EPFL, the Swiss Federal Institute of Technology in Lausanne, is one of the most dynamic university campuses in Europe and ranks among the top 20 universities worldwide. The EPFL employs more than 6,500 people supporting the three main missions of the institutions: education, research and innovation. The EPFL campus offers an exceptional working environment at the heart of a community of more than 18,500 people, including over 14,000 students and 4,000 researchers from more than 120 different countries.

Post-Doctoral Researcher in Catalytic Process Development for Sustainable Energy Carriers

Mission

The Group for Sustainable Energy Carriers (GSE) targets the production of sustainable energy carriers by catalytic processes from carbon dioxide, syngas or biomass. We are currently working in our small group on the development of energy-efficient processes for the production of synfuels (particularly NH_3) and the reverse water gas shift (RWGS) reaction but are open to expand our field of activities.

To support the group in working on current and new research topics, we are looking for a candidate to fill a Postdoc position in the field of heterogeneous catalysis, with a focus on structure-activity investigations.

Tasks

- Research and development in the field of catalytic processes for sustainable energy carriers
- In-situ/ex-situ catalyst characterization to identify catalytically active sites and deactivation mechanisms. The ultimate task is to establish comprehensive synthesis-structure-performance relationships that will serve as a guideline for rational catalyst design and advancement.
- Development of your own research profile by creating new research ideas and co-authoring research proposals
- Close collaboration with other EPFL laboratories and the Laboratory for Sustainable Energy Carriers and Processes (LEP) at the Paul Scherrer Institute (PSI)
- Safety correspondent: Ensuring smooth lab operation and workflow
- Publication of research results in scientific journals and at congresses
- Supporting the research group with your expertise in heterogeneous catalysis
- Supervision of PhD and master students

Profile

- Candidates for this Postdoctoral position should have a PhD in chemistry, material science, chemical engineering, or a related field.
- In-depth knowledge of heterogeneous catalysis, catalytic reaction engineering, reactor design, and spectroscopic methods
- Experience with the synthesis of advanced heterogeneous catalysts as well as structural characterization of materials using synchrotron-based techniques are highly valued.
- Pleasure in experimental work combined with excellent scientific writing
- High level of self-motivation to work very independently in a small familiar group.
- Very good English communication skills and ideally knowledge of French to easily integrate into the group and the EPFL

We offer

- A technology-oriented academic institution that is consistently near the top of the international rankings with world-class faculty and students from around the world.
- Numerous opportunities to collaborate with other research groups at EPFL or other Swiss and international institutions.
- Support in developing your own ideas and independent research profile.
- A career boost significantly increasing chances to obtain a faculty position.
- A family-like working environment.
- In the event of good performance, the contract can be extended for up to four years.

Start date

15 March 2026 or later. We will start evaluating applications after 1 December 2025, but the position will remain open until filled.

Application

- Curriculum Vitae including educational history, full list of publications, awards, etc.
- An approximately 2-page research statement outlining your interests and goals and how they relate and fit into the GCB's research activities.
- Names of at least two references.

Term of employment: Fixed-term (CDD)

Duration: 1-year fixed-term contract, renewable up to 4 years.

Contact: Prof. Oliver Kröcher, email: oliver.kroecher@psi.ch, oliver.krocher@epfl.ch