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NTZ

UNIVERSITÄT LEIPZIG

Fakultät für Physik und Geowissenschaften

Institute für Physik

Physik-Kolloquium

Donnerstag, den 29.11.2007 um 17:15 Uhr

Prof. Dr. Joan Adler

University of Haifa, Department of Physics, Israel

Modelling nanotubes and their applications with atomistic simulations

It is HARD to make laboratory experiments on the nanoscale. It is EASIER to simulate on the nanoscale than at macroscopic sizes. I will introduce dynamic atomistic simulation and visualization techniques, assuming no background beyond Newton's laws and the time-independent Schrödinger equation. Nanotubes are cylinders made of a rolled up sheet of graphite (graphene). Their potential applications include membranes for gas separation, mass sensors to weigh small molecules, etc. I will describe simulations of nanotubes (and other fullerenes) carried out by my students at the Technion in collaboration with chemical and electrical engineering experimentalists aimed towards modelling membrane and sensor applications. Movies made with the software package AViz will be shown.

Ort: Hörsaal für Theoretische Physik, Linnéstraße 5

Alle Teilnehmer sind herzlich eingeladen.