURE SOLUTION FOR ORGANIC-INORGANIC HYBRID MATERIALS
C. Mellot
- I-I.03** 10:15 HIERARCHICALLY ORGANIZED ARCHITECTURE IN MULTISCALES EMERGING FROM EXQUIEITE ASSOCAITION OF CRYSTALS, ORGANIC POLYMERS, AND DYES
Yuva Oaki and Hiroaki Imai, Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan
- 10:30 **BREAK**
- I-I.04** 11:00 -Invited- HIERARCHICALLY ORGANIZED MATERIALS
Nicola Hüsing
- I-I.05** 11:30 WATER INSERTION IN HYDROPHOBIC POROUS OXIDES
L. Coiffard(a), S. Sidis(b), V. Eroshenko(a), P. Barboux(b), (a)XTEC, Ecole Polytechnique, 91128 Palaiseau, France, (b)Physique Matière Condensée, UMR CNRS 7643, Ecole Polytechnique, 91128 Palaiseau, France
- I-I.06** 11:45 EFFECT OF THE ZEOLITE CRYSTAL SIZE ON THE STRUCTURE AND PROPERTIES OF CARBON REPLICAS MADE BY NANOCASTING PROCESS
Fabrice Gaslain(a), Valentin P. Valtchev(a), Lubomira Tosheva(a), Julien Parmentier(a), Cathie Vix-Guterl(b), Joël Patarin(a), (a)Laboratoire de Matériaux à Porosité Contrôlée (LMPC), UMR CNRS 7016, ENSCMu, Université de Haute Alsace, Mulhouse Cedex, France, (b)Institut de Chimie des Surfaces et Interfaces (ICSI), UPR CNRS 9069, 15 rue Jean Starky, Mulhouse Cedex, France
- I-I.07** 12:00 = **I/PIII.52**
- I-I.08** 12:15 MOLECULARLY ORDERED INORGANIC SOLIDS TEMPLATED BY SURFACTANTS
B.F. Chmelka, N. Hedin, S.C. Christiansen, Ryan Hayward, Dept. of Chemical Engineering, University of California, Santa Barbara CA 93106, USA; Robert Graf, Max-Planck-Institut für Polymerforschung, Postfach 3148, 55021 Mainz, Germany; Juergen Eckert, Los Alamos National Laboratory, NM 87545, USA; Christel Gervais, Laboratoire de Chimie de la Matière Condensée, Université Pierre et Marie Curie, CNRS Jussieu, 75252 Paris, France
- 12:30 **LUNCH**

Tuesday, May 31, 2005
Mardi 31 mai 2005

Afternoon
Après-midi

Session II : Nanoobjects and self-assembling
Session chairs :

- I-II.01** 14:00 -Invited- ARCHITECTURE, SELF-ASSEMBLY AND MAGNETISM OF CLUSTERS AND MOLECULE MAGNETS ON SURFACES
J.P. Bucher, Institut de Physique et de Chimie des Matériaux de Strasbourg, UMR 7504, Université Louis Pasteur, 23 rue du Loess, 67034 Strasbourg, France
- I-II.02** 14:45 -Invited- ORGANOMETALLIC SYNTHESIS OF IRON NANOPARTICLES : SIZE EFFECTS, SHAPE CONTROL AND ORGANIZATION
C. Amiens
- I-II.03** 15:15 MAGNETIC NANOPARTICLES WITH HYBRID SHAPES
D. Ung, G. Viau and F. Fiévet, ITODYS UMR 7086, Université Paris 7, case 7090, 2 place Jussieu 75251 Paris Cedex 05 France
- I-II.04** 15:30 JANUS-HEAD TYPE GOLD NANOPARTICLES: SELF ORGANISATION AND OPTICAL EVIDENCIES
A. Moores(a), F. Goettmann(b), P. Le Floch(a), C. Sanchez(b), (a)Laboratoire «Hétéroéléments et Coordination» UMR CNRS 7653 (DCPH), Département de Chimie, Ecole Polytechnique, 91128 Palaiseau cedex, France, (b)Laboratoire de Chimie de la Matière Condensée, UPMC-CNRS, 4 place Jussieu, 75005 Paris, France
- I-II.05** 15:45 REINFORCEMENT OF POLYSTYRENE BY COVALENTLY BONDED OXOTITANIUM CLUSTERS
L. Rozes, G. Fornasieri, C. Sanchez, Laboratoire Chimie et Propriétés de la Matière Condensée, Université Pierre et Marie Curie, 4 place Jussieu, 75252 Paris cedex 05, France, C. Creton, Laboratoire Physico-Chimie des Polymers et des Milieux Dispersés, ESPCI, 10 rue Vauquelin, 75231 Paris cedex 05, France and S. Trabelsi, N.E. Zafeiropoulos, M. Stamm, Leibniz-Institut für Polymerforschung Dresden e.V., Hohe Strasse 6, Dresden 01069, Germany
- 16:00 **BREAK**
- I-II.06** 16:30 -Invited- NONAQUEOUS ROUTES TO CRYSTALLINE METAL OXIDE NANOPARTICLES: FORMATION MECHANISMS AND APPLICATIONS
M. Niederberger, G. Garnweitner, N. Pinna, J. Polleux, M. Antonietti, Max Planck Institute of Colloids and Interfaces, Colloid Chemistry, Research Campus Golm, 14424 Potsdam, Germany
- I-II.07** 17:00 PERIODIC METAL OXIDE NANOWIRE ARRAYS: TEMPLATE-DIRECTED FABRICATION AND PHYSICAL PROPERTIES
H.J. Fan, W. Lee, M. Alexe, K. Nielsch and M. Zacharias, Max Planck Institute of Microstructure Physics, Halle, Germany; A. Dadgar and A. Krost, Institute of Experimental Physics, Otto-von-Guericke-University Magdeburg, Germany
- I-II.08** 17:15 HIERARCHICALLY STRUCTURED CARBON AND METAL OXIDE MONOLITHS THROUGH NANOCASTING
Jan-Henrik Smått(a), An-Hui Lu(b), Stefan Backlund(a) and Mika Lindén(a), (a)Dept. Phys. Chem, Åbo Akademi University, 20500 Turku, Finland, (b)Max-Planck-Institut für Kohlenforschung, 45470 Mülheim an der Ruhr, Germany
- I-II.09** 17:30 ELABORATION OF HYBRID NANOCLUSTER MATERIALS BY SOLUTION CHEMISTRY
S. Cordier, K. Kirakci, A. Perrin, C. Perrin, Institut de Chimie de Rennes, LCSIM, UMR 6511 CNRS-Université de Rennes 1, Avenue du Général Leclerc, 35042 Rennes cedex, France
- 17:45-19:00 **POSTER SESSION I**

POSTER SESSION I
Tuesday, May 31, 2005
17:45 – 19:00

- I/PL.01** NANOTUBE ON NANOFIBERS: A TOTAL GAS-PHASE ROUTE TO A STRUCTURED C-C NANOCOMPOSITES
Wei Xia, Jun Qian, Changhai Liang, Oliver F.-K. Schlüter, Martin Muhler, Laboratory of Industrial Chemistry, Ruhr University Bochum, 44780 Bochum, Germany
- I/PL.02** CARBON NANOTUBES REINFORCED POLY(VINYL ALCOHOL) COMPOSITE FILMS
Wei Chen, Xiaoming Tao, Pu Xue, Nanotechnology Center Institute of Textiles & Clothing The Hong Kong Polytechnic University Hung Hom, Kowloon, Hong Kong
- I/PL.03** COVALENT BONDED MULTI-WALLED CARBON TUBES COMBINED WITH DNA: SYNTHESIS AND CHARACTERIZATION
Weiwei Chen(a), Chi Hung Tzan(b), Jianxin Tang(a), Mengsu Yang(b), Shuit Tong Lee(a), (a)Center of Super-Diamond and Advanced Films (COSDAF) & Department of Physics and Materials Science, City University of Hong Kong, Hong Kong SAR, China, (b)Department of Biology and Chemistry, City University of Hong Kong, Hong Kong SAR, China
- I/PL.04** CR AND NI NANO ARRAYS EMBEDDED INTO BLOCK COPOLYMERS AND IMAGED WITH SPECTRO MICROSCOPY
O. Seifarth, Y. Burkov, D. Schmeißer, Brandenburg Technical University, Konrad Wachsmann Allee 17, 03046 Cottbus, Germany, A. Sydorenko, R. Kremek, M. Stamm Leibniz Institute for Polymer Research, Hohe Strasse 6, 01069 Dresden, Germany
- I/PL.05** SILICON NANO-BEACON ARRAYS: SYNTHESIS, CHARACTERIZATION, AND SELF-ASSEMBLY
Teng Qiu(a,b), Xinglong Wu(a) and Paul K. Chu(b), (a)National Laboratory of Solid State Microstructures and Department of Physics, Nanjing University, Nanjing 210093, China, (b)Department of Physics and Materials Science, City University of Hong Kong, Kowloon, Hong Kong, China
- I/PL.06** CARBON NANOTUBE JUNCTIONS AND THEIR ELECTRONIC PROPERTIES
Istvan Laszlo, Department of Theoretical Physics, Institute of Physics and Center for Applied Mathematics and Computational Physics, Budapest University of Technology and Economics, 1521 Budapest, Hungary
- I/PL.07** COLLOIDAL MOLECULAR SIEVES WITH FLUORESCENT PROPERTIES
T. Doussineau(a), E. Gavilan(a), A. El Mansouri(a), M. Smaïhi(a), J.-O. Durand(b) and M. Granier(b), (a)IEM UMR 5635, CNRS, 1919 route de Mende, 34293 Montpellier Cedex 5, France, (b)CMOS UMR 5637 cc 007, UM2, Place Eugène Bataillon, 34095 Montpellier Cedex 5, France
- I/PL.08** STRUCTURING OF NOT STOICHIOMETRICAL DISPERSIBLE FILLERS OF A INCLUSION PHASES IN THERMO STEADY POLYMERIC MATRIXES
A.V. Ishkov, A.M. Sagalakov, Barnaul, Russia
- I/PL.09** NEW SYNTHESIS OF NANOSTRUCTURED TiO₂(B) AND ITS ELECTROCHEMICAL BEHAVIOR
M. Zúkalová, M. Kalbác, L. Kavan, J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Dolejškova 3, 18223 Prague 8, Czech Republic, I. Exnar, High Power Lithium, Park Scientifique, PSE-B, EPFL, Ecublens, 1015 Lausanne, Switzerland and M. Graetzel, Laboratory of Photonics and Interfaces, EPFL, Ecublens, 1015 Lausanne, Switzerland
- I/PL.10** SELF-ASSEMBLY AND FUNCTIONALISATION OF HYBRID ORGANIC-INORGANIC SILICA
Johan Alauzun, Ahmad Mehdi, Catherine Reyé, Robert J.P. Corriu, CMOS UMR 5637 CNRS, Université de Montpellier II, Place E. Bataillon, 34095 Montpellier Cedex 5, France
- I/PL.11** ELECTRON-HOLE EXCITATIONS IN METAL NANOCCLUSERS UNDER LOW-ENERGY ION SCATTERING
V.V. Lebid'ko, M.A. Pushkin, V.I. Troyan, Moscow Engineering Physics Institute, 31 Kashirskoe chausse, 115409 Moscow, Russia, and I. Smurov, ENISE-DIPI, 58 rue Jean Parot, 42023 St-Etienne, France
- I/PL.12** ELECTRON FIELD-EMISSION PROPERTIES OF PHOSPHOROUS DOPED SILICON NANOWIRE ARRAYS
Yu.M. Litvin(a), O.S. Oberemok(a), D.O. Mazunov(a), T.I. Kamins(b), S. Sharma(b), P.M. Lytvyn(a), A.A. Dadykin(c), A.G. Naumovets(c), A.I. Klimovskaya(a), B.D. Shanina(a), O.O. Pikaruk(a), (a)Institute of Semiconductor Physics, National Academy of Sciences, Kyiv 03028, Ukraine, (b)Quantum Science Research, Hewlett-Packard Laboratories, Palo Alto CA 94304, USA; (c)Institute of Physics, National Academy of Sciences, Kyiv 03028, Ukraine
- I/PL.13** CONVERSION CuO POWDERS TO NANOSTRUCTURES BY SOLUTION METHOD
Jian Quan Qi(a,b), Yu Wang(a), Hu Yong Tian(a), Long Tu Li(b), Helen Lai Wah Chan(a), (a)Department of Applied Physics and Materials Research Center, The Hong Kong Polytechnic University, Hong Kong, China, (b)Department of Materials Sciences & Engineering and State Key Laboratory of Fine Ceramics and New Processing, Tsinghua University, Beijing 100084, China

