

WORKSHOP PROGRAM

THURSDAY, 21.10.2004

Magnetic nanoparticles
(chairman: D. Arčon)

- 8.25-8.30** Opening
- 8.30-9.00** Conductance of nanosystems (A. Ramšak, University of Ljubljana)
- 9.00-9.20** Neutron diffraction and ESR studies of MnO embedded into the silica nanoporous matrices with different topology (I.V. Golosovsky, St. Petersburg Nuclear Physics Institute)
- 9.20-9.40** Hybrid Manganese Perovskite Crystals for Poly(dimethylsiloxane) Nanocomposites: Morphology, Static Magnetic Properties and Pinned Solitons (A. Lappas, IESL - FORTH)
- 9.40-10.00** Pulse EPR Study of the local magnetic field fluctuations near surface of the nanomagnet Mn₁₂-acetate (B. Rakvin, Institute Ruđer Bošković)
- 10.00-10.20** Preparation of magnetic fluids (D. Makovec, Institute Jozef Stefan)
- 10.20-10.40** Sm-Fe-based magnetic thin films made by pulsed- laser deposition at 157 nm (K. Žužek Rozman, Institute Jozef Stefan)

10.40-11.00 Coffee break

C₆₀ superconductivity and magnetism
(chairman: D. Mihailovič)

- 11.00-11.30** Electronic properties of fullerides (P. Rudolf, University of Groningen)
- 11.30-12.00** Structural and Electronic Properties of Lithium Doped Fullerides (D. Pontiroli, Università di Parma)
- 12.00-12.15** Belt-like C₆₀⁻ Electron Spin Density Distribution in the Organic Ferromagnet TDAE-C₆₀ (D. Arčon, Jozef Stefan Institute)
- 12.15-12.30** Phase transitions in organic molecular ferromagnet TDAE-C₆₀ (A. Omerzu, Jozef Stefan Institute)

12.30-13.30 Lunch time and poster session**Surface and low-dimensional systems**

(chairman: C.P. Ewels)

- 13.30-14.00** Growth and morphology of 2D Pb/Ge(111) Films (D. Cvetko, *University of Ljubljana*)
- 14.00-14.20** Structural Characterization of a Self-Assembled Methyl-Thiolate/Au(111) Interface (L. Casalis, *International School for Advanced Studies, Trieste*)
- 14.20-14.40** Measurements of interparticle forces in complex liquids on nanometer scale (M. Škarabot, *Josef Stefan Institute*)
- 14.40-15.00** Purification and positioning of Mo₆S₃I₆ nanowires by (di)electrophoresis (Mihaela Ploscaru, *Institute Jozef Stefan*)
- 15.00-15.20** The role of metal-organic semiconductor interfaces in electric charge transport in oligothiophene-based thin film transistors (E. Pavlica, *Nova Gorica Polytechnic*)

15.20-15.40 Coffee break**Soft matter and biophysics**

(chairman: A. Omerzu)

- 15.40-16.10** Hole Interactions with molecular vibrations on DNA (D. Mihailovič, *Josef Stefan Institute*)
- 16.10-16.30** Production of ssDNA nanostructures in alkylthiol Self Assembled Monolayer (Mateo Castronovo, *National Institute for Matter Physics – TASC laboratory, BASOVIZZA (TRIESTE), ITALY*)
- 16.30-16.50** One-dimensional aggregation in solutions of disc-shape molecules (Irena Drevenšek Olenik, *University of Ljubljana*)
- 16.50-17.10** Membrane protein conformations determined by site directed spin labelling EPR and ghost condensation (J. Štrancar, *Institute Jozef Stefan*)

- 17.10-17.25** Potentials of Nanomaterials and Nanotechnology in the White Goods Industry (Vasilije Vasič, *Gorenje d.d.*)
- 17.25-17.40** Slovenia and the 3rd priority of the EU 6th Framework Programme (B. Jenko, *Ministry of Education, Science and Sport, Ljubljana, Slovenija*)

FRIDAY, 22.10.2004**Applications**
(chairman: R. Dominko)

- 8.30-9.00** Nanoparticles and Nanotextured materials as electrode materials for Li-batteries (*Dominique Larcher, Université de Picardie Jules Verne, Amiens, France*)
- 9.00-9.30** Novel synthetic approaches to nanostructured mixed oxides-based thin films for electronic applications (*Silvia Gross, University of Padova*)
- 9.30-9.50** Micro- and Nano-Mechanics of Polymers (*Igor Emri, University of Ljubljana*)
- 9.50-10.10** Nanometre Dimensions in Electrochemical Sensor: Design, Fabrication and Performance (*Bozidar Ogorevc, National Institute of Chemistry*)
- 10.10-10.30** The effect of surface hydroxyl groups on the adsorption properties of nanocrystalline TiO₂ films (*Angela Vuk Šurca, National Institute of Chemistry*)

10.30-10.45 Coffee break**Synthesis and functionalisation**
(chairman: A. Jesih)

- 10.45-11.15** Functionalized Soluble Carbon Nanotubes (*M. Prato, Università di Trieste*)
- 11.15-11.45** Chemical Functionalisation of Nanotubes and Fullerenes by fluorination (*C.P. Ewels, LPS, Université Paris Sud*)
- 11.45-12.00** Synthesis, characterisation and physical properties of TiO₂-based nanostructures (*P. Umek, Institute Jozef Stefan*)
- 12.00-12.15** X-ray powder diffraction study of the structure of Mo-S-I nanowires (*A. Meden, University of Ljubljana*)
- 12.15-12.30** EXAFS analysis of MoSI nanowires (*A. Kodre, University of Ljubljana*)
- 12.30-12.45** Density-Functional Theory of Mo-S-I nanowires (*I. Vilfan, Institute Jozef Stefan*)
- 12.45-13.00** Hydrothermal synthesis of Mg-silicate nanotubes (*Bostjan Jancar, Josef Stefan Institute*)
- 13.00-13.15** Functionalisation of nanoporous silicate MCM-41 by manganese (*Nataša Zabukovec Logar, National Institute of Chemistry*)
- 13.15-13.30** Modification of montmorillonite with liquid crystalline diols (*Miro Huskić, National Institute of Chemistry*)

- 13.30-13.45** Nanocomposite PP fibers (K. Stakne, University of Maribor)
- 13.45-14.00** NaNbO₃ Nanoparticles Prepared by Mechanochemical Synthesis (Tadej Rojac, Josef Stefan Institute)
- 14.00-14.15** Solution Synthesis of Nano-Powders in the Multicomponent Systems (Elena-Daniela Ion, Institut Jožef Stefan)

Closing

- 14.30** International Consortium for Nanoscience and Nanotechnology - Meeting
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POSTERS

Thermogravimetric analysis of nickel-oxide thin films: useful tool in optimisation of the electrochromic response (Romana Cerc Korošec, Faculty for Chemistry and Chemical Technology, Ljubljana, Slovenia)

Surfactant stabilization of nematic - Mo₆S₃I₆ nanowires mixtures (M. Avsec, Institute Jozef Stefan)

Nanocomposite sol-gel barrier coatings for metals (Mojca Fir, National Institute of Chemistry)

Nanocomposite redox electrolyte based on tetramethoxysilane containing R⁺R⁺Im⁺ I⁻ ionic liquid (Vasko Jovanovski, National Institute of Chemistry)

Impact of coating thickness on the electrochemical performance of LiFePO₄, (R. Dominko, M. Bele, M. Gaberscek, D. Hanzel, M. Remskar, J. Jamnik, National Institute of Chemistry)

Synthesis, Characterisation and Magnetic Properties of Cu(OH)₂ Nanoribbons (P. Umek, J. W. Seo, L. Fórró, P. Cevc, M. Škarabot, Z. Jagličič, A. Zorko, H. van Tol, L.C. Brunel, and D. Arčon, Institute Jozef Stefan)

Synthesis, structural and adsorption properties of titania-based nanotubes (P. Umek, P. Cevc, A. Jesih, C.P. Ewels, D. Arčon, Institute Jozef Stefan)

Impedance spectroscopy of TiO₂ based nanotubes (A. Hočevar, R. Dominko, P. Umek, and D. Arčon, Institute Jozef Stefan)

Determination of Young's modulus of TiO₂-based nanotubes (G. Bregar, M. Škarabot, P. Umek, and D. Arčon, Institute Jozef Stefan)

Deuteron NMR studies of nematic nanoemulsions (A. Lebar, Institute Jozef Stefan)

Theoretical Study of fluorination of fullerenes and carbon nanotubes (C.P. Ewels, LPS, Université Paris Sud)

Nano-scale morphology of iron-oxide pigment after oxygen-plasma treatment: EXAFS study (I. Arčon, Nova Gorica Polytechnic)