Computational Microelectronics Report (Homework #7)

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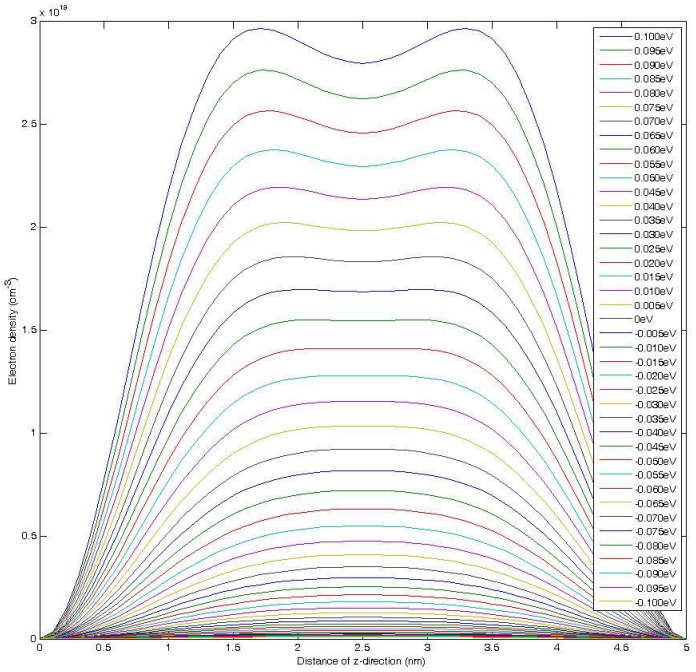
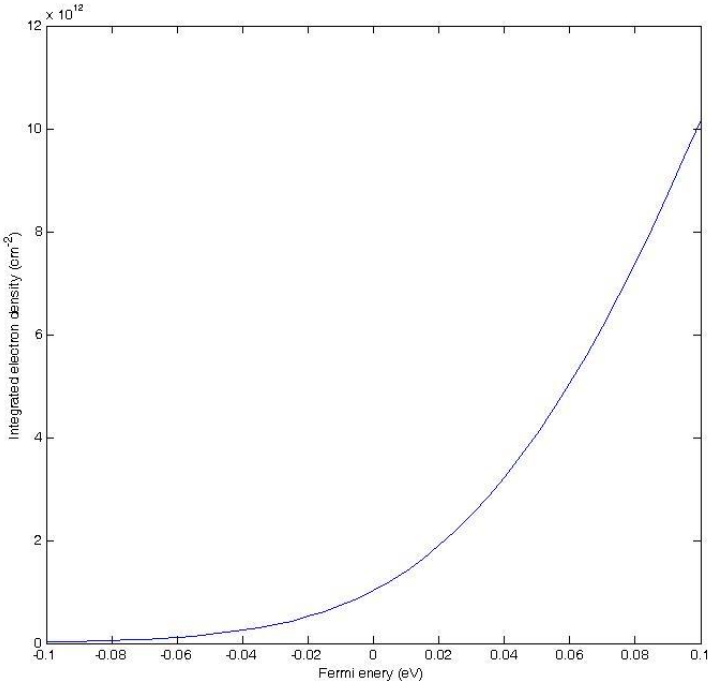
Submission Date: 2018.10.21

Problem) Three-dimensional infinite potential well box bounded in the z direction (Lx = Ly = 100 nm, Lz = 5 nm)

1. Electron density(/cm^3) as a function of position with different gate voltages (by Fermi-Dirac distribution)



2. Integrated electron density (/cm2) as a function of the Fermi energy



Electron concentration grows faster as the gate voltage is increased.