

metal–insulator transition

Synonym: metal–nonmetal transition

A transition characterized by a sudden change in electrical transport properties (conductivity) due to a reversible change from localized to itinerant behaviour of the electrons. Example: The transition at 339 K in VO₂ where it changes from a high-temperature metallic behaviour to a low-temperature semiconductor behaviour. Synonymous with metal–nonmetal transition.

See: localized-itinerant transition

Source:

PAC, 1994, 66, 577 (*Definitions of terms relating to phase transitions of the solid state (IUPAC Recommendations 1994)*) on page 586