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4.5 Thermodynamic Functions References; Chapter 5. The Chemical Potential and Equilibrium; 5.1 Composition as a Variable; 5.2 The Chemical Potential; 5.3 Partial Molar Properties; 5.4 The Gibbs-Duhem Equation; 5.5 Determination of Partial Molar Properties; 5.6 Criteria for Equilibrium; References; Chapter 6. Fugacity, Activity, and Standard States; 6.1 Fugacity; 6.2 The Activity; 6.3 Standard States; 6.4 Activities of Electrolyte Solutions; 6.5 Determination of Activity; References; Chapter 7. The Thermodynamic Properties of Solutions
7.1 Change in the Thermodynamic Properties of Nonelectrolyte Solutions due to the Mixing Process
7.2 Calculation of the Thermodynamic Properties of Strong Electrolyte Solutes: The Debye - Huckel Theory; 7.3 Relative Partial Molar and Apparent Relative Partial Molar Thermal Properties; 7.4 The Osmotic Pressure; References; Chapter 8. The Equilibrium Condition Applied to Phase Equilibria; 8.1 Phase Equilibria for Pure Substances; 8.2 Phase Equilibria for Mixtures; References; Chapter 9. The Equilibrium Condition Applied to Chemical Processes; 9.1 The Equilibrium Constant
9.2 Enthalpies and Gibbs Free Energies of Formation
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10.8 Calculation of the Thermodynamic Properties of Solids

Sommario/riassunto

Chemical Thermodynamics: Principles and Applications presents a thorough development of the principles of thermodynamics--an old science to which the authors include the most modern applications, along with those of importance in developing the science and those of historical interest. The text is written in an informal but rigorous style, including anecdotes about some of the great thermodynamicists (with some of whom the authors have had a personal relationship), and focuses on "real" systems in the discussion and figures, in contrast to the generic examples that are often use
