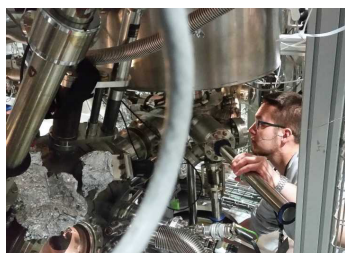


HERCULES at the Swiss Light Source

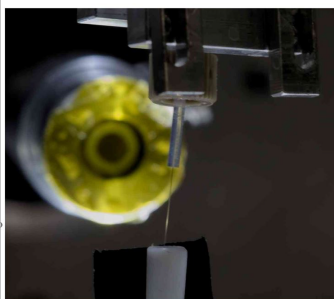


In the week of March 18-23 PSI hosted 20 PhD students and postdocs taking part in the [HERCULES 2018 school](#) on Neutron and Synchrotron Radiation. They attended lectures and performed two days of practical courses at several beam lines of the Swiss Light Source. This renowned 1-month school allows students, postdoctoral and senior scientists from European and non-European universities and laboratories to learn about Neutron and Synchrotron Radiation methods. The school covers a broad range of disciplines including Biology, Chemistry, Physics, Materials

Science, Geosciences and Industrial applications.

Read more: <https://www.psi.ch/micmag/hercules-2018-at-the-swiss-light-source>

New insights into the nucleation and subsequent crystallization of calcium carbonate



Despite its widespread occurrence in nature and its importance in a variety of industrial applications, the nucleation and subsequent crystallization of calcium carbonate is still a matter of debate. Classical theory predicts that supersaturated carbonate solutions consist mostly of ions and ion pairs, with a small number of larger clusters present in the solution. However, for calcium carbonate solutions, this classical view has been challenged by the emergence of non-classical theories. In a novel experiment, using synchrotron X-ray absorption spectroscopy, the molecular structure around the solvated calcium ion in dilute

supersaturated calcium carbonate solutions was probed in situ.

Read more: <https://www.psi.ch/group-phoenix/are-supersaturated-calcium-carbonate-solutions-classical-or-non-classical>

Increased benefits for industry through the use of the Swiss Light Source



The scope for industrial research and development at the Swiss Light Source (SLS) is greater than ever before. Clients from all over the world are able to probe their systems with greater resolution and more closely matching realistic operation conditions than can be achieved at their home laboratories. For industry use, the SLS offers a variety of instruments and a team of scientists covering a wide range of expertise

including macromolecular and small molecule crystallography, X-ray powder diffraction, X-ray absorption spectroscopy, small-angle X-ray scattering and imaging. Proprietary access to the Swiss Light Source, SwissFEL and PSI Clean Rooms is managed through the SLS Techno Trans AG. Read more:

<http://synchrotron-analysis.ch/>

CALIPSOplus, a European Horizon2020 funded research and innovation program, provides access support for SMEs to light sources. The access is based on a specific review system for SMEs in parallel to the established academic access route but following the same principles. The proposal confidentiality is kept during the whole process. If the proposal is accepted, the SME will have access to the requested light sources and the experiments will be financially supported through CALIPSOplus. Read more:

<http://www.wayforlight.eu/en/industries/sme-access-proposal>