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4.3.2.2 Rhodium Phosphine-Catalyzed Arylation of Imines; 1.4.3.2.3 Rhodium Diene-Catalyzed Arylation of Imines; 1.4.4 Catalytic Asymmetric Addition of sp Hybridized Carbanions; 1.5 Conclusion; References; 2 Asymmetric Methods for Radical Addition to Imino Compounds; 2.1 Background and Introduction; 2.2 Intermolecular Radical Addition Chiral N-Acylhydrazones; 2.2.1 Design of Chiral N-Acylhydrazones; 2.2.2 Preparation of Chiral N-Acylhydrazones; 2.2.3 Tin-Mediated Addition of Secondary and Tertiary Radicals 2.2.4 Tin-Free Radical Addition 2.2.5 Manganese-Mediated Radical Addition; 2.2.6 Manganese-Mediated Coupling with Multifunctional Precursors; 2.2.6.1 Hybrid Radical-Ionic Annulation; 2.2.6.2 Precursors Containing Hydroxyl or Protected Hydroxyl Groups; 2.2.6.3 Ester-Containing N-Acylhydrazones; 2.2.6.4 Additions to Ketone Hydrazones; 2.3 Asymmetric Catalysis of Radical Addition; 2.4 Closing Remarks; References; 3 Enantioselective Synthesis of Amines by Chiral Brønsted Acid Catalysts; 3.1 Introduction; 3.2 Carbon-Carbon Bond Forming Reactions; 3.2.1 Mannich and Related Reactions 3.2.1.1 Mannich Reaction 3.2.1.2 Nucleophilic Addition of Diazoacetates to Aldimine; 3.2.1.3 Vinylogous Mannich Reaction; 3.2.1.4 Aza-Petasis-Ferrier Rearrangement; 3.2.2 One-Carbon Homologation Reactions; 3.2.2.1 Strecker Reaction; 3.2.2.2 Aza-Henry Reaction; 3.2.2.3 Imino-Azaenamine Reaction; 3.2.3 Friedel-Crafts and Related Reactions; 3.2.3.1 Friedel-Crafts Reaction via Activation of Aldimines; 3.2.3.2 Friedel-Crafts Reaction via Activation of Electron-Rich Alkenes; 3.2.3.3 Pictet-Spengler Reaction; 3.2.4 Cycloaddition Reactions 3.2.4.1 Hetero-Diels-Alder Reaction of Aldimines with Siloxydienes

Sommario/riassunto

This first comprehensive presentation of this hot and important topic compiles the most up-to-date methods for chiral amine synthesis. The international list of authors reads like a "Who's Who" of the subject, providing a large array of highly practical information concentrated into the useful and essential methods. Following an introductory chapter devoted to helping readers quickly determine which strategies to choose for their investigation, this handbook and ready reference focuses on the examination of methods that are reliable and simultaneously efficient for the synthesis of struc
