OMEN Nanowire:
Rappture(GUI) Tool for Atomistic Simulation of Nanowires

Objective:

- Powerful tool development for atomistic level nanowire FET

Approach:

- User-friendly input interface implementation in Rappture
- Post-processing the output of OMEN
- 3D graphical visualization using dx (data explorer) format
- Job submission to nanoHUB or Purdue Steele Cluster

OMEN :
http://cobweb.ecn.purdue.edu/~gekco/omen/index.html

Impact:

- Atomistic level simulator for the scientific community

Result:

- Plots of 3D electrostatic potential (Fig.1), 3D electron density(Fig.2), 2D density of states(Fig3.) , and 1D bandstructure(Fig. 4) achieved

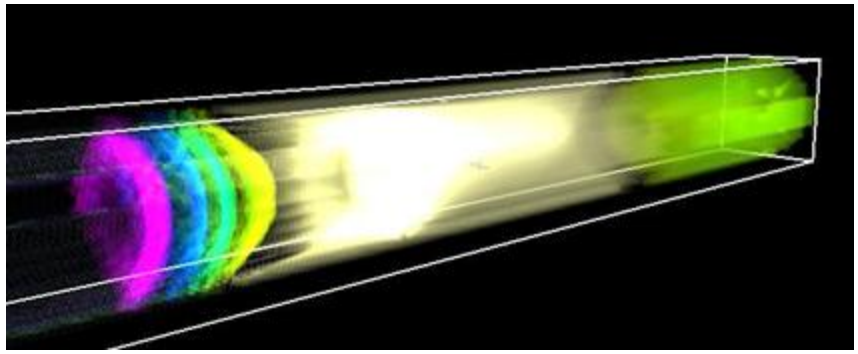

Fig. 1 3D electro-static potential in nanowire

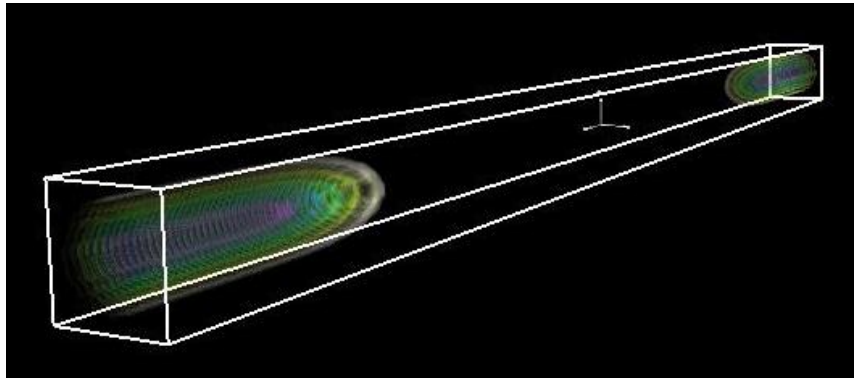

Fig. 2 3D carrier density in nanowire

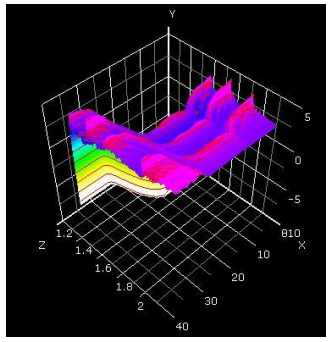

Fig. 3 2D density of states

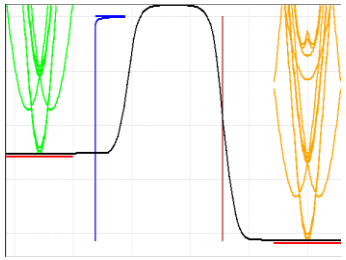

Fig. 4 1D bandstructure

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