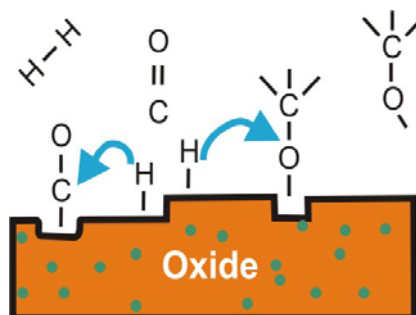


# Ruhr-Universität Bochum



**SFB 558**

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

**Einladung  
zum Vortrag von**

**Prof. Dr. Hicham Idriss**

Universität Auckland, Neuseeland  
(Gast von Prof. Wöll)

### “Catalytic hydrogen production from bio-renewable sources”

Abstract: Hydrogen is one of the most promising alternative energy carriers that can be widely used in the near future if sustainable ways of generating it are found. This work is focusing on the reaction of ethanol to hydrogen, as an example of a bio-fuel, on the surfaces of monometallic and bimetallic catalysts composed of platinum, palladium and rhodium supported on ceria (of size 10 to 20 nm) in search for the most promising catalyst. Detailed study of these multicomponent catalysts, often performing in ways that cannot be explained by the sum of the functions of the individual components, has indicated that the unique functionality of the successful catalyst is governed by the nature of the interface between two or more of its constituent. In this work we employ a large arsenal of techniques to probe the interface between finely dispersed rhodium and palladium metal clusters (of the order of 1-2 nm) on the surface of ceria nanoparticles. The three phases combined form a highly active and stable catalyst for hydrogen production by steam reforming of ethanol.

<b>Termin:</b>	<b>14.08.2007</b>
<b>Zeit:</b>	<b>11:15 Uhr</b>
<b>Ort:</b>	<b>HNC 5/99</b>

*Gäste sind herzlich willkommen.*