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S E M I N A R
aus
Halbleiterphysik und Nanotechnologie

Di, 7.11.2017, 11:00 Uhr, Hörsaal für Physik

"Studying Single and Interacting Soft Interfaces with X-Rays, Neutrons, and Computer Simulations"

Dr. Emanuel Schneck

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Soft interfaces constituted by molecular assemblies in two dimensions play key roles in numerous technological applications and are major components of all biological matter, for example in the form of biomembranes. The understanding of important biological or technological processes involving single (isolated) or interacting soft interfaces typically relies on detailed structural insight. We use neutron reflectometry (NR) and a novel, label-free implementation of standing-wave x-ray fluorescence (SWXF) for the high-resolution structural characterization of single and interacting soft interfaces of biological and biotechnological relevance. In a complementary approach we investigate the interaction between biomembrane surfaces using solvent-explicit molecular dynamics simulations, accounting for the water chemical potential.