

Non-linear poisson solver in 2-dimension

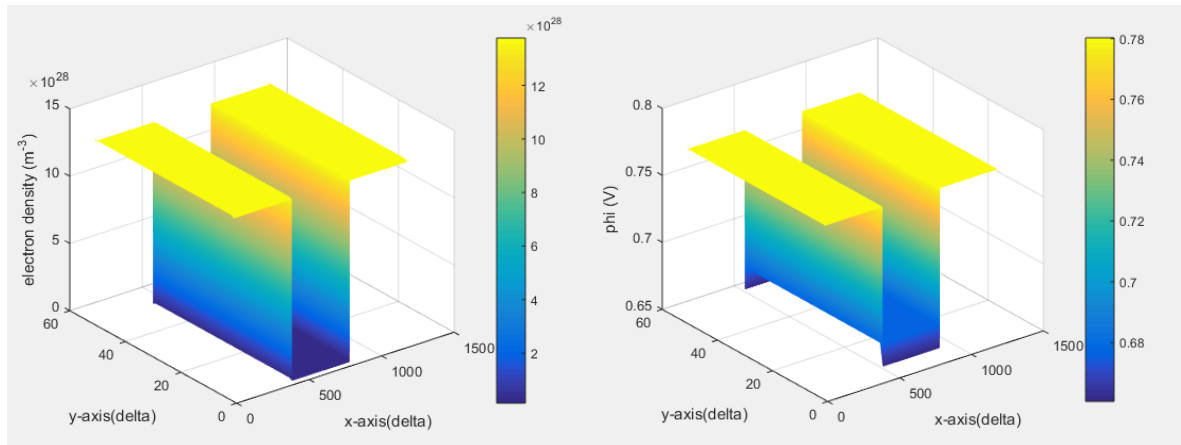
20171058 주휘인

Introduction

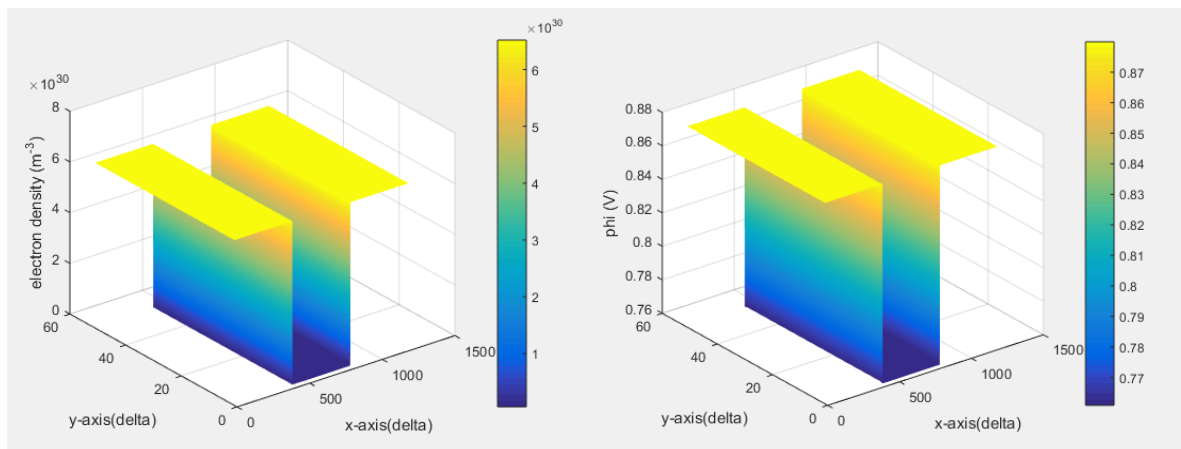
We calculated the 2-dimensional potential and electron density of SiO₂ (0.5nm)/Si (5 nm)/SiO₂ (0.5 nm) double gate structure with 40 nm gate at each SiO₂ part. 40 nm length source and drain are positioned at side of the double gate structure.

