



INTERNATIONAL SUMMER SCHOOL

NANOSCIENCE MEETS METROLOGY
**Synthesis, Characterization, Testing and Applications of
Validated Nanoparticles**

September 4th - 9th, 2016 - Torino, Italy
Chemistry Department of the University of Torino



According to European Commission important challenges at European level are related to the establishment of validated method and instrumentation for detection, characterization and analysis of nanoparticles.

In this frame the SETNanoMetro project (started in 2013 and grouping 16 European partners) aims to move from the current *trial and error* approach toward the development of well-defined and controlled protocols for the production of NPs and to the establishment of correct metrological traceability chain in order to ensure the reliability of the results. To this scope the set-up of standardized experimental procedures is also needed for the characterization of individual NPs and films resulting from their assembly/aggregation, as well as of standardized rules for the evaluation of NPs and films performances in a variety of possible application fields, ranging from environment and energy to health.

In the context of the dissemination and exploitation activities of the

FP7 SETNanoMetro Project

the

NANOSCIENCE MEETS METROLOGY

International Summer School

aims to illustrate and discuss the most recent

**advances in the synthesis, characterization, testing and application of
nanoparticles with controlled properties**

The school is addressed to PhD students and Post-Docs with a background in Physics, Chemistry, Material Science, Regenerative Biology and Medicine.



This school is organized by the FP7 **SETNanoMetro Project**
www.setnanometro.eu

setnano.school@unito.it





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Topics

Wide-ranging lectures

- 1) Measurements and Metrology throughout history (Dr. M. Rossi, INRIM, IT)
- 2) Nanotechnologies and Nanoscience throughout history (Prof. G. Pacchioni, UniMiB, IT)
- 3) Nanoscience meets Metrology: energy and environment (Prof. C.O. Ania, INCAR-CSIC, SP)
- 4) Nanoscience meets Metrology: medicine and biology (Prof. L. Calzolari, JRC Ispra, IT)
- 5) Nanoscience and metrology meet applications: from the lab to the industrial scale (Prof. M. Foss, iNano-AU, DK)

Specialist-lectures (given by specialists involved in the SETNanoMetro Project) on:

- Synthetic methods for validated nanoparticles: modeling the synthesis, controlling the morphology and guiding the aggregation
- Characterization methods for validated nanoparticles: electron microscopies, electronic and vibrational (included Raman) spectroscopies, IR spectroscopy of surface probes
- Testing methods for validated nanoparticles: chemical and photochemical properties, biocompatibility and toxicology
- Applications of validated nanoparticles in catalysis, photocatalysis, medicine and biology



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Venue



Dipartimento di Chimica dell'Università di Torino
Via Pietro Giuria 7, I-10125 Torino - Italy
Tel.: +39 0116707650 - Fax: +39 0116707855
<http://www.chemistry.unito.it/>



UNIVERSITÀ
DEGLI STUDI
DI TORINO

The Chemistry Department is located within walking distance from the city center, the central railway station, the bus terminal from the Torino Airport and the University Halls of Residence.

Accommodation For students registering before **6 August** accommodations will be available at the University Halls of Residence at the special rates of € 20 (double room) or 25 (single room, following availability) per day per person (breakfast not included). For teachers and accompanying persons the rates are € 23 (dr) and 33 (sr). A list of hotels can be provided on request.

Registration Registration fee is set at € 400,00 and includes the booklet of the abstracts; 5 lunches (5-9 September); coffee breaks; welcome on September 4th and social dinner. Does not include the accommodation fee (to be paid separately). Deadline for registration: **15 August**.

The registration form and information about the procedure for booking the accommodation are available at the link <http://www.setnanometro.eu/events>.

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