Universität Basel
Swiss Nanoscience Institute

PAUL SCHERRER INSTITUT
PSI

SNI
SWISS NANOSCIENCE INSTITUTE
EINE INITIATIVE DER UNIVERSITÄT BASEL UND DES KANTONS AARGAU

In the framework of the SNI PhD school we are announcing the position of a

PhD candidate in nanoscience

for the research project

Local manipulation of spin domains in a multiferroic Rashba semiconductor

Principle investigators: Matthias Muntwiler, Thomas A. Jung

Your tasks

You will study the local atomic and electronic structure of thin films of multiferroic semiconductors by scanning probe and photoelectron spectroscopy methods. In particular, you will conduct experiments to polarize individual surface domains and read out their local spin density of states by spin-polarized scanning tunnelling microscopy and spectroscopy (STM/STS). For a complete characterization of the samples, you will also conduct synchrotron-based photoelectron spectroscopy (ARPES) and diffraction (XPD) measurements.

You will be registered as a PhD student at the University of Basel where you shall also teach. The experimental work will be done at the PEARL beamline of the Paul Scherrer Institut, the Nanolab at the Universität Basel and in collaboration with European partners.

Your profile

You are a highly motivated individual who enjoys working in a small team of scientists with different backgrounds. You have a master's degree in physics, nanoscience, materials science, physical chemistry or a related field. An interdisciplinary background is of advantage. Ideally, you have experience in one of the mentioned methods. You enjoy working with complex scientific instrumentation. You are fluent in English, basic knowledge of German is desirable.

Further Information / Contact

SNI PhD School

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Please submit your application online at
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