

SECTION OVERVIEW

1.10: Extended Explanations - Phase Equilibria

Phase equilibria is the term used to describe with two or more phases co-exist (in equilibrium). The stability of phases can be predicted by the chemical potential, in that the most stable form of the substance will have the minimum chemical potential at the given temperature and pressure. A key tool in exploring phase equilibria is a phase diagram which is used to show conditions (pressure, temperature, volume, etc.) at which thermodynamically distinct phases (such as solid, liquid or gaseous states) occur and coexist at equilibrium.

1.10.1: Phase Diagrams

1.10.2: A Phase Diagram Summarizes the Solid-Liquid-Gas Behavior of a Substance

1.10.3: Gibbs Energies and Phase Diagrams

1.10.4: The Chemical Potentials of a Pure Substance in Two Phases in Equilibrium

1.10.5: The Clausius-Clapeyron Equation

1.10.6: Chemical Potential Can be Evaluated From a Partition Function

1.10.E: Phase Equilibria (Exercises)

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