

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-driven short-pulse light sources in a broad spectral range in combination with methods of nonlinear spectroscopy.

With its research, MBI fulfills a national mission and is an integral part of the international scientific community. The Max-Born-Institute invites applications for the position

## Postdoctoral Research Associate (m/f/d)

in the field of ultrafast spectroscopy in wide bandgap dielectrics

### Job profile:

The topic is the study of primary excitation mechanisms during ultrashort pulse laser irradiation of amorphous and crystalline solid dielectrics. More specifically, the principal objective is to study the evolution of the bandgap when the material is subjected to a strong external laser field via pump-probe experiments using few-cycle VUV pulses. These fundamental studies aim to understand, control and optimize the laser-matter interaction for micro- and nano-processing applications. While few-cycle pulses in the visible spectral range are available, the UV conversion will be explored and a vacuum beamline hosting the optical arrangement will be implemented.

The postdoctoral position will be supported by the ANR-DFG funding programme, designed to expand and intensify french-german collaborations. The researcher will thus be a part of an international team pursuing research goals on the fundamentals of laser-matter interaction at ultrashort timescales.

### Requirements:

PhD in physics. Hands-on experience in ultrafast optics and a strong background in nonlinear optics, material science and/or solid state physics. Programming skills for coding data acquisition and processing.

### Offer:

MBI offers a 2-year appointment with a salary according to the German salary scheme for the public sector (TVöD Bund).

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>. The deadline for applications is **January 31, 2020**.