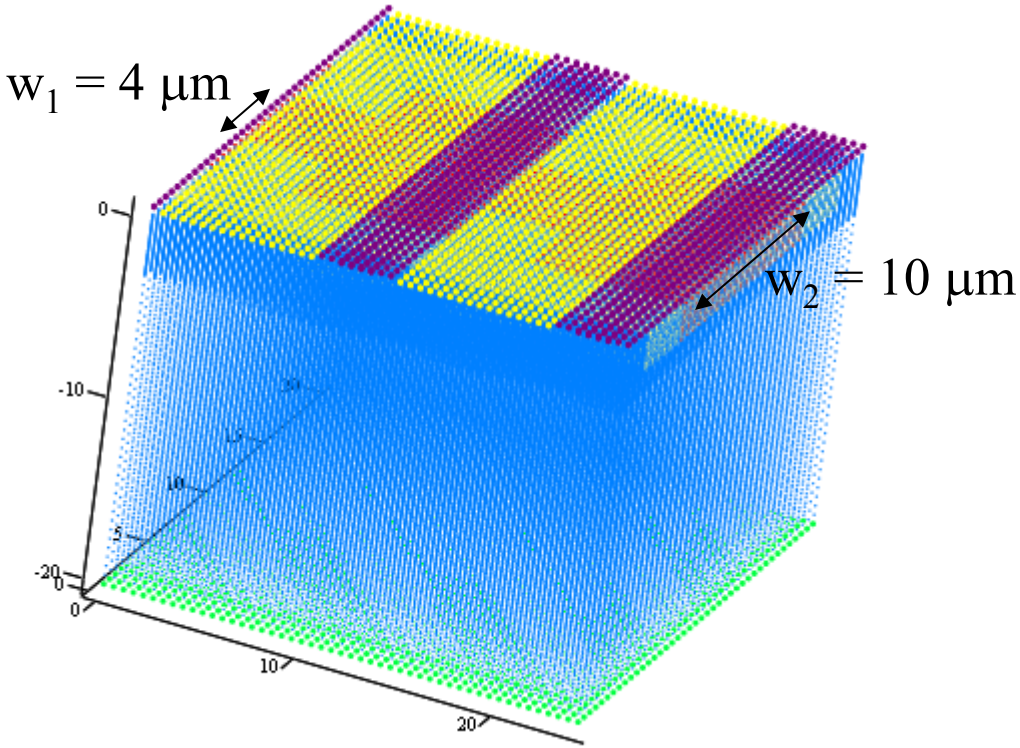
Further studies of Shaped Channel CCD potentials

- Structure studied:



- $V_P = -1.5$ V throughout.

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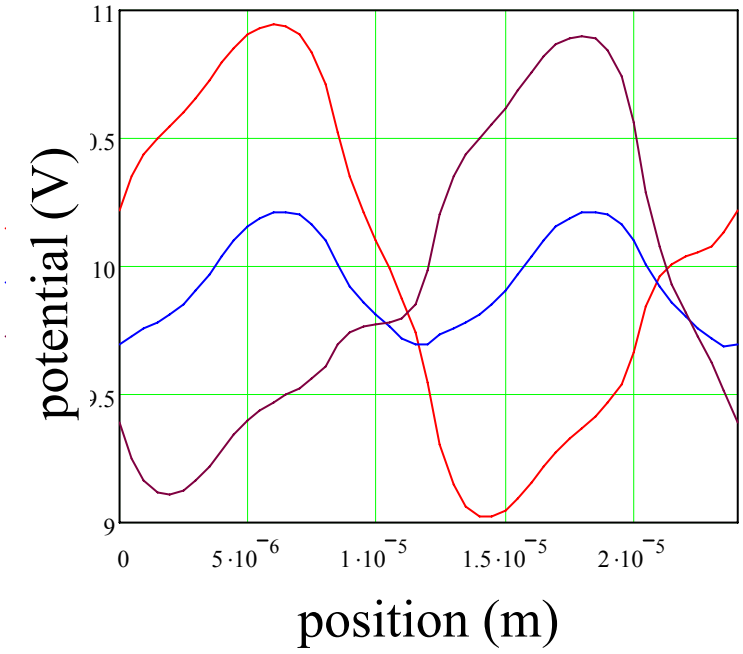
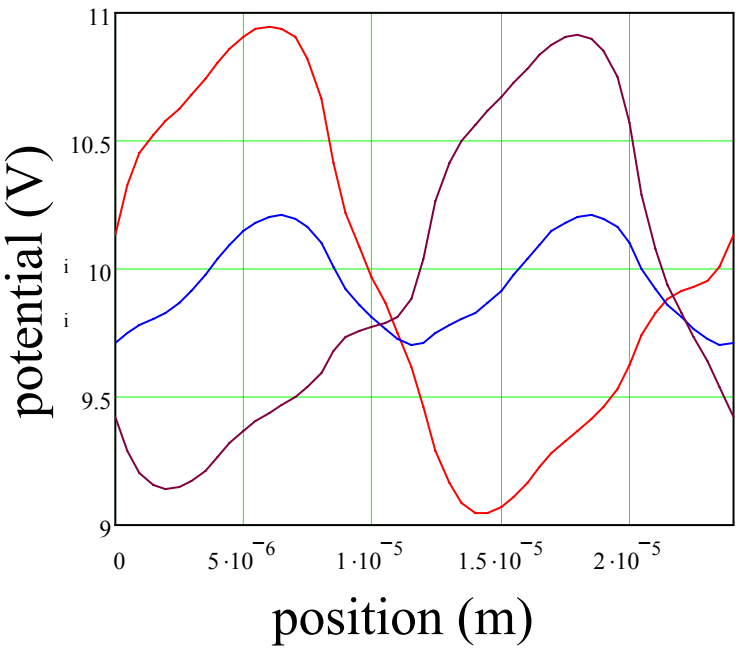
Gate voltages	red	blue	purple
V_1 (V)	2	1	0
V_2 (V)	0	1	2



