## Lecture 8 — Semi-Conductors

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## • Intrinsic Semiconductors

- Energy Bands
- Electrons and Holes
- Conduction
- $-e^-$  and  $H^+$  Concentrations

## • Extrinsic Semiconductors

- Produced by doping
- Introduce small amounts of impurity atoms
- Semiconductor in which concentration of one type carrier is much greater than the other (p >> n or n >> p)
- Pentavalent ions versus trivalent ions