From one well, to two wells to 5 wells (energy bands formation)

Dragica Vasileska, Gerhard Klimeck and Michael McLennan
(ASU, Purdue)

In order to understand the energy bands formation, run the Resonant Tunneling Diode Tool for the case of:

(a) double barrier open system with barrier thickness of 5 nm and well thickness of 10 nm.
(b) Triple barrier open system with barrier thickness of 5 nm and well thickness of 10nm.
(c) 6-barrier system with barrier thickness of 5 nm and well thickness of 10 nm.

Comment on:

(a) The sharpness of the energy levels for all three cases.
(b) Why is the formation of the bands more pronounced for the higher lying quasi-bound energy states?
(c) Repeat the simulations for barrier thickness of 2.5 nm and well thickness of 10 nm. Comment on the results obtained regarding the formation of the bands?