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2.7.3 The Water Molecule2.7.4 The Ammonia Molecule; 2.8 DELOCALIZED BONDS; 2.8.1 The Ethylene Molecule; 2.8.2 The Allyl Radical; 2.8.3 The Butadiene Molecule; 2.8.4 The Cyclobutadiene Molecule; 2.8.5 The Benzene Molecule; 2.9 APPENDICES; 2.9.1 The Second Derivative of the H€uckel Energy; 2.9.2 The Set of Three Coulson's Orthogonal Hybrids; 2.9.3 Calculation of Coefficients of Real MOs for Benzene; 3 An Introduction to Bonding in Solids; 3.1 THE LINEAR POLYENE CHAIN; 3.1.1 Butadiene N = 4; 3.2 THE CLOSED POLYENE CHAIN; 3.2.1 Benzene N = 6; 3.3 A MODEL FOR THE ONE-DIMENSIONAL CRYSTAL
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Sommario/riassunto

A readable little book assisting the student in understanding, in a nonmathematical way, the essentials of the different bonds occurring in chemistry. Starting with a short, self-contained,introduction, Chapter 1 presents the essential elements of the variation approach to either total or second-order molecular energies, the system of atomic units (au) necessary to simplify all mathematical expressions, and an introductory description of the electron distribution in molecules. Using mostly 2x2 Huckel secular equations, Chapter 2, by far the largest part of the book because of the many implicat