

Home work #5

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September 18, 2017

case1

$$\phi_s = 0.3[\text{ev}], T_{\text{si}} = 5[\mu\text{m}], N^- = 10^{15}[\text{cm}^{-3}]$$

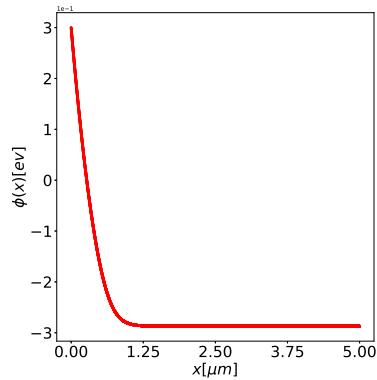


Figure 1: The energy ϕ in the semiconductor versus x

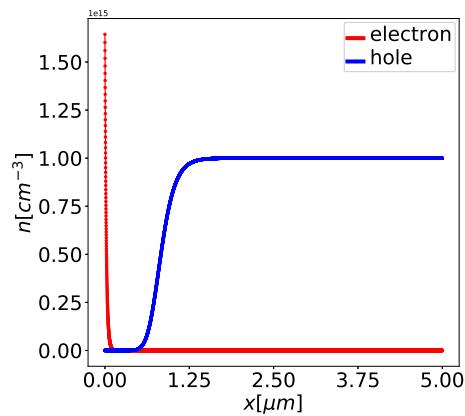


Figure 2: number density for the electron and hole concentration

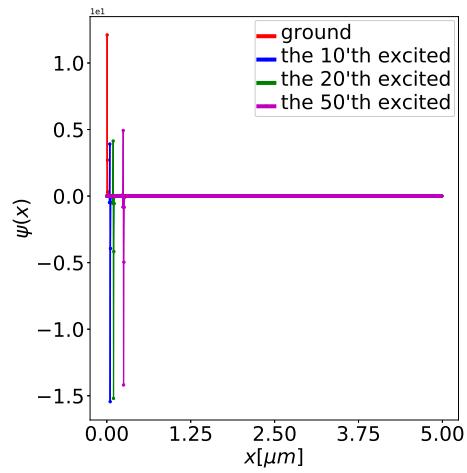


Figure 3: The wave function for the electron in the semiconductor

case2

$$\phi_s = 0.3[\text{ev}], T_{\text{si}} = 5[\mu\text{m}], N^- = 10^{15}[\text{cm}^{-3}]$$

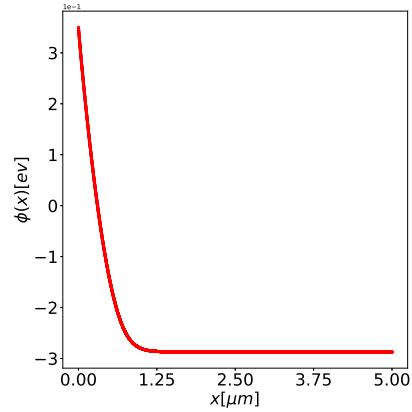


Figure 4: The energy ϕ in the semiconductor versus x

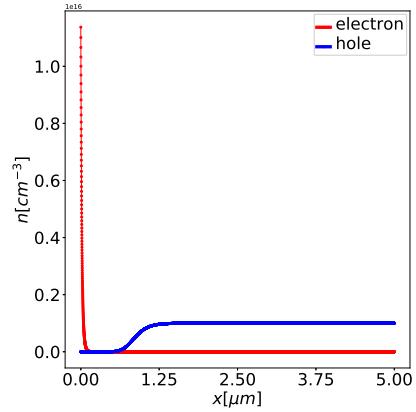


Figure 5: number density for the electron and hole concentration

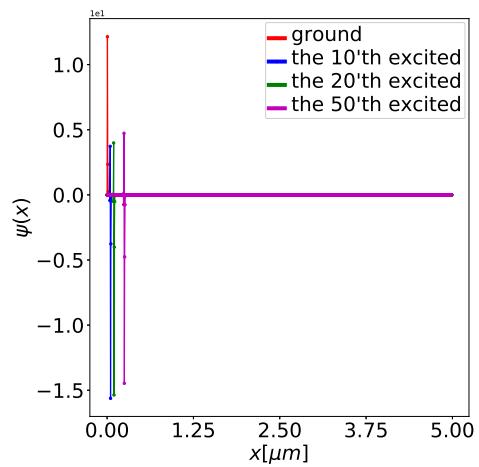


Figure 6: The wave function for the electron in the semiconductor