

## PhD position (Marie Skłodowska Curie ITN Early Stage Researcher): Attosecond molecular physics with high repetition rate lasers

at the Max-Born-Institute, Berlin, Germany

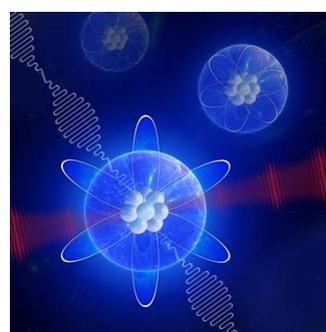
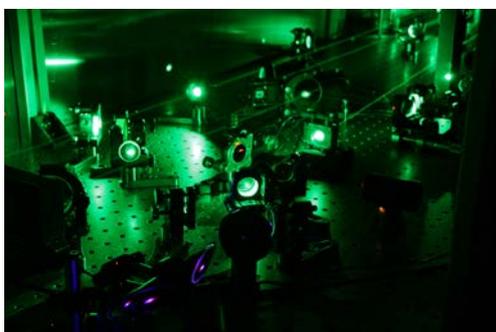
Division A, Attosecond Science, led by Prof Marc J.J. Vrakking



Marie Skłodowska-Curie  
Actions

**Job profile:** Applications are invited for a PhD position as part of the EU-funded Marie Skłodowska-Curie Innovative Training Network (ITN), "ASPIRE". The post benefits from a highly competitive and attractive salary, plus mobility and family allowances as applicable.

At the Max-Born Institute, a state-of-the-art 100 kHz, few-cycle Optical Parametric Chirped Pulse Amplifier (OPCPA) has been developed as drive laser for two-color attosecond pump-probe experiments. Given the uniquely high repetition rate of the OPCPA, the experiments will be carried out using fully coincident detection of the electrons and ions formed in the experiment, using a COLTRIMS setup. In addition to Prof. Vrakking as thesis supervisor, the PhD students will benefit from supervision by senior scientists Dr. Schulz, Dr. Furch and Dr. Witting. Within the PhD-work, isolated attosecond pulses will be generated and demonstrated, and experiments will be performed on ultrafast correlated electronic and structural dynamics in several small molecules.



The ASPIRE network comprises 9 member institutions, from both academia and industry, located in the United Kingdom, Germany, France, Denmark and Italy, together with 6 further partner organisations. A total of 12 Early Stage Researchers (ESRs) are hosted across the network and take part in laboratory-based research, a network-wide training program, public engagement activities and collaboration with network partners through short-term placements in European industrial/academic partner laboratories. Details of all available projects can be found at: [www.ASPIRE-ITN.eu](http://www.ASPIRE-ITN.eu). The overarching research goal of the ASPIRE project is the measurement of "molecular frame" (MF) photoelectron angular distributions (PADs) from isolated molecules of varying complexity.

**Requirements:** The successful candidate for the post will possess an excellent Master's degree in a relevant subject (Physics, Chemistry, Chemical Physics), excellent verbal and written communication skills, and the potential to conduct independent scientific research and perform well as part of a research team. Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria:

([http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/main/h2020-wp1415-msca\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-msca_en.pdf), p40-41).

In particular, at the time of appointment the candidate must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, he/she must not have resided in Germany for more than 12 months in the 3 years immediately before the appointment.

**Offer:** The post is offered on a fixed-term 36 month contract. If needed, individual arrangements deviating from this scheme can be considered. The successful candidate will register for a PhD at the Freie Universität Berlin.

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

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

Please send your application, including cover letter, curriculum vitae, certificates and description of previous professional activities electronically to Ms. Schulz [personal@mbi-berlin.de](mailto:personal@mbi-berlin.de) or by Mail to Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie, Max-Born-Straße 2a, 12489 Berlin, Germany, c/o Ms. Schulz quoting this announcement. The deadline for applications is **January 31<sup>st</sup>, 2018**.

For further information about the position please contact Prof. Vrakking ([vrakking@mbi-berlin.de](mailto:vrakking@mbi-berlin.de)), Dr. Schulz ([cps@mbi-berlin.de](mailto:cps@mbi-berlin.de)), Dr. Furch ([furch@mbi-berlin.de](mailto:furch@mbi-berlin.de)) or Dr. Witting ([witting@mbi-berlin.de](mailto:witting@mbi-berlin.de)).

■ **Direktor Bereich A**

Prof. Dr. Marc Vrakking

■ **Direktor Bereich B**

Prof. Dr. Stefan Eisebitt

■ **Direktor Bereich C**

Prof. Dr. Thomas Elsässer