Homework #11

20152052

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Boltzmann transport equation simulator in a specific system :

 Elastic scattering + parabolic band structure)
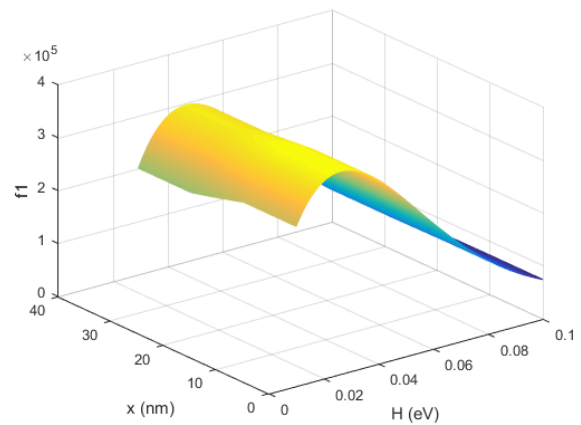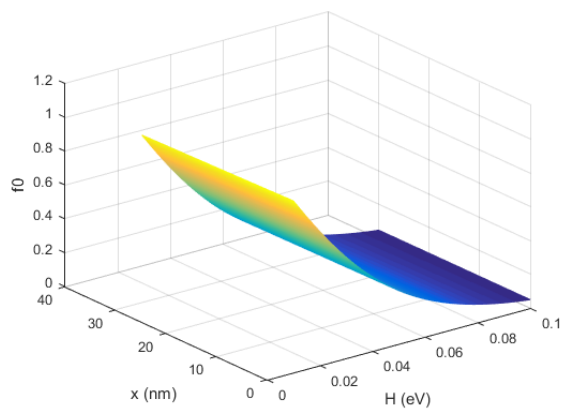
Condition

H factor (energy + applied voltage) :   0.01-0.1 [eV]

VD (voltage drop from source and drain): 0.001 [V]

m_eff (effective mass) : 2 m0 [kg]

tau (decay time) : 1×10^{-5} [s]

Both f0 and f1 show decreases as H factor increase, which corresponding to the fact that electron has low possibility to occupy on high energy.

Meanwhile, f0 and f1 have very small variation with x. It would be very small voltage drop.