Result

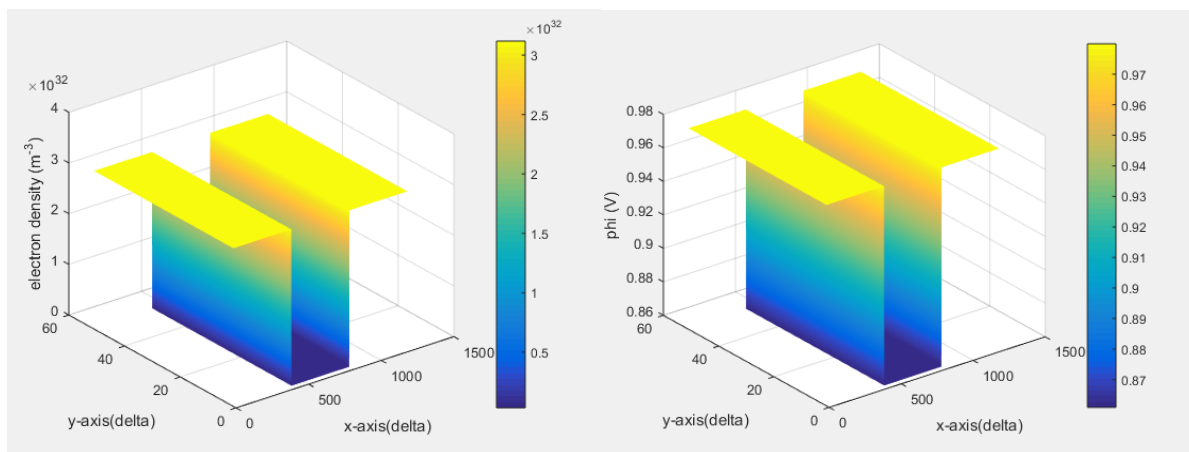
Gate voltage: 0 V



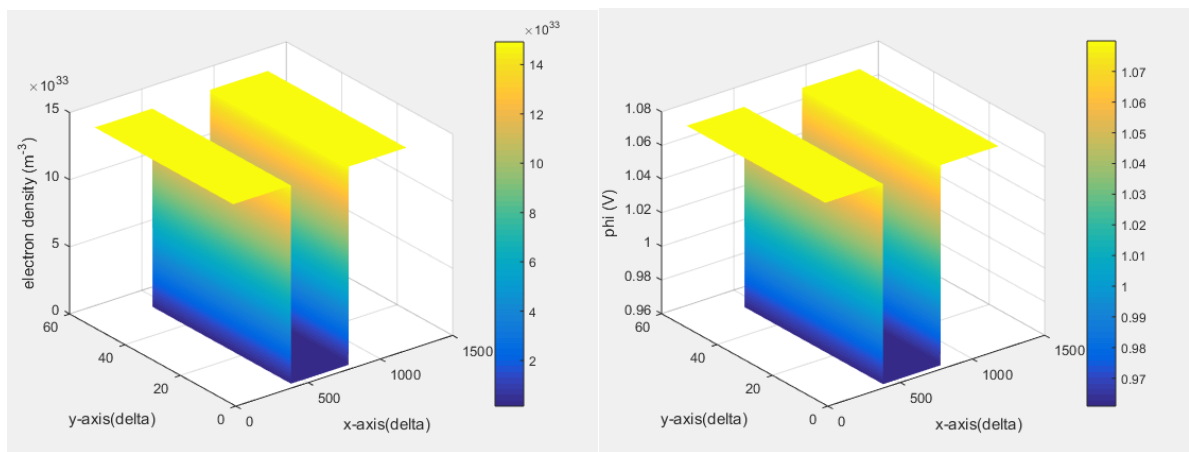
Gate voltage: 0.1 V



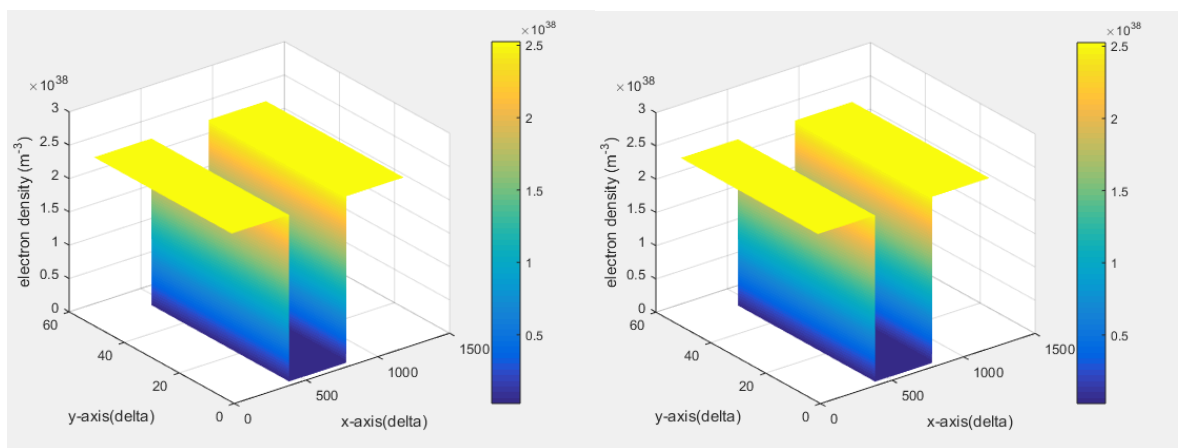
Gate voltage: 0.2 V



