

We invite applications for a

### PhD Student Position

(fare based on german 3/4 E13 TV-L FU) in experimental solid-state physics, starting from May 2026 and limited until 31.12.2029. The position is assigned to the workgroup Kuch, which has experience investigating ultrathin magnetic films, surfaces, nanostructures, and adsorbed molecules that may become relevant in a future spin-based electronics. A focus is on spin and magnetization dynamics of ultrathin layers with unconventional spin structures and on the magnetism of adsorbed molecules. Experiments are carried out both by laboratory-based techniques as well as by using synchrotron radiation. We provide excellent conditions for motivated experimentalists. Extensive equipment for X-ray spectroscopy and state-of-the-art surface science analysis tools can be used.

The project encompasses time- and element-resolved X-ray-spectroscopy investigations of magnetic layered systems with interfaces between layers of different spin structures. The position is embedded in a research project funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) as part of the Trans-regional Collaborative Research Center 227 "Ultrafast Spin Dynamics". The goal is to gain insight into the interplay of ultrafast demagnetization, transient spin currents, and thermal effects after ultrafast optical excitation. Circular and linear magnetic dichroism in resonant x-ray reflectivity help to reveal the temporal evolution of ferromagnetic and antiferromagnetic spin structures as a function of depth in the layers. Experiments will be carried out in the university laboratory in Berlin-Dahlem and at the synchrotron-radiation source BESSY II in Berlin-Adlershof.

A Master's degree is required with a Master's thesis in experimental physics or equivalent. We are seeking a motivated candidate with team spirit and ability for independent work. Experience in one or more of the following is of advantage: magnetization dynamics, ultrafast pump–probe experiments, surface science, ultra-high vacuum, or x-ray absorption spectroscopy of magnetic materials.

More information can be obtained from Prof. Dr. Wolfgang Kuch, e-mail: [magnetism@physik.fu-berlin.de](mailto:magnetism@physik.fu-berlin.de), Tel.: +49-30-838-52098, or at <https://www.physik.fu-berlin.de/~ag-kuch>.

Applications quoting the reference code **DM-637** must include a complete CV, an abstract (max. one page) of the master thesis, as well as names and addresses (postal and e-mail) of two or three persons willing to provide confidential letters of reference. Only complete applications will be considered! Submit your application on the [online recruiting portal](#) (you need to create a profile) not later than **10. March 2026**.

The Freie Universität is an equal opportunity employer. Women are strongly encouraged to apply. Applicants with a disability are given preference in case of equal qualification.