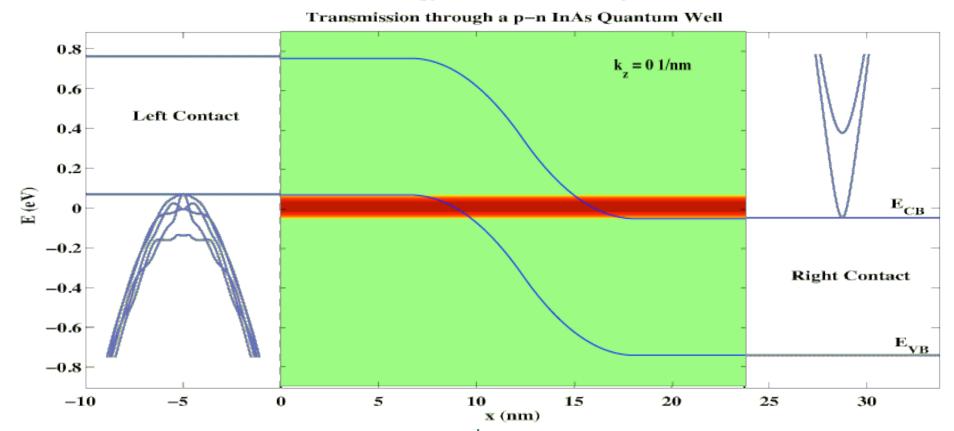


## Band-To-Band-Tunneling in InAs Devices

Momentum-Energy-Resolved Transport in Full-Band Simulations



## **Objective:**

- Demonstrate BTBT capabilityApproach:
- UTB InAs PIN diode quantization automatically included
- Compute energy and momentum transmission coefficient

## **Result:**

- Conduction band moves rapidly
  determines k-cutoff.
- Complicated hole dispersion creates Fano-resonance like features in T.

## Impact:

Demonstrate explicit E-k-dependence