- I/PI.14** SYNTHESIS AND CHARACTERIZATION OF SUPERPARAMAGNETIC NANOCOMPOSITES BY GRAFTING BIOCOMPATIBLE POLYMERS ONTO MAGHEMITE NANOPARTICLES
C. Flesch(a), C. Delaite(a), E. Bourgeat-Lami(b), E. Duguet(c), P. Dumas(a), (a)Laboratoire de Chimie Macromoléculaire, ENSCMu-CNRS (ICSI-UPR 9069), 3 rue A. Werner, 68093 Mulhouse cedex, France; (b)Laboratoire de Chimie et Procédés de Polymérisation, CNRS-CPE (LCP-UMR 140), Bât. 308F, 43 bd du 11 novembre 1918, 69616 Villeurbanne cedex, France; (c)Institut de Chimie de la Matière Condensée de Bordeaux, CNRS-UB1 (ICMCB-UPR 9048), Université Bordeaux-1, 87 avenue du Dr A. Schweitzer, 33608 Pessac, France
- I/PI.15** BN COVER ON THIN SiC WHISKERS
V. Pokropivny(a), E. Prilutsky(a), V. Lyachenko(a), G.Oleinik(a), V. Gubanov(b), R. Partch(c), (a)Frantsevich Institute for Problems of Materials Science of NASU, Kiev, Ukraine, (b)National Taras Chevshenko Kyiv University, Kiev, Ukraine, (c)Clarkson University, Potsdam, NY, USA
- I/PI.16** OPTICAL THIN FILM PREPARATION USING WATER-BASED SILICA SOLS
Xavier Le Guével(a), Philippe Belleville(a), Monique Gervais(b), (a)Département Matériaux, Laboratoire Sol-Gel, CEA Le Ripault, BP16, 37260 Monts, France, (b)Laboratoire d'Electrodynamique des Matériaux Avancés (LEMA), FRE 2077, Ufr Sciences et Techniques Parc Grandmont, Tours, France
- I/PI.17** MESOPOROUS SILICE-TITANIA MIXED OXIDES OBTAINED FROM POLYETHYLENIMINE-CONTAINING HYBRID XEROGELS
J. Retuert, E. Pabon and R. Quijada, Fac. Ciencias Fisicas y Matematicas, Universidad de Chile and Center for Advanced Interdisciplinary Research in Materials,Beauchef 850, PO Box 2777, Santiago, Chile
- I/PI.18** SYNTHESIS AND CHARACTERIZATION OF HIGHLY ORDERED BiFeO₃ MULTIFERROIC NANOWIRE ARRAYS
X.Y. Zhang, C.W. Lai, D.Y. Wang, X. Zhao, H.L.W. Chan and J.Y. Dai, Department of Applied Physics, The Hong Kong Polytechnic University, Kowloon, Hong Kong, P.R. China
- I/PI.19** PREPARATION OF ADVANCED NANOCOMPOSITE CARBON/SILICA HYBRID AND NANOSTRUCTURED CARBON MATERIALS VIA CONTROLLED LIVING RADICAL POLYMERIZATION
G.D. Fu, E.T. Kang, K.G. Neoh, Singapore
- I/PI.20** SOLID STATE SELF-ASSEMBLIES POLYPYRROLE-BASED WITH PORHYRIN μ -OXO DIMER SPACERS
Rodica-Mariana Ion, Dragos-Viorel Brezoi, Valahia University, Materials Science Department, Târgoviste, Romania
- I/PI.21** DEPENDENCE OF THE SILICON NANOWIRE DIAMETER ON DEPOSITION PARAMETERS
Kyung Ah Jeon, Jong Hoon Kim and Sang Yeol Lee, Department of Electrical and Electronic Engineering, Yonsei University, 134, Shinchon-dong, Seodaemoon-ku, 120-749, Seoul, Korea
- I/PI.22** PHOTOLUMINESCENCE PROPERTIES OF SnO₂ NANOWHISKERS GROWN BY THERMAL EVAPORATION
S.H. Luo(a,b), W.L. Liu(a), M. Zhang(a), Z.F. Di(a,b), Z.T. Song(a), C. L. Lin(a) and Paul K Chu(b), (a)The Research Center of Semiconductor Functional Film Engineering Technology & State Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences (CAS), Shanghai 200050, People's Republic of China, (b)Department of Physics and Material Science, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong, China
- I/PI.23** AIBi₃C₅VI THIN FILMS AS NO SENSORS
V. Bilozertseva, N. Dyakonenko, L. Petrenko, S. Gapochenko, National Technical University "KPI", Kharkiv, Ukraine; H. Khlyap, University of Technology, E.-Schroedinger Str. 56, Kaiserslautern 67663, Germany and State Pedagogical University, 24 franko str, Drohobych 82100, Ukraine
- I/PI.24** A POTENTIAL TOOL FOR ANALYZING ALUMINOSILICATE MATERIALS: FOURIER TRANSFORM ION CYCLOTRON RESONANCE MASS SPECTROMETRY
J. Castello(a), J.J. Gaumet(a), J.F. Muller(a), G. Friour(b), J. Guilment(b), O. Poncelet(b), (a)LSMCL, Université de Metz, 1 bd Arago, 57078 Metz Cedex 03, France, (b)Kodak European Research Labs, ZI Nord, 71100 Chalon sur Saône, France
- I/PI.25** DEPOSITION OF 2-AMINO-1-PROPANOL ON Cu(110) SURFACE: CHEMISORBTION
S. Irrera, G. Contini, S. Turchini, N. Zema, M. Brolatti, T. Prosperi, ISM- CNR, Via del Fosso del Cavaliere 100, 00133 Rome, Italy
- I/PI.26** NEW SPECIFIC SENSOR FOR VOLATILE ORGANIC CONTAMINATION USING MESO-POROUS SURFACES
Jean-Louis Stehlé(a), Jérôme Banizette(a), Sylviane Cetre(b), Hervé Fontaine(b), Marc Veillerot(b), Adrien Danel (b), (a) SOPRA, 26 rue Pierre Joigneaux, 92270 Bois-Colombes, France, (b) CEA-LETI, CEA-DRT-LETI/DTPS-CEA/GRE, 17 rue des Martyrs, 38034 Grenoble Cédex 9, France
- I/PI.27** INTERACTIONS AND MULTILEVEL ORDERING IN SUPRAMOLECULAR ASSEMBLIES
F. Vonau(a), D. Suhr(b), D. Aubel(a), L. Bouteiller(b), G. Reiter(c) and L. Simon(a), (a)Laboratoire de Physique et de Spectroscopie Electronique (LPSE)CNRS-UMRC-7014, 4 rue de frères Lumière, 68093 Mulhouse Cedex, France, (b)Laboratoire de Chimie des Polymères,UMR 7610, Université Pierre et Marie Curie, 4 place Jussieu, 75252 Paris Cedex 05, France, (c)Institut de Chimie des Surfaces et Interfaces CNRS, 15, rue Jean Starcky, B.P. 2488, 68057 Mulhouse Cedex, France

- I/PI.28** CHEMICALLY SYNTHESIZED SEMICONDUCTOR NANOCRYSTALS EMITTING IN THE TELECOMMUNICATION WAVELENGTH RANGE
M.V. Kovalenko, J. Roither, W. Heiss, Institute of Semiconductor and Solid State Physics, University of Linz, 4040 Linz, Austria
- I/PI.29** EXAMINING THE USE OF OXIDE PARTICLES TO ENHANCE THE SENSITIVITY OF POLYMER/CARBON BLACK NANOCOMPOSITE GAS SENSORS
K. Arshak, E. Moore, S. Clifford, L. Cavanagh, Ireland
- I/PI.30** NANOARCHITECTURES FROM WO₃, TiO₂ AND CHITOSAN
Fritz Huguenin, Departamento de Química, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, 14040-901 Ribeirão Preto (SP), Brazil, Valtencir Zucolotto, Antônio Felix Carvalho and Osvaldo N. Oliveira Jr, Instituto de Física de São Carlos, Universidade de São Paulo, CP 369 13560 – 970 São Carlos (SP), Brazil, Ernesto R. Gonzalez, Instituto de Química de São Carlos, Universidade de São Paulo, 13560-970 São Carlos (SP), Brazil
- I/PI.31** Withdraw
- I/PI.32** Withdraw
- I/PI.33** PROBING THE MICROPOROUS NATURE OF HIERARCHICALLY TEMPLATED MESOPOROUS SILICA VIA POSITRON ANNIHILATION SPECTROSCOPY
S. Boskovic(a,b,c), A.J. Hill(a), T.W. Turney(a), M.L. Gee(b), G.W. Stevens(c) and A.J. O'Connor(c), (a)CSIRO Manufacturing and Infrastructure Technology, Private Bag 33, Clayton South, Victoria 3169, Australia, (b)School of Chemistry, The University of Melbourne, Victoria 3010, Australia, (c)Department of Chemical and Biomolecular Engineering, The University of Melbourne, Victoria 3010, Australia
- I/PI.34** ASSEMBLY OF PREFORMED CRYSTALLINE NANOBUILDING BLOCKS INTO MESOPOROUS METAL OXIDES
J. Ba, J. Polleux, M. Niederberger, M. Antonietti, Max Planck Institute of Colloids and Interfaces, 14424 Potsdam, Germany
- I/PI.35** SYNTHESIS AND CHARACTERISTICS OF SEMICONDUCTOR AND METAL NANOPARTICLES BY A MICROCHANNEL REACTOR
Youngmin Choi, Beyong-Hwan Ryu, Jeong-A Lee, Jong-Ung Kim, Yunae Lee and Ki-Won Jun, KRICT, 100 Yuseong, Daejeon 305-600, Korea
- I/PI.36** LIGHT-EMITTING DIODES FROM SELF-ORGANIZED CONJUGATED POLYMER/SILICA MESOSTRUCTURES
Ekaterina Dovgolevsky and Gitti L. Frey, Department of Materials Engineering, Technion – Israel Institute of Technology, Haifa 32000, Israel; Yi Yang and C. Jeffrey Brinker, Department of Chemical and Nuclear Engineering, the University of New Mexico and the Sandia National Laboratory/UNM Advanced materials Lab, Albuquerque NM 87106, USA
- I/PI.37** ELECTROCHEMICAL STUDY ON OVER-GRAFTED PLATINUM NANOPARTICLES LANGMUIR-BLODGETT FILMS
S. Cavaliere(a,b), A. Etcheberry(a), M. Herlem(a), H. Perez(b), (a) Institut Lavoisier, Université de Versailles, 45 Avenue des Etats-Unis, 78035 Versailles, France, (b) Laboratoire Francis Perrin, CEA/DSM/DRECAM/SPAM-CNRS-URA 2453, Bât. 522, 91191 Gif sur Yvette, France
- I/PI.38** MICROSTRUCTURE OF BRACHIOPOD SHELL CALCITE - A WELL OPTIMIZED HYBRID FIBRE COMPOSITE MATERIAL
W.W. Schmahl, Lehrstuhl für anorganische und biogene Geomaterialien, Ludwig Maximilians Universität München, Theresienstrasse 41, 80333 München, Germany, E. Griesshaber, R. Neuser, M. Blüm, Fakultät für Geowissenschaften, Ruhr-Universität, 44780 Bochum, Germany, R. Job, FB Elektrotechnik, Fernuniversität, 58084 Hagen, Germany
- I/PI.39** Withdraw
- I/PI.40** STAR GEL HYBRID MATERIALS WITH MEDICAL APPLICATIONS
M. Manzano(a), E. Ruiz(a), D. Arcos(a,b) and M. Vallet-Regí(a), (a)Departamento de Química Inorgánica y Bioinorgánica, Fac. Farmacia, UCM, 28040 Madrid, Spain, (b)Centro Nacional de Investigaciones Metalúrgicas (CENIM), CSIC, 28040 Madrid, Spain
- I/PI.41** TAILORING THE MORPHOLOGY OF OXIDE NANO-ISLANDS THROUGH THE SUBSTRATE MISCUT ANGLE
R. Bachelet, A. Boule, R. Guinebrière, A. Daurer Science des Procédés Céramiques et de Traitements de Surface CNRS UMR 6638, ENSCI, 47-73 avenue Albert Thomas 87065 Limoges Cedex, France

