

# EINLADUNG

zum Vortrag  
von

**Univ.-Prof. Dr. Martin Sterrer**

Karl-Franzens-Universität Graz, Institute of Physics, Surface Science,  
Austria

**From UHV into the liquid: Surface science model studies at increasing chemical complexity**

am

**Mittwoch, 24. Juni 2015 um 16:30 Uhr**

Technische Universität Wien, Chemie Hochhaus  
Bauteil BA Hochhaus, GM 3 Vortmann Hörsaal, 02. Stock  
1060 Wien, Getreidemarkt 9

## Abstract:

This talk provides an overview of our recent efforts to extend surface science model studies from ultrahigh vacuum (UHV) conditions, via elevated pressure environments, to investigations of processes at solid-liquid interfaces using thin, single-crystalline oxide films as substrates. In order to obtain information about our sample surfaces and processes occurring thereon at various levels of chemical complexity, our approach utilizes UHV-based preparation and characterization techniques, special sample cells for exposing the surfaces to elevated pressure gas environment or aqueous solutions, and spectroscopic and microscopic methods that can be applied at ambient environment or for studying solid-liquid interfaces. The topics that will be covered in this presentation include studies about CO<sub>2</sub> activation on small-supported gold clusters and functionalized Au (111), hydroxylation of oxide surfaces and the influence of hydroxylation on metal nucleation, model catalyst preparation by applying wet-chemical deposition of Pd-salts onto iron oxide surfaces, and first results of electrochemical tests with iron oxide thin films.

**FWF SFB F45 „Functional Oxide Surfaces and Interfaces (FOXSI)“**

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