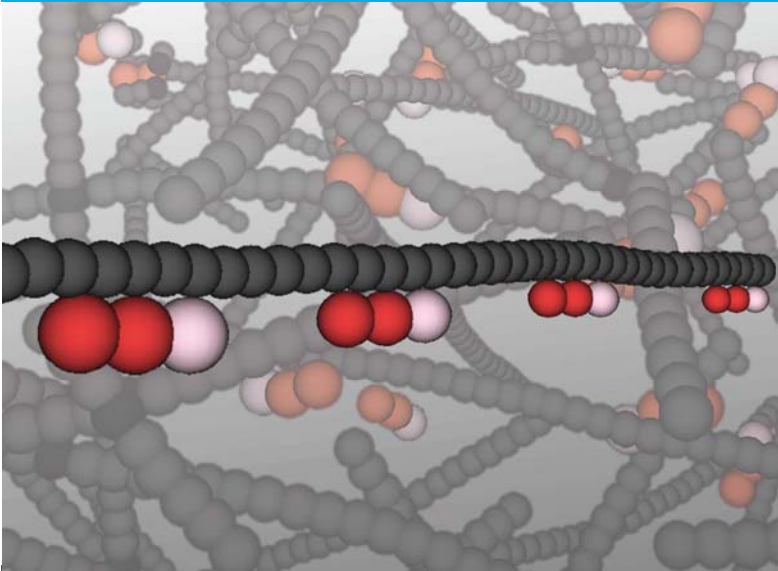


PHYSICAL SEMINAR

Title: “Molecular Machines and Synthetic Motors: Active Motion on Nanoscales”



Guest Speaker:
Professor Ray Kapral
University of Toronto
Department of Chemistry

Monday, October 21
4:00 PM
473 Hutchison Hall
Department of Chemistry

Abstract: Molecular machines or motors in the cell operate under nonequilibrium conditions and extract chemical energy from their surroundings to perform a variety of transport and other biological functions. Synthetic nanomotors without moving parts also operate under nonequilibrium conditions using chemical energy to move in solution, and can transport cargo and perform other functions. Although they operate by different mechanisms it will be shown that there are similarities between how these very different nanomotors function. Systems containing many synthetic motors can display collective behavior leading to active self-assembly, swarming and other collective states that differ from those in systems at equilibrium, and these new structures will also be described.

Host: Professor Frank Huo, email: pengfei.huo@rochester.edu