- I/PI.42** SYNTHESIS, SELF-ASSEMBLY AND ELECTRICAL PROPERTIES OF OLIGOTHIOPHENES 'FREE' OR GRAFTED TO ALIPHATIC RIGID SCAFFOLDS
Manuela Melucci, Giovanna Barbarella, Cristian Bettini, Laura Favaretto, Istituto per la sintesi organica e la fotoreattività, ISOF-CNR, via Gobetti 101, 40129 Bologna, Italy
- I/PI.43** DEPOSITION OF 2-AMINO-1-PROPANOL ON Cu(110) SURFACE: CHEMISORPTION
S. Irrera, G. Contini, S. Turchini, N. Zema, M. Brolatti, T. Prosperi; ISM - CNR, Via del Fosso del Cavaliere 100, 00133 Rome, Italy
- I/PI.44** HIGH TEMPERATURE NANOSTRUCTURED HYBRID MEMBRANES FOR FUEL CELLS
Ioan Stamatin(a), Adina Morozan(a), Keith Scott(b), Anca Dumitru(a), Victor Ciupina(c), G. Prodan(c), (a)University of Bucharest, Faculty of Physics, 3Nano-SAE Reserch. Centre, P.O. Box MG-11, 077125, Bucharest-Magurele, Romania, (b)School of Chemical Engineering and Advanced Materials, University of Newcastle upon Tyne, NE1 7RU, U.K., (c)Ovidius University of Constanta, Bd. Mamaia 124, Constanta, Romania
- I/PI.45** PREPARATION OF NANOGEL-CALCIUM PHOSPHATE HYBRID NANOPARTICLES
A. Sugawara, S. Yamane, and K. Akiyoshi, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, 2-3-10 Kanda-Surugadai, Chiyoda-ku, Tokyo 101-0062, Japan
- I/PI.46** POLY(FERROCENYLSILAZANES) PRECURSORS FOR ADVANCED NANOSTRUCTURED CERAMICS
Anca Dumitru(a), Ioan Stamatin(a), F. Nastase(a), Adina Morozan(a), C. Panaiotu(a), C. Mirea(b), V. Ciupina(c), (a)University of Bucharest, Faculty of Physics, 3Nano-SAE Research Centre, P.O. Box MG-11, 077125, Bucharest- Magurele, Romania, (b)National Institute of Forensic Expertise, Bd.Regina Elisabeta 53, Bucharest, Romania, (c)Ovidius University of Constanta, Bd. Mamaia 124, Constanta, Romania
- I/PI.47** HIERARCHICAL ASSEMBLY OF SURFACTANT MICELLES THROUGH COORDINATION CHEMISTRY
Martin In and Mathieu Joubert, GDPC (UMR 5581), Montpellier, France
- I/PI.48** STRUCTURE AND COAGULATION OF TiO₂ HYDROSOLS OF DIFFERENT DISPERSITY
O.B. Pavlova-Verevkina, S.N. Chvalun, E.D. Politova, L.A. Ozerina, A.N. Ozerin, Karpov Institute of Physical Chemistry, Moscow
- I/PI.49** HIERARCHICAL POROUS MATERIALS WITH A MULTIMODAL PORE SYSTEM AND THIN FILMS OF METAL OXIDES
Özlem Sel, Bernd Smarsly, Daibin Kuang, Markus Antonietti, Germany
- I/PI.50** SOL GEL DERIVED ZnO/SiO₂ NANOSTRUCTURES FOR SECOND HARMONIC GENERATION
A. Gaudon, A. Boulle, A. Lecomte, B. Soulestin, R. Guinebretière, A. Dager. Science des Procédés Céramiques et de Traitements de Surface CNRS UMR 6638, ENSCI, 47 Av. A. Thomas 87065 Limoges, France
- I/PI.51** KNbO₃ EPITAXIAL THIN FILMS GROWN BY POLYMERIC PRECURSOR METHOD
I.T. Weber, A. Rousseau, V. Bouquet, M. Guilloux-Viry, A. Perrin, Institut de Chimie de Rennes, LCSIM-UMR 6511 CNRS, Université de Rennes 1, 35042 Rennes Cedex, France
- I/PI.52** MOLECULAR DYNAMICS OF CONFINED GLUCOSE SOLUTIONS
G. Lelong, CRMD, 1B Rue de la Férollerie, 45071 Orléans Cedex 2, France, D.L. Price, HFIR/Center for Neutron Science, Oak Ridge National Lab., Oak Ridge TN, USA, A. Douy, CRMHT, 1D avenue de la Recherche Scientifique, 45071 Orléans Cedex 2, France, S. Kline, NIST Center for Neutron Research, National Institute of Standards and Technology, Gaithersburg MD, USA, J.W. Brady, Dept of Food Science, Cornell University, Ithaca NY, USA, M.-L. Saboungi, CRMD, 1B Rue de la Férollerie, 45071 Orléans Cedex 2, France
- I/PI.53** EFFECTS OF CeO₂ DOPING ON THE SUPERCONDUCTIVITY OF THE YBaCuO SUPERCONDUCTORS
This work was supported by Korea Research Foundation Grant (KRF-2004-041-D00293)
Sang Heon Lee, Department of Electronics Engineering, Sun Moon University Asan, Chung Nam, 336-840, Korea

Wednesday, June 1, 2005
Mercredi 1er juin 2005

Afternoon
Après-midi

Session III : Magnetic nanomaterials

Session chairs :

- I-III.01** 14:00 -Invited- ORGANIZING MOLECULAR NANOMAGNETS
D. Gattschi
- I-III.02** 14:45 -Invited- Si/SiO₂ NANOPARTICLE HETEROSTRUCTURES FOR ELECTRONIC MEMORY APPLICATIONS
M.L. Ostraat
- I-III.03** 15:15 DESIGN OF HYBRID ORGANIC-INORGANIC LAYERED STRUCTURES COMBINING MAGNETIC AND OPTICAL PROPERTIES
A. Demessence, M. Werner, G. Rogez and P. Rabu, IPCMS-GMI, 23 rue du Loess, B.P. 43, 67034 Strasbourg Cedex 2, France
- I-III.04** 15:30 SPIN LIFETIME ENHANCEMENT PROBED IN A SINGLE AU NANOPARTICLE
A. Bernand-Mantel, P. Seneor, L. Calvet, N. Lidgi, V. Cros, K. Bouzehouane, S. Fusil, C. Deranlot, A. Vaures, F. Petroff and A. Fert, Unité Mixte de Physique CNRS/Thales, Domaine de Corbeville 91404, Orsay, France and Université de Paris-Sud, 91405 Orsay, France
- I-III.05** 15:45 MAGNETIC NANO-COMPOSITE MICELLES AND VESICLES
S. Lecommandoux(a), O. Sandre(b), F. Chécot(a), J. Rodriguez-Hernandez(a), R. Perzynski(c), (a)Laboratoire Chimie des Polymères Organiques (LCPO), UMR 5629 CNRS-ENSCP, University Bordeaux 1, 16 avenue Pey Berland, 33607 Pessac, France, (b)Laboratoire Liquides Ioniques et Interfaces Chargées, UMR 7612 CNRS, Université Pierre et Marie Curie, 4 place Jussieu, case 63, 75252 Paris cedex 05, France, (c)Laboratoire Milieux Désordonnés et Hétérogènes, UMR 7603 CNRS, Université Pierre et Marie Curie, 4, place Jussieu – case 78, 75252 Paris cedex 05, France
- 16:00 **BREAK**

Session IV : Nanoporous systems

Session chairs :

- I-IV.01** 16:30 -Invited- SUPRAMOLECULAR APPROACHES TO NANOPOROUS MOLECULAR MAGNETIC MATERIALS. FROM NANOSCALE CLUSTERS TO 3-D MAGNETS
J. Veciana
- I-IV.02** 17:15 -Invited- NEW FUNCTIONAL HYBRID MATERIALS - NANOPOROUS MATERIALS
Filipe A. Almeida Paz(a), Fa-Nian Shi(a), Joao Rocha(a), Tito Trindade(a) and Jacek Klinowski(b), (a)Department of Chemistry, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal, (b)Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, U.K.
- I-IV.03** 17:45 A ROUTE TO HEAT RESISTANT SOLID MEMBRANES WITH PERFORMANCES OF LIQUID ELECTROLYTES
M-A. Néouze, J. Le Bideau, A. Vioux, Institut Gerhardt, UMR CNRS 5637, CC 007 Université Montpellier 2, 34095 Montpellier, France and F. Leroux, Laboratoire des Matériaux Inorganiques, UMR CNRS 6002, Université Blaise Pascal, 63177 Aubière, France
- 18:00-19:00 **POSTER SESSION II**
- 19:00 **AWARD CEREMONY**
The symposium organizers and the candidates to the graduate student award are requested to attend.

