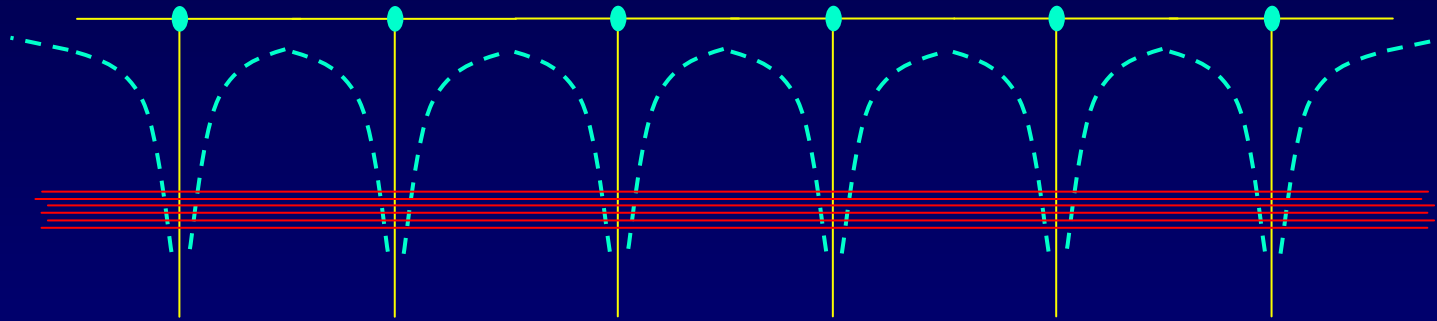


Energy Bands and Band Gaps

In a crystal the number of atoms is very large and the states approach a continuum of energies between the lowest and highest → a “band” of energies. A band has exactly enough states to hold 2 electrons per atom (spin up and spin down).



Each 1-atom state leads to an energy band. A crystal has multiple energy bands. **Band gaps** (regions of disallowed energies) lie between the bands.

