DS 26: Gaede Prize Talk

Time: Wednesday 12:30–13:00 Location: HSZ 02

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Spectroscopy and microscopy of graphene on metals — •Yuriy Dedkov — SPECS Surface Nano Analysis GmbH, Berlin, Germany

Graphene on metals, which structure can vary from simple lattice matched to commensurate moiré structures, is an ideal system for different kinds of surface science experiments allowing to study many fascinating phenomena. Here we present several examples on the application of electron spectroscopy (NEXAFS, XMCD, XPS, ARPES) and scanning probe methods (STM and AFM) for the investigation of the electronic structure of these systems. These combined approaches allow to understand the bonding mechanism at the graphene-metal interface, the main features of the graphene-derived electronic structure as well as the imaging contrasts in the scanning probe experiments. All experimental data are compared with the state-of-the-art DFT calculations that lead to the deep understanding of the observed phenomena.