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	Nota di contenuto	Modern Carbonyl Olefination; Contents; Preface; List of Authors; 1 The Wittig Reaction; 1.1 Introduction; 1.2 The ""Classic"" Wittig Reaction; 1.2.1 Mechanism and Stereoselectivity; 1.2.2 Nature of the Ylide and Carbonyl Compound; 1.2.3 Reagents and Reaction Conditions; 1.3 Horner-Wadsworth-Emmons Reaction; 1.3.1 Mechanism and Stereochemistry; 1.3.2 Reagents and Reaction Conditions; 1.4 Horner- Wittig (HW) Reaction; 1.4.1 Mechanism and Stereochemistry; 1.4.2 Reagents and Reaction Conditions; 1.5 Conclusion; References; 2 The Peterson and Related Reactions; 2.1 Introduction 2.2 Stereochemistry and the Reaction Mechanism of the Peterson Reaction2.2.1 Stereochemistry and the Reaction Mechanism of the Peterson Reaction of -Hydroxyalkylsilanes; 2.2.1.1 Stepwise Mechanism; 2.2.1.2 Reaction Mechanism via a 1,2-Oxasiletanide; 2.2.2 Reaction Mechanism of the Addition Step of an -Silyl Carbanion to a Carbonyl Compound; 2.2.2.1 Approach Control of the Transition State; 2.2.2 Concerted Mechanism; 2.2.2.3 Chelation Control Mechanism; 2.2.3 Theoretical Calculations on the Reaction Mechanism; 2.2.4 Convergently Stereoselective Peterson Reactions 2.3 Generation of -Silyl Carbanions and their Peterson Reactions2.3.1

	Generation of -Silyl Carbanions from -Silylalkyl Halides; 2.3.1.1 Generation of -Silyl Grignard Reagents from -Silylalkyl Halides; 2.3.1.2 Generation of -Silyl Alkyllithium Reagents from -Silylalkyl Halides; 2.3.1.3 Synthesis of Terminal Alkenes by the Use of -Silyl Carbanions Generated from -Silylalkyl Halides; 2.3.1.4 Reactions of -Silyl Carbanions Generated from -Silylalkyl Halides with Esters, Carboxylic Acids, and Acetals; 2.3.1.5 The Reformatsky-Peterson Reactions of -Silylalkyl Halides 2.3.2 Generation of -Silyl Carbanions by Deprotonation of Alkylsilanes2.3.2.1 Generation of -Silyl Carbanions Bearing an Aryl or a Heteroaryl Group; 2.3.2.2 Generation of -Silyl Carbanions Bearing an Alkoxy Group; 2.3.2.3 Generation of -Silyl Carbanions Bearing a Nitrogen-Containing Group; 2.3.2.4 Generation of -Silyl Carbanions Bearing a Sulfur-Containing Group; 2.3.2.5 Generation of -Silyl Carbanions Bearing a Phosphorus-Containing Group; 2.3.2.6 Generation of -Silyl Carbanions Bearing an Halogen Group; 2.3.2.7 Generation of -Silyl Carbanions Bearing an Ester Group2.3.2.9 Generation of -Silyl Carbanions Bearing an Ester Group2.3.2.9 Generation of -Silyl Carbanions Bearing an Lactone Group; 2.3.2.10 Generation of -Silyl Carbanions Bearing a Lactone Group; 2.3.2.10 Generