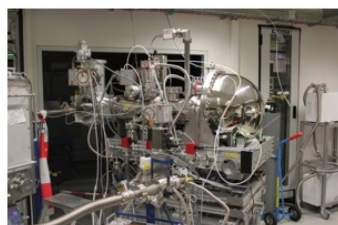


Announcements

JUM@P'13: Second Joint Users' Meeting @ PSI

The next users' meeting from the **JUM@P** series will be held at PSI on **September 18-20, 2013**. The meeting will consist of a plenary session with keynote and invited lectures as well as information about PSI and its user facilities on the first day. The second day is reserved for topical parallel workshops, poster sessions, and a tour of the PSI user facilities. The award of the second PSI thesis medal will accomplish the program.

More details: <http://indico.psi.ch/event/jump13>.



Facility News

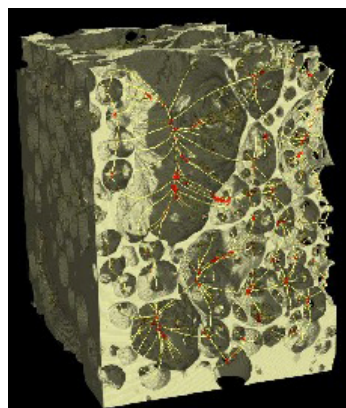
SLS: Near-Ambient Pressure Photoemission, NAPP

X-ray photoelectron spectroscopy (XPS) performed at pressures up to 20 mbar (here referred to as near-ambient pressure photoemission, NAPP) is an emerging tool that allows probing the chemistry of surfaces that are relevant

to catalysis and the environment under nearly realistic reactant and pressure conditions.

The basic concept of NAPP is that the sample is exposed to a gas or liquid environment and that the photoelectrons are sampled through a differentially pumped electrostatic lens system into an electron energy analyzer held at UHV. Only a handful of further synchrotron-based or lab X-ray source based instruments exist worldwide.

The NAPP instrument has been set-up as a mobile end station prepared for beam lines of the Swiss Light Source (SLS) (see figure NAPP @ Phoenix-beamline). For environmental surface chemistry, the long-term focus is establishing a molecular level description of the climate and air pollution impact of atmospheric particles. In the field of catalysis, the ultimate aim is to measure industrially relevant catalyst structures under catalytic conditions that have realistic flow dynamics.



RESEARCH HIGHLIGHT

X-rays provide insights into volcanic processes

Experiments performed at the Paul Scherrer Institute (PSI) investigate processes inside volcanic materials that determine whether a volcano will erupt violently or mildly. In the experiments, scientists heated small pieces of volcanic material similarly to conditions present at the beginning of a volcanic eruption. They used X-rays from the SLS to observe, in real time, what happens to the rock as it goes from the solid to the molten state. Read more on: <http://www.psi.ch/media/x-rays-provide-insights-into-volcanic-processes>