

Dienstag, 10.07.2012

Hörsaal D, Chemie Zentralbau, 17:15 Uhr

Sprecher: Rolf Schuster
Karlsruher Institut für Technologie

**Thema: Electrochemical Microcalorimetry –
Measuring the Heat of
Electrochemical Reactions**

Abstract: The measurement of heat effects upon electrochemical reactions provides valuable information on the entropy of reaction, i.e., entropic contributions of all reactants, including those of the reacting ions as well as of solvent molecules or double layer charging. Here we present an experimental approach by combination of sensitive pyroelectric heat detection with pulsed electrochemistry, which allows to measure heat effects of surface electrochemical reactions with small conversions down to a few percent of a monolayer with respect to the sample surface.
We will discuss the role of entropy for the stabilization of surface adlayers like under-potentially deposited Cu on Au or hydrogen adsorption on Pt. In addition we present results on entropic contributions of the solvent water upon potential induced phase transitions of organic adlayers on Au surfaces.

Organisation: T. Hertel

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Weitere Informationen unter
<http://www.phys-chemie.uni-wuerzburg.de>