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1.

	of Thermodynamics to Geological Systems; 15.4 Thermodynamics of Complexation with Macrocyclic Ligands; References; Chapter 16. Applications of Thermodynamics to Biological Processes; 16.1 Metabolism and Work; 16.2 Biopolymer Stabilities; References; Chapter 17. Applications of Thermodynamics to Nonelectrolyte Solutions; 17.1 Excess Thermodynamic Properties; 17.2 The Excess Thermodynamic Properties and (Liquid + Liquid) Phase Equilibrium 17.3 The Excess Thermodynamic Properties and (Fluid + Fluid) Phase EquilibriumReferences; Chapter 18. Applications of Thermodynamics to Solutions Containing Electrolyte Solutes; 18.1 Electrolyte Solutions; 18.2 Ion Association; 18.3 Surfactant Solutions; References; APPENDIX 5. Thermodynamic Properties of Selected Chemical Substances; Table A5.1 Thermodynamic Functions; Table A5.2 Standard Heat Capacities, Entropies, Enthalpies, and Gibbs Free Energies of Formation of Selected Substances at T = 298.15 K Table A5.3 Standard Heat Capacities, Entropies, Enthalpies, and Gibbs Free Energies of Formation of Some Common Ions at T = 298.15 KTable A5.4 Enthalpies and Temperatures of Fusion and Vaporization; Table A5.5 Coefficients at P = 0.1 MPa for the Heat Capacity Equation; Table A5.6 Standard Reduction Potentials at T = 298.15 K; APPENDIX 6. Calculations from Statistical Thermodynamics; A6.1 Atomic and Molecular Energy Levels; A6.2 The Partition Function; A6.3 Relationship Between the Partition Function and the Thermodynamic Functions for the Ideal Gas; A6.4 Partition Functions for the Ideal Gas A6.5 Calculation of the Thermodynamic Properties from the Energy Levels
Sommario/riassunto	This book is an excellent companion to Chemical Thermodynamics: Principles and Applications. Together they make a complete reference set for the practicing scientist. This volume extends the range of topics and applications to ones that are not usually covered in a beginning thermodynamics text. In a sense, the book covers a ""middle ground"" between the basic principles developed in a beginning thermodynamics textbook, and the very specialized applications that are a part of an ongoing research project. As such, it could prove invaluable to the practicing scientist who needs to apply t