CONFERENCE RECEPTION

POSTER SESSION II
Wednesday, June 1, 2005
18:00 – 19:00

- I/PII.01** DYNAMIC COMPETITION OF PHOTOOXIDATION AND DISSOLUTION OF Si IN ALKALINE ELECTROLYTES: FORMATION OF NANOSTRUCTURES
K. Skorupska(a), M. Aggour(a), Eder Goncalves(a), Ralf Hunger(b), M. Kanis(a), M. Lublow(a), Elmar Rütther(a), T. Wilhelm(a), H. Jungblut(a) and H.J. Lewerenz(c), (a)Hahn-Meitner-Institut, Glienicke Str 100, 14109 Berlin, Germany, (b)TU Darmstadt, FB Materialwissenschaften, Germany, (c)Department of materials Science and Engineering North Carolina state University Research Building 1, 1001 Capability Road, Raleigh, NC 27695, USA
- I/PII.02** GISAXS STUDY OF GOLD IMPLANTED GLASS
B. Pivac, P. Dubcek, I. Kovacevic, R. Boskovic Institute, P.O. Box 180, Zagreb, Croatia, S. Bernstorff, Sincrotrone Trieste, SS 14, km 163.5, Basovizza (TS), Italy, R. Mu, M. Wu, A. Ueda, Fisk University, Nashville, TN 37831, USA, B. Vlahovic, NCCU, Durham, NC, USA
- I/PII.03** AC CONDUCTANCE OF $(\text{Co}_{0.45}\text{Fe}_{0.45}\text{Zr}_{0.10})_x(\text{Al}_2\text{O}_3)_{1-x}$ NANOCOMPOSITES
Anis Saad, Al-Balqa Applied University, P.O.Box 2041, Amman 11953, Jordan, A.B. Fedotov, I.A. Svito, A.V. Mazanik, Belarusian State University, Minsk, 220050 Belarus, B.V. Andrievsky, A.A. Patryn, Technical University of Kozsalin, Voronez, Kozsalin 119899, Poland, Yu.E. Kalinin, A.V. Sitnikov, Voronezh State Technical University, Voronez 250770, Russia
- I/PII.04** WITHDRAW
- I/PII.05** NANOSTRUCTURES “METAL NANOPARTICLES ON SEMICONDUCTOR SURFACE”: INFLUENCE OF SUBSTRATE SURFACE ON OPTICAL PROPERTIES
N.L. Dmitruk, T.R. Barlas, O.V. Kondratenko, V.R. Romanyuk, Institute for Physics of Semiconductors of NASU, Pr. Nauki 41, 03028, Kyiv, Ukraine V.V. Gozhenko, L.G. Grechko Institute of Surface Chemistry of NASU, G. Naumova str., 17, 03164, Kyiv, Ukraine I.N. Dmitruk, Kyiv National Taras Shevchenko University, Pr. Glushkov 6, 03127, Ukraine
- I/PII.06** NEW HYBRID ORGANIC-INORGANIC MATERIALS BASED ON TITANIUM OXIDE GELS FOR PHOTONIC APPLICATIONS
O. Kameneva(a,b,c), A. I. Kuznetsov(a,d), L. A. Smirnova(b), L. Rozes(c), C. Sanchez(c), N. Bityurin(d), K. Chhor(a), P. Marteau(a) and A. Kanaev(a), (a)Laboratoire d'Ingénierie des Matériaux et des Hautes Pressions, URP1311 CNRS, 93430 Villetaneuse, France, (b)Lobachevsky State University, 603950 Nizhnii Novgorod, Russia, (c)Laboratoire de Chimie de la Matière Condensée, UMR 7574 CNRS, Université Pierre et Marie Curie, 75252 Paris cedex 05, France, (d)Institute of Applied Physics RAS, 603950, Nizhnii Novgorod, Russia
- I/PII.07** ASSEMBLY OF ALUMINA-BASED NANOPARTICLES DOPED WITH Ag CLUSTERS AND THEIR OPTICAL, MECHANICAL AND ELECTRICAL PROPERTIES
A.R. Phani, L. Lozzi and S. Santucci, INFN and Department of Physics, University of L'Aquila, via Vetoio, 67010 Coppito, L'Aquila, Italy
- I/PII.08** SYNTHESIS AND BIO-ADSORPTION OF ROD-LIKE LARGE-PORE PERIODIC MESOPOROUS ORGANOSILICA
Shizhang Qiao, Yonggang Jin, Qihong Hu, G.Q. Max Lu, ARC Centre for Functional Nanomaterials, School of Engineering, The University of Queensland, Brisbane QLD 4072, Australia
- I/PII.09** NEAR-FIELD SCANNING OPTICAL MICROSCOPY OF InAs QUANTUM DOT LASER DIODES AT ROOM TEMPERATURE
S.I. Jung(a), H.Y. Yeo(a), I.G. Yun(a), J.Y. Leem(b), I.K. Han(b), J.I. Lee(b), (a)Department of Electrical and Electronic Engineering, Yonsei University, South Korea, (b)School of Nano Engineering, Institute for Nanotechnology Applications, InJe University, South Korea
- I/PII.10** INTERACTIONS BETWEEN POLYMERS AND NANOPARTICLES: FORMATION OF SUPERMICELLAR HYBRID AGGREGATES
J.-F. Berret(a), K. Yokota(b), Y. Lalatonne(c), A. Sehgal(c) and M. Morvan(c), (a)Matière et Systèmes Complexes, UMR CNRS 7057, Université Denis Diderot 140 rue de Lourmel, 75015 Paris, France, (b)Rhodia, Centre de Recherches d'Aubervilliers, 52 rue de la Haie Coq, 93308 Aubervilliers Cedex France, (c)Complex Fluids Laboratory, UMR CNRS - Rhodia n°166, Cranbury Research
- I/PII.11** HYBRID NANOCOMPOSITES REINFORCED WITH CARBON NANOTUBES
S. Bhattacharyya, J.-P. Salvétat, C. Sinturel, M.-L. Saboungi, CNRS-CRMD, 1B rue de la Férollerie, 45071 Orléans cedex 2, France
- I/PII.12** COPOLYIMIDES FROM COMMONLY USED MONOMERS, AND THEIR NANOCOMPOSITES
E. Mazoniene, J. Bendoraitiene, S. Diliunas and A. Zemaitaitis, Kaunas University of Technology, Radvilenu pl. 19, 50254 Kaunas, Lithuania

- I/PII.13** NONAQUEOUS SYNTHESIS OF METAL OXIDE NANOPARTICLES VIA ORGANIC CONDENSATION REACTIONS
Georg Garnweitner, Markus Niederberger, Markus Antonietti, Max Planck Institute of Colloids and Interfaces, Colloid Chemistry, Research Campus Golm, 14424 Potsdam, Germany
- I/PII.14** SOLID STATE NMR INVESTIGATIONS OF SURFACTANT TEMPLATED SILICAS AND ORGANOSILICAS
 Niki Baccile, Jocelyne Maquet, Florence Babonneau, Chimie de la Matière Condensée, UMP/CNRS, 4 place Jussieu, 75005 Paris, France
- I/PII.15** PREPARATION OF MAGNETIC AND CONDUCTING FE₃O₄/POLY(STYRENESULFONATE)/POLYPYRROLE NANOPARTICLES WITH CORE-SHELL STRUCTURE
Hasio-Yen Lee(a), Leeyih Wang(b), and Syang-Peng Rwei(a), (a)Institute of Organic & Polymer Materials, National Taipei University of Technology, Taipei, Taiwan, (b)Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan
- I/PII.16** ELECTROCHEMICAL BUILDING OF NANOSTRUCTURED ZINC OXIDE/ CHROMOPHORE HYBRID FILMS FOR LIGHT EMISSION APPLICATIONS
Thierry Pauporté, Laboratoire d'Électrochimie et Chimie Analytique, UMR 7575, ENSCP, 11 rue P. et M. Curie, 75231 Paris cedex 05, France, Tsukasa Yoshida, Daisuke Komatsu, Heideki Minoura, Environmental and Renewable Energy Systems Division, Graduate School of Engineering, Gifu University, Yanagido 1-1, Gifu 501-1193, Japan
- I/PII.17** QUANTUM DOTS-BASED IMAGING OF CANCER TISSUE SLICES
Wei Zhao(a), Dai-Wen Pang(a), Yu-Xia Zhang(b), Jing-Ping Ouyang(b), Zhi-Ling Zhang(a), Er-Qun Shong(a), Min Xie(a), (a) College of Chemistry & Molecular Sciences and (b)School of Medicine, Wuhan University, Wuhan, 430072 P. R. China
- I/PII.18** OPTICAL PROPERTIES OF POLY(PHENYLENE VINYLENE) OLIGOMER/POROUS SILICON COMPOSITES
T.P. Nguyen(a), S.H. Yang(a,b), M.S. Wong(c), (a)Laboratoire de Physique des Matériaux et Nanostructures, Institut des Matériaux Jean Rouxel, 2 rue de la Houssinière, BP32229, 44322 Nantes, France, (b)Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan, (c)Department of Chemistry, The Hong Kong Baptist University, Kowloon Tong, Hong Kong, China
- I/PII.19** NANOPOROUS SOL-GEL SILICA FILM DOPED WITH NiO AND Au NANOCRYSTALS FOR OPTICAL AND ELECTRICAL GAS SENSORS
Dario Buso, Alessandro Martucci, Massimo Guglielmi, INSTM and Università di Padova, Dipartimento di Ingegneria Meccanica S. Materiali Via Marzolo 9, 35131 Padova, Italy, Michael Post, ICPET, National Research Council of Canada, 1200 Montreal Road, Ottawa, Ontario K1A 0R6, Canada, Carlo Cantalini Università di L'Aquila, Dipartimento di Chimica, Ing. Chimica e dei Materiali, Monteluco di Roio L'Aquila, Italy
- I/PII.20** A NEW LOW COST AND RECYCLABLE INORGANIC PRECURSOR TO NIOBIUM OXIDE MESOSTRUCTURES
Marcos A. Bizeto and Vera R.L. Constantino, Instituto de Química, Universidade de São Paulo, Av. Lineu Prestes 748, 05508-900, São Paulo, Brazil
- I/PII.21** MESOPOROUS SUPPORTS FOR NANOSIZED CATALYSTS
L. Alessandri, INSTM and Chemistry for Technologies Laboratory, University of Brescia, via Branze 38, 25123 Brescia, Italy, E. Bontempi, INSTM and Chemistry for Technologies Laboratory, University of Brescia, via Branze 38, 25123 Brescia, Italy, L.E. Depero, INSTM and Chemistry for Technologies Laboratory, University of Brescia, via Branze 38, 25123 Brescia, Italy, P.Fornasiero, Center of Excellence for Nanostructured Materials, INSTM-Trieste and Chemistry Department, via L.Giorgieri 1, 34127, Trieste, Italy
- I/PII.22** STRUCTURAL AND MAGNETIC STUDIES OF FERRIHYDRITE NANOPARTICLES FORMED WITHIN ORGANIC-INORGANIC MATRICES
N.J.O. Silva(a), A. Millan(b), V.S. Amaral(a), F. Palacio(b), L.M. Liz-Marzán(c), L.S. Fu(a), L.D. Carlos(a) and V. de Zea Bermudez(d), (a)Departamento de Física e CICECO Universidade de Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal, (b)Instituto de Ciencia de Materiales de Aragón, Universidad de Zaragoza C.S.I.C. 50009 Zaragoza, Spain, (c)Departamento de Química Física, Universidad de Vigo, 36200 Vigo Spain, (d)Departamento de Química and CQ-VR, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, Apartado 1013, 5001-911 and Vila Real, Portugal
- I/PII.23** CORRELATIONS BETWEEN THE SYNTHESIS PARAMETERS AND THE PROPERTIES OF POLYPYRROLE-MAGNETIC NANOPARTICLES COMPOSITES
 R. Turcu(a), D. Bica(b), L. Vekas(b), N. Aldea(a), D. Macovei(c), O. Pana(a), M.L. Soran(a), A. Nan(a), O. Marinica(d), C. Pop(a), (a)National Institute R&D for Isotopic and Molecular Technologies, PO Box 700, Cluj-Napoca, Romania, (b)Romanian Academy, Timisoara Branch, Magnetic Fluids Laboratory, Timisoara, Romania, (c)National Institute R&D of Materials Physics, P.O.Box MG-7 Bucuresti-Magurele, Romania, (d)National Center for Engineering of Systems with Complex Fluids Univ. Politehnica Timisoara, Romania
- I/PII.24** PERIODICALLY MESOSTRUCTURED ORGANO-SILICA MONOLITHS WITH HIERARCHICAL BUILD-UP
D. Brandhuber, Institute of Materials Chemistry, Vienna University of Technology, Getreidemarkt 9/165, 1060 Vienna, Austria, N. Hüsing, Division of Inorganic Chemistry I, University of Ulm, Albert-Einstein Allee 11, 89069 Ulm, Germany

