

# SLONANO2007

10–12 October

Institute Jožef Stefan,  
Ljubljana, Slovenia



## Program

### Wednesday 10 October

- 9.00-9.15 *Welcoming Remarks*  
Anton Ramšak and Spomenka Kobe
- Nano 1 (Chair: Dragan Mihailović)
- 9.15-9.45 *A compact high-brilliance SAXS/SWAXS/GISAXS instrument for laboratory use*  
Peter Laggner (invited)
- 9.45-10.00 *Reprocessing of liquid crystal elastomers with conducting particles*  
Martin Chambers
- 10.00-10.15 *Ceramic based nanocomposites for high temperature, sensor and bio-applications*  
Csaba Balázsi
- 10.15-10.30 *The first inorganic nanopods and nanobuds*  
Marko Vršek
- 10.30-10.45 *Nanostructuring of polycrystalline gold thin films, deposited on glass, by means of ion beam*  
Barbara Šetina Batič
- 10.45-11.00 *Structural and electronic properties of molybdenum chalcogenide nanowires*  
Igor Popov

- COFFEE
- Theory (Chair: Anton Ramšak)
- 11.30-12.00 *Some topics in theoretical nanofriction*  
Erio Tosatti (invited)
- 12.00-12.30 *Zero-bias conductance through coupled quantum dots*  
Janez Bonča (invited)
- 12.30-12.50 *Magnetic impurity formation in quantum point contacts*  
Tomaž Rejec
- 12.50-13.10 *An efficient, mixed semiclassical/quantum mechanical model to simulate planar and wire nano-transistors*  
Luca Selmi
- 13.10-13.30 *Optical Properties and Excitonic Effects in Mo-S-I Nanowires*  
Igor Vilfan

### LUNCH

- Pharma (Chair: Janez Bonča)
- 15.00-15.30 *Can particles at the nanoscale result in better drug delivery systems?*  
Julijana Kristl (invited)
- 15.30-15.45 *Formulation of PLGA nanoparticles for intracellular delivery of protein drug*  
Mateja Cegnar
- 15.45-16.00 *Nanoscale functionalities for biopharmaceutical drug delivery*  
Gorazd Hribar
- Nano II (Chair: Janez Bonča)
- 16.00-16.15 *Novel routes to nano-materials for Li-ion batteries*  
Mario Valvo
- 16.15-16.30 *Manipulation of Nanoscale Charged Polar States in Manganites*

- Rinat Mamin
- 16.45-17.00 *Self-catalysed growth of GaAs nanowires by MBE*
- Silvia Rubini
- 17.00-17.15 *Carbon nanotubes added hexagonal WO<sub>3</sub> films for sensing applications*
- Katarina Sedláčková
- 17.15-17.30 *Preparation of the Bi<sub>2</sub>SiO<sub>2</sub> thin films by the sol-gel method*
- Špela Kunej
- 17.30-17.45 *Carbon-metal (Ni or Ti) nanocomposite thin films*
- Robert Grasin
- 17.45-18.00 *Photosensitive titanium oxide sols and gels for solar energy conversion and storage*
- Mireille Richard

### Thursday 11 October

- Microscopy I (Chair: Paul McGuinness)
- 9.15-9.45 *HAADF-STEM imaging: from qualitative to quantitative interpretation of atomic resolution HAADF-STEM images*  
Miran Čeh (invited)
- 9.45-10.15 *Structural properties of magnetic nanoparticles*  
Darko Makovec (invited)
- 10.15-10.30 *The nanostructure of silicon thin films for solar cells*  
Andreja Gajović
- 10.30-10.45 *Characterization and Properties of Novel Oxygen Contained Hollandite VO<sub>1.52</sub>(OH)<sub>0.77</sub> Nanorods Synthesized by Nonaqueous Sol-Gel Route*  
Igor Djerdj
- 10.45-11.00 *FT-IR microspectroscopy: a powerful tool for spatially resolved studies on supports for solid phase organic synthesis*  
Lisa Vaccari

