



MMM Seminar

Friday, 16 May 2014, 10:00 a.m.
Room IC 02/718

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Hydrogen in thin film systems

Hydrogen in metals represents a fascinating field from a technological point of view, e.g. switchable mirrors and hydrogen storage devices, as well as for fundamental research. Due to the extremely small dimension of a hydrogen atom its diffusion properties are significantly different compared to atoms of other elements.

In order to understand the influence of hydrogen to nanoscale thin film systems, the prerequisite is the characterization of the initial steps. Thus, I will report on the **adsorption** of hydrogen on a metal surface, the subsequent **absorption** due to the incorporation and the following **diffusion** process which results in material changes like embrittlement.

This investigation was carried out by means of scanning tunneling microscopy and spectroscopy which enables to detect the different processes with highest lateral resolution.