

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)

to develop a novel plasma lens for focusing attosecond pulses.

Job profile:

We aim to develop a novel plasma lens to focus attosecond pulses at extreme-ultraviolet (XUV) frequencies. Since glass lenses cannot be used in the XUV range due to large absorption, we have recently demonstrated a gas lens consisting of neutral atoms to focus XUV pulses (Nature 564, 91). In a team effort, the successful applicant will develop this technique further by using a lens consisting of a plasma. This makes it possible to focus attosecond pulses at higher XUV photon energies, while keeping dispersion and chromatic aberration low. Simulations will be performed to model the plasma focusing. The postdoc will further perform time-resolved experiments with attosecond resolution. The project will be conducted in close collaboration with Dr. Jens Osterhoff (DESY, Hamburg).

The entire project will be realized in an optimum environment with respect not only to the existing infrastructure but also to the available experience and possibilities for national and international collaborations. This will provide the necessary basis for achieving essential results within shortest time as well as for their dissemination at international level.

Requirements:

PhD in physics, experience with ultrashort laser pulses, attosecond physics and / or plasmas.

Offer:

MBI offers a 2-year appointment. The payment is according to the German TVöD 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 use the button "Apply online" and upload your application including cover letter, curriculum vitae, certificates and description of previous professional activities electronically via the MBI online recruiting platform at <https://mbi-berlin.de/career>. The deadline for applications is **July 31st, 2021**.

For further information about the project, please contact Dr. Bernd Schütte (Bernd.Schuette@mbi-berlin.de).