- I/PII.25** HYBRID STRUCTURES BASED ON POLYPYRROLE AND MAGNETIC NANOPARTICLES OF $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ PEROVSKITE MANGANITE
O. Pana(a), R. Turcu(a), Al. Darabont(b), M.L. Soran(a), I. Deac(b), (a)National Institute R&D for Isotopic and Molecular Technologies, PO Box 700, Cluj-Napoca, Romania, (b)“Babes-Bolyai” Univ. of Cluj, Faculty of Physics, 1 Kogalniceanu str. Cluj-Napoca, Romania
- I/PII.26** SYNTHESIS OF MOLECULE-BASED MAGNETIC NANOPARTICLES
Y. Guari, G. Clavel, B. Folch, J. Larionova, Ch. Guérin, Laboratoire de Chimie de Moléculaire et Organisation du Solide, UMR 5637, Université Montpellier II, Bât. 17, cc 007, Place E. Bataillon, 34095, Montpellier cedex 5, France
- I/PII.27** GROWTH OF 3C-SiC NANOWIRES ON NICKEL COATED Si(100) SUBSTRATE USING DICHLOROMETHYLVINYLSILANE AND DIETHYLMETHYLSILANE BY MOCVD METHOD
B.-C. Kang, J.-S. Hyun, and J.-H. Boo, Department of Chemistry, Sungkyunkwan University, Suwon 440-746, Korea
- I/PII.28** MASSIVE SYNTHETIC METHOD OF ROOM TEMPERATURE STABLE NANOPOROUS $\text{12CaO}\cdot\text{7Al}_2\text{O}_3$ ELECTRIDE VIA MELT
Sung Wng Kim, Katsuro Hayashi, Masahiro Hirano, and Hideo Hosono Frontier Collaborative Research Center, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 226-8503, Japan
- I/PII.29** STUDY ON THE APPLICATIONS OF SiC THIN FILMS TO MEMS TECHNIQUES THROUGH A FABRICATION PROCESS OF CANTILEVERS
J.-S. Hyun(a), J.-H. Park(a), J.-S. Moon(a), J.H. Park(b), S.H. Kim(c), Y.J. Choi(c), N.-E. Lee(b) and J.-H. Boo(a), (a)Department of Chemistry, Sungkyunkwan University, Suwon 440-746, Korea, (b)Department of Materials Engineering, Sungkyunkwan University, Suwon 440-746, Korea, (c)Korea Electronics Technology Institute, Pyungtaek 451-865, Korea
- I/PII.30** TEMPLATING OF ORGANIC/INORGANIC HYBRID MATERIALS
C. Fritscher, Institute of Materials Science and Technology; H.C. Lichtenegger, Institute of Materials Science and Technology; J. Stampfl, Institute of Materials Science and Technology; N. Hüsing, Institute of Inorganic Chemistry I, University of Ulm, Germany; R. Liska, Institute of Applied Synthetic Chemistry, Vienna University of Technology, Austria; R. Inführ, Institute of Applied Synthetic Chemistry, Vienna University of Technology, Austria; S. Seidler, Institute of Materials Science and Technology
- I/PII.31** SOLID-STATE SYNTHESIS OF INORGANIC ELECTRIDE WITH MAYENITE TYPE STRUCTURE
S. Narushima, S. Ito, Research Center, Asahi Glass Co.,Ltd., 1150 Hazawa, Kanagawa-ku, Yokohama 221-8755, Japan, S. Kim, M. Miyakawa, K. Hayashi, T. Sakai, M. Hirano, and H. Hosono, Frontier Collaborative Research Center, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 226-8503, Japan
- I/PII.32** NANOCOMPOSITES BASED ON FUNCTIONALIZED NANOTUBES IN POLYANILINE MATRIX BY PLASMA POLYMERIZATION
Claudia Nastase(a), Ioan Stamatin(a), F. Nastase(a), A. Vaseashta(b), L.M. Constantinescu(a), (a)University of Bucharest, Polymer Science Department, P.O. Box MG-11, 077125 Magurele – Bucharest, Romania, (b)Marshall University, Department of Physics, Materials Processing and Characterization Laboratories, Huntington WV 25701, USA
- I/PII.33** SYNTHESIS AND CHARACTERIZATION OF SiO_2 – PANI / PTH NANOCOMPOSITES THIN FILM BY PLASMA POLYMERIZATION
F. Nastase(a), Ioan Stamatin(a), Claudia Nastase(a), V. Ciupina(b), G. Prodan(b), (a)University of Bucharest, Polymer Science Department, P.O. Box MG-11, 077125 Magurele – Bucharest, Romania, (b)Ovidius University of Constanta, Bd. Mamaia 124, Constanta, Romania
- I/PII.34** STRUCTURAL AND MAGNETIC PROPERTIES OF MANGANITE-SILICON STRUCTURES
I. Bergenti and V. Dediu, ISMN CNR, via P. Gobetti 101, 40129 Bologna, Italy, M.P. de Jong, Department of Physics, IFM, Linköping University, 581 83 Linköping, Sweden, C. Dennis and J. Gregg, Clarendon Laboratory, University of Oxford, Parks Road, Oxford OX1 3PU, U.K.
- I/PII.35** MAGNETIC PROPERTIES AND STRUCTURE OF Sm-Fe-X FILMS PROCESSED BY PULSED LASER DEPOSITION
S. Kobe, G. Drasic, Department of Nanostructured Materials, Josef Stefan Institute, Jamova 39, Ljubljana, Slovenia, E. Sarantopoulou, Z. Kollia, A.C. Cefalas, National Hellenic Research Foundation, TPCL, Athens 11635, Greece
- I/PII.36** ACID FUNCTIONALIZED COLLOIDS
L. Pautrot, P. Barboux, K. Lahlil, Physique de la Matière Condensée, Ecole Polytechnique, 91128 Palaiseau, France
- I/PII.37** AEROSOL GENERATED MESOPOROUS MATERIALS WITH EXPANDED PORES
Malin Sörensen, YKI Institute for Surface Chemistry, Stockholm, Sweden Peter Alberius, YKI Institute for Surface Chemistry, Stockholm, Sweden
- I/PII.38** GROWTH AND CONTROLLED OXIDATION IN ELECTRODEPOSITED Sn AGGREGATES FOR GAS SENSORS
P. Andreatza, C. Andreatza-Vignolle, Centre de Recherche sur la Matière Divisée, UMR 6619, CNRS-Université d'Orléans, 1b rue de la Férollerie, 45071 Orléans Cedex 2, France and I. Kante, T. Devers, L. Allam, LESI, Laboratoire de Physique Electronique, Université d'Orléans, IUT de Chartres, 28000 Chartres, France

- I/PII.39** COMPARISON OF BLTO FILMS DEPOSITED BY MAGNETRON SPUTTERING AND PULSED LASER DEPOSITION
M.P. Besland(a), H. Djani-ait Haissa(b), P.R.J. Barroy(a), P.Y. Tessier(a), B. Angleraud(a), M. Richard(a), L. Brohan(a) and M.A. Djouadi(a) (a)Institut des Matériaux Jean Rouxel, UMR 6502, 2 rue de la Houssinière, B.P. 32229, 44322, Nantes cedex 3, France, (b)Division milieux Ionisés et lasers, Centre des Technologies Avancées CDTA, Baba Hassen Alger, Algérie
- I/PII.40** LOCAL STRUCTURE OF POTASSIUM DOPED SILOXANE-POLYOXYPROPYLENE SOLID IONIC CONDUCTORS
 J.A. Chaker(a,b,c), P. Hammer(a), K. Dahmouche(a), C.V. Santilli(a), V. Briois(b), P. Judeinstein(c),(a)Instituto de Química (UNESP), C.P. 355, 14800-900 Araraquara, SP, Brazil, (b)LURE-Centre Universitaire Paris-Sud, BP 34, 91898 Orsay, France, (c)Lab. de Chimie Structurale Organique, Centre Universitaire Paris-Sud, 91898 Orsay, France
- I/PII.41** GROWTH MODES AND SELF-ORGANIZATION IN THE EPITAXY OF FERROMAGNETIC SrRuO₃ ON SrTiO₃(001)
F. Sánchez(a), G. Herranz(a), C. Ferrater(b), M.V. García-Cuenca(b), M. Varela(b), J. Fontcuberta(a), (a)Institut de Ciència de Materials de Barcelona, CSIC, Campus U.A.B., 08193 Bellaterra, Spain, (b)Dep. de Física Aplicada i Òptica, Universitat de Barcelona, Diagonal 647, Barcelona 08028, Spain
- I/PII.42** TIN CLUSTERS AS NANOBUILDING BLOCKS FOR HYBRID MATERIALS
E. Martínez-Ferrero(a), F. Ribot(a), L. Rozes(a), C. Sanchez(a) and L. Matejka(b), (a)Laboratoire de Chimie de la Matière Condensée, 4, Place Jussieu, 75005 Paris, France, (b)Institute of Macromolecular Chemistry, Prague, Czech Republic
- I/PII.43** JAMMING STATE OF BINARY MIXTURE DEPOSITION ON PRE-TREATED SURFACES
N. Araújo and A.M. Cadilhe, GCEP - Centro de Física da Universidade do Minho, 4710-057 Braga, Portugal
- I/PII.44** THE USE OF HEXAGONAL MESOPOROUS SILICA MATRICES FOR THE PREPARATION OF CONTROLLED-ANISOTROPY IRON NANOWIRES
 A.A. Eliseev, K.S. Napolskii, I.V. Kolesnik, Yu. D. Tretyakov, A.V. Lukashin, Dept. of Materials Science, Moscow State University, 119992 Moscow, Russia, Peter Gornert, INNOVENT e.V., Prüssingstrasse 27 B, 07745 Jena, Germany, N.A. Grigorieva, S.V. Grigoriev, St-Petersburg State University, St-Petersburg, 198504, Russia, A.A. Vorobiev, Institute Laue-Langevin, B.P. 156, Grenoble Cedex 9, 38042, France
- I/PII.45** SYNTHETIC ROUTE TO TiO₂ NANO CRYSTALS WITH CONTROLLABLE STRUCTURE AND SHAPE
A. Rouet, E. Puzenat, A. M. Marie, T. Cottineau, M. Richard, L. Brohan Institut des Matériaux Jean Rouxel, UMR 6502, 2 rue de la Houssinière, B.P. 32229, 44322, Nantes cedex 3, France
- I/PII.46** VISCOMECHEMICAL DETECTION OF VAN DER WAALS BONDS IN CARBON-BASED MATERIALS
Patrick Lemoine, John Paul Quinn, Paul Maguire, Pagona Papakonstantinou and Niall Dougan, U.K.
- I/PII.47** SYNTHESIS AND STRUCTURAL PECULIARITIES OF Ce-Zr-La-O NANO-SYSTEM
E.V. Frolova, M.I. Ivanovskaya, Research Institute for Physical Chemical Problems, BSU, Minsk, Belarus; V.V. Kharton, A.A. Yaremchenko, Department of Ceramics and Glass Engineering, CICECO, University of Aveiro, Aveiro, Portugal
- I/PII.48** NANOSCALE MANIPULATION OF QUANTUM DOTS IN PHOTOLUMINESCENT NANOSTRUCTURES
V. Zucolotto(a), K.M. Gattás-Asfura(b), T. Tumolo(c), P.A. Antunes(d), C.J.L. Constantino(d), M.S. Baptista(c), R.M. Leblanc(b) and O.N. Oliveira Jr.(a), (a)IFSC, Universidade de São Paulo, CP 369, 13560-970, São Carlos, SP, Brazil, (b)Department of Chemistry, University of Miami, Coral Gables, Florida, 33146, USA (c)IQ, Universidade de São Paulo, CP 26077, 05513-970, São Paulo, Brazil, (d)FCT, Universidade Estadual Paulista, CP 467, 19060-900, Presidente Prudente, SP, Brazil
- I/PII.49** THE ORIGIN OF DEFECTS FORMATION IN NANOSIZED ZIRCONIA
E.V. Frolova, M.I. Ivanovskaya, Research Institute for Physical Chemical Problems, BSU, Minsk, Belarus
- I/PII.50** IMPROVEMENT OF HEAVY METAL FLUORIDE GLASSES RESISTANCE BY SURFACE RECOVERING WITH TRANSPARENT TIN OXIDE LAYERS PREPARED BY SOL-GEL PROCESS
A.P. Rizzato, C.V. Santilli, S.H. Pulcinelli, P. Hammer, LQM-Instituto de Química/Unesp P.O. Box 355, Araraquara, SP, Brasil
- I/PII.51** PHOTOLUMINESCENCE STUDY OF NOVEL SELF-ASSEMBLY ORGANIC-INORGANIC MONO-AMINOSIL HYBRIDS
R.A. Sá Ferreira, S.S. Nobre, J. Cybinska, L.D. Carlos, Departamento de Física and CICECO, Universidade de Aveiro, 3810-193 Aveiro, Portugal and S.C. Nunes, V. de Zea Bermudez, Departamento de Química and CQ-VR, Universidade de Trás-os-Montes e Alto Douro 5000-911 Vila Real, Portugal
- I/PII.52** A STRUCTURAL AND CHEMICAL STUDY OF GALLIUM NITRIDE NANOSTRUCTURES: NANONEEDLES, NANOBELTS AND NANOWIRES
A.S.W. Wong(a), G.W. Ho(b), P.M.F.J. Costa(a) and C.J. Humphreys(a), (a)Department of Materials Science and Metallurgy, New Museum Site, Pembroke Street, University of Cambridge, Cambridge, CB2 3QZ, U.K., (b)Nanoscience Centre, University of Cambridge, 11 J.J. Thompson Avenue, Cambridge CB3 0FF, U.K.

