

The Paul Scherrer Institute PSI is the largest research institute for natural and engineering sciences within Switzerland. We perform cutting-edge research in the fields of matter and materials, energy and environment and human health. By performing fundamental and applied research, we work on sustainable solutions for major challenges facing society, science and economy. PSI is committed to the training of future generations. Therefore about one quarter of our staff are post-docs, post-graduates or apprentices. Altogether PSI employs 2100 people.

For the Microscopy and Magnetism Group we are looking for a

Postdoctoral Fellow

Ultrafast science in condensed matter



Your tasks

You will investigate the ultrafast dynamics of electronic, magnetic and structural properties in perovskite related materials. That requires the characterisation of static properties of the materials too. The goal is to understand the different basic interaction in solids and how they determine the dynamical and statical properties. Experiments are based on ultrafast pump probe techniques including the use of X-Rays as a probe. For this purpose, you will perform X-Ray scattering and X-Ray spectroscopies experiments on the utrafast time scales. Static experiments are performed at the <u>Swiss</u> <u>Light Source SLS</u> and ultrafast dynamics will be studied at the X-Ray <u>Free Electron Laser SwissFEL</u> at PSI, or other XFEL's such as the LCLS (Stanford, USA), SACLA (Japan) or the EuXFEL in Hamburg. These investigations will be in close collaboration with colleagues of other groups in and outside of PSI.

Your profile

You have a PhD degree in physics and enjoy working in an interdisciplinary and internationally oriented environment. You want to understand physics of complex oxides on the atomic level and its ultrafast dynamics and you can easily integrate yourself in a team. Expertise with fs lasers or with synchrotron/XFEL X-Ray techniques will be of advantage. A good command of English is required.

We offer

Our institution is based on an interdisciplinary, innovative and dynamic collaboration. You will profit from a systematic training on the job, in addition to personal development possibilities and our pronounced vocational training culture. If you wish to optimally combine work and family life or other personal interests, we are able to support you with our modern employment conditions and the onsite infrastructure.

Your employment contract is limited to 2 years.

Paul Scherrer Institut Human Resources Management, Anita Bleiker	For further information please contact Dr Urs Staub, phone +41 56 310 44 94.
Forschungsstrasse 111,	Please submit your application online (including list of publications
5232 Villigen PSI, Switzerland,	and addresses of referees) for the position as a Postdoctoral
<u>www.psi.ch</u>	Fellow <mark>(index no. xxxx-xx).</mark>



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Your tasks

You will investigate the ultrafast dynamics of electronic, magnetic and structural properties in perovskite related materials. The goal is to understand the different basic interaction in solids and how they determine the dynamical and statical properties by driving the mateirals coherently or to use non-linear X-Ray effects. Experiments are based on ultrafast techniques mainly based on X-Rays as a probe. For this purpose, you will perform X-Ray scattering and X-Ray spectroscopies experiments on the utrafast time scales with a focus of using the new opportunities at the X-Ray Free Electron Laser SwissFEL at PSI, in particular with the new soft X-Ray FURKA beamline. These investigations will be in close collaboration with colleagues of other groups in and outside of PSI.

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02.12.2020