

## UNIVERSITY OF PARDUBICE, Faculty of Chemical Technology

is seeking 1 researcher for the position of a

### **Specialist in photocatalysts with heterojunction effective in water splitting under presence of sacrificial agent - POSTDOC**

**Research area:** photocatalysis, spectroscopy

#### **Job description:**

Postdoctoral position is focusing on photocatalysts with heterojunction structure effective in water splitting under presence of sacrificial agent. The main objectives are to describe migration pathway of electron-hole pairs in heterojunction photocatalysts and to obtain advanced material properties allowing a deep understanding of key parameters affecting the photocatalytic behaviour of studied materials. There is required knowledge / skill in the field of fluorescence measurement / evaluation, synthesis of photocatalysts or work with micro photoreactors.

The following characterization techniques are available: diffuse reflectance spectroscopy, fluorescence spectroscopy (with quantum yield analysis and fluorescence lifetime analysis), Raman spectroscopy, X-ray diffraction, N<sub>2</sub>-adsorption. The laboratory is equipped with a batch photoreactor and a flow-type micro photo reactor. Other techniques such as TEM, SEM, XPS, EIS, EPR and photocurrent response are done by external partners.

The Postdoc will be obliged to organise a seminar/workshop for his/her colleagues or other scholars on research achievements, experience from abroad, possibilities of cooperation etc.

The Postdoc will fully participate in the research activities of the research team of "Surface chemistry and catalysis" at the Department of Physical Chemistry.

Head of team: prof. Ing. Libor Čapek, Ph.D., [libor.capek@upce.cz](mailto:libor.capek@upce.cz), <https://www.upce.cz/en>

#### **The applicant is required:**

- To be a postdoc, i.e. research worker within 7 years of gaining the PhD or its equivalent<sup>[1]</sup> (ISCED level 8)
- Will submit her/his sufficient list of publications (listed in the databases Thomson Reuters Web of Science, types of publications including "article", "book chapters", "letter" and "review"),
- To be experienced in the field of fluorescence measurement / evaluation, synthesis of photocatalysts or work with micro photoreactors. The work will be specified based on the experience of the postdoc.
- To have excellent knowledge of the English language (written as well as spoken).

Successful applicants should not have any type of employment at another university or other institution. Any exception from this rule must be based on an application submitted during the selection process.

#### **Job location:**

University of Pardubice, Faculty of Chemical Technology, Department of Physical Chemistry, Pardubice, Czech Republic.

#### **Job duration:**

From 12 to 24 months.

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<sup>[1]</sup> The stated time limit may be extended by a period spent by the applicant on maternity leave or sick leave longer than 90 days, caring for a family member (more than 90 days), sabbatical, or military service.