Session V : Functional materials

Session chairs :

- I-V.01** 8:30 -Invited- ORDERED MESOPOROUS MATERIALS AS THE BASIS FOR CONTROLLED NANOSTRUCTURING OF SOLIDS
F. Schüth
- I-V.02** 9:15 -Invited- MULTIFUNCTIONAL HYBRID MATERIALS FOR ENERGY PRODUCTION AND STORAGE DEVICES
Mónica Lira-Cantú, Institut de Ciencia de Materials de Barceleona (ICMAB, CSIC), Barcelona, Spain
- I-V.03** 9:45 ENGINEERED COLLOIDAL CRYSTALS WITH TUNABLE OPTICAL PROPERTIES
Pascal Masse, **Stephane Reculusa**, **Serge Ravaine** Centre de Recherche Paul Pascal - CNRS, 115 avenue du Dr. Schweitzer, 33600 Pessac, France
- I-V.04** 10:00 OPAL HETEROJUNCTIONS AS FUNCTIONALISED PHOTONIC CRYSTALS
S.G. Romanov, C.M. Sotomayor Torres, Tyndall National Institute, University College Cork, Lee Maltings, Prospect Row, Cork, Ireland, D.N. Chigrin, Institute of Physics, University of Bonn, 53115 Bonn, Germany, N. Gaponik, A. Eychmueller, Institute of Physical Chemistry, University of Hamburg, 20146 Hamburg, Germany, A.L. Rogach, Department of Physics and CeNS, University of Munich, 80799 Munich, Germany, M. Egen, J. Ye, R. Zentel, Institute of Organic Chemistry, University of Mainz, 55099 Mainz, Germany
- I-V.05** 10:15 SOLUTION PROCESSABLE NANOCOMPOSITE DENDRIMERS BASED ON INORGANIC CORES FOR USE IN ORGANIC LIGHT EMITTING DIODES (OLEDs)
Alan Sellinger(a), **Sudhakar Sundarraj**(a), **Ryo Tamaki**(b,c), **Richard M. Laine**(c), **Kazunori Ueno**(d), **Hiroshi Tanabe**(d), **Evan Williams**(e), **Ghassan E. Jabbour**(e), (a)Institute of Materials Research and Engineering (IMRE), Singapore, Republic of Singapore, (b)General Electric Company, Niskayuna NY, USA, (c)Macromolecular Science and Engineering; Materials Science and Engineering, University of Michigan, Ann Arbor MI, USA, (d)Canon, Inc., Tokyo, Japan, (e)Chemical and Materials Engineering & Flexible Display Center, Arizona State University, Tempe AZ 85284, USA
- 10:30 **BREAK**
- I-V.06** 11:00 MULTILAYER MULTIFUNCTIONAL MESOPOROUS METAL OXIDE THIN FILMS MADE BY INTEGRATIVE TEMPLATING AND ETCHING METHODS
Galo J. de A. A. Soler-Illia, **Paula C. Angelomé** and **M. Cecilia Fuentes**, Unidad de Actividad Química, CNEA, Centro Atómico Constituyentes, Av. Gral Paz 1499 (B1650KNA) San Martín, Pcia de Bs.As, Argentina
- I-V.07** 11:15 MAGNETIC SUSCEPTIBILITY OF COLLOIDAL CDSE NANOCRYSTALS
L.E. Calvet*, **V.J. Porter**, **J. Collins**, **M. Bawendi**, **M.A. Kastner** Department of Physics and Department of Chemistry, Cambridge MA 02139, USA, *Current Address: Unité Mixte de Physique CNRS/Thales (UMR137), Domaine de Corbeville, 91404 Orsay, France
- I-V.08** 11:30 DEVELOPMENT OF NANOCOMPOSITE COATINGS AS UV AND VISIBLE LIGHT HOLOGRAPHIC RECORDING MATERIAL BY PHOTO-INDUCED DIFFUSION OF NANOPARTICLES
M. Mennig, **P.W. Oliveira**, **S.S. Yip**, **H. Schmidt**, Leibniz-Institut für Neue Materialien gem. GmbH, Im Stadtwald, Gebäude 43 A, 66123 Saarbrücken, Germany
- I-V.09** 11:45 Withdraw
- I-V.10** 12:00 TUNING THE PROPERTIES OF NANOSTRUCTURED INORGANIC-ORGANIC HYBRID POLYMERS OBTAINED FROM METAL OXIDE CLUSTERS AS BUILDING BLOCKS
U. Schubert, **Y. Gao**, **F.R. Kogler**, **M. Yupa**, Institute of Materials Chemistry, Vienna University of Technology, Getreidemarkt 9, 1060 Wien, Austria
- I-V.11** 12:15 NANOSCALE RINGS, DOTS AND RODS ON SOLID SUBSTRATE BY SHADOW NANOSPHERE LITHOGRAPHY
A. Kosiorek, **W. Kandulski**, **H. Glaczynska**, **M. Olek**, **M. Giersig**, Caesar - Research Center, Dept. Nanoparticle Technology, Ludwig-Erhard-Allee 2, 53175 Bonn, Germany
- 12:30 **LUNCH**

Thursday, June 2, 2005
Jeudi 2 juin 2005

Afternoon
Après-midi

Session VI : Solid state approach of hybrids

Session chairs :

- I-VI.01** 14:00 -Invited- FLEXIBLE GUEST SORPTION AND TRAPPING BY METAL-ORGANIC FRAMEWORKS
M. Rosseinsky
- I-VI.02** 14:45 -Invited- ARTIFICIAL ATOM SOLIDS BASED ON NANOCRYSTAL QUANTUM DOTS: SYNTHESIS AND ELECTRICAL PROPERTIES
G. Redmond
- I-VI.03** 15:15 FORMATION MECHANISM AND PHYSICO-CHEMICAL PROPERTIES OF MESOSTRUCTURED THIN FILMS OF TUNGSTEN OXIDE WITH HIGHLY CRYSTALLINE FRAMEWORK OBTAINED FROM NOVEL BLOCK COPOLYMERS
Bernd Smarsly, Torsten Brezesinski, Markus Antonietti, Christian Erpen, MPI of Colloids and Interfaces, Potsdam, Germany
- I-VI.04** 15:30 THE STRUCTURAL AND DIELECTRIC PROPERTIES OF THE CORE-SHELL STRUCTURE CERAMICS DERIVED FROM NANOSCALED BST CORE MATERIAL
H.Y. Tian, J.Q. Qi, Y. Wang, H.L.W. Chan, and C.L. Choy, Department of Applied Physics and Materials Research Center, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, China
- I-VI.05** 15:45 HYBRID NANOSTRUCTURED MATERIALS BY SUPERSONIC MOLECULAR AND CLUSTER BEAMS
T. Toccoli, N. Coppedè, F. Siviero, A. Pallaoro, S. Chiarani, L. Aversa, A. Boschetti, M. Nardi, R. Verucchi and S. Iannotta, IFN-CNR, Istituto di Fotonica e Nanotecnologie Sezione di Trento, Italy
- 15:50 **BREAK**

Session VII : Polymeric materials

Session chairs :

- I-VII.01** 16:30 -Invited- SYNTHESIS AND CHARACTERIZATION OF NOVEL FILM-FORMING (CO)POLYMER/CLAY COMPOSITE LATEXES
E. Bourgeat-Lami
- I-VII.02** 17:00 HYBRID POLYION COMPLEX MICELLES AS PRECURSORS FOR POLYMER-STABILIZED METAL HYDROXIDE NANOPARTICLES
Nicolas Sanson, Corine Gerardin, François Fajula, Laboratoire de Matériaux Catalytiques et Catalyse en Chimie Organique, UMR ENSCM UMI CNRS 5618, Ecole Nationale Supérieure de Chimie de Montpellier, 8 rue de l'Ecole Normale, 34296 Montpellier cedex 5, France
- I-VII.02** 17:15 -Invited- BUILD-TO-ORDER ASSEMBLY OF MULTIMATERIAL FILMS
G. Decher
- 17:45-19:00 **POSTER SESSION III**

POSTER SESSION III
Thursday, June 2, 2005
17:45 – 19:00

- I/PIII.01** HARD CARBON NANOSTRUCTURES PREPARED USING CONVENTIONAL SCANNING ELECTRON MICROSCOPES AND DUAL FOCUSED ION BEAM SYSTEMS
P. Lemoine and J.P Quinn, University of Ulster, Newtonabbey, U.K.
- I/PIII.02** PROPERTIES OF Ce-Zr-La-O NANO-SYSTEM WITH RUTHENIUM MODIFIED SURFACE
E. Frolova, M. Ivanovskaya, Research Institute for Physical Chemical Problems, BSU, Minsk, Belarus; V. Sadykov, G. Alikina and A. Lukashevich, Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
- I/PIII.03** ELECTROCHEMICAL PROPERTIES OF A RUTHENIUM COMPLEX IN LANGMUIR-BLODGETT FILMS AND CARBON PASTE ELECTRODES
K. Wohnerath(a), C.A. Pessôa(a), P.M. dos Santos(a), J.R. Garcia(b), A.A. Batista(c), O.N. Oliveira Jr.(d), (a)DeQuim/UEPG, Av. Carlos Cavalcanti, 4748, CEP 84030-900, Ponta Grossa, Brazil, (b)DEQ/UNICENTRO, Guarapuava, Brazil, (c)DQ/UFSCar, São Carlos, Brazil, (d)IFSC/USP, São Carlos, Brazil
- I/PIII.04** Withdraw
- I/PIII.05** SOLID-STATE SYNTHESIS OF INORGANIC ELECTRIDE WITH MAYENITE TYPE STRUCTURE
S. Narushima, S. Ito, Research Center, Asahi Glass Co.,Ltd., 1150 Hazawa, Kanagawa-ku, Yokohama 221-8755, Japan, S. Kim, M. Miyakawa, K. Hayashi, M. Hirano, and H. Hosono, Frontier Collaborative Research Center, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 226-8503, Japan
- I/PIII.06** ONE-STAGE TEMPLATE SYNTHESIS OF MESOPOROUS SILICAS CONTAINING THIOUREA FUNCTIONAL GROUPS
Yu.L. Zub, O.I. Gona, A.A. Chuiko, Institute of Surface Chemistry, NAS of Ukraine, 17 General Naumov Str., Kyiv 03164 Ukraine, N.A. Yaroshenko, Institute of Sorption and Endoecology Problems, NAS of Ukraine, Kyiv, and A. Dabrowski, LCSU, Lublin, Poland
- I/PIII.07** COMPARATIVE CHARACTERISTIC OF STRUCTURE AND PROPERTIES OF HYBRID ORGANIC-INORGANIC ABSORBENTS FUNCTIONALIZED BY AMINE- AND THIOL- GROUPS
Yu.L. Zub, I.V. Melnik, N.V. Stolyarchuk, H.I. Dobryans'ka, Institute of Surface Chemistry, NAS of Ukraine, 17 General Naumov Str., Kyiv 03164 Ukraine, and M. Barczak, A. Dabrowski, Chemistry Facultat, LCSU, Lublin, Poland
- I/PIII.08** HARD MAGNETS FROM NANOSIZED IRON OXIDE IN SILICA PREPARED BY SOL-GEL
A. Hutlova(a,b), C. Estournès(c), M. Kurmoo(d) D. Niznansky(b,e), S. Vilminot(a), J.L. Rehspringer(a), (a)I.P.C.M.S., Groupe des Matériaux Inorganiques, UMR 7504 CNRS-ULP, 23 Rue du Loess, 67034 STRASBOURG Cedex2, France, (b)Institute of Inorganic Chemistry, ASCR, 25068 Rez u Prahy, Czech Republic, (c)CIRIMAT, UMR 5085 CNRS - UPS - INP, 118 route de Narbonne, 31062 Toulouse Cedex 04, France, (d)Laboratoire de Chimie de Coordination Organique, UMR 7140 CNRS - ULP, Tectonique Moléculaire du Solide, Université Louis Pasteur, 4, rue Blaise Pascal, 67000 Strasbourg Cedex01, France, (e)Department of Inorganic Chemistry, Faculty of Science, Charles University of Prague, Albertov 2030, 128 40 Prague 2, Czech Republic
- I/PIII.09** INFLUENCE OF PRECIPITATION AND AGEING MEDIUM ON THE CHARACTERISTICS OF NANO ALUMINA AND a ALUMINA
M. Thiruchitrambalam(a), V.R. Palkar(b) and V. Gopinathan(c), (a)Dept. of Mechanical Engineering, MCET, Anna University, Tamil Nadu, India, (b)Dept. of Condensed Matter Physics and Materials Science Group, Tata Institute of Fundamental Research, Mumbai 400 005, India, (c)Dept. of Metallurgical Engineering and Materials Science, Indian Institute of Technology, Mumbai 400 076, India
- I/PIII.10** CORE-SHELL COPPER HYDROXIDE-POLYSACCHARIDE COMPOSITES WITH HIERARCHICAL MACROPOROSITY
F. Quignard, F. Di Renzo, C. Gerardin, Laboratoire de Matériaux Catalytiques et Catalyse en Chimie Organique, UMR 5618 CNRS-ENSCM-UM1, Institut C. Gerhardt, FR 1878, ENSCM, 8 rue Ecole Normale, 34296 Montpellier, France
- I/PIII.11** Withdraw
- I/PIII.12** TALC AS THE CATHODE MATERIAL FOR LITHIUM-ION ENERGY SOURCES
I.I. Grygorchak, B.P. Bachmatyuk, A. Pidluejna, I.M. Bordun, National University "Lviv Politechnic", Kotlyarevskogo Str. 1, r.1, Lviv 79013, Ukraine
- I/PIII.13** PROBING ELECTRON INJECTION AT ORGANIC / INORGANIC SEMICONDUCTOR INTERFACES
J. Cabanillas-Gonzalez(a), A. Gambetta(a), C. Manzoni(a), G. Cerullo(a), M. Cantoni(a), F. Ciccacci(a), L. Favaretto(b), G. Barbarella(b) and G. Lanzani(a), (a)IFN-CNR, Dipartimento di Fisica, ULTRAS-INFM, Politecnico di Milano, Milano 20133, Italy, (b)Consiglio Nazionale delle Ricerche (CNR), ISOF, Area della Ricerca di Bologna, via Gobetti 101, 40129 Bologna, Italy

