1. Record Nr. UNINA9910139364603321 Autore Fleming Ian <1935-> Titolo Molecular orbitals and organic chemical reactions / / Ian Fleming Pubbl/distr/stampa Hoboken, N.J., : Wiley, 2010 **ISBN** 1-119-96467-9 1-282-55013-6 9786612550133 0-470-68949-8 0-470-68950-1 Edizione [Reference ed.] Descrizione fisica 1 online resource (529 p.) Disciplina 547/.2 Soggetti Molecular orbitals Chemical bonds Physical organic chemistry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record Nota di bibliografia Includes bibliographical references and index. Nota di contenuto CONTENTS: Preface: 1 Molecular Orbital Theory: 1.1 The Atomic Orbitals of a Hydrogen Atom; 1.2 Molecules Made from Hydrogen Atoms; 1.3 C-H and C-C Bonds; 1.4 Conjugation-Huckel Theory; 1.5 Aromaticity; 1.6 Strained Bonds-Cyclopropanes and Cyclobutanes; 1.7 Heteronuclear Bonds, C-M, C-X and C=O; 1.8 The Tau Bond Model; 1.9 Spectroscopic Methods; 2 Molecular Orbitals and the Structures of Organic Molecules; 2.1 The Effects of Conjugation; 2.2 Hyperconjugation- Conjugation; 2.3 The Configurations and Conformations of Molecules; 2.4 The Effect of Conjugation on Electron Distribution 2.5 Other Noncovalent Interactions3 Chemical Reactions-How Far and How Fast; 3.1 Factors Affecting the Position of an Equilibrium; 3.2 The Principle of Hard and Soft Acids and Bases (HSAB); 3.3 Transition Structures: 3.4 The Perturbation Theory of Reactivity: 3.5 The Salem-Klopman Equation; 3.6 Hard and Soft Nucleophiles and Electrophiles; 3.7 Other Factors Affecting Chemical Reactivity; 4 Ionic Reactions-

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