

## second-order transition

**Synonym:** continuous transition

A transition in which a crystal structure undergoes a continuous change and in which the first derivatives of the Gibbs energies (or chemical potentials) are continuous but the second derivatives with respect to temperature and pressure (i.e. heat capacity, thermal expansion, compressibility) are discontinuous. Example: The order-disorder transition in metal alloys, for example, CuZn. Synonymous with continuous transition.

**Source:**

PAC, 1994, 66, 577 (*Definitions of terms relating to phase transitions of the solid state (IUPAC Recommendations 1994)*) on page 589