



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 charged 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-like sources, soft x-ray lasers, 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

### “Pulse radiolysis with sub-picosecond temporal resolution”

The postdoctoral fellow will focus on the design and the realization of the end-station making possible various low-jitter pump-probe measurements of ultra-fast processes initiated in liquid water and related systems using the laser-driven sources of ionizing radiation.

The applicant should have obtained a PhD degree, mainly in areas of radiation chemistry, radiobiology and/or radiation physics. We expect from the candidate a theoretical knowledge and demonstrated practical experimental skills in the field of generation, characterization and applications of short and/or ultra-short pulses of ionizing radiation. An additional knowledge about pulse radiolysis (in general, any pump-probe technique) 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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