



**Simtel Nanotechnology** is interactive learning and simulation software, a very powerful tool to understand core concept of Nanoscience. Nanotechnology is very diverse, ranging from extensions of conventional device physics to completely new approaches based upon molecular self-assembly. With the help of SimTEL Nanotechnology some of core topics are explained virtually through high quality simulation, rich theoretical content and attractive animated diagrams.

### Topics covered:

- **Introduction:** Definition, History, Scaling of Nano, Approaching Nanoscience (Top-Down Approach and Bottom-Up Approach), Quantum Confinement, Properties of Nano Particle (Optical and Electronic Properties)
- **Nano particle Diagnostics:** Electron Microscopy: Transmission Electron Microscope, Scanning Electron Microscope; Scanning Probe Microscopy: Atomic Force Microscope, Scanning Tunneling Microscope; Lithography: Photolithography, Electron Beam Lithography, Dip Pen Lithography; Electro Spinning.
- **Building Blocks:** Allotropes of Carbon: Graphene, Fullerenes and Carbon Nanotubes; Self Assembled Monolayers, Nanoparticles, Quantum Dots, Dandrimers, Nanoshells.
- **Evolving Interfaces of Nano:** Nanobiology, Nanosensors, Nanomedicines, Nanomachines

### Software program windows:

