

ELI Beamlines research centre in Dolní Břežany is part of pan-European infrastructure ELI (Extreme Light Infrastructure) representing a unique tool of support of scientific excellence in Europe by making available its capacities to the best scientific teams across the world. The aim of ELI Beamlines is to establish the most intensive laser system in the world and to operate it on a long-term basis. Due to ultra-high performances of 10 PW (1 petawatt = 1,000,000,000,000,000 watts) and concentrated intensities of up to  $10^{24}$  W/cm<sup>2</sup>, we can offer our users a unique source of radiation and beams of accelerated particles. The so called beamlines will enable ground-breaking research in the area of physics and science dealing with materials, but also in biomedicine and laboratory astrophysics and many other fields. ELI Beamlines is part of the Institute of Physics of the Czech Academy of Sciences, and it was open in 2015.

The Institute of Physics of the Czech Academy of Sciences is a holder of the HR Excellence in Research Award. It is awarded by the European Commission to institutions which put significant effort into improving their HR strategy and ensuring professional and ethical working conditions.

At ELI Beamlines, Research Program 4 (RP4) develops interdisciplinary applications in Molecular, Bio-medical and Materials (MBM) Sciences. Specific research areas under development are Atomic, Molecular and Optical (AMO) sciences, Coherent Diffractive Imaging (CDI), time-resolved X-ray diffraction and spectroscopy, time-resolved VUV magneto-optical ellipsometry and advanced optical spectroscopy methods.

## Postdoctoral Fellow - Ultrafast spectroscopy and Imaging (IV-116)

We are now looking for a junior researcher/instrument scientist to contribute to the development of the unique experimental capabilities of the MAC user end-station. The successful candidate will work both on independent research topics focused on ultrafast spectroscopy and imaging of nano-particles and molecular beams as well as provide support for members of an international user community who come to perform experiments at the scientific end stations.

### The work will be predominantly focused on following topics:

- development of experimental capabilities of the MAC user end-station
- participation in the support of user experiments at the MAC user end-station as well as *in-house* research and development programmes

- contribution to the relevant research activities of the department of Structural Dynamics within national and international collaborators at synchrotrons and X-ray free-electron laser facilities

**Requirements:**

- PhD in physics, biophysics, chemistry or related field is desirable. Highly motivated candidates with a M.Sc. degree are also encouraged to apply (in that case the position will be transferred to a PhD student position)
- strong interests in development and operation of advanced scientific instruments
- programming skills in Python, Matlab are beneficial
- experience from working with lasers and/or other pulsed light sources and/or vacuum equipment is beneficial
- strong interests in scientific fields related to biophysics, ultrafast spectroscopy and dynamics, coherent diffractive imaging, physics with ultra-short pulses, interaction of light with matter, atomic and molecular physics
- good networking and communication skills, capability to work in a team
- a good knowledge of spoken and written English is necessary as the work environment is highly international

**We offer:**

- the opportunity to contribute to a unique scientific project and to develop a strong scientific profile in an interdisciplinary research field
- career growth, professional education
- competitive and motivating salary
- 5 weeks of holidays and other employee benefits
- pleasant work environment in highly motivated international research-team

Project related questions can be addressed to Maria Krikunova (e-mail: [maria.krikunova@eli-beams.eu](mailto:maria.krikunova@eli-beams.eu)) and Jakob Andreasson (e-mail: [jakob.andreasson@eli-beams.eu](mailto:jakob.andreasson@eli-beams.eu))

Applications, containing CV, cover letter, contacts of references, and any other material the candidate considers relevant, should be sent to Mrs. Jana Ženíšková, HR specialist ([jana.zeniskova@eli-beams.eu](mailto:jana.zeniskova@eli-beams.eu), +420 - 601560322).

Information regarding the personal data processing and access to the personal data at the Institute of Physics of the Czech Academy of Sciences can be found on: <https://www.fzu.cz/en/processing-of-personal-data>