

EINLADUNG ZUM
WIENER PHYSIKALISCHEN KOLLOQUIUM

**NANOTECHNOLOGY WITH NANOTUBES
FROM THERMAL MOTOR TO ELECTRON
MANIPULATION**

Adrian BACHTOLD

Institut Català de Nanotecnologia,
Universitat Autònoma de Barcelona

Carbon nanotubes have unique mechanical and electrical properties that can be exploited in various nanoscale devices. Because carbon nanotubes are exceptionally robust mechanically and chemically inert, they have attracted considerable interest as nanoelectromechanical systems (NEMS). Besides, nanotubes combine ultrasmall cross section and the property that their conducting electrons are located at the tube surface. This makes nanotubes outstanding sensors of, e.g., charges, chemical gas or biological probes. In this talk, I will review some of our group's recent results on this remarkable material, including studies of high-frequency mechanical nanotube resonators, the development of thermal motors in which the motion depends on the arrangement of the atoms in the nanotube, and the study of the spectrum properties of molecular systems by counting electrons using a nanotube field-effect transistor.

Montag, 15. Dezember 2008, 17:30 Uhr
(ab 17:00 Uhr Kaffee)

Großer Hörsaal für Experimentalphysik der Universität Wien
Strudlhofgasse 4/1. Stock, A-1090 Wien

www.univie.ac.at/wpk



universität
wien