

1. Record Nr.	UNINA9911019856003321
Titolo	Organosulfur chemistry in asymmetric synthesis // edited by Takeshi Toru and Carsten Bolm
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2008
ISBN	9786611947170 9781281947178 1281947172 9783527623235 352762323X 9783527623242 3527623248
Descrizione fisica	1 online resource (450 p.)
Altri autori (Persone)	ToruTakeshi BolmCarsten
Disciplina	547.06045
Soggetti	Organosulfur compounds Asymmetric synthesis Enantioselective catalysis
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	Organosulfur Chemistry in Asymmetric Synthesis; Contents; Preface; List of Contributors; 1 Asymmetric Synthesis of Chiral Sulfoxides; 1.1 Chiral Sulfoxides; 1.1.1 Introduction; 1.1.2 The Main Routes to Chiral Sulfoxides; 1.2 Use of Chiral Sulfur Precursors; 1.2.1 Sulfinates (Andersen Method); 1.2.2 Diastereoselective Formation of Sulfinates; 1.2.3 Sulfinates from Sulfites; 1.2.4 Sulfinamides; 1.3 Catalytic Enantioselective Sulfide Oxidation; 1.3.1 Titanium Complexes; 1.3.1.1 Diesters of Tartaric Acid; 1.3.1.2 C(2)-Symmetric 1,2-Diols as Ligands; 1.3.1.3 Binaphthol and Derivatives 1.3.1.4 C(3)-Symmetric Triethanolamine Ligands1.3.1.5 Ti (Salen) Catalysts; 1.3.2 Manganese Complexes; 1.3.3 Vanadium Complexes; 1.3.4 Molybdenum Complexes; 1.3.5 Iron Complexes; 1.3.6 Miscellaneous; 1.4 Catalytic Arylation of Sulfenate Anions; 1.5 Enantioselective Oxidation of Sulfides; 1.6 Summary; References; 2

Asymmetric Synthesis of Optically Active Sulfinic Acid Esters; 2.1 Introduction; 2.2 Enantiomeric Sulfinic Acid Esters; 2.3 Diastereomeric Sulfinic Acid Esters; References; 3 Asymmetric Transformations Mediated by Sulfinyl Groups; 3.1 Introduction 3.2 Nucleophilic Additions to C=O and C=N Bonds Mediated by - Sulfinyl Groups 3.2.1 -Ketosulfoxides; 3.2.1.1 Reduction Reactions; 3.2.1.2 Alkylation Reactions; 3.2.1.3 Aldol Reaction with - Ketosulfoxides Acting as Electrophiles; 3.2.1.4 Hydrocyanation Reactions; 3.2.2 -Imino(enamino)sulfoxides; 3.3 Conjugate Additions to , -Unsaturated Sulfoxides; 3.3.1 Nucleophilic Additions; 3.3.1.1 (E) and (Z)-2-Substituted Vinyl Sulfoxides; 3.3.1.2 1-Substituted Vinyl Sulfoxides; 3.3.2 Tandem Reactions; 3.3.3 Radical Conjugate Additions and Other Reactions; 3.4 Cycloadditions 3.4.1 Asymmetric Diels-Alder Reactions 3.4.1.1 Sulfinyl Dienophiles; 3.4.1.2 Sulfinyl Dienes; 3.4.2 Asymmetric Hetero Diels-Alder Reactions; 3.4.3 Asymmetric 1,3-Dipolar Cycloadditions; 3.4.3.1 Reactions with Nitrones; 3.4.3.2 Reactions with Azomethine Ylides; 3.4.3.3 Reactions with Nitrile Oxides; 3.4.3.4 Reactions with Diazoalkanes; 3.4.3.5 Reactions with Other Dipoles; 3.4.4 Other Asymmetric Cycloadditions; 3.5 Asymmetric Processes Stereocontrolled by Remote Sulfoxides; 3.5.1 Nucleophilic Processes; 3.5.1.1 Reactions with Sulfinylated Electrophiles 3.5.1.2 Reactions with Sulfinylated Nucleophiles 3.6 Asymmetric Pummerer Reaction; References; 4 Synthesis and Applications of Chiral Dithioacetal Derivatives; 4.1 Introduction; 4.2 Lithiated Dithianes; 4.3 Alternative Methods; 4.4 Oxidation Methods for the Construction of Chiral Dithioacetal Derivatives and Applications in Synthesis; 4.5 Applications of Chiral Dithioacetal Derivatives in Natural Product and Biologically Active Compound Synthesis; 4.6 Summary; References; 5 Synthesis and Use of Chiral Sulfur Ylides; 5.1 Introduction; 5.1.1 Reactions of Sulfonium Ylides 5.1.2 Methods of Preparation

Sommario/riassunto

In this first book to gather the information on this hot topic otherwise widely spread throughout the literature, experienced editors and top international authors cover everything the reader needs -- from the synthesis of chiral organosulfur compounds to applications and catalysis: * Asymmetric synthesis of chiral sulfinates and sulfoxides* Synthesis and use of chiral dithioacetal derivatives, ylids, chiral sulfoximines and sulfinamides* Use of chiral sulfoxides as ligands in catalysis* Asymmetric reactions of alpha-sulfenyl, alpha-sulfinyl and alpha-sulfonyl carbanions.As