- I/PIII.14** PBCN ORTHORHOMBIC SnO₂ NANOWIRES FOR NANOSIZED GAS SENSORS CHARACTERIZED BY HRTEM AND EELS
J. Arbiol(a,b), J.R. Morante(b), E. Comini(c); G. Faglia(c) and G. Sberveglieri(c), (a)TEM-MAT, SSR, Universitat de Barcelona, Lluís Sole i Sabaris 1-3, 08028 Barcelona, CAT, Spain, (b)EME, Departament d'Electronica, Universitat de Barcelona, 08028, Barcelona, CAT, Spain, (c)INFN and Università di Brescia, via valotti 9, 25133 Brescia, Italy
- I/PIII.15** = I/PII.51
- I/PIII.16** SELF-ASSEMBLY OF MONO-AMIDE ALKYLENE/ SILOXANE HYBRIDS
 S.C. Nunes, V. de Zea Bermudez, Dep. of Chemistry and CQ-VR, University of Trás-os-Montes and Alto Douro, 5000-911 Vila Real, Portugal, R.A. Sá Ferreira, L. D. Carlos, Dep. of Physics and CICECO, University of Aveiro, 3810-193 Aveiro, Portugal, M.M. Silva, M.J. Smith, Dep. of Chemistry, University of Minho, Gualtar, 4710-057 Braga, Portugal, D. Ostrovskii, Dep. of Applied Physics, Chalmers University of Technology, 41296 Göteborg, Sweden, J. Rocha, Dep. of Chemistry and CICECO, University of Aveiro, 3810-193 Aveiro, Portugal
- I/PIII.17** FIRST DIRECT SYNTHESIS OF HIGHLY ORDERED MULTIFUNCTIONALISED MESOPOROUS SILICA THIN FILMS
Ahmad Mehdi(a), Sandrine Dourdain(b), Jean-François Bardeau(b), Catherine Reyé(a), Alain Gibaud(b) and Robert J.P. Corriu(a), (a)Laboratoire de Chimie Moléculaire et Organisation du Solide, Université de Montpellier II, UMR 5637 CNRS, Place E. Bataillon, 34095 Montpellier Cedex 5, France, (b)Laboratoire de Physique de l'Etat Condensé, Université du Maine, UMR 6087 CNRS, 72085 Le Mans Cedex 09, France
- I/PIII.18** AN ORIGINAL SYNTHESIS OF LARGE-PORE ORDERED MESOPOROUS SILICAS CONTAINING AMINOPROPYL GROUPS
Ahmad Mehdi(a), Catherine Reyé(a), Stéphane Brandès(b), Roger Guillard(b), Robert J.P. Corriu(a), (a)Laboratoire de Chimie Moléculaire et Organisation du Solide, Université de Montpellier II, UMR 5637 CNRS, Place E. Bataillon, 34095 Montpellier Cedex 5, France, (b)Laboratoire d'Ingénierie Moléculaire pour la Séparation et les Applications des Gaz, LIMSAG, UMR 5633, Université de Bourgogne, 6 Boulevard Gabriel, 21100 Dijon, France
- I/PIII.19** PHOTO RESPONSIVE ORDERED HYBRID MATERIALS CONTAINING A BRIDGED AZOBENZENE GROUP
 Eric Besson(a), Ahmad Mehdi(a), Dan A. Lerner(b), Catherine Reyé(a), Robert J.P. Corriu(a), (a)Laboratoire de Chimie Moléculaire et Organisation du Solide, UMR 5637 CNRS, Université de Montpellier II, Sciences et Techniques du Languedoc, Place E. Bataillon, 34095 Montpellier Cedex 5, France, (b)ENSCM, UMR 5618 CNRS, 8, rue de l'Ecole Normale, F-34296 Montpellier Cedex 5, France
- I/PIII.20** SYNTHESIS AND CHARACTERIZATION OF SELENIUM CONFINED IN CARBON NANOTUBES
Jérôme Chancelon, Françoise Archaimbault, Alain Pineau, Sylvie Bonnamy, CRMD, CNRS/Université, 1B rue de la Férollerie, 45071 Orléans Cedex 2, France
- I/PIII.21** EFFECT OF DOPANT ON THE PHYSICAL PROPERTIES OF POLYMER FILMS FOR MICROPHOTONICS
Paula Obreja(a), Dana Cristea(a), Elena Budianu(a), Roxana Rebigan(a), Victor Kuncser(b), Mircea Bulinski(b), George Filoti(b), (a)National Institute for Research and Development in Microtechnologies, Bucharest, Romania, (b)National Institute for Research and Development in Materials Physics, Bucharest, Romania
- I/PIII.22** MECHANICAL PROPERTIES OF UV-PHOTOPOLYMERIZABLE HYBRID SOL-GEL FILMS INVESTIGATED BY AFM IN PULSED FORCE MODE
 O. Soppera, M. Feuillade, C. Carré, Dépt. de Photochimie Générale, CNRS UMR 7525, 3 rue A. Werner, 68093 Mulhouse, France
- I/PIII.23** A COMPARISON BETWEEN ACID AND BASIC CATALYSIS OF GLYCIDOXYPROPYLTRIMETHOXYSILANE BASED SOL-GEL HYBRID MATERIALS FOR PHOTOCURABLE SYSTEMS
Giovanna Brusatin, Gioia Della Giustina, Massimo Guglielmi, Department of Mechanical Engineering – Materials Sector, via Marzolo 9, 35131 Padova, Italy; Plinio Innocenzi, Dipartimento di Architettura e Pianificazione - Laboratorio di Scienza dei Materiali e Nanotecnologie, Università di Sassari Palazzo Pou Salit, Piazza Duomo 6, 07041 Alghero (SS), Italy
- I/PIII.24** NEGATIVE DIFFERENTIAL MAGNETIZATION IN NI DISCONTINUOUS LAYERS EMBEDDED IN AN Al MATRIX
E. Fonda(a), S.R. Teixeira(b), J. Geshev(b), D. Babonneau(c), F. Pailloux(c), A. Traverse(a), (a)Laboratoire pour l'Utilisation du Rayonnement Electromagnetique, BP 34, 91898 Orsay, France, (b)Instituto de Fisica -UFRGS, P.O. Box 15051, 91501-970, Porto Alegre, RS, Brazil, (c)Laboratoire de Metallurgie Physique, UMR6630 CNRS, 86962Futuroscope Chasseneuil, France
- I/PIII.25** ORGANIZATION OF METALLIC NANOPARTICLES ONTO ALUMINA SURFACE : APPLICATION TO THE ELABORATION OF VARIABLE CAPACITORS
D. Veautier(a), N. Lidgi(b), G. Viau(a), P. Sénéor(b) F. Nguyen Van Dau(b), F. Fiévet(a), A. Friederich(b), A. Fert(b); (a)ITODYS, Université Paris 7, 2 Place Jussieu, 75251 Paris Cedex 05, France; (b)Unité mixte de Physique CNRS/Thales, Domaine de Corbeville, 91404 Orsay, France
- I/PIII.26** THICK ETCH-THROUGH MACROPOROUS SILICON MEMBRANE WITH TUNING THE PORE SIZE AND FAST PORE ETCHING FROM n-Si
 P.Y.Y. Kan and T.G. Finstad, Dept of Physics, University of Oslo, P O Box 1048, Blindern, Oslo N-0316, Norway

- I/PIII.27** 29SI LIQUID NMR INVESTIGATION OF PHOTOPATTERNABLE HYBRID SOL-GEL
M. Feuillade, C. Croutxé-Barghorn, C. Carré, Département de Photochimie Générale, CNRS UMR n°7525, E.N.S.C.Mu., 68093 Mulhouse Cedex, France
- I/PIII.28** FLUORESCENCE STUDY OF THE SOL-GEL PROCESS IN HYBRID PRECURSOR
C. Croutxé-Barghorn, D. Hu, M. Feuillade, C. Carré, Département de Photochimie Générale, CNRS UMR n°7525, E.N.S.C.Mu., 68093 Mulhouse Cedex, France
- I/PIII.29** SECOND-HARMONIC GENERATION FROM LANGMUIR-BLODGETT FILMS OF VARIOUS OPTICALLY NON-LINEAR PYRIDINE AND TERPYRIDINE METAL COMPLEXES
Danika Locatelli, Stefania Righetto, Dominique Roberto and Renato Ugo, Dipartimento di Chimica Inorganica, Metallorganica e Analitica dell' Università di Milano, UdR dell'INSTM di Milano, Centro di Eccellenza CIMAINA, and Istituto di Scienze e Tecnologie Molecolari del CNR (ISTM), via Venezian 21, 20133 Milano, Italy; Silvio Quici, Istituto di Scienze e Tecnologie Molecolari del CNR (ISTM) and Dipartimento di Chimica Organica e Industriale Via C. Golgi 19, 20133 Milano, Italy; Geoffrey J. Ashwell and Mukhtar Amiri, Centre for Photonics and Optical Engineering, The Whittle Building, Cranfield University, Cranfield MK43 0AL, U.K.
- I/PIII.30** ELECTROCATALYTIC OXIDATION OF ASCORBIC ACID AT ACID TREATED MULTI-WALL CARBON NANOTUBE ELECTRODES
T. Cunning, P. Papakonstantinou, E.T. McAdams, NIBEC, School of Electrical and Mechanical Engineering, University of Ulster, Newtownabbey BT 37 0QB, Northern Ireland, U.K.
- I/PIII.31** = I-V.11
- I/PIII.32** MESOPOROUS MATRICES DOPED BY METAL TRANSITION IONS (Cu²⁺, Fe²⁺, Fe³⁺, Co²⁺): EPR INVESTIGATIONS AND NUMERICAL SIMULATIONS
A. Kassiba, Laboratoire de Physique de l'Etat Condensé-UMR-CNRS 6087, 72085 Le Mans, France, M. Makowska-Janusik Institute of Physics, University of Czestochowa, Al.Armi.Krajowej 13/15, 42-200 Czestochowa, Poland, Johan Alauzun and Ahmad Mehdi Laboratoire de Chimie Moléculaire et Organisation du Solide, UMR 5637 CNRS, Université de Montpellier II, Place E. Bataillon, 34095 Montpellier Cedex 5, France
- I/PIII.33** ELECTROOPTICAL PROPERTIES OF FUNCTIONAL HYBRID GUEST-HOST MATERIALS BASED ON POLYMER-SiC NANOPARTICLES
A. Kassiba, J. Bouclé, Laboratoire de Physique de l'Etat Condensé- UMR CNRS 6087, 72085 Le Mans cedex, France and M. Makowska-Janusik, Institute of Physics, University of Czestochowa, Al.Armi.Krajowej 13/15, 42-200 Czestochowa, Poland
- I/PIII.34** OXIDE NANOTEMPLATES FOR SELF-ASSEMBLING "SOLID" BUILDING BLOCKS
N. Berdunov, G. Mariotto, I.V. Shvets, SFI Laboratories, Physics Dept., Trinity College, Dublin, Ireland
- I/PIII.35** HYBRID FUNCTIONAL MATERIALS FOR ENERGY PRODUCTION AND STORAGE DEVICES
Karina Cuentas-Gallegos, Juan Antonio Asencio, Nieves Casañ-Pastor, Mónica Lira-Cantú, Pedro Gómez-Romero, Institut de Ciencia de Materials de Barcleona (ICMAB, CSIC), Barcelona, Spain
- I/PIII.36** METAL NANOPARTICLES ENCAPSULATED IN CONDUCTING ORGANIC POLYMERS APPLICATION IN ENERGY STORAGE DEVICES
M. Lira-Cantú, P. Gómez-Romero, Institut de Ciencia de Materials de Barcleona (ICMAB, CSIC), Barcelona, Spain
- I/PIII.37** METAL SPONGES WITH FRACTAL POROSITY FROM SIMPLE COMBUSTION TECHNIQUE
M. Lira-Cantú, B. Ballesteros, N. Casañ-Pastor and P. Gómez-Romero, Institut de Ciencia de Materials de Barcleona (ICMAB, CSIC), Barcelona, Spain
- I/PIII.38** I/PII.52
- I/PIII.39** HYBRID POLYMER ARCHITECTURE TO RELEASE SELF-STANDING MULTIMATERIAL FILMS
Shoko S. Ono(a,b), Gero Decher(a,c), (a)Institut Charles Sadron, 6 rue Baussingault, 67083 Strasbourg , France, (b)R&D Center, Mitsui Chemicals, Inc, 580-32, Nagaura, Sodegaura, Chiba 299-0265, Japan, (c)Université Louis Pasteur, Faculté de Chemie, 4 rue Blaise Pascal, 67000 Strasbourg, France
- I/PIII.40** FIRST MAGNETIC MESOPOROUS HYBRID MATERIALS CONTAINING Fe/CYCLAM MOIETIES
Ahmad Mehdi(a), Johan Alauzun(a), Alain Gibaud(b), Jean-Marc Greneche(b), Catherine Reyé(a), Robert J.P. Corriu(a), (a)Laboratoire de Chimie Moléculaire et Organisation du Solide, UMR 5637 CNRS, Université de Montpellier II, Sciences et Techniques du Languedoc, Place E. Bataillon, 34095 Montpellier Cedex 5, France, Laboratoire de Physique de l'Etat Condensé, Université du Maine, UMR 6087 CNRS, 72085 Le Mans Cedex 09, France
- I/PIII.41** SELF-ASSEMBLED NANOTUBES IN ORGANIC SOLVENTS FROM BISAMIDES
P. Mésini, F.X. Simon, M. Schmutz and N. Diaz, ICS (CNRS-UPR 22), 6 rue Boussingault, 67083 Strasbourg, France

- I/PIII.42** SYNTHESIS AND CHARACTERISATION OF A NOVEL PHOSPHOVANADATE LAYERED HYBRID MATERIAL
Fa Nian Shi(a), Filipe A. Almeida Paz(a), Tito Trindade(a), Jacek Klinowski(b) and João Rocha(a), (a)Department of Chemistry, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal, (b)Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, U.K.
- I/PIII.43** CUBIC SILSESQUIOXANE-POLYIMIDE NANOCOMPOSITES WITH IMPROVED THERMOMECHANICAL PROPERTIES AND DIELECTRIC PROPERTIES
Junchao Huang, Chaobin He, Institute of Materials Research and Engineering, 3 Research Link, 117602 Singapore
- I/PIII.44** ORGANIC/INORGANIC TRANSITION METAL-THIOPHENE BASED LAYERED MATERIALS: SYNTHESIS, STRUCTURE AND MAGNETIC PROPERTIES
Aude Demessence, Guillaume Rogez and Pierre Rabu, Institut de Physique et Chimie des Matériaux de Strasbourg, UMR 7504 CNRS-ULP, 23 rue du Loess, 67034 Strasbourg cedex, France
- I/PIII.45** OPTICAL AND ELECTROPHYSICAL PROPERTIES OF POLYMER-METAL NANOCOMPOSTIES NEAR THE PERCOLATION THRESHOLD
V. Zaporozhchenko, U. Schürmann, H. Takele, F. Faupel, Faculty of Engineering, Kiel University, 24143 Kiel, Germany
- I/PIII.46** SELF-ASSEMBLING AND THERMAL STRIPPING OF ORGANO-BIMETALLIC CLUSTERS OF RuCo₃L ON SURFACES
A. Nait Abdi, O. Toulemonde, J.P. Bucher and M. Drillon, Institut de Physique et Chimie des Matériaux de Strasbourg, Université Louis Pasteur, UMR 7504, 23 rue du Loess, B.P. 43, 67034 Strasbourg, France, J. Rosé, P. Braunstein and R. Welter, Laboratoire de Chimie de Coordination, Université Louis Pasteur, UMR 7513, 4 rue Blaise Pascal, 67070 Strasbourg, France
- I/PIII.47** ELABORATION OF SILICA-BASED NANOCOMPOSITES
V. Hornebecq, P. Llewellyn, V. Zelenak, MADIREL Laboratory, Centre de Saint-Jérôme, 13397 Marseille Cedex 20, France and T. Cardinal, C. Elissalde, C. Huber, M. Maglione, S. Mornet, M. Treguer-Delapierre, ICMCB-CNRS, 87 Av. Dr. Schweitzer, 33608 Pessac Cedex, France and M. Antonietti, Max Planck Institute of Colloids and Interfaces, 14424 Postdam, Germany
- I/PIII.48** HYBRID MESOPOROUS MCM-41 TYPE MATERIALS CONTAINING 1,4-DIAZOBUTADIENE CHELATE LIGAND “INSIDE” THE WALLS: SYNTHESIS AND CHARACTERISATION
P. Ferreira, Department of Ceramic Engineering and Glass, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal, C. D. Nunes, P. D. Vaz, Department of Chemistry and Biochemistry, Faculty of Sciences University of Lisbon, 1749-016 Lisboa, Portugal, N. Bion, Laboratoire de Catalyse en Chimie Organique - UMR6503, Avenue du Recteur Pineau, 86022 Poitiers Cedex, France, P. Brandão, J. Rocha, Department of Chemistry, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal
- I/PIII.49** THE DESIGN OF FUNCTIONAL NANOCONTAINERS BASED ON NANOGOLD TEMPLATE: A NEW AND GENERAL ROUTE FOR NANOPARTICLE FUNCTIONALISATION
Grégory Schneider, Gero Decher, Institute Charles Sadron, CNRS UPR022, 6 rue Boussingault, 67083 Strasbourg Cedex, France
- I/PIII.50** POLYANILINE NANOTUBES
E.N. Konyushenko, J. Stejskal and I. Šeděnková, Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, 162 06 Prague 6, Czech Republic, and I. Sapurina, Institute of Macromolecular Compounds, Russian Academy of Sciences, St. Petersburg 199004, Russia
- I/PIII.51** SYNTHESIS AND CHARACTERIZATION OF NEW AROMATIC SUBSTITUTED OXO-ALCOXO-TITANIUM CLUSTERS.
S. Cochet and M. Popall, Fraunhofer Institut für Silicidforschung (ISC), Neunerplatz 2, 97082 Würzburg, Germany, L. Rozes and C. Sanchez, Laboratoire de la Chimie de la Matière Condensée (UMR CNRS 7574), Université Pierre et Marie Curie, 4 Place Jussieu, 75252 Paris, France
- I/PIII.52** ONE-STEP TEMPLATE-DIRECTED SYNTHESIS OF MULTIFUNCTIONALISED NANOPOROUS SILICA: ON THE WAY TO INTERACTIVE NANOMATERIALS
Eric Besson, Ahmad Mehdi, Victor Matsura, Yannick Guari, Catherine Reyé, Robert J.P. Corriu, Laboratoire de Chimie Moléculaire et Organisation du Solide, Université de Montpellier II, UMR 5637 CNRS, Place E. Bataillon, 34095 Montpellier Cedex 5, France

Friday, June 3, 2005
Vendredi 3 juin 2005

Morning
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Session VIII : Biomaterials

Session chairs :

- I-VIII.01** 8:30 -Invited- NANODEVICES FOR DRUG DELIVERY AND TARGETING
P. Couvreur
- I-VIII.02** 9:15 -Invited- DESIGN OF MULTIFUNCTIONAL NANOPARTICLES
E. Duguet
- I-VIII.03** 9:45 NOVEL PHOSPHATE-PHOSPHONATE HYBRID NANOMATERIALS, APPLIED TO BIOLOGY
B. Bujoli(a), D.R. Talham(b), J.M. Bouler(a), B. Alonso(c), P. Janvier(a), M. Pipelier(a), (a)University of Nantes, France; (b)University of Florida, USA; (c)University of Orléans, France
- I-VIII.04** 10:00 CONTAINING ORMOSILS FOR BONE RECONSTRUCTION
M. Manzano, A.J. Salinas and M. Vallet-Regí, Dpt. Química Inorgánica y Bioinorgánica, Fac. Farmacia. Universidad Complutense de Madrid, 28040 Madrid, Spain
- I-VIII.05** 10:15 EMISSION PROPERTIES AND APPLICATIONS OF NANOSTRUCTURED LUMINESCENT OXIDE NANOPARTICLES
T. Gacoin(a), V. Buissette(a,b), D. Giaume(a), J-P. Boilot(a), (a)Groupe de Chimie du Solide Laboratoire de Physique de la matière condensée, CNRS / Ecole Polytechnique UMR 7643, 91128 Palaiseau, France, (b) Rhodia, Centre de Recherches d'Aubervilliers, 52 rue de la Haie Coq, 93308 Aubervilliers, France
- 10:30 **BREAK**

Session IX : Nanomaterials: processing and catalysis

Session chairs :

- I-IX.01** 11:00 ORGANICALLY FUNCTIONALIZED MESOPOROUS SILICATES AS CATALYSTS IN THE FORMATION OF BISPHENOL A
Ryan K. Zeidan, Veronique Dufaud, Mark E. Davis, Caltech, USA
- I-IX.02** 11:15 BIOMIMETIC FUNCTIONAL RECOGNITION FOR REGIOSELECTIVE HYDROGENATION
F. Goettmann(a), C. Sanchez(a), P. Le Floch(b), (a)Laboratoire de Chimie de la Matière Condensée, UPMC-CNRS, 4 place Jussieu, 75005 Paris, France, (b)Laboratoire «Hétéroéléments et Coordination» UMR CNRS 7653 (DCPH), Département de Chimie, Ecole Polytechnique, 91128 Palaiseau cedex, France
- I-IX.03** 11:30 AEROSOL GENERATED FUNCTIONALIZED MESOSTRUCTURED MATERIALS
Nina Andersson(a), Peter Alberius(a), Lennart Bergström(b), (a)YKI, Institute for Surface Chemistry, Stockholm, Sweden, (b)Inorganic Chemistry, University of Stockholm, Sweden
- I-IX.04** 11:45 STUDY OF SURFACTANT-SILOXANE INTERFACES IN SPRAY-DRIED MESOPOROUS SILICA-BASED SPHERES
Bruno Alonso, Dominique Massiot, CRMHT, CNRS, Orléans, France
- I-IX.05** 12:00 CHARACTERIZATION OF POROUS LOW K FILMS AND PORE SEALING TREATMENT ON PATTERNED AND BLANKET WAFERS BY ELLIPSOMETRIC POROSIMETRY
A. Darragon, J.P. Piel, C. Defranoux, Y. Turcant, J.L. Stehle, SOPRA, 26 rue Pierre Joigneaux, 92270 Bois-Colombes, France
- 12:15 **LUNCH**