Computational Microelectronics

Assignment # 7

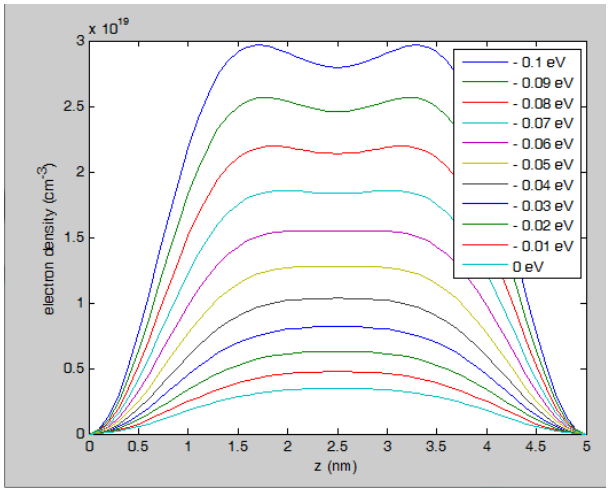
20174009

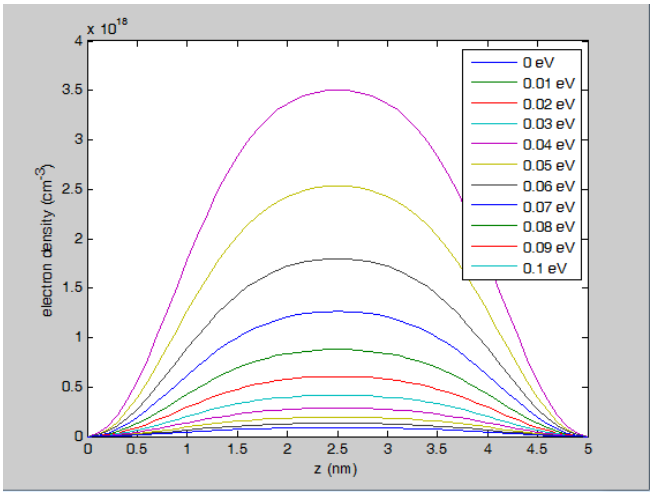
Choi Pyeunghwi

- Electron in a 3D-box

We considered electron in a thin and wide 3D box which has length of $L_x = L_y = 100\ nm\ \ and\ \ L_z = 5\ nm$ and quantum confinement along the only z direction. Considering a subband number, we found that electron density at position and integrated electron density for different fermi energy.

I. Position-dependent electron density





II. Integrated electron density for different fermi energy