

# PhD Position at ETH Zurich: *In situ/Operando* Spectroscopy in Heterogeneous Catalysis

**ETH**

Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich



Safety and  
Environmental  
Technology Group

## **Description:**

A PhD position is available to study heterogeneous asymmetric catalysis by means of *in situ/operando* spectroscopy in Safety & Environmental Technology Group at ETH Zurich. The goal of the project is to advance fundamental and practical aspects of fine chemicals synthesis at solid-liquid chiral interfaces and to pave the way for a rational design of environmentally-benign catalytic systems.

The successful candidate will be trained in an interdisciplinary environment gaining skills of simultaneous time-resolved detections of bulk species in the liquid phase and of surface species at solid-liquid chiral interfaces by ATR-IR, UV-vis and Raman spectroscopies, and calorimeter in collaboration with Prof. Alfons Baiker at ETH Zurich. Preference will be given to candidates with a background in catalysis, vibrational spectroscopy or physical chemistry.

**Start date:** September 2011 or later (negotiable).

**Benefits:** The Safety & Environmental Technology Group at ETH Zurich is an internationally recognised leader in reaction calorimetry, *in situ* spectroscopy and methodologies for the evaluation of reaction kinetics with excellent contacts to chemical and pharmaceutical industry. The detail about the group can be found at:

[www.sust-chem.ethz.ch](http://www.sust-chem.ethz.ch)

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**For further information,** please contact [Dr. Nobutaka Maeda](mailto:nobutaka.maeda@chem.ethz.ch) ([nobutaka.maeda@chem.ethz.ch](mailto:nobutaka.maeda@chem.ethz.ch)) at ETH Zurich.

**Please apply online,** including a letter of motivation & research project (A4, 1 page) curriculum vitae, full academic records such as bachelor and master degrees, and also references to: Prof. K. Hungerbühler, ETH Zurich, Hönggerberg HCI, 8093 Zürich.