

Phase transition (1st and 2nd order) →

First-order phase transition → Involves a discontinuous change in properties like internal energy and volume, accompanied by the absorption or release of latent heat. For example - melting or boiling, where there is a sudden change in volume as the substance changes from solid to liquid or liquid to gas.

Second-order phase transition → Involves a continuous change in properties like energy and volume, but a discontinuity occurs in their derivatives, such as specific heat or susceptibility. For example - Superconductors transitioning to a normal state, or the liquid gas transition at a critical point.

Common phase transition —

- Melting / Freezing
- Vaporization / Condensation
- Sublimation / Deposition etc.