

metastability

of a phase

A term that describes the state of a phase in which an energy barrier considerably higher than kT must be surmounted before this phase can transform to a phase of lower molar Gibbs energy and molar Helmholtz energy, where k is the Boltzmann constant and T the thermodynamic temperature.

Note:

In a thermodynamic sense, the equilibrium state is the state with the lowest molar Gibbs energy; a metastable state corresponds to a relative minimum in the molar Gibbs energy.

Source:

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