

CONFERENCE PROGRAM N&N 2014

06-07 October 2014

<http://www.lnf.infn.it/conference/nn2014/>

Monday 6

9.00 – 10.00 Registration

PLENARY Session

Touschek Auditorium

10.00 – 10.10 S. Bellucci, *Director of N&N2014 Conference, INFN-LNF, Frascati, Italy* - “**Welcome address to Participants**”

Chair: G. Mistura

10.10 – 10.40 N. Pugno, *Department of Civil, Environmental and Mechanical Engineering University of Trento, Italy* - “**New frontiers in Nanomechanics**”

10.40 – 11.10 F. Cardarelli, *IIT@NEST, Center for Nanotechnology Innovation, Pisa, Italy* - “**Molecular sensing and delivery: new paradigms for nanomedicine**”

11.10 – 11.40 C. Albonetti, *CNR-ISMN, Bologna, Italy* - “**Growth mode of 6T ultra-thin films probed by height measurements: applied force, molecule deformation and phase shift**”

11.40 – 12.10 M. Marcaccio, *University of Bologna, Bologna, Italy*- “**An Electrochemical Pathway to Generate Nanostructured Systems from Polycyclic Aromatic Hydrocarbons.**”

Session A: NanoMechanics

Touschek Auditorium

Chair: M. Marcaccio

12.10 – 12.40 E. Ivanov, *Open Laboratory of Experimental Mechanics, Institute of Mechanics, Bulgarian Academy of Sciences, Sofia, Bulgaria* - “**Nanomechanical Properties of Different Materials**”

12.40 – 13.05 A. Cataldo, *INFN-LNF, Frascati and University of Palermo, Palermo, Italy* - “**Structural investigation and mechanical properties of epoxy resins nanocomposites through solid state NMR and nanoindentation**”

13.05 – 13.30 G. Mistura, *Physics and Astronomy Dept. “Galileo Galilei”, University of Padova, Padova Italy* - “**Controlling friction at the nanoscale**”

13.30 - 14.30 Lunch Break

Session B: Chemistry on Nanomaterials & Nanostructures Seminar Room

Chair: C. Albonetti

12.15 – 12.40 F. Brasili, *University of Rome “Sapienza”*, Roma, Italy - “Design and AFM characterization of SERS-active gold nanoparticle cluster arrays to improve biosensing”

12.40 – 13.05 G. Serrano, *University of Rome “Tor Vergata”*, Roma, Italy - “In situ Scanning Tunneling Microscopy study of TiO₂ crystals in aqueous environment”

13.05 – 13.30 R. Flammini, CNR-IMIP Roma. Italy – “Nearly-free electron like surface state of a 8x8-reconstructed β -Si₃N₄(0001) layer”

13.30 - 14.30 Lunch Break

PLENARY Session

Touschek Auditorium

Chair: E. Signori

14.30 – 15.00 B. J. Panessa-Warren, *Instrumentation Division, Brookhaven National Laboratory, Upton, NY, USA* – “Identification/Characterization of Wood Combustion Emission Nanoparticles (harvested from a new technology indoor wood burning boiler), and used for in vitro cytotoxic testing with Human Lung Cells”

15.00 – 15.30 A. Sindona, *Università della Calabria and INFN, gruppo collegato di Cosenza, Italy* - “Work distribution, dynamic core-hole screening, and dielectric properties in carbon based nanomaterials”

15.30 – 16.00 R. Paollesse, *University of Rome “Tor Vergata”*, Roma, Italy - “Nanostructured porphyrin based materials for chemical sensor applications”

16.00 – 16.30 F. Ricci, *University of Rome “Tor Vergata”*, Roma, Italy - “DNA-based nature-inspired nanoswitches for sensing applications”

16.30 - 16.50 Coffee Break

Session C: Modelling on Nanostructures

Touschek Auditorium

Chair: S. Bellucci

16.50 – 17.15 D. Giuliano, *University of Calabria, Cosenza, and INFN, gruppo collegato di Cosenza, Italy* – “Realization of a two-channel kondo model with Josephson junction networks”

17.15 – 17.40 G. Campagnano, *Università di Napoli “Federico II”, Italy* – “Spin-orbit coupling and Anomalous Josephson effect in Nanowires”

17.40 – 18.05 E. Perfetto, *University Tor Vergata, Roma, Italy* – “Dynamics of the Topological Phase Transition in Driven Systems Hosting Majorana Fermions”

18.05 – 18.30 G. Stefanucci, *University Tor Vergata, Roma, Italy* – “**Introduction to nonequilibrium Green's functions**”

18.30 – 18.55 M. Cini, *LNF-INFN and Univ.of Rome “Tor Vergata”, Roma, Italy* - “**Production, measurement and storage of spin currents in quantum circuits**”

Session D: NanoBiology

Seminar Room

Chair: F. Ricci

16.50 – 17.15 E. Signori

CNR-Institute of Translational Pharmacology and University of Rome “Campus Bio-Medico”-School of Medicine, Roma, Italy – “ **New strategies for cancer treatments by the help of nanotechnologies**”

17.15 – 17.40 M. Carbone, *University of Rome “Tor Vergata”, Roma, Italy* – “**Gold nanoparticles functionalized with proton caged compounds for in vitro experiments**”

17.40 – 18.05 A. Celluzzi, *Bambino Gesù Children's Hospital* – “**Properties of carbon nanotubes as delivery vector for microRNA**”

18.05 – 18.30 A. Caporali, *University of Edinburgh, Edinburgh, Scotland* –“ **Function and toxicity of carbon nanotubes as delivery vector for microRNA in endothelial cells**”

18.30 – 18.55 C. Cairone, *University of Rome “Tor Vergata”, Roma, Italy* - “**Conjugation of Nanodiamonds With Interesting Natural Substances For Therapeutics**”

19.00 – 19.40 POSTER SESSION



20.00

Tuesday 7

Special Session: FAEMCAR , NAmiceMC



Touschek Auditorium

Chair: L. Chernozatonskii

9.40 – 10.15 L. Pierantoni, *Università Politecnica delle Marche, Ancona, Italy* - “**Radio-Frequency Nanoelectronics – Bridging the Gap between Nanotechnology and R.F. Engineering Applications**”

10.15 – 10.50 D. Mencarelli, *Università Politecnica delle Marche, Ancona, Italy* - “**Modeling and simulation of carbon nano transistors**”

10.50 – 11.25 A. Maffucci, *University of Cassino and Southern Lazio, Cassino Italy* - “**tba**”

11.25 – 11.55 Coffee Break

Chair: A. Maffucci

11.55 – 12.25 S. Maksimenko, *Director of Belarus State University, Institute for Nuclear Problems, Minsk, Belarus* - “**Nanocarbon materials for electromagnetic applications**”

12.25 – 12.55 G. Slepyan, *University of Tel Aviv, Tel Aviv, Israel* “**tba**”

12.55 – 13.25 L. Chernozatonskii, *Institute of Biochemical Physics, Russian Academy of Sciences, Moscow, Russia* – “**New nanostructures based on bi-layer of h-BN-graphene**”

13.30 - 14.30 Lunch Break

Chair: S. Maksimenko

14.30 - 15.00 G. Dovbeshko, *Institute of Physics National Academy of Science of Ukraine, Kiev, Ukraine*– “**Optical properties of thin pyrolytic carbon films versus graphene layers and graphite**”

15.00 -15.30 A. Kukhta, *Research Institute for Nuclear Problems of Belarusian State University, Minsk, Belarus* - “**Conducting Thin Films Based on Organic-inorganic Nanocomposites**”

15.30 - 16.00 O. Fesenko, *Institute of Physics, Kiev, Ukraine* - “**Surface enhanced Coherent anti-Stokes Raman scattering of thymine adsorbed on graphene layers**”

16.00 -16.30 V. Levin, *Institute of Biochemical Physics, RAS* - “**What is inside nanocomposites? Carbon-epoxy nanocomposite microstructure seen with an acoustic microscope**”

16.00 - 16.20 Coffee Break

Chair: G. Dovbeshko

16.20 -16.50 V. Levin, *Institute of Biochemical Physics, RAS* - “**What is inside nanocomposites? Carbon-epoxy nanocomposite microstructure seen with an acoustic microscope**”

16.50 – 17.20 B. Berzina, *Institute of Solid State Physics, University of Latvia, Latvia* – “**Wide Band Gap Nitrides – Materials For Oxygen Gas Sensors**”

17.20 – 17.30 S. Bellucci, *Director of N&N2014 Conference, INFN-LNF, Frascati, Italy* - “**Concluding remarks**”

END OF CONFERENCE.