

1. Record Nr.	UNINA9910813403203321
Autore	Kumar Sunil
Titolo	Pericyclic reactions : a mechanistic and problem-solving approach // Sunil Kumar ; Vinod Kumar, ; S.P. Singh
Pubbl/distr/stampa	London, UK : , : Elsevier Science, , [2016] ©2016
ISBN	0-12-803669-9
Descrizione fisica	1 online resource (383 p.)
Disciplina	547.2
Soggetti	Ring formation (Chemistry) Chemical reactions
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	Front Cover; Pericyclic Reactions; Copyright; To Our Families; Contents; Preface; Chapter 1 - Pericyclic Reactions and Molecular Orbital Symmetry; 1.1 CLASSIFICATION OF PERICYCLIC REACTIONS; 1.2 MOLECULAR ORBITALS OF ALKENES AND CONJUGATED POLYENE SYSTEMS; 1.3 MOLECULAR ORBITALS OF CONJUGATED IONS OR RADICALS; 1.4 SYMMETRY PROPERTIES OF OR -MOLECULAR ORBITALS; 1.5 ANALYSIS OF PERICYCLIC REACTIONS; FURTHER READING; Chapter 2 - Electrocyclic Reactions; 2.1 CONROTATORY AND DISROTATORY MODES; 2.2 STEREOCHEMISTRY OF ELECTROCYCLIC REACTIONS; 2.3 SELECTION RULES FOR ELECTROCYCLIC REACTIONS 2.4 ANALYSIS OF ELECTROCYCLIC REACTIONS2.5 ELECTROCYCLIC REACTIONS OF IONIC SPECIES; Chapter 3 - Sigmatropic Rearrangements; 3.1 SUPRAFACIAL AND ANTARAFACIAL PROCESSES; 3.2 ANALYSIS OF SIGMATROPIC REARRANGEMENTS OF HYDROGEN; 3.3 ANALYSIS OF SIGMATROPIC REARRANGEMENTS OF ALKYL GROUP; 3.4 [3,3] SIGMATROPIC REARRANGEMENTS; 3.5 [5,5] SIGMATROPIC SHIFT; 3.6 [2,3] SIGMATROPIC REARRANGEMENTS; 3.7 PERIPATETIC CYCLOPROPANE BRIDGE: WALK REARRANGEMENTS; 3.8 SIGMATROPIC REARRANGEMENTS INVOLVING IONIC TRANSITION STATES; Chapter 4 - Cycloaddition Reactions; 4.1 STEREOCHEMICAL MODES OF CYCLOADDITION 4.2 FEASIBILITY OF CYCLOADDITION REACTIONS4.3 [2+2]

CYCLOADDITIONS; 4.4 [4+2] CYCLOADDITIONS; 4.5 HIGHER CYCLOADDITIONS; 4.6 CYCLOADDITION OF MULTIPLE COMPONENTS; Chapter 5 - Cheletropic Reactions and 1,3-Dipolar Cycloadditions; 5.1 CHELETROPIC REACTIONS; 5.2 1,3-DIPOLAR CYCLOADDITIONS; Chapter 6 - Group Transfer, Elimination, and Related Reactions; 6.1 GROUP TRANSFER REACTIONS; 6.2 ELIMINATION REACTIONS; 6.3 DYOTROPIC REARRANGEMENTS; 6.4 ENE REACTIONS; 6.5 -ELIMINATIONS INVOLVING CYCLIC TRANSITION STRUCTURES; Chapter 7 - Unsolved Problems; Appendix - Solution Manual; Index

Sommario/riassunto

Pericyclic Reactions: A Mechanistic and Problem-Solving Approach provides complete and systematic coverage of pericyclic reactions for researchers and graduate students in organic chemistry and pharmacy programs. Drawing from their cumulative years of teaching in the area, the authors use a clear, problem-solving approach, supplemented with colorful figures and illustrative examples. Written in an accessible and engaging manner, this book covers electrocyclic reactions, sigmatropic reactions, cycloaddition reactions, 1,3-dipolar reactions, group transfer, and ene reactions. It offers an in
