

The Max-Born Institute for Nonlinear Optics and Short Pulse Spectroscopy (MBI) conducts basic research in the field of nonlinear optics and ultrafast dynamics arising from the interaction of light with matter and pursues applications that emerge from this research. It develops and uses ultrafast and ultra-intense lasers and laser-riven short-pulse light sources in a broad spectral range in combination with methods of nonlinear spectroscopy. The spectral range includes in particular XUV radiation and soft x-rays, where experiments at in-house sources are complemented with the use of accelerator driven sources such as free electron x-ray lasers.

With its research, MBI fulfils a national mission and is an integral part of the international scientific community.

Division B "Transient Electronic Structure and Nanoscience" of MBI invites applications for a

Postdoctoral Fellow (m/f/d) in condensed matter physics: Ultrafast magnetization dynamics in 2D magnets probed by element-specific soft X-ray spectroscopy

Job profile:

With the discovery of the first intrinsic 2D magnet in 2017, researchers around the world have started to observe intriguing new properties of this class of magnetic systems. Most interestingly, the sensitivity of the electronic structure to external perturbations like strain, electric fields, electrostatic- or photo-doping enable new opportunities to manipulate their macroscopic, magnetic properties. We are looking for a postdoctoral fellow who would like to join our team to investigate laser induced, ultrafast processes in this novel class of materials with the aim of controlling magnetic order by light. As our main experimental technique we will use two recently commissioned high-harmonic, laboratory-based instruments and employ helicity- and energy dependent transient absorption spectroscopy in the extreme ultraviolet and soft X-ray spectral range. All our experimental efforts are guided and complemented by in-house, state-of-the-art, ab-initio calculations.

Requirements:

- You have an academic background in experimental physics with a PhD.
- You have worked with femtosecond laser systems in past experiments. Experience in high harmonic generation and related technologies such as nonlinear light conversion, vacuum and X-ray technologies are welcome.
- A background in solid-state physics with experience in magnetism, semiconductor physics, or 2D materials will be considered as an advantage.
- You have a high level of self-motivation and initiative to advance new scientific and experimental directions as well as enthusiasm to perform hands-on-work in a laser laboratory.
- You are happy to work in a team, openly share and discuss your results and communicate effectively in English.

Offer:

We offer a stimulating scientific environment in a team of experimental and theoretical PhD students, postdocs and senior scientists. MBI provides a state-of-the art research infrastructure with modern and very well equipped laser laboratories.

The research position is limited to a duration of 2 years. The payment is according to the German TVöD (Bund) salary scheme for scientists in public research institutions. The position is available immediately and open until filled.

MBI is an equal opportunity employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply. If equally qualified, severely handicapped persons are given preference.

MBI supports the reconcilability of family and working life and is certified as family-friendly by the "family audit".

Please use the button "Apply online" and upload your application with a CV, a description of the research experience, publication list, references, and/or recommendation letters electronically via the MBI online recruiting platform at <https://mbi-berlin.de/career>.

Further information on the position is available from Dr. Clemens von Korff Schmising (korff@mbi-berlin.de) and Prof. Dr. Stefan Eisebitt (eisebitt@mbi-berlin.de).