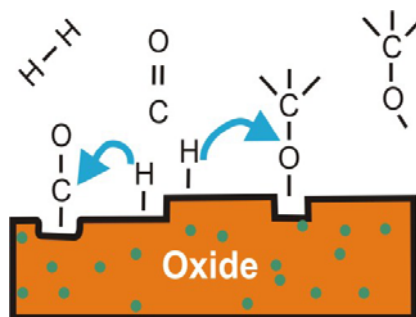


# Ruhr-Universität Bochum



**SFB 558**

## „Metall-Substrat-Wechselwirkungen in der heterogenen Katalyse“

**Einladung  
zum Vortrag von**

**Prof. Dr. Peter Varga**  
**Universität Wien**  
(Gast von Prof. Wöll)

### **Surface alloys and surface oxides at atomic scale**

Abstract: The most frequently studied model systems in heterogenous catalysis are transition metal (alloy) clusters grown on ultra-thin oxide layers. In this talk results of the composition and structure of alloy surfaces and surface oxides on transition metal, determined by a combination of surface sensitive methods like high resolution STM (Scanning Tunneling Microscopy), LEED (Low Energy Electron Diffraction), HRCLS (High Resolution Core Level Spectroscopy) and ab initio calculations, will be presented.

In particular the formation and reduction of the surface oxide grown on Rh(111) [1,2] will be discussed as well as the structure of alumina film on NiAl(110) [3]. As an example for defects as nucleation center for alloy clusters the atomic structure of the domain boundaries of alumina on NiAl(110) will be presented as well as the recently solved structure of p(4x4)-O layer on Ag(111)[4].

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[3] G. Kresse, M. Schmid, E. Napetschnig, L. Köhler, M. Shishkin, P. Varga, Science 308 (2005) 1440-1442.

[4] M. Schmid, A. Reicho, A. Stierle, I. Costina, J. Klikovits, P. Kostelnik, O. Dubay, G. Kresse, J. Gustafson, E. Lundgren, J.N. Andersen, H. Dosch, and P. Varga, Phys. Rev. Lett. 96 (2006) 146102

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*Gäste sind herzlich willkommen.*