SYSR 7 Hauptvortrag

Zeit: Samstag 12:00–12:30 Raum: TU HE101

Hauptvortrag SYSR 7.1 Sa 12:00 TU HE101

X-ray Spectroscopy of Nanoclusters: State of the art and perspectives at the new VUV - Free Electron Laser in Hamburg — •Wilfried Wurth — Institut für Experimentalphysik, Universität Hamburg

Third generation synchrotron sources provide high brillance radiation in the soft X-ray regime with variable polarisation. Soft X-ray spectroscopy at these sources is an ideal tool to study the detailed evolution of static physical properties of nanoclusters from the atom to the bulk. Recent examples for the magnetic properties of supported transition metal clusters obtained at BESSY in Berlin will be given. With the free electron laser in the XUV spectral regime at DESY in Hamburg (VUV-FEL) operational from 2005 a new research tool will be available which offers unique opportunities. In the talk I will review some of the prospects of this new source for the investigation of nanoclusters. In particular I will discuss the possibility to obtain detailed electronic structure information as a function of the number of atoms in small free clusters as well as possible approaches to study ultrafast dynamical processes in nanoclusters with the VUV-FEL.