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 future technologies, energy and climate, health innovation and fundamentals of nature. 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 2300 people.

For the Nanodiffraction Group we are looking for a

PhD Student in low-energy electron holography

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Your tasks

You will participate in developing a novel imaging technique—low-energy electron holography — which will be applied for atomic-resolution imaging of 2D crystals (graphene, TMDs, etc.), and nano-scaled non-crystalline samples including single proteins and other macromolecules. The project will consist of the following tasks:

- Building a coherent low-energy electron microscope
- Sample preparation and recording holograms
- Numerical reconstruction of the sample structure from holograms
- Presenting the results at conferences, writing papers

Your profile

- Master's degree in physics or engineering
- Hands-on experience in experimental physics, experience in building a device is preferred
- Good knowledge of solid-state physics, coherent optics, and theoretical physics (quantum mechanics, QED) is required
- Programming skills (Matlab, Python)
- Experimental experience in electron microscopy and light optical imaging are a plus

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 on-site infrastructure.

For further information, please contact PD Dr Tatiana Latychevskaia, phone +41 56 310 46 79.

Please submit your application online by **31 December 2025** (including addresses of referees) for the position as a PhD Student (Index-Nr. 2411-24155).

Paul Scherrer Institute, Human Resources Management, Pascale Bärtschi, 5232 Villigen PSI, Switzerland