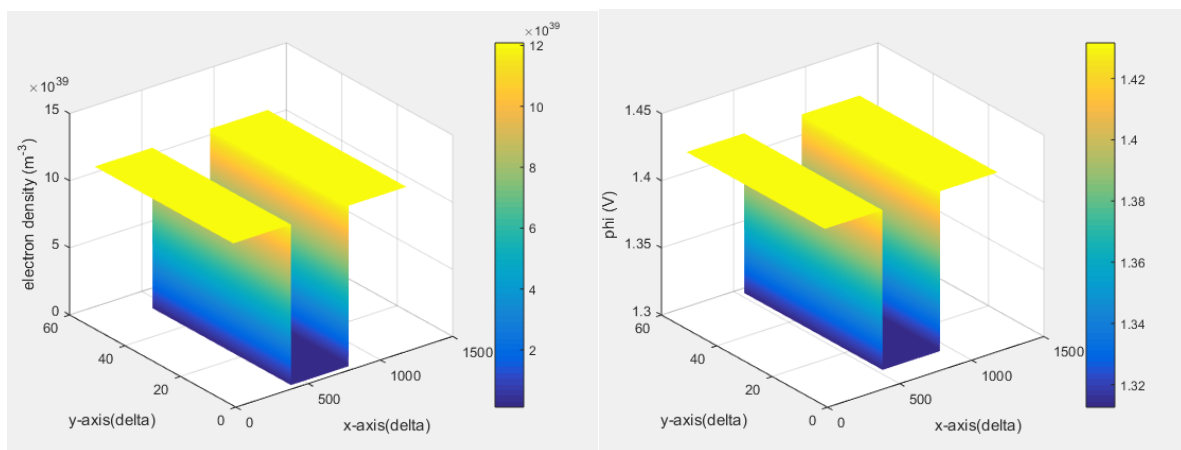
Gate voltage: 0.3 V



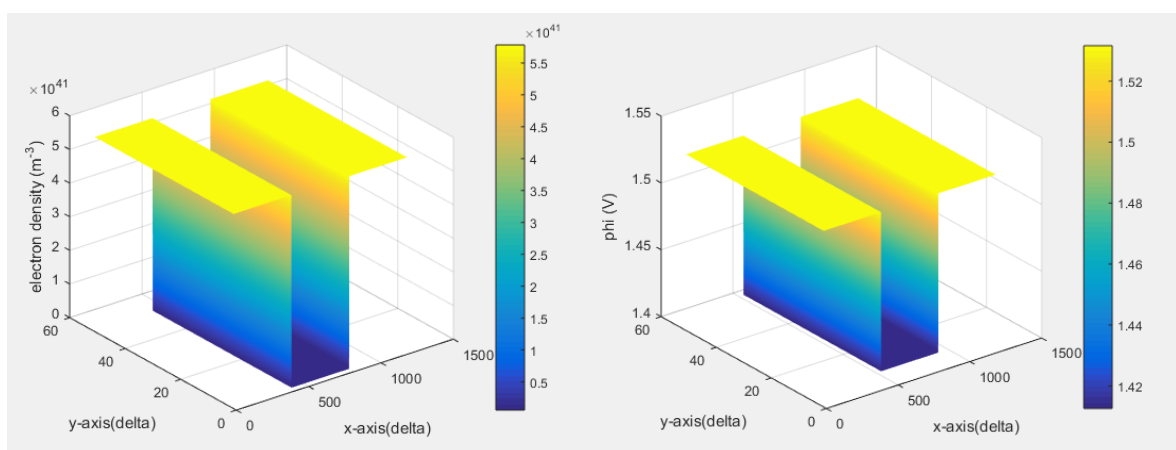
Gate voltage: 0.4 V



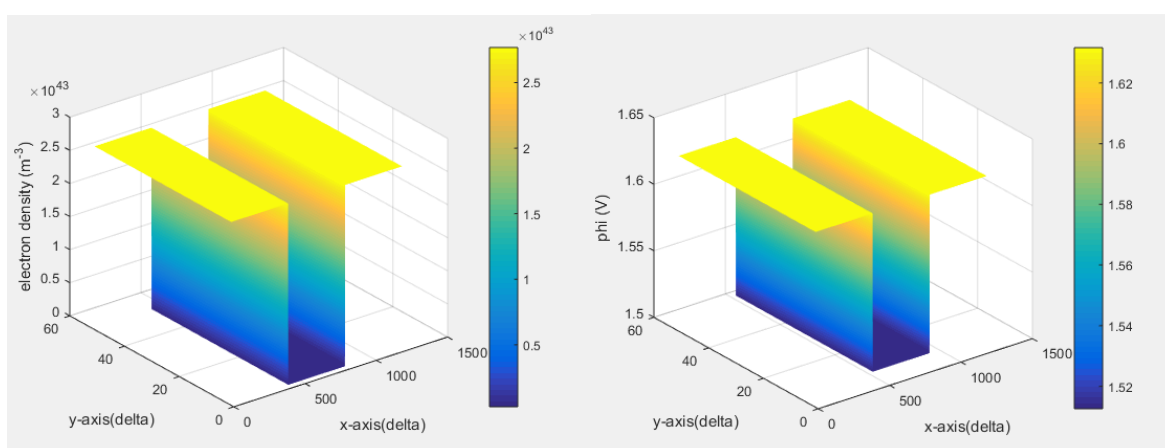
Gate voltage: 0.5 V



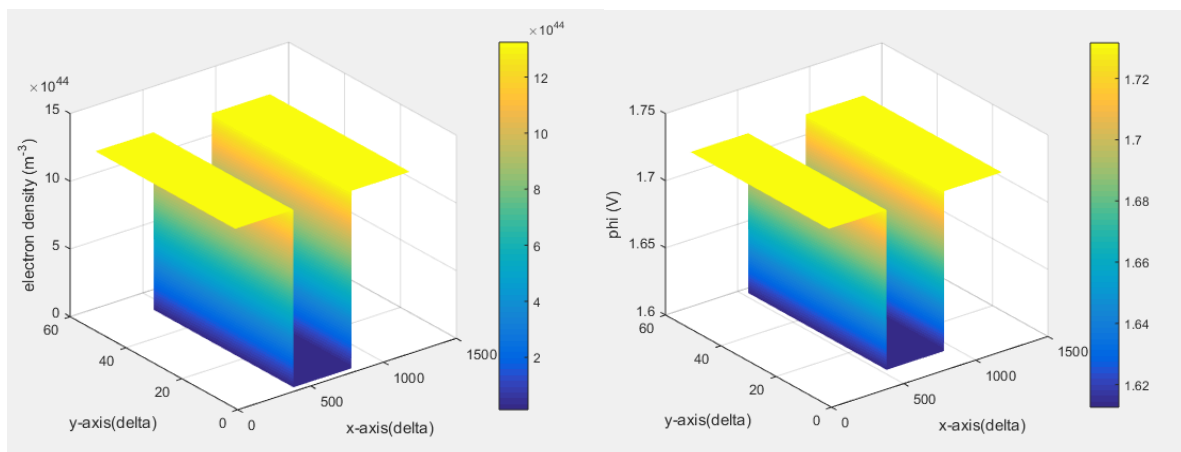
Gate voltage: 0.6 V



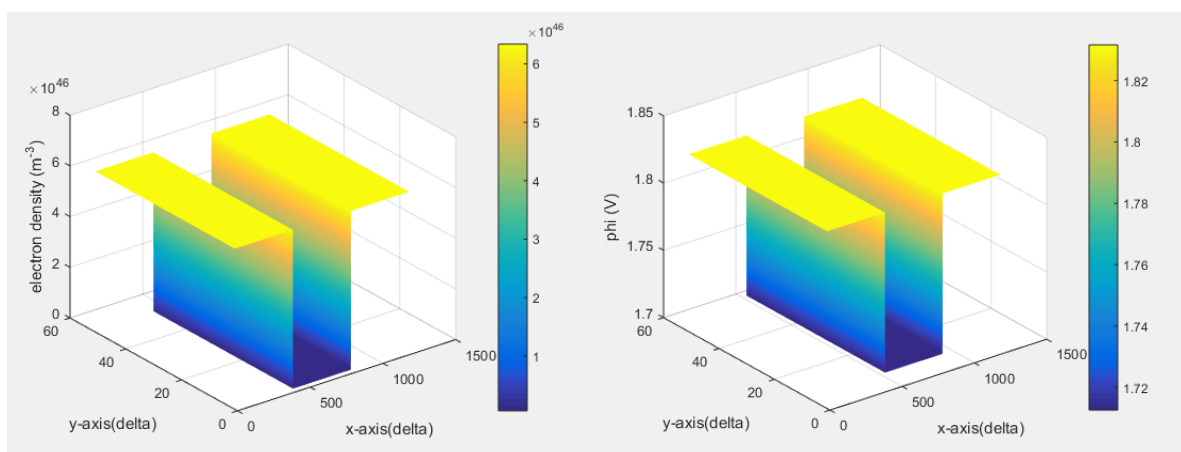
Gate voltage: 0.7 V



Gate voltage: 0.8 V



Gate voltage: 0.9 V



Gate voltage: 1.0 V

