



Università degli Studi di Torino

Dipartimento di Chimica

Via P. Giuria, 7 10125 Torino Italy



Dipartimento di Fisica



# Superconducting micro and nanostructures: growth, properties and applications

NIS Colloquium – 1<sup>st</sup> October 2013

aula Principi d'Acaja, (piano terra) Rettorato, via Po 21, Torino

9:30 *welcome*

*chairman: Angelo Agostino*

- 10:00 **Petre Badica** “Some growth aspects of oxide whiskers and their complex structures”
- 10:40 **Lise Pascale** “Structural modulations in single crystals HTc superconductors by chemical substitutions”
- 11:00 **Marco Truccato** “Fabrication and characterization of intrinsic Josephson junctions in high-temperature superconductors”
- 11:20 **M. Eyyuphan Yakinci** “Formation of single crystal nano Bi-2212 whiskers, characterization and possible applications in electronic circuits”
- 12:00 **Gianluca Ghigo** “Superconducting materials engineering by swift particle beams”
- 12:20 **Alessandro Pagliero** “Oxygen displacement induced in Bi-2212 single crystals by synchrotron radiation”

Lunch

*chairman: Lorenza Operti*

- 14:40 **Simon Hall** “Growth mechanisms in metal oxide nanowires”
- 15:20 **Natascia De Leo** “Micro and nano superconducting quantum Josephson devices for Metrology”
- 15:40 **Chiara Portesi** “How to count single photons with a superconducting microcalorimeter”
- 16:00 **Riccardo Arpaia** “High critical temperature superconductor nanodevices: quantum tools for basic research and ultrasensitive magnetic flux and photon detectors”
- 16:40 **Francesco Laviano** “Evidence of anisotropic vortex pinning by intrinsic and irradiation-induced defects in  $Ba(Fe_{1-x}Co_x)_2As_2$  crystals studied by quantitative magneto-optical imaging”

Coffe break

17:30 *round table*

Dinner





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## Participants

- M. Eyyuphan Yakinci** *İnönü Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü – Malatya - Turkey*
- Simon Hall** *University of Bristol, School of Chemistry, United Kingdom*
- Petre Badica** *National Institute of Materials Physics, Bucharest-Magurele, Romania*
- Riccardo Arpaia** *Quantum Device Physics laboratory, Chalmers University of Technology, Goteborg, Sweden.*
- Lise Pascale** *Dipartimento di Chimica, Università di Torino, member of the Nanostructured Interfaces and Surfaces (NIS) center of excellence and CRISDI (Crystallographic Diffractometry center)*
- Lorenza Operti** *Dipartimento di Chimica, Università di Torino, member of the Nanostructured Interfaces and Surfaces (NIS) center of excellence and CRISDI (Crystallographic Diffractometry center)*
- Marco Truccato** *Dipartimento di Fisica, Università di Torino, member of the Nanostructured Interfaces and Surfaces (NIS) center of excellence and CNISM (consorzio nazionale interuniversitario per le scienze fisiche della materia)*
- Gianluca Ghigo** *DISAT (Dipartimento Scienza Applicata e Tecnologia), Politecnico di Torino*
- Alessandro Pagliero** *Dipartimento di Fisica, Università di Torino, member of the Nanostructured Interfaces and Surfaces (NIS) center of excellence*
- Natascia De Leo** *INRIM (Istituto Nazionale di Ricerca Metrologica) and Nanofacility Piemonte, Torino*
- Chiara Portesi** *INRIM (Istituto Nazionale di Ricerca Metrologica), Torino*
- Francesco Laviano** *DISAT (Dipartimento Scienza Applicata e Tecnologia), Politecnico di Torino*
- Angelo Agostino** *Dipartimento di Chimica, Università di Torino, member of the Nanostructured Interfaces and Surfaces (NIS) center of excellence and CRISDI (Crystallographic Diffractometry center)*

Organizing committee: Angelo Agostino, Marco Truccato, Elisabetta Bonometti

