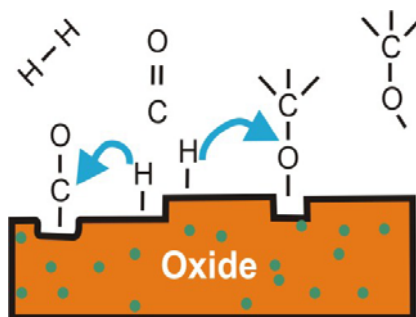


Ruhr-Universität Bochum



SFB 558

„Metall-Substrat-Wechselwirkungen in der heterogenen Katalyse“

**Einladung
zum Vortrag von**

Dr. Andreas Stierle

Max-Planck-Institut für Metallforschung, Stuttgart, Germany
(Gast von Prof. Gies)

“Oxidation of nanomaterials observed by in-situ x-ray diffraction”

Abstract: Substantial effort has been made to understand the fundamentals of oxidation within the past few decades using pioneering-type experiments under highly idealized conditions, such as very low oxygen pressures (10^{-6} mbar), and idealized, model material systems (single crystals). However, understanding chemical reactions on single crystal surfaces in vacuum doesn't usually enable prediction of the reaction behavior of a device made of nanoparticles operating at ambient gas pressure. In my talk I will present how a systematic investigation of model systems with increasing complexity (single crystal & vicinal surfaces, epitaxial nanoparticles on single crystal oxide supports) using synchrotron radiation based x-ray diffraction under near-atmospheric pressures and elevated temperatures can provide atomistic insight into the structure of metal nanoparticles during oxidation and reduction cycles.

Termin:	25.11.2008
Zeit:	11.15 h
Ort:	HNC 5/99

Gäste sind herzlich willkommen.