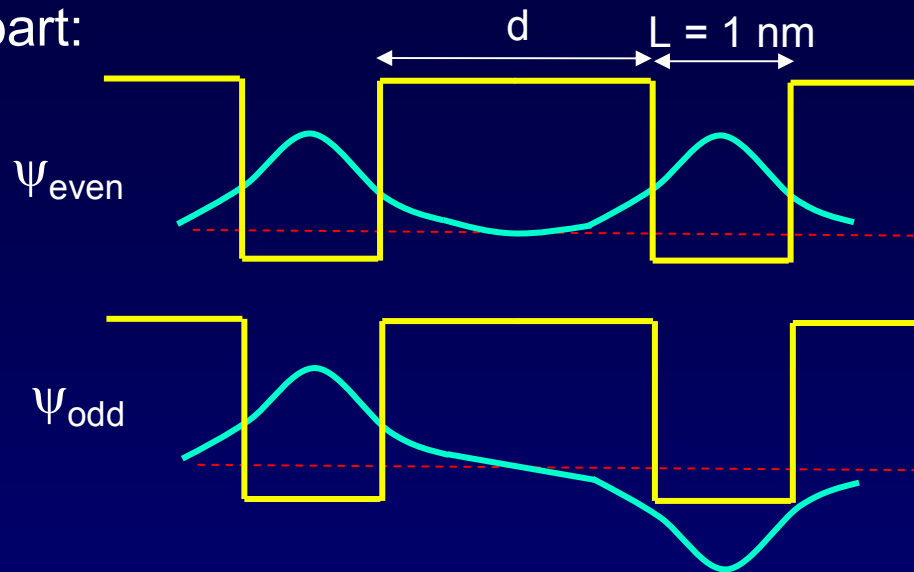


'Molecular' Wave Functions and Energies

Wells far apart:

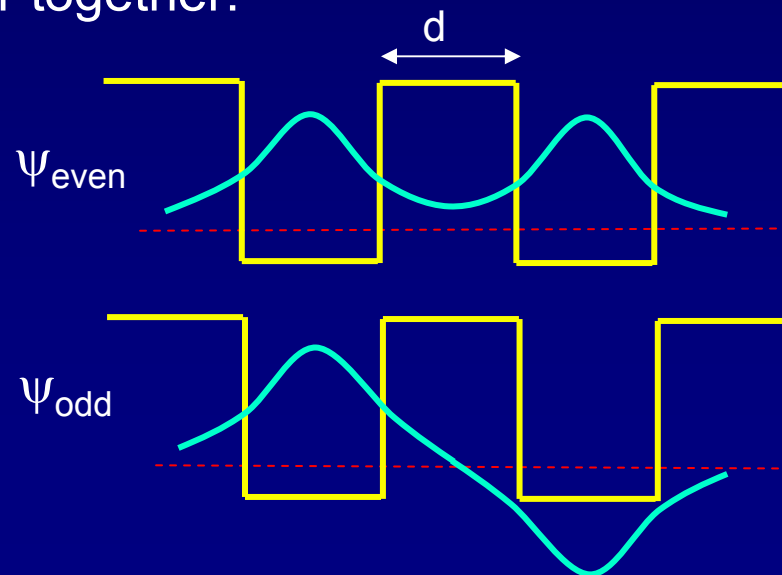


Degenerate states:

$$E \approx \frac{1.505 \text{ eV} \cdot \text{nm}^2}{(2L)^2} = 0.4 \text{ eV}$$

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Wells closer together:



'Atomic' states are beginning to overlap and distort. Ψ_{even} and Ψ_{odd} are not the same. The degeneracy is broken:

$$E_{\text{even}} < E_{\text{odd}}$$

Ψ_{even} : no nodes
 Ψ_{odd} : one node