



PhD student position for project at the Paul Scherrer Institute

"Convergent Beam Electron diffraction"

Your tasks

You will participate in developing new method of convergent beam electron diffraction (CBED) for high-resolution imaging. CBED will be applied for imaging 2D crystals, such as graphene, and noncrystalline samples such as individual macromolecules. The project will include three subprojects: theoretical and numerical modeling of CBED experiment, CBED experiments using different samples under different experimental conditions, and data analysis with structure recovery.

Your profile

You should hold a master's degree in physics, chemistry, or materials science and be highly motivated to do theoretical, numerical and experimental research in an international team. Spoken and written English on at least an upper-intermediate level (CEFR B2) is required. Good knowledge of theoretical physics, condensed matter physics, soft condensed matter physics, scattering theory, optics, as well as programming skills for numerical simulation and data analysis are a plus. Experimental experience in electron microscopy and light optical imaging are also a plus.

The experimental work will be carried at the Paul Scherrer Institute in Villigen, the PhD degree will be awarded by the University of Zurich.

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.

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