

HW12 : Poisson-Continuity Solver

20171057

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Introduction and Approach

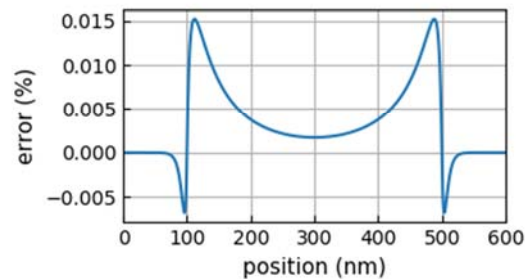
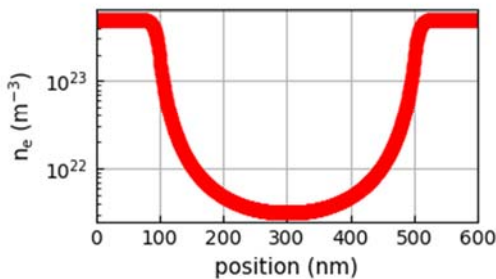
수업시간에 언급한 long model 과 short 모델에 대해 x sample spacing 이 각각 long(0.5nm, 1nm, 10nm), short(0.2nm, 1nm, 5nm)으로 설정하여 Poisson-Continuity 를 풀어보았다. Self-consistent result 와 non-linear Poisson solver 로 부터의 결과를 비교하여 spacing 에 따라 maximum error 가 얼마인지 살펴보았다.

Results

Long model

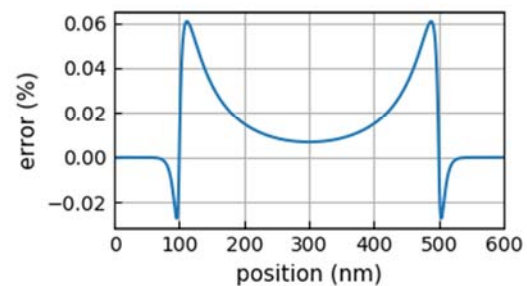
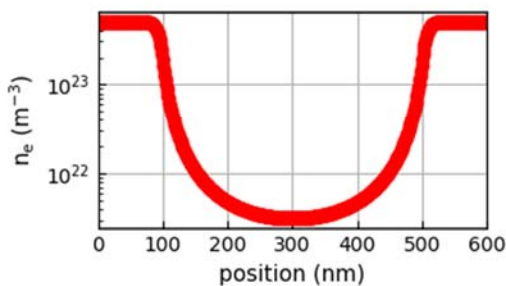
0.5 nm

Poisson-Continuity :long/0.5



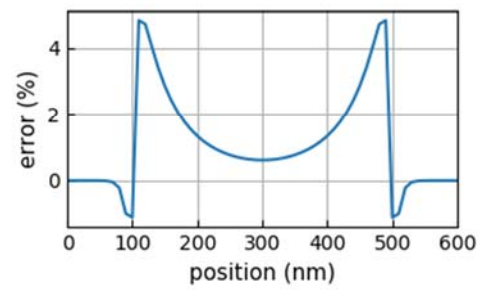
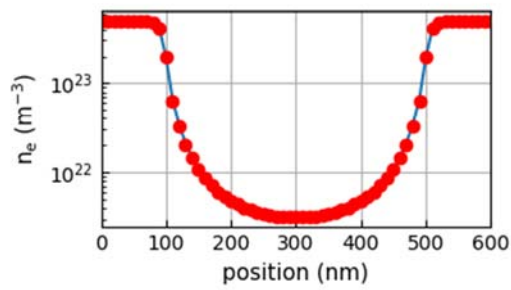
1.0 nm

Poisson-Continuity :long/1.0



10.0 nm

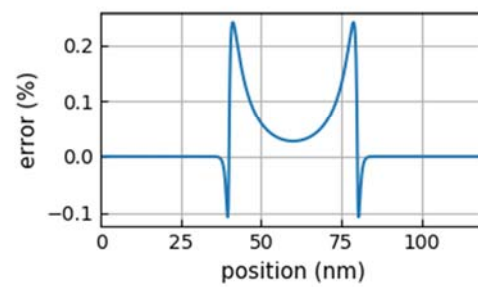
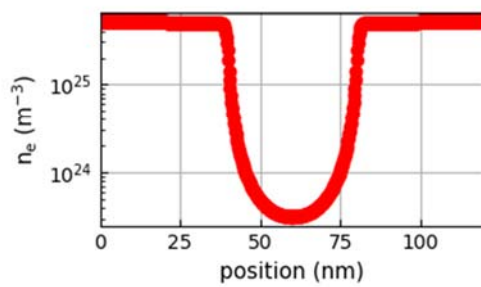
Poisson-Continuity :long/10.0



Short model

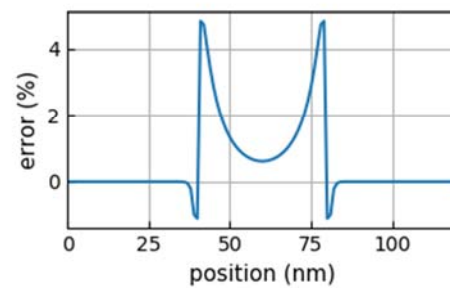
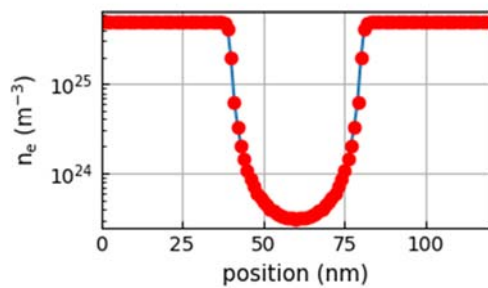
0.2 nm

Poisson-Continuity :short/0.2



1.0 nm

Poisson-Continuity :short/1.0



5.0 nm

Poisson-Continuity :short/5.0

