



Empa is an interdisciplinary research and services institution for material sciences and technology development within the ETH Domain.

The laboratory nanotech@surfaces is studying molecular architectures and surfaces of complex metallic alloys to gain fundamental insight into their structural and electronic properties, mainly by scanning tunneling microscopy (STM) and photoelectron spectroscopy. In the framework of a SNF project in collaboration with the EPFL (thesis supervisor) we offer a 100%

## **PhD position in experimental surface science investigations of palladium-gallium intermetallics for heterogeneous catalysis**

The work will focus on systematic experimental investigations of the surface electronic and structural properties of low Miller index single crystal surfaces. Adsorption experiments will be performed for the identification of initial adsorption sites and reaction mechanisms on the catalytically active Pd-Ga compounds. For these investigations, state-of-the-art surface analytical methods will be applied such as XPS, UPS, XPD, SSC and LEED with a strong emphasis on STM. The research in this project will be carried out in the framework of an international collaboration bringing together top competencies in the fields of single crystal growth, high pressure catalysis and solid state physics/chemistry.

The ideal candidate is a determined, creative and communicative physicist or chemist having experience in the field of scanning probe methods, ultra high vacuum techniques and the preparation of atomically clean surfaces.

The position is immediately available for a candidate (m/f) with a masters or diploma degree in Chemistry, Physics or Materials Sciences (or related) with a planned duration of 3 years.

Empa

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Please send your application including a short statement of research interests, CV, list of publications and names and addresses of two academic references.

**Please submit your application by e-mail to:**

[roland.widmer@empa.ch](mailto:roland.widmer@empa.ch)