- Blue curve, $\Delta V \sim 0.5$ V.

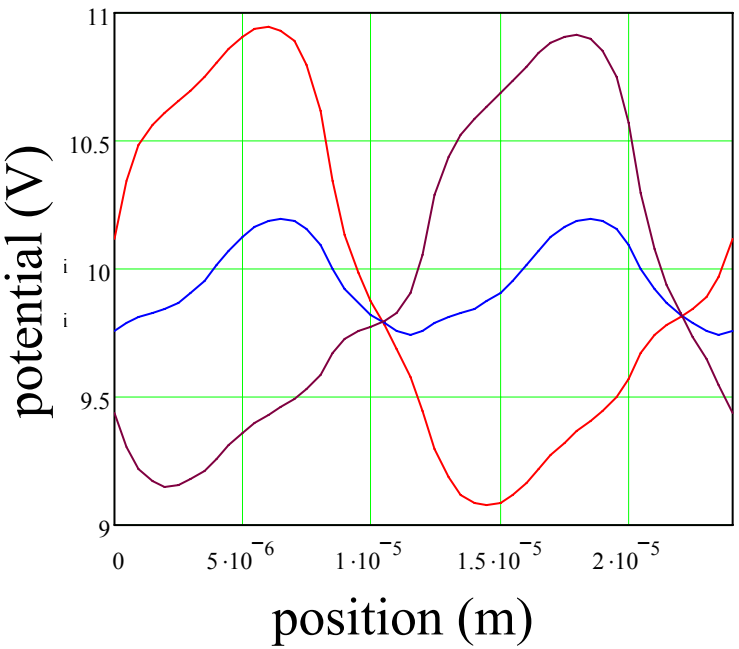
SCCCD potentials

- $w_1 = 4$ μm and $w_2 = 16$ μm:



- $\Delta V \sim 0.5$ V.

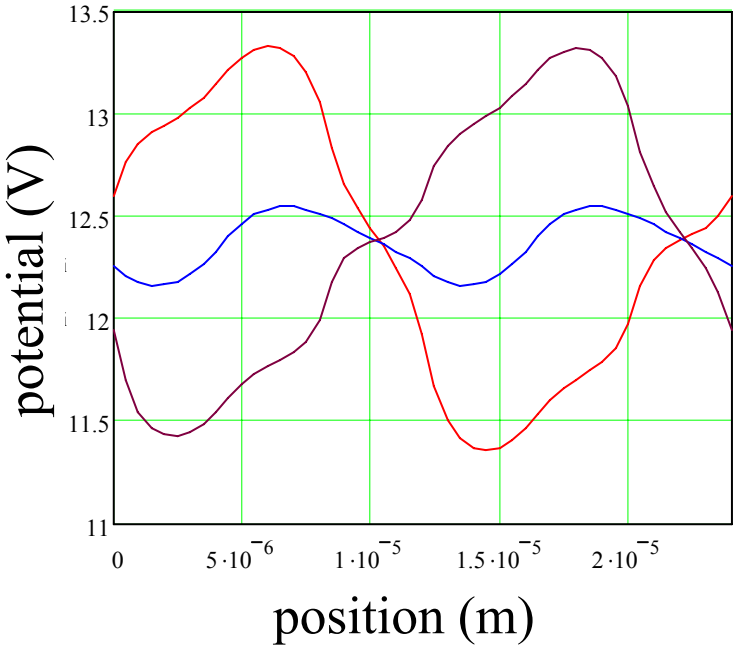
- $w_1 = 3$ μm and $w_2 = 10$ μm:



- $\Delta V \sim 0.45$ V.

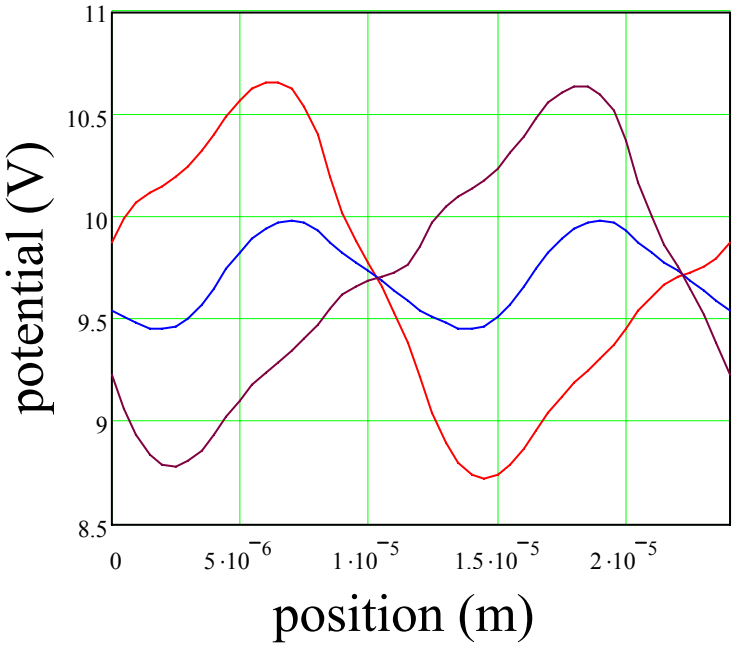
SCCCD potentials

- w_1 = 3 μm and w_2 = 10 μm, increased dopant concentration in notch:



- ΔV ~ 0.5 V.

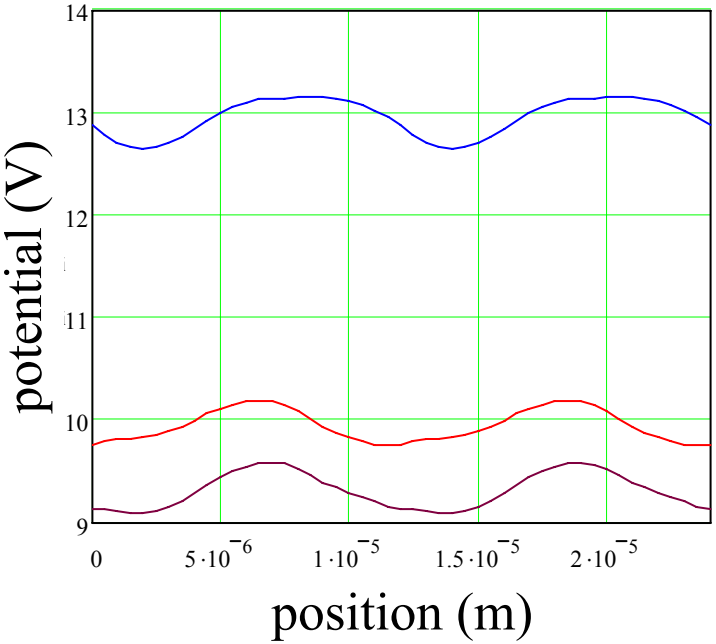
- w_1 = 3 μm and w_2 = 10 μm, decreased dopant concentration in notch:



- ΔV ~ 0.5 V.

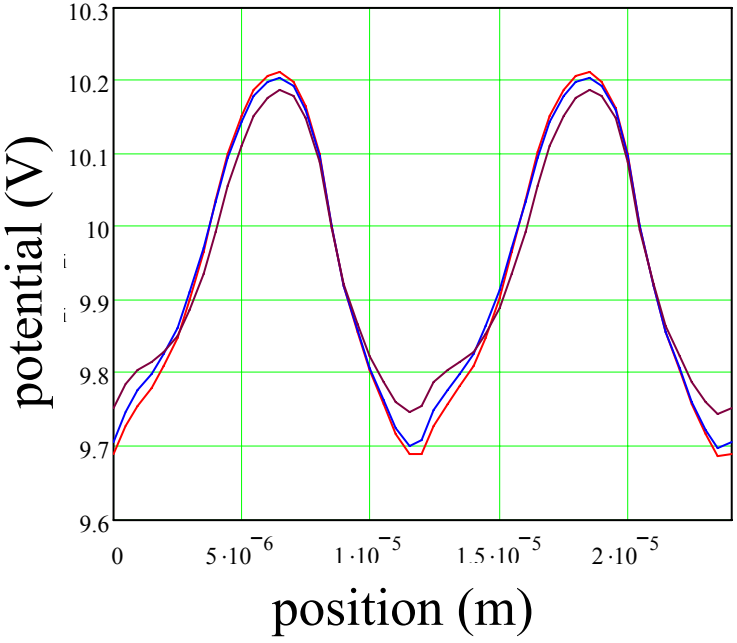
SCCCD potential

- C.f. nominal (red), high (blue) and low (purple) notch dopant concentrations:



- Depths of BC vary:
  - Nominal, ~ 0.7 μm.
  - High, ~ 0.6 μm.
  - Low, ~ 1 μm.

- C.f. nominal, broad and narrow configurations:



- Potentials for V1 = 1 V, V2 = 1V:
  - Nominal, ΔV ~ 0.5 V.
  - Broad, ΔV ~ 0.5 V.
  - Narrow, ΔV ~ 0.4 V.