

Sissi-Bio: The Chemical and life sciences branch of the IR beamline at Elettra - Sincrotrone Trieste

Wednesday 1 March 2017 09:45 (45 minutes)

SISSI (Synchrotron Infrared Source for Spectroscopy and Imaging) is the infrared beamline at Elettra Sincrotrone Trieste. It extracts the IR and visible components of synchrotron emission for performing spectroscopy, microspectroscopy and imaging at the two SISSI branches: SISSI-Mat (IOM-CNR, Sapienza) and SISSI-Bio (Elettra). The applications cover a wide range of research fields, including surface and material science, high-pressure experiments, geology, cultural heritage, biochemistry, cellular biology, etc.

The present talk aims to provide an overview of the actual beamline status, focusing on the equipment and potentialities of SISSI-Bio branchline. Selected examples of both user and in-house research activities at SISSI-Bio will be presented, covering fields of science such as in-situ cell sorting according to cell-cycle phases by FTIR microscopy and X-ray radiation damage probed by non-damaging IR beams.

An overview of the planned upgrades of SISSI will be also provided, in order to explore potential synergisms with LNF, encompassing both technical developments and scientific topics.

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