

## semiconductor-metal transition

Any transition from a semiconductor to a metallic state under the influence of a temperature or pressure change or both. Examples:

1.  $\text{Ti}_2\text{O}_3$ : band-edge crossing in a semiconductor to semimetal transition.
2. SmS: localized level crossing a band edge. In SmS hydrostatic pressure above the critical pressure  $P_c \approx 0.65$  GPa broadens the Sm-5d band to make the band edge cross the Sm-4f<sup>6</sup> level.
3. A localized-itinerant transition.
4. A switching transition.

**Source:**

PAC, 1994, 66, 577 (*Definitions of terms relating to phase transitions of the solid state (IUPAC Recommendations 1994)*) on page 590