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2. Solubility of Gases in Molten Metals3. References; Chapter 2.4 Solubility of Gases in Solid Metals; 1. Sieverts Method; 2. Equilibrate-Quench-Analyze Method; 3. Gravimetric Method; 4. Changes of Lattice Parameters and Electrical Resistivity Due to Dissolved Hydrogen in Metals; 5. Determination of Changes of Hydrogen Solubilities from Measurements of Electrode Potential Under Conditions of Controlled Electolyte Stirring; 6. References; 3 LIQUIDS; Chapter 3 Liquid-Liquid Solubilities; 1. Introduction; 2. The Synthetic Method; 3. The Analytical Method; 4. Miscellaneous Methods
5. Sample Purity6. Test Systems; 7. References; 4 SOLIDS; Chapter 4.1 Solubility of Solids in Liquids; 1. General Review of Methods; 2. Analytical Methods; 3. Synthetic Methods; 4. 'Combinatorial' Methods; 5. Summary of Experimental Difficulties; 6. References; Chapter 4.2 Solubility of Sparingly Soluble Ionic Solids in Liquids; 1. Introduction; 2. Fundamentals and Applications of Solubility Measurements; 3. The Experimental Determination of Solubilities of Sparingly Soluble Compounds; 4. Summary, Conclusions and Recommendations; 5. References
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Sommario/riassunto

This book covers the most useful experimental methods for all types of solubility measurements. The importance of solubility phenomena has been long recognized throughout science. For example, in medicine, the solubility of gases in liquids forms the basis of life itself; in the environment, solubility phenomena influence the weathering of rocks, the creation of soils, the composition of natural water bodies and the behaviour and fate of many chemicals. However, until now, no systematic critical presentation of the methods for obtaining solubilities has been given.