



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



HiLASE (High-average power pulsed lasers) is a european R&D project aimed at development of novel type of diode-pumped solid-state lasers (DPSSL) intended for industrial and scientific applications. 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. is seeking a candidate for the position of:

## **Postdoctoral Fellow**

### **"Design and modeling of high-energy diode pumped laser"**

The postdoctoral fellow will focus on optical design and modeling of a 100 J / 2 ns / 10 Hz laser system and its scaling up to the kJ level.

The successful candidate will identify and design key components of the laser system to allow a significant energy upscaling of current diode-pumped solid-state lasers while preserving essential system parameters such as high optical-to-optical efficiency, low nonlinear phase shift (B-integral) and small wavefront distortions without a significant risk of optical damage in the system. The model will be updated according to experimental data obtained during the HiLASE project.

We expect from the candidate an extensive theoretical knowledge and demonstrated practical experimental skills in the field of high-power, high-energy-class solid-state lasers, nonlinear optics, and laser diagnostics. The candidate must also have some experience in managing of interdisciplinary research, in particular in planning and organization of application experiments with lasers.

#### **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:** June 11, 2012

**Contact:**

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