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CHAPTER 3: Structure: The Nomenclature of Hydrocarbons and the Shape of Things to Come A. INTRODUCTION; B. NOMENCLATURE AND SPECTROSCOPY; I. Alkanes; a. Acyclic Alkanes; b. Cyclic Alkanes; II. Alkenes, Arenes, and Alkynes; a. Alkenes; b. Arenes; c. Alkynes; C. PHYSICAL AND CHEMICAL PROPERTIES; OXIDATION AND REDUCTION OF HYDROCARBONS; I. The Concept of Homology; II. Oxidation and Reduction; a. Oxidation; b. Reduction; ADDITIONAL PROBLEMS; REFERENCES; CHAPTER 4: An Introduction to Dynamics; A. INTRODUCTION; B. REVIEW OF SOME ENERGY CONSIDERATIONS; C. THE BARRIER BETWEEN REACTANTS AND PRODUCTS
CHAPTER 5: Classes of Organic Compounds-A Survey: An Introduction to Solvents and to Acids and Bases and to Computational Chemistry A. INTRODUCTION; B. GENERAL CHARACTERISTICS OF FUNCTIONAL GROUP PLACEMENT; C. THE FUNCTIONAL GROUPS AND THEIR NAMES; I. Hydrocarbons; a. Alkanes; b. Alkenes; c. Alkynes; d. Arenes; II. Alkyl and Aryl Halides; III. Alcohols and Phenols; IV. Ethers; V. Thiols, Thioethers, Disulfides, and Their Oxides; VI. Amines, Hydrazines, and Other Nitrogenous Materials; VII. Phosphines, Phosphonium Salts, and Other Phosphorus Derivatives
VIII. An Introduction to Organometallic Compounds

Sommario/riassunto

This book differs from other organic chemistry textbooks in that it is not focused purely on the needs of students studying premed, but rather for all students studying organic chemistry. It directs the reader to question present assumptions rather than to accept what is told, so the second chapter is largely devoted to spectroscopy (rather than finding it much later on as with most current organic chemistry textbooks). Additionally, after an introduction to spectroscopy, thermodynamics and kinetics, the presentation of structural information of compounds and organic families advances from hyd
