JOHANNES KEPLER UNIVERSITÄT LINZ

P H Y S I K K O L L O Q U I U M

Fachbereich für Physik

Im Rahmen des Physikkolloquiums spricht

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über

X-ray scattering as a tool to analyse the atomic and magnetic structure of low dimensional systems

Abstract:

Low dimensional systems such as crystal surfaces, interfaces, nanocrystals are a central theme in modern solid state physics. Besides sophisticated preparation methods such as molecular beam epitaxy highly accurate and sensitive analytical tools are needed for their controlled design and improvement. Among these x-ray diffraction plays an important role. Since its discovery in 1912 and the first prediction of surface effects on the diffraction pattern by v. Laue in 1936, the availability of synchrotron radiation beginning about three decades ago has opened a wide field of applications for x-ray analysis of nano-systems.

This presentation gives an introduction into the peculiarities of non-resonant and resonant x-ray scattering applied to low dimensional non-magnetic and magnetic systems based on a few prototype examples.

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