

Call for applications

Postdoctoral Research Associate / Research Assistant Professor in L52 Laboratory for demonstration of H₂ and CO₂ technologies

The new [Center for Development, Demonstration and Training for Carbon-free Technologies](#) (unique research facilities) and the excellently rated HyBReED programme (TRL 3-6 collaborative research programme) are announcing engaging research positions in decarbonisation and hydrogen technologies.

Job Responsibilities:

- conduct, manage, and coordinate research,
- prepare articles, reports, presentations and other forms of results dissemination and promotion, prepare project proposals,
- participate in preparation of annual programmes and the laboratory unit concept of operation,
- cooperate with national and international experts and researchers,
- establish and maintain contacts with the R&D users,
- coordinate work and training of technical, professional and research personnel.

Detailed description of work and tasks:

- conducting research in a selected research area in collaboration with other members of the group, critical evaluation of research data and integration of individual experimental results for research tasks or projects,
- preparation of material and/or proposals for research and development or scientific projects;
- preparation of scientific papers and presentation of results at international conferences,
- management and coordination of joint work and project tasks,
- participating in coordination of the team, laboratory organisation, and supervising operation, servicing and routine maintenance of the equipment,
- planning implementation and development of analytical and characterization methods,
- reviewing, submitting and handing over work reports to the superior and, if necessary, presentation to external users,
- submitting proposals for purchasing and maintaining research equipment, and procurement of consumables,
- other tasks as instructed by the superior.

A variety of **research topics** is possible. Preference will be given to applicants with (post)doctoral experience in the following areas:

- process engineering (design, management, optimization, process intensification, scaling-up from laboratory to pilot),
- catalytic and electrochemical processes,
- bioprocess and environmental engineering, chemical and biotechnological recovery of waste streams,
- modelling of processes on different time scales or with knowledge in DFT, KMC, CFD, reaction (micro)kinetics, techno-economics, etc.

The candidate's qualifications: PhD

Offer: Temporary contract is offered until 30 June 2026 with a three-month probation period and the possibility to extend the contract

Start date: second half of 2024 or by arrangement

Work location: Kisovec

Additional information: phone +386-1-4760-531 (Gasan Osojnik), gasan.osojnik@ki.si

Candidates are invited to submit their written applications by **15 of June 2024** with a brief research proposal in: (i) hydrogen technologies, (ii) CO₂ capture, (iii) electrolysis, (iv) or other relevant topics to the following e-mail address zaposlitev@ki.si, marked "**for the Researcher D50 – L52**"



DEMONSTRATION AND TRAINING CENTRE FOR CARBON-FREE TECHNOLOGIES

A bridge to accelerate the transfer of research knowledge to industry

ABOUT THE INSTITUTE

The National Institute of Chemistry is a scientifically excellent, established and breakthrough **research institution** based in Slovenia, Europe, with 374 employees, of whom 167 have a PhD. The institute is a member of international multidisciplinary research networks and it collaborates with the best research institutions, groups and individuals worldwide.

PILOT PLANTS FOR THE NEEDS OF INDUSTRY

The Centre will represent the link in the chain that will enable companies to increase the technological sophistication of their innovation in development. The Centre will include the development of all **green transition technologies**, such as hydrogen technologies, technologies for the capture and conversion of carbon dioxide, and especially the development of **modern battery technologies**.

TRAINING

The Centre will facilitate the efficient transfer of knowledge, training employees in the companies the Centre cooperates with. The newly equipped Centre, enhanced with key personnel, will develop **programs for the transfer of knowledge and skills to the economy**, which, in addition to upgrading basic knowledge about advanced materials, will also enable practical training using **new high-tech equipment**.

ESTABLISHMENT OF INFRASTRUCTURE THAT DOES NOT YET EXIST IN SLOVENIA

The Centre will enable both academic and industrial partners to confirm the concept of innovation in the field of developing advanced solutions for a **carbon-free society**, as well as enable the rapid transfer of innovation to higher levels of development, resulting in a faster market appearance.

INTEGRATION INTO INTERNATIONAL FLOWS

The Centre will enable the involvement of researchers in the international research environment (with an emphasis on the European), put the National Institute of Chemistry and Slovenia on the map of scientifically **excellent organizations and countries**, and speed up the transfer of knowledge and experience into the international environment.

EDUCATION

The Centre aims to fulfil the mission of transferring the knowledge and expertise of research work to younger generations of researchers and of students. In parallel with the increasing competencies in the international (European) research environment, the personnel will have access to the latest trends in research, which will significantly contribute to the expansion and enrichment of educational programs at the universities in Slovenia.

CONNECTION WITH THE ECONOMY (SLOVENIAN AND FOREIGN)

The Centre will enable partner companies to access infrastructure that is otherwise inaccessible to them, or that would require a lot of investment funds that the companies do not have. The available infrastructure will also enable the easier networking of the Centre with industrial partners.

THE MAIN ACTIVITIES OF THE CENTRE

- Validation of advanced materials
- Testing in industrial applications
- Standardization of the use of new materials and chemicals
- The development of business models for advanced technologies
- Quality assurance



GET IN TOUCH