

1. Record Nr.	UNISA996202135403316
Autore	Nogradi M
Titolo	Stereoselective synthesis [[electronic resource]] : a practical approach / / Mihaly Nogradi ; foreword by A.I. Meyers
Pubbl/distr/stampa	Weinheim ; ; New York, : VCH, 1995
ISBN	1-281-75874-4 9786611758745 3-527-61569-5 3-527-61568-7
Edizione	[2nd, thoroughly rev. and updated ed.]
Descrizione fisica	1 online resource (390 p.)
Disciplina	541.223 541.39
Soggetti	Stereochemistry Stereoisomers Organic compounds - Synthesis
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 (p. [315]-358) and index.
Nota di contenuto	Stereoselective Synthesis; Contents; List of Symbols and Abbreviations; Introduction; 1 General Concepts of Stereoselective Synthesis; 1.1 Principles of Differentiating Molecules; 1.2 Characterization of Stereoisomers. Conformation and Configuration; 1.3 Intramolecular Symmetry. Topicity and Prochirality; 1.4 Selectivity in Chemistry; 1.4.1 Substrate Selectivity; 1.4.1.1 Substrate Diastereoselectivity (Diastereomer Selectivity); 1.4.1.2 Substrate Enantioselectivity (Enantiomer Selectivity). Kinetic Resolution; 1.4.2 Product Selectivity; 1.4.2.1 Formation of Stereoisomers 1.4.2.2 Conditions Necessary for Stereoselectivity1.4.2.3 Concept of Stereodifferentiation; 1.4.2.4 Methods for Inducing Stereoselectivity; 1.4.3 Stereoselective Synthetic Strategies; 1.4.3.1 Enantioconvergent Synthesis; 1.4.3.2 Selective Preparation of Both Enantiomers from a Single Substrate; 1.5 Kinetics and Thermodynamics of Stereoselective Reactions; 2 Stereoselective Catalytic Reductions; 2.1 Stereoselective Homogeneous Hydrogenations with Rhodium-, Ruthenium- and Iridium-Phosphine Catalysts; 2.1.1 Hydrogenation of Olefinic Bonds;

2.1.1.1 Chiral Phosphorus Containing Ligands
2.1.2 Enantioselective Catalytic Hydrogenation of Ketones and Imines
2.1.3 Diastereoselective Hydrogenations in Homogeneous Phase; 2.2 Catalytic Hydrosilylation; 2.3 Heterogeneous Stereoselective Catalytic Hydrogenations; 2.3.1 Enantioselective Heterogeneous Catalytic Hydrogenations; 2.3.2 Diastereoselective Heterogeneous Catalytic Hydrogenations; 3 Stereoselective Non-Catalytic Reductions; 3.1 Enantioselective Reductions; 3.1.1 Chiral Lithium Aluminum Hydrides; 3.1.1.1 Reduction of Carbonyl Groups; 3.1.1.2 Reduction of C=N and C=C Bonds; 3.1.2 Chirally Modified Hydridoborates
3.1.3 Chiral Boranes and Boronates
3.1.4 Enantioselective Reductions with Hydride Transfer from Carbon; 3.1.4.1 Chiral Trialkylboranes; 3.1.4.2 Chiral Metal Alkyls; 3.1.4.3 Chiral Metal Alkoxides; 3.1.4.4 Chiral 1,4-Dihydropyridines; 3.1.5 Correlation of Substrate Constitution and Enantioselectivity; 3.2 Diastereoselective Reductions of Carbonyl Groups; 3.2.1 Stereochemistry of Diastereoselective Ketone Reductions; 3.2.2 Practical Aspects of Diastereoselective Ketone Reductions; 4 Stereoselective Oxidations; 4.1 Enantioselective Oxidations; 4.1.1 Epoxidation with Chiral Oxidants
4.1.2 Oxidations in the Presence of Chiral Catalysts
4.2 Diastereoselective Oxidations; 4.2.1 Diastereoselective Epoxidation; 4.2.2 Various Diastereoselective Oxidations; 5 Stereoselective Carbon-Carbon Bond Forming Reactions by Nucleophilic Addition to Carbonyl Groups; 5.1 Addition of Simple Nucleophiles to Carbonyl Compounds; 5.1.1 Enantioselective Additions; 5.1.2 Diastereoselective Additions; 5.1.3 Additions to C=N Bonds; 5.2 Additions Involving Allylmetal and Allylboron Compounds; 5.2.1 General Aspects of Allylmetal Addition; 5.2.2 Addition of Allylboron Compounds
5.2.3 Addition of Allyltitanium Compounds

Sommario/riassunto

The state-of-the-art in stereoselective synthesis! Thoroughly revised and updated, this enlarged second edition offers a plethora of valuable information on methods and reagents in stereoselective synthesis. Methods have been selected for high efficiency and selectivity; mechanistic aspects are treated succinctly, with a strong emphasis on practical applications. For this new edition, material has been added on* homogeneous diastereoselective hydrogenations* enantioselective oxidations* novel, efficient chiral auxiliaries Much of the information given is presented in figu