COFFEE

	Nano III		Marko Jagodic		Fouzia Bano
11.30-12.00	<i>The Styrian activities in nano Surface Engineering: Development of nanostructured coatings for the design of multifunctional surfaces</i>	16.15-16.30	<i>Electron Transport Through M-m-M Junctions: A Scanning Differential CP-AFM Investigation</i>	10.00-10.15	<i>Crowding effects in Enzymatic Restriction Reactions within DNA Nanostructures</i>
	Wolganag Waldhauser (invited)		Denia Scaini		Matteo Castronovo
12.00-12.15	<i>The Evolution of Aluminum Hydroxides During the AlN Powder Hydrolysis</i>	16.30-16.45	<i>Recent achievement in characterization of micro- and nano-materials by scanning photoemission imaging and spectromicroscopy</i>	10.15-10.30	<i>New approach for the determination of the hybridation efficiency of ssDNA nanopatches</i>
	Andraž Kocjan		Luca Gregoratti		Mauro Melli
12.15-12.30	<i>Dynamics of nanoscopic magnetic clusters in (Pr,Ca)MnO<sub>3</sub> thin films observed by ultrafast magneto-optics</i>	16.45-17.00	<i>Studies of Free Clusters and of Low Energy Cluster Beam Deposition at TASC</i>		COFFEE
	Tomaž Mertelj		Monica de Simone		
	DNA I	17.00-17.15	<i>Infrared nanoscopy of structured SAMs</i>	11.00-11.15	<i>EU framework programmes and Slovenia</i>
12.30-13.00	<i>Coverage Dependence of DNA Hybridization in Nanostructured Monolayers: a Nanografting AFM Study</i>		Ilona Kopf		Bojan Jenko
	Loredana Casalis (invited)	17.15-17.30	<i>The twin cantilever approach to the single molecule detection</i>		
13.00-13.15	<i>Carbon nanotubes wrapped by DNA molecules</i>		Marco Lazzarino		Nano IV (Chair: Dragan Mihailović)
	Andrey Enyashin	17.30-17.45	<i>Novel scanning microscope for visualization of individual emission sites on flat field emission cathodes</i>	11.15-11.30	<i>MoSi<sub>x</sub> nanowires functionalization for molecular-scale connectivity</i>
13.15-13.30	<i>Verification of Biochemical Activity for Protein Monolayers Nanostructured on Gold Surfaces</i>		Vincenc Nemanic	11.30-11.45	<i>Director and polarization fluctuations in suspensions of ferroelectric nanoparticles in nematic liquid crystals</i>
	Giacinto Scoles				Alenka Mertelj
				11.45-12.00	<i>Self-assembled Mo<sub>6</sub>S<sub>9</sub>-xI<sub>x</sub> networks</i>
	LUNCH				Jure Strle
			Microscopy III		
	Microscopy II (Chair: Spomenka Kobe)	9.00-9.15	<i>PicoNewton Force Spectroscopy of Live Neuronal Cells, using Optical Tweezers</i>	12.00-12.15	<i>Non-equilibrium optical properties of MoSI nanowires</i>
15.00-15.30	<i>Analytical electron microscopy of nanoparticles</i>		Dan Cojoc		Christoph Gagermaier
	Goran Dražič (invited)	9.15-9.30	<i>Single atom manipulation and spectroscopy using low-temperature STM</i>	12.15-12.30	<i>Synthesis of metallic Ag and semiconducting ZnS nanoparticles in self-assembled polyelectrolyte templates</i>
15.30-15.45	<i>Hydroxylapatite coatings on ZrO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> ceramics by biomimetic method</i>		Erik Zupanič		Manca Logar
	Irena Pribošič			12.30-12.45	<i>The influence of space restriction on the formation and stability of polymorphic and amorphous forms</i>
15.45-16.00	<i>"XAFS study of Zr local environment in amorphous precursors of La<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub> ceramics prepared by a nitrate-modified alkoxide synthesis route</i>				Aljaž Godec
	Elena Ion	9.30-9.45	<i>In situ comparison of hybridization properties of nanografted and self-assembled DNA monolayers</i>	12.45-13.00	<i>Closing Remarks</i>
16.00-16.15	<i>Detection of irreversible fusion of iron oxide magnetic nanoparticle into single-domain clusters by magnetic measurements</i>		Christian Grunwald		Dragan Mihailović
		9.45-10.00	<i>Surface Nanostructuring of DNA for Higher Sensitive and Label Free Biosensing</i>		

Posters will be on display during the breaks.