

SEMINAR ANNOUNCEMENT

Atomic scale modeling and simulations of nanoscale materials and biomolecules

Dr. Alper Buldum

Department of Physics
The University of Akron

Abstract: The trend in electronics and information technology is to produce smaller and faster devices. The silicon-based electronics industry currently produces devices in submicrometers but it is pushing the critical physical limits. New scientific and technological approaches at nanometer scale (billionths of a meter scale) are necessary. Nanoscale materials such as carbon nanotubes and nanowires are promising candidates for fabrication of nanoscale devices such as transistors, switches computer memories, chemical sensors and flat panel displays. By performing theoretical research, we aim at understanding and controlling the novel mechanical and electronic properties of nanoscale materials, and evaluating their potential applications. In this respect, a wide variety of phenomena related with nanoscale materials is investigated. In this seminar, I will present our investigations on: (1) Carbon Nanotubes, (2) Metallic Nanowires, and (3) Biomolecules such as proteins and protein/polymer conjugates..

Thursday, February 7, 2008

12:00 pm

Room 117

Pizza and refreshments will be served before the seminar.