

EINLADUNG ZUM
WIENER PHYSIKALISCHEN KOLLOQUIUM

**ULTRATHIN OXIDE FILMS IN CATALYSIS:
AN OLD MISCONCEPTION?**

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In general thin film systems exhibit properties different from bulk materials. For oxides, however, convergence towards properties similar to the bulk sets in after a few atomic layers. Such oxide thin films are used to model supports in heterogeneous catalysis and carry nanoparticles as active components, both as metal particles and transition metal oxide particles.

We have prepared a variety of thin films, including those of importance in heterogeneous catalysis, i. e. alumina, silica, magnesia, ceria, vanadia, chromia, and niobia etc. Those materials can be characterized at the atomic level including photoelectron spectroscopy and other relevant techniques such as scanning tunnelling microscopy and electron spin resonance spectroscopy.

Deposits ranging from single atoms via clusters and larger nanoparticles have been prepared and these properties and chemical reactivity has been studied. Even pristine ultrathin oxide films reveal interesting chemistry at ultrahigh vacuum and ambient conditions.

Montag, 2. Mai 2011, 17:30 Uhr
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