# 《化学》

### 图书基本信息

书名:《化学》

13位ISBN编号:9780471655527

10位ISBN编号:047165552X

出版时间:2006-12

出版社:吉林长白山

作者: Spencer, James N.; Bodner, George M.; Rickard, Lyman H.

页数:735

版权说明:本站所提供下载的PDF图书仅提供预览和简介以及在线试读,请支持正版图书。

更多资源请访问:www.tushu000.com



#### 内容概要

Promote a spirit of scientific discovery New scientific discoveries do not usually begin with models; they begin with data and a spirit of intellectual curiosity. In much the same way, Spencer, Bodner, and Rickard's Chemistry: Structure & Dynamics, Third Edition presents data, and challenges students to derive the models. Built on the recommendations of the American Chemical Society's Task Force on the General Chemistry Curriculum, this innovative approach helps students get a feel for how chemists approach problems in the real world.



#### 书籍目录

Chapter 1. Elements and Compounds. 1.1 Chemistry: A Definition. 1.2 Elements, Compounds, and 1.3 Atomic Symbols. 1.4 Chemical Formulas. 1.5 Evidence for the Existence of Atoms. 1.6 The Structure of Atoms. 1.7 Atomic Number and Mass Number. 1.8 Isotopes. 1.9 The Difference between 1.10 Polyatomic Ions. 1.11 Predicting the Formulas of Ionic Compounds. Atoms and Ions. 1.13 The Macroscopic, Atomic, and Symbolic Worlds of Chemistry. Periodic Table. 1.14 The Mass of an 1.15 The Mole as the Bridge between the Macroscopic and Atomic Scales. 1.16 The Mole as a Collection of Atoms. 1.17 Converting Grams into Moles and Number of Atoms. 1.18 The Mole as a Collection of Molecules. 1.19 Percent Mass. 1.20 Determining the Formula of a Compound. Problems. Chapter 2. The Mole: The Link between the Macroscopic and the Atomic World Elemental Analysis. 2.1 Chemical Reactions and the Law of Conservation of Atoms. 2.2 Chemical Equations as a 2.3 Two Views of Chemical Equations: Molecules Versus Moles. Representation of Chemical Reactions. Balancing Chemical Equations. 2.5 Mole Ratios and Chemical Equations. 2.6 Stoichiometry. Chemistry in the World Around Us: The Stoichiometry of the Breathalyzer. 2.7 The Nuts and Bolts of Limiting Reagents. 2.9 Solute, Solvent, and Solution. 2.10 Concentration. 2.11 Molarity as a Way of Counting Particles in Solution. 2.12 Dilution Calculations. 2.13 Solution Stoichiometry. Problems. Chapter 3. The 3.1 Rutherford 's Model of the Atom. 3.2 Particles and Waves. Structure of the Atom. 3.3 Light and Other Forms of Electromagnetic Radiation. 3.4 Atomic Spectra. 3.5 Quantization of Energy. 3.6 The Bohr Model 3.7 The Energy States of the Hydrogen Atom. Chemistry in the World Around Us: Color. of the Atom. The First Ionization Energy. 3.9 The Shell Model. 3.10 The Shell Model and the Periodic Table. Photoelectron Spectroscopy and the Structure of Atoms. 3.12 Electron Configurations from Photoelectron 3.13 Allowed Combinations of Quantum Numbers. 3.14 Shells and Subshells of Orbitals. 3.15 Orbitals and the Pauli Exclusion Principle. 3.16 Predicting Electron Configurations. 3.17 Electron 3.18 Electron Configurations and Hund 's Rules. Configurations and the Periodic Table. 3.19 The Sizes of Atoms: Metallic Radii. 3.20 The Sizes of Atoms: Covalent Radii. 3.21 The Relative Sizes of Atoms and Their 3.22 Patterns in Ionic Radii. 3.23 Second, Third, Fourth, and Higher Ionization Energies. Average Valence Electron Energy (AVEE). 3.25 AVEE and Metallicity. Problems. Chapter 4. The Covalent Bond. Chapter 5. Ionic and Metallic Bonds. Chapter 6. Gases. Chapter 7. Making and Breaking of Bonds. Chapter 8. Liquids and Solutions. Chapter 9. Solids. Chapter 10. An Introduction to Kinetics and Equilibrium. Chapter 11. Acids and Bases. Chapter 12. Oxidation – Reduction Reactions. Chapter 13. Chemical Thermodynamics. Chapter 14. Kinetics. Chapter 15. Nuclear Chemistry. Chapter 16. Chemical Analysis. Appendix A. Appendix B. Modules Module 1. Chemistry of the Nonmetals. (available at www.wiley.com/college/spencer). Module 2. Transition Module 4. Organic Chemistry: Structure and Metal Chemistry. Module 3. Complex Ion Equilibria. Nomenclature of Hydrocarbons. Module 5. Organic Chemistry: Functional Groups. Module 6. Organic Chemistry: Reaction Mechanisms. Module 7. Polymer Chemistry. Module 8. Biochemistry.

# 《化学》

# 版权说明

本站所提供下载的PDF图书仅提供预览和简介,请支持正版图书。

更多资源请访问:www.tushu000.com