PSI facilities newsletter

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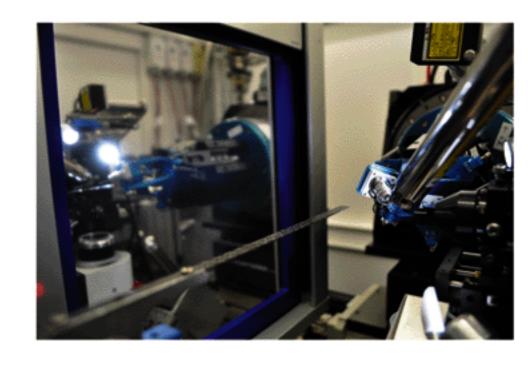


EDITORIAL

ERC Grant for the development of a new imaging method with high potential clinical impact

Marco Stampanoni, Assistant Professor for X-ray microscopy at the ETH Zürich and Head of the "X-ray Tomography Group" of the SLS has been recently awarded one of the coveted European Research Council (ERC)

Starting Grant for the project PhaseX: "Phase contrast X-ray imaging for medicine". Marco Stampanoni's project will be supported by the ERC with 1.5 million euros for the next 5 years. The highly competitive ERC Starting Grants are reserved for outstanding young research talents. With his team, Stampanoni has been working on the development of phase contrast X-ray imaging methods since several years. This technique can potentially revolutionize the radiological approach to medical imaging. Read more on: http://www.psi.ch/media/new-x-ray-technique

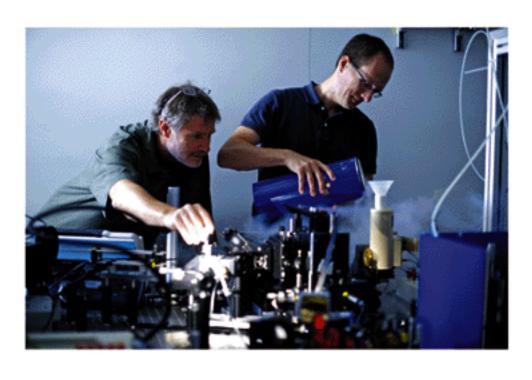


Facility News

SLS: Advanced diffraction data collection with multiaxis goniometer and single-photon counting detector at beamline X06DA

A new type of multi-axis goniometer called PRIGo (Parallel Robotics Inspired Goniometer) has been developed for macromolecular crystallography applications at the Swiss

Light Source. It allows to precisely reorient crystals and to collect very accurate data with high mechanical precision. With the very compact design, it offers the highest degree of freedom in a crowded sample environment. Combined with single-photon counting PILATUS 2M-Fast detector, the beamline X06DA now offers new data collection opportunities taking full advantages of crystal geometry and detector properties.



RESEARCH HIGHLIGHT

Built-in Germanium Lasers could make Computer Chips faster

Lee Carroll et al.; *Phys. Rev. Lett.* 109, 057402 (2012); DOI: 10.1103/PhysRevLett.109.057402

Paul Scherrer Institute (PSI) researchers (figure left: Hans Sigg and Peter Friedli at the SLS) have investigated the

mechanisms necessary for enabling the semiconductor germanium to emit laser light. As a laser material, germanium together with silicon could form the basis for innovative computer chips in which information would be transferred partially in the form of light. This technology would revolutionize data streaming within chips and give a boost to the performance of electronics. Read more on:

http://www.psi.ch/media/built-in-germanium-lasers-could-make-computer-chips-faster