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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
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9.2 Enthalpies and Gibbs Free Energies of Formation9.3 Examples of Chemical Equilibrium Calculations; 9.4 Electrochemical Cells; References; Chapter 10. Statistical Thermodynamics; 10.1 Energy Levels of an Ideal Gas Molecule; 10.2 Distribution of Energy Among Energy Levels; 10.3 The Boltzmann Distribution Law; 10.4 The Partition Function; 10.5 Relationship Between the Partition Function and the Thermodynamic Properties; 10.6 Evaluation of the Partition Function for the Ideal Gas; 10.7 Calculation of the Thermodynamic Properties of the Ideal Gas
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