

Postdoctoral Research Fellow, Associate, or Assistant for Chemical Engineering, Catalysis and/or Modelling

Description

Postdoctoral Research Fellow, Associate, or Assistant in Chemical Engineering

Laboratory of Catalysis and Chemical Reaction Engineering

National Institute of Chemistry

Hajdrihova 19 SI-1001 Ljubljana, Slovenia

Basic and applied research of the National Institute of Chemistry are oriented towards fields which are of long-term importance to the world: biotechnology, environmental protection, structural and theoretical chemistry, analytical chemistry, materials research, and chemical engineering, through which the institute is in line with the needs of the domestic chemical, pharmaceutical, tire, and food industries. The work of the Institute is also in line with the priority thematic areas of the EU Research and Innovation programme Horizon 2020, which places an emphasis on genomics and biotechnology for health, nanotechnology, quality and safety of food, as well as nutrition, sustainable development, and global change.

You can find more information about the institute and laboratory at <http://www.ki.si/en/> and <http://www.ki.si/en/materials-engineering-and-analytics/113-laboratory-of-catalysis-and-chemical-reaction-engineering/>, respectively.

National Institute of Chemistry is offering a Postdoctoral Research Fellow, Associate, or Assistant (m/f) for a period of 4 years (starting 1 October 2015 or later, if desired by a selected candidate) with the possibility of shortening/extension, if desired. The trial employment period is 1 year.

Content of work:

The laboratory is offering a Postdoctoral Research Fellow position within the framework of a positively-evaluated H2020-SPIRE-2015 project, involving several leading industrial partners and academic institutions. The content of the project includes (among others) the plasma activation and (catalytic) conversion of methane and carbon dioxide into oxygenates, and for the project-related tasks and subtasks several (post)doctoral positions are open.

Candidates should preferably have experience in the fields of chemical engineering, chemistry or physics relating to reactor construction, plasma processes, methane conversion, heterogeneous catalysis and the pertinent experimentation (Option 1), or plasma processes, their modelling and the interrelating mechanisms (Option 2). Having demonstrable expertise in both of these fields is definitely desired as well, in addition to the conventional (natural gas) or emerging (flue gases, biogas, dry reforming, *etc.*) methane and CO₂ activation routes.

We invite applicants with a PhD degree in chemical engineering, chemistry, physics or related areas who have worked scientifically using the above-described skillsets, experience and expertise to apply for the open position. We expect the applicants to be proficient in at least the basic concepts of chemical engineering, reaction kinetics and heterogeneous catalysis. Experience in the field of the conventional methane conversion-related catalysis and process (steam reforming), syngas production, or further applications of the syngas to synthesized other value-added chemicals (methanol, formaldehyde, dimethyl ether, *etc.*) is highly welcome, although reactor construction, plasma-processes experience or mechanistic modelling skills are more beneficial.

Candidates should be prepared to work as a member of the team, should be reliable, motivated, independent and imaginative. Candidates should preferably exhibit past knowledge in project preparation, management and execution in general, not related to the current project at hand. Mastering of both spoken and written English is required, and may be presented through language skill certificates or the application-enclosed publications (preferably first-authored).

Please send your application referring to this open position by e-mail (andrej.pohar@ki.si), enclosing **CV** (explaining the scientific and research background with regard to the open position, including copies of university

certificates), **bibliography** (rendering the most position-relevant references in bold), a list of **employed/mastered open position-related expertise** for the above-described tasks (list them for both Option 1 and Option 2 (reactor construction, plasma processes, etc.), and self-grade them from 1 to 5, 5 being the mastering of a technique, and 1 being a novice for this specific expertise).

The closing date for the application is 20 September 2015, unless a fitting candidate is obtained before this deadline.

Number of positions available: 1

Research Fields

Chemical Engineering

Catalysis

Modelling

Methane Activation

Plasma

Career Stage

Experienced (postdoctoral) researcher – existing postdoctoral research experience are desired, but not obligatory.

Research Profile

Recognised Researcher (R2)