



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



ELI-Beamlines will be the high-energy, repetition-rate laser pillar of the ELI (Extreme Light Infrastructure) project. It will be an international facility for both academic and applied research, slated to provide user capability. The main objective of the ELI-Beamlines Project is delivery of ultra-short high-energy pulses for the generation and applications of high-brightness short pulse X-ray sources and accelerated particles. The laser systems will be delivering pulses with length ranging between 10 and 150 fs and will provide high-energy Petawatt and 10-PW peak powers. Numerous pump-probe experiments are planned to be conducted with a pump pulse delivered by secondary sources of ionizing radiation (e.g., K-alpha source, high-order harmonics, betatron sources, soft x-ray lasers and sources of energetic charged particles) driven by above-mentioned ultra-intense laser beams whose part is used as a probe pulse. Within the project “Strengthening capacity of research teams in the field of physical sciences” realized by the Institute of Physics AS CR, v.v.i. we are seeking a candidate for the position of:

Postdoctoral Fellow

“Time-resolved X-ray diffraction on biomolecular and artificial nanostructures”

The postdoctoral fellow will focus on the design and the realization of the end-station enabling possible various pump-probe experiments using laser-driven X-ray sources for investigation of ultra-fast dynamics in biomolecular and artificial nanostructures.

The applicant should have obtained a PhD degree, mainly in areas of molecular biophysics, radiation physics, materials science and condensed matter physics. We expect from the candidate a theoretical knowledge and demonstrated practical experimental skills in generation and characterization of X-ray pulses and/or their utilization in structural analysis and related techniques. An additional knowledge about ultra-short laser pulses, synchrotron radiation, and/or time-resolved diffraction would represent an advantage. The candidate must also have some experience in managing of interdisciplinary research, in particular in planning and organization of experiments using high-power lasers and/or synchrotron radiation. The applicant will have to work in a wide environment (different large-scale facilities) in order to actively participate in the different collaborations involved. The candidate is expected to work in an international team of scientists and engineers.

Key Responsibilities:

1. Realization of research tasks assigned by the Mentor.
2. Advising, training, and educating students (3 hours per week).

3. Research stay in selected world-class institutions outside Czech Republic (50 days per year).
4. Publishing in SCI journals.

Key Requirements:

1. Ph.D. in natural sciences or applied sciences or engineering gained within the last 3 years.
2. English language on a very good level (written and spoken).
3. Strong motivation for work and loyalty.
4. Excellent communication and organizational skills.
5. Team player, feel a sense of accomplishment.
6. Willing to travel.

We Offer:

1. Monthly salary of up to 2.400 EUR depending on the quality of candidate.
2. 36 months contract.
3. 5 weeks of holidays.

Requested Documents:

1. CV (English).
2. List of publications (English).
3. Recommendation Letter (English or Czech).
4. Motivation Letter (English).
5. Copy of Ph.D. diploma or certificate (English or Czech)
6. Copy of Ph.D. thesis (hard copy or electronic version)

Deadline: 1 July 2012

Contact:

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