

Topic-Level learning goals for *Solids and Conductivity*
UBC PHYS 250, *Introduction to Modern Physics*, Summer 2009
(updated July 30, 2009)

7. Conductivity of electrons in materials

- Given the conductivity of a material, predict the energy distribution of the electrons.
- For an unknown material, be able to analyze whether it is a conductor, insulator, or semiconductor, and then predict what electron energy distribution it must have.
- Describe the energy distribution the electrons need to have in order to produce a desired conductivity of a material.
- Qualitatively design a semiconductor diode that will only allow current to flow in one direction.