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.

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 Position in Attosecond Diffraction Imaging (m/f/d)

Job profile:

The Leibniz junior research group “Ultrafast Nanoplasma Dynamics” at MBI (group leader D. Rupp) studies single nanoscale particles and ultrafast dynamics within them via diffraction imaging at X-ray free-electron lasers (FEL) and intense high-harmonic generation sources (HHG), see e.g. Rupp et al., Nat. Com. 8, 493 (2017).

We are currently developing and constructing a high-intensity HHG-XUV beamline at the MBI, making use of a cutting-edge laser system (<10 fs, >30 mJ). One envisioned experimental application will be time-resolved diffraction imaging of clusters, nanodroplets, and microjets to trace correlated electron dynamics with attosecond resolution.

You will be working within a friendly, open-minded and motivated team. You will contribute to the further development of the source for intense and ultrashort HHG pulses and in setting up and characterizing microfocusing XUV optics and pump-probe configurations. The planning, conduction, and analysis of time-resolved diffractive imaging experiments will be a key aspect of the project. Further, you have the possibility to actively participate in interdisciplinary projects and beamtimes of the group within international collaborations at XUV and X-ray FELs (e.g. at E-XFEL, FERMI, SwissFEL).

Requirements:

You have a PhD in physics or a related field and previous experience in ultrafast laser or X-ray science. Experience with attosecond pulses or FELs or synchrotrons, with single-particle imaging, gas-phase electron or ion spectroscopy, will be considered an asset. Good English communication abilities are required.

Offer:

The position is initially limited to two years with the possibility of extension. The payment is according to the German TVöD Bund salary scheme for scientists in public research institutions.

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 upload your application, including cover letter, curriculum vitae, certificates, transcript of grades as well as a list of publications electronically via the MBI online recruiting platform at http://www.mbi-berlin.de/de/jobs/index.html. The deadline for applications is **February 28th, 2019**

For further information and inquires please contact Daniela Rupp (rupp@mbi-berlin.de).