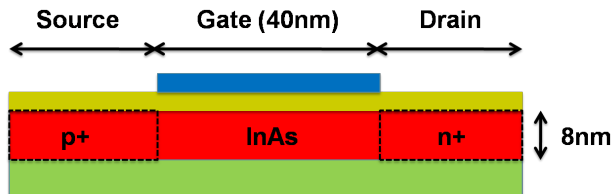
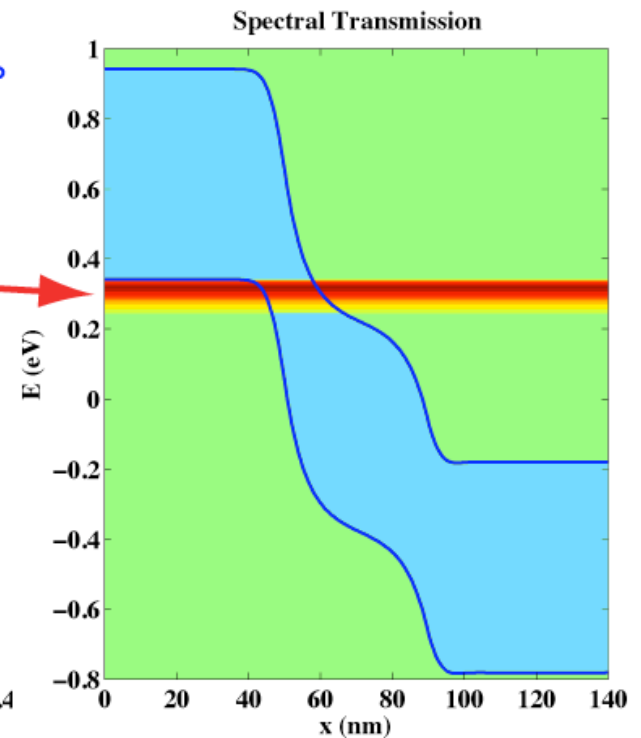
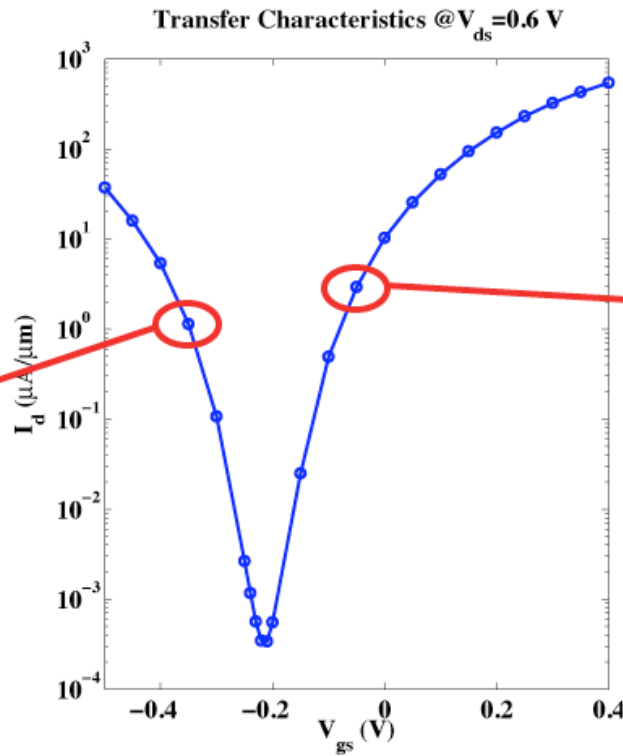
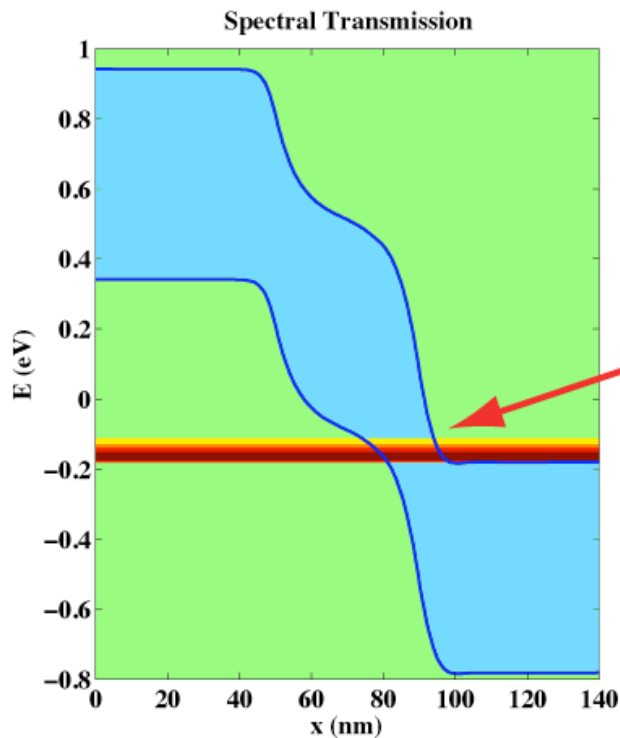


Band-To-Band-Tunneling in InAs Devices

Charge Self-consistent Full-Band Transport in Realistic Structure



- Bandgap raised from bulk 0.37=>0.6eV
- Doping $1 \times 10^{18}/\text{cm}^3$



Objective:

- Demonstrate BTBT capability

Approach:

- Full I-V calculation in OMEN

Impact:

- First full band / atomistic charge-self-consistent BTBT simulation
- Full ambipolar carrier treatment