


The Paul Scherrer Institute PSI is the largest research institute for natural and engineering sciences within Switzerland. We perform cutting-edge research in the fields of future technologies, energy and climate, health innovation and fundamentals of nature. By performing fundamental and applied research, we work on sustainable solutions for major challenges facing society, science and economy. PSI is committed to the training of future generations. Therefore, about one quarter of our staff are post-docs, post-graduates or apprentices. Altogether, PSI employs 2300 people.

For the Microscopy and Magnetism Group we are looking for a

PhD student for Ni-based model catalysts for dry methane reforming

29.08.2024 • Doctoral • 6313-02 • 100% 

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Your tasks

This project is an exciting opportunity to contribute to an international and interdisciplinary research effort in the field of heterogenous catalysis. Your working place will be at PSI Villigen, but you will closely collaborate with the groups of Stefan Vajda at J. Heyrovsky Institute in Prague and with the group of Jeroen von Bokhoven at ETH Zürich. The project will be carried out taking advantage of cutting-edge x-ray microscopy facilities at the Swiss Light Source and in situ electron microscopy facilities at ScopeM in Zürich.

Your tasks will include:

- Perform spectroscopic and structural characterization of Ni-based nanocatalysts for dry methane reforming using correlative in situ x-ray and electron microscopy over a wide pressure range
- Analyze and combine the experimental data to address the gap between the model reactions at low pressure and high pressure under industrially relevant conditions and to optimize the catalysts
- Present work at conferences/workshops and publish in internationally recognized journals

Your profile

- You hold a Master's degree in Chemistry, Nanoscience, Material Science or related field
- You are motivated to perform experimental work using cutting edge x-ray and electron microscopes
- You enjoy processing and correlating complementary data
- You have excellent communication and scientific writing skills

We offer

Our institution is based on an interdisciplinary, innovative and dynamic collaboration. You will profit from a systematic training on the job, in addition to personal development possibilities and our pronounced vocational training culture. If you wish to optimally combine work and family life or other personal interests, we are able to support you with our modern employment conditions and the on-site infrastructure.

For further information, please contact Dr Armin Kleibert, phone +41 56 310 55 27.

Please submit your application online by **4 October 2024** (including addresses of referees) for the position as a PhD student (index no. 6313-02).

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