Homework #6
Computational Microelectronics

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Due on October 15, 2018

1 Results

We have implemented the nonlinear poisson solver for the double-gate structure. We have considered the same double-gate structure in the homework #4. Fig. 1 shows the integrated electron density as a function of the gate voltage V_G from 0.0 V to 1.0 V. We calculate the density n_{2D} providing the voltage step 0.1 V. We have found that the density increases exponentially near $V_G = 0$ and as V_G increases, the density increases logarithmically.

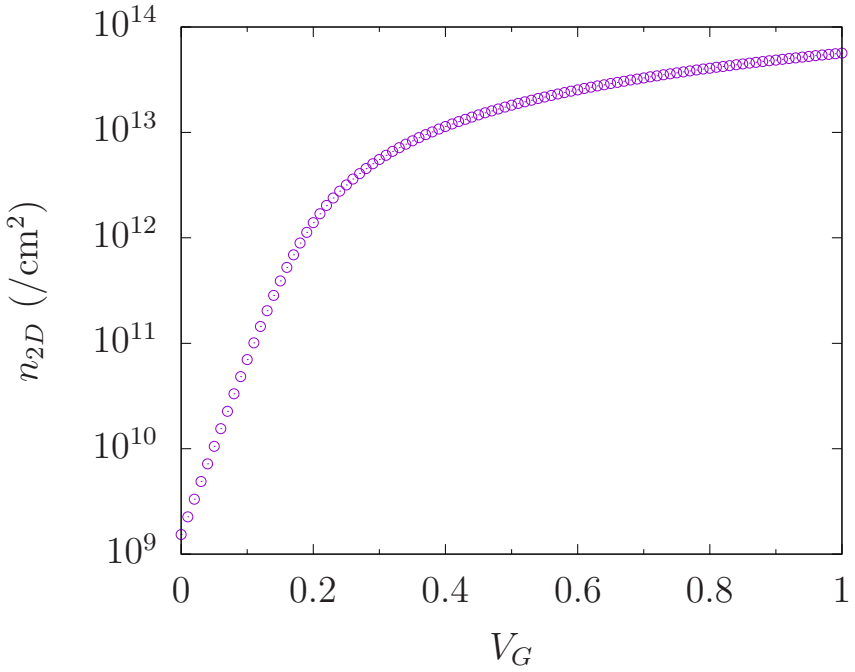

Figure 1: The integrated electron density n_{2D} as a function of the gate voltage V_G.