

Seminar cycle

Synchrotron radiation INTERNATIONAL FACILITIES AND RESEARCH OPPORTUNITIES

Thursday **11 April 2019**
h 16:00-18:00

Aula C - Dipartimento Scienze della Terra
Via Santa Maria, 53

Prof. Simone Capaccioli

Director of CISUP - Centro per l'Integrazione della
Strumentazione scientifica dell'Università di Pisa

**New research opportunities
at Large Scale Facilities**

Dr. Alessandra Gianoncelli

Elettra - Sincrotrone, Trieste

Head of TwinMic beamline

**Synchrotron Soft X-ray Spectromicroscopy at
the TwinMic beamline at Elettra:
principles and applications**

Dr. Simona Raneri

Department of Earth Sciences - University of Pisa

**Synchrotron radiation and Cultural Heritage:
challenges and applications**

Prof. Natale Perchiazzi

Department of Earth Sciences - University of Pisa

**Synchrotron data collection is
always a good idea**



Reviews in Mineralogy and Geochemistry, 49, 2002

The valuable advantages offered by the synchrotron facilities, namely in-depth element-specific compositional and chemical state analysis, possibility to analyse very small amount of materials with high spatial resolution, non-destructive and non-invasive analytic approach, make synchrotron radiation a powerful tool for studying materials of interest in several fields of science, from atomic and solid state physics, to chemistry, mineralogy, and cultural heritage.

In this cycle of seminar, the opportunities offered by high brilliant sources for researches in several fields of science will be presented, with a peculiar focus on material science applications.

As special guest, the head of the TwinMic beamline at the Italian synchrotron Elettra Sincrotrone Trieste will illustrate the challenges offered by soft X-ray synchrotron microscopy in investigating materials at micron and submicron level, providing simultaneous morphological and chemical information.

The basics and methods underlying the applications of synchrotron radiation will be discussed, and its unique potential illustrated with selected case studies in the field of mineralogy and cultural heritages.



Dr Alessandra Gianoncelli is the head of the TwinMic beamline at the Italian synchrotron Elettra Sincrotrone Trieste. Prior her work in the synchrotron she was a researcher in King's College London, C2RMF Louvre Museum, and Politecnico di Milano. Alessandra has been active in X-ray spectroscopy and Imaging fields for more than 15 years with both synchrotron and laboratory techniques and portable instruments. She is the co-author on more than 130 peer-reviewed papers in materials science, life science, nanotoxicology, cultural heritage and environmental science fields.

Homepage: <http://www.elettra.eu/PEOPLE/index.php?n=AlessandraGianoncelli.HomePage>



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