

## UNIVERSITY OF PARDUBICE, Faculty of Chemical Technology

is hiring 1 postdoc researcher in the following field:

### 1 – KA09 – Solid basic catalysts for environmental processes

#### Job description

The postdoc will deal with the research of solid basic catalysts, in order to analyze the amount and distribution of basic sites, targeted preparation of basic catalysts with the required textural, structural and basic properties. The main goal of the project is to create a relationship between structural / textural / acid-base properties and catalytic properties (activity / stability) of mixed oxides and reconstructed layered double hydroxides. Another goal is focused on deposited layered double hydroxides, mixed oxides and reconstructed layered double hydroxides (so-called core-shell systems). The primary goal is to develop catalysts for the aldol condensation of furfural, but it is possible to focus on further research into these types of catalysts for other environmental reactions. In particular, the following characterization techniques are available: TPD-CO<sub>2</sub>, FTIR-CO<sub>2</sub>, XRD, N<sub>2</sub>-adsorption, UV-vis DR spectroscopy, Raman spectroscopy, in-situ DRS and in-situ DRIFT. Other techniques such as TEM, SEM and XPS are performed by external partners.

The researcher shall actively participate in a conference, seminar, or workshop organized by the receiving institution at least once in every six months of the mobility. The obligation of active participation / participation in a conference / seminar / workshop, etc. can also be fulfilled by online form due to extraordinary measures related to force majeure. These are extraordinary measures of the Government of the Czech Republic as well as extraordinary measures of the host country, transit countries or the country of residence of the researcher's family.

#### Field of Research

Environmental Engineering

#### Objectives and expected benefits

The Department of Physical Chemistry of the Faculty of Chemical Technology of the University of Pardubice will benefit from the expanded use of solid basic catalysts in environmental processes. The activities carried out by the postdoctoral researcher will be follow up on the existing research activities of the Department in the field of heterogeneous catalysis and characterization of solid materials. Professor Čapek will be available as a mentor for the postdoctoral researcher throughout the entire stay.

#### Requirements

- Ph.D. or its foreign equivalent (ISCED Level 8) awarded not earlier than 7 years before the beginning of the mobility<sup>1</sup>,
- over the past 3 years, the candidate has spent a minimum of 2 continuous years (as of the beginning of the mobility) outside the Czech Republic working as a researcher (with FTE of 0.5 and more) or did Ph.D. studies abroad;
- over the past 3 years the candidate has published a minimum of 2 papers (as of the beginning of the mobility) in journals indexed in Thomson Reuters Web of Science, Scopus or ERIH PLUS databases.

The winning candidate should not be employed by another university or similar institution as of the commencement date. This requirement may be waived if applied for in the hiring procedure.

#### Place of work

University of Pardubice, Faculty of Chemical Technology, Studentska 95, 532 10 Pardubice, Czech Republic. The Department of Physical Chemistry.

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<sup>1</sup> The period may be extended to account for maternity and parental leave, long-term sick leave exceeding 90 days, family caregiver leave exceeding 90 days, medical pre-certification training and military service

### **What we offer**

- 18-month fixed-term employment
- expected commencement date: 1. 4. 2021
- full-time work (8 hours/day, working hours: 8:30 a.m. - 5 p.m.)
- gross monthly salary: CZK 63 500,-
- employee benefits: annual leave, contributions for meals
- friendly environment, induction training

### **The application must contain:**

- Application form (filled in)
- CV
- A copy of university diploma, or a decision on its recognition
- A certificate on a language exam passed during the studies or a statement of the institution from which the candidate graduated - for English language as a minimum<sup>2</sup>
- A list of publications, especially publications in journals indexed in Web of Science.
- A motivation letter including a description of the benefit for the receiving institution.
- A brief description of the existing research
- A list and a brief description of research projects (national and international) in which the candidate participated (including the position)
- Other documents evidencing research activities carried out outside the Czech Republic
- List of international stays and their brief description
- A letter of recommendation of the previous supervisor or the head of the department or team where the candidate worked

All of the documents must be submitted in English. A university diploma or a decision on its recognition and a language exam certificate may also be submitted in Czech or Slovak. If an original of a document is not in Czech, Slovak or English, an official translation into one of these languages is required. An authenticated copy is not required for the purposes of the selection procedure, a printed or an electronic (pdf) one is sufficient.

**The application, including the attachments, must be sent by 5<sup>th</sup> March 2021** electronically to [libuse.cermanova@upce.cz](mailto:libuse.cermanova@upce.cz) or to the following address:

Ing. Libuše Cermanová  
University of Pardubice  
Studentská 95

532 10 Pardubice, Czech Republic

(please state „**Neotvírat – výběrové řízení**“ (Do not open – selection procedure) on the left side of the envelope).

### **Timetable of the selection procedure**

- Announcement of the call on the website of the University of Pardubice and Euraxess: by 26<sup>th</sup> February
- Deadline for submitting the required documents: by 5<sup>th</sup> March
- Evaluation: by 19<sup>th</sup> March
- Notification of the results and their announcement on the website of the University of Pardubice: by 26<sup>th</sup> March 2021

Each candidate will be notified in writing and will receive his or her record. The record will also define the appeal procedure and its time schedule. The results of the selection procedure will be published on the website of the University of Pardubice.

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<sup>2</sup> Not required for native speakers.

**Appeals** must be filed within 10 business days after the results were published on the University website. The appeal must be delivered to the contact person (Mrs. Libuše Cermanová) at the University of Pardubice within the set time. The appeal will be dealt within 10 business days after received. The selection committee will give its opinion on the appeal.