

1. Record Nr.	UNINA9910637715803321
Autore	Talapatra Sunil Kumar
Titolo	Basic concepts in organic stereochemistry // Sunil Kumar Talapatra, Bani Talapatra
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-030-95990-2
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (266 pages)
Disciplina	547.1223
Soggetti	Stereochemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Symmetry and Molecular Chirality. Conformation, Stability, and Physical Properties -- Configurational Nomenclature. Physical Properties of Geometrical Isomers -- Projection (Fischer, Newman, Sawhorse) and Perspective (Flying Wedge and Zigzag) Formulas, Working out Stereoisomers -- Prochirality and Prostereoisomerism. Topicity of Ligands and Faces Nomenclature [1–5] -- Asymmetric Synthesis -- Some Other Aspects of Dynamic Stereochemistry: Conformation and Reactivity -- Conformation of Saturated Six-Membered Ring Compounds -- Cyclohexanone -- Fused Ring Systems -- Stereoisomerism: Axial Chirality, Planar Chirality, (R,S) Notations Helicity -- Chiroptical Properties I: Optical Rotation. ORD, CD [1-4] -- Chiroptical Properties II: Helicity Rule or Chirality Rule.
Sommario/riassunto	This book discusses essential stereochemical concepts associated with organic molecules (natural or synthetic), as reflected in the course of their many reactions, their mechanisms, their asymmetric synthesis, biosynthesis, and biological activities. This treatise provides useful insights and understanding of the chiral/achiral designations (nomenclatures), the stereochemical features, and related properties of the natural and synthetic products. Without having an adequate knowledge of stereochemical concepts, it will not be possible to understand and appreciate the stereochemistry of natural or synthetic products. Thus, essential static and dynamic aspects of stereochemistry with sufficient illustrative examples along with discussions are

presented. The structure of the monograph allows for easy selection of separate topics for reading and teaching. This book will also provide an idea of basic stereochemical concepts, as applied to organic molecules in general as well as to organic ligands in coordination complexes, and will, therefore, be valuable resources to teachers and students of advanced undergraduates and post-graduates, researchers, and professionals.
