

1. Record Nr.	UNINA9910831021903321
Titolo	Multimetallic catalysts in organic synthesis [[electronic resource] /] / edited by Masakatsu Shibasaki and Yoshinori Yamamoto
Pubbl/distr/stampa	Weinheim ; ; [Great Britain], : Wiley-VCH, c2004
ISBN	1-280-51967-3 9786610519675 3-527-60355-7 3-527-60432-4
Descrizione fisica	1 online resource (313 p.)
Classificazione	35.52 35.17
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Disciplina	547.1395 547.2
Soggetti	Organic compounds - Synthesis Metal catalysts
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	Multimetallic Catalysts in Organic Synthesis; Contents; Preface; List of Contributors; 1 Organic Synthesis with Bimetallic Systems; 1.1 Introduction; 1.2 Reactions Promoted by a Combination of Catalytic and Stoichiometric Amounts of Metals; 1.2.1 Transition Metal-Catalyzed Cross-Coupling Reactions; 1.2.2 The Wacker Reaction; 1.2.3 The Heck Reaction; 1.2.4 Reactions Involving -Allylpalladium Intermediates; 1.2.4.1 Electrophilic Reactions; 1.2.4.2 Nucleophilic Reactions; 1.2.5 Nickel-Catalyzed Three-Component Coupling Reaction; 1.2.6 The Nozaki-Hiyama-Kishi Reaction 1.3 Reactions Promoted by a Combination of Catalytic Amounts of Two Metals 1.3.1 Transition Metal Catalyzed Cross-Coupling Reactions; 1.3.1.1 The Stille Reaction; 1.3.1.2 The Hiyama Reaction; 1.3.1.3 The Sonogashira Reaction; 1.3.2 The Wacker Reaction; 1.3.3 Reactions Involving -Allylpalladium Intermediates; 1.3.4 Transition Metal Catalyzed Cyclization Reactions; 1.3.4.1 [3+2] Cycloaddition Reactions; 1.3.4.2 Intramolecular [n+2] Cyclization Reactions; 1.3.4.3

Intermolecular [n+2+2] Cyclotrimerization Reactions; 1.3.4.4 [2+2+1] Cycloaddition Reactions; The Pauson-Khand Reaction
1.3.4.5 Cycloisomerization Reactions
1.3.4.6 Indole-Forming Reaction;
1.3.4.7 Furan- and Pyrrole-Forming Reactions; 1.3.5 Reactions Involving Nucleophilic Addition of Carbonyl Compounds; 1.3.5.1 The Aldol Reaction; 1.3.5.2 Alkynylation Reactions; 1.3.5.3 Conjugate Addition Reactions; 1.3.6 Miscellaneous Reactions; 1.3.6.1 Transition Metal Catalyzed Reactions; 1.3.6.2 Lewis Acid Catalyzed Reactions; 1.3.6.3 Sequential Reactions; References; 2 Zinc Polymetallic Asymmetric Catalysis; 2.1 Introduction; 2.2 Asymmetric Alternating Copolymerization with Dimeric Zn Complexes
2.3 Direct Catalytic Asymmetric Aldol Reaction with Zn Polymetallic Catalysts
2.3.1 Introduction; 2.3.2 Direct Catalytic Asymmetric Aldol Reaction with Methyl Ketones; 2.3.3 Direct Catalytic Asymmetric Aldol Reaction with α -Hydroxy Ketones; 2.4 Direct Catalytic Asymmetric Mannich-Type Reactions; 2.5 Direct Catalytic Asymmetric Michael Reaction; 2.6 Nitroaldol (Henry) Reaction; 2.7 Conclusions; References; 3 Group 13-Alkali Metal Heterobimetallic Asymmetric Catalysis; 3.1 Introduction; 3.2 Catalytic Asymmetric Michael Reaction of Stabilized Carbon Nucleophiles
3.2.1 Development of ALB - The First Example of a Group 13-Alkali Metal Heterobimetallic Asymmetric Catalyst
3.2.2 Development of the Second-Generation Heterobimetallic Catalysts - Self-Assembly of Heterobimetallic Catalysts and Reactive Nucleophiles; 3.3 Catalytic Asymmetric Ring-Opening Reaction of meso-Epoxides; 3.3.1 Ring-Opening Reaction with Thiols; 3.3.2 Ring-Opening Reaction with Phenolic Oxygen - Development of a Novel Linked-BINOL Complex; 3.4 Catalytic Asymmetric Mannich Reactions; 3.4.1 Direct Catalytic Asymmetric Mannich-Type Reaction of Unmodified Ketones
3.4.2 Enantio- and Diastereoselective Catalytic Nitro-Mannich Reactions

Sommario/riassunto

This first book to comprehensively cover this hot topic presents the information hitherto scattered throughout smaller reviews or single book chapters to provide an introduction to this rapidly expanding field. In ten chapters, the international team of expert authors treats asymmetric syntheses, new transformations, and organometallic reactions using homo- and hetero-bimetallic catalysts. Written for advanced researchers, this very timely publication is of significant benefit to organic and organometallic chemists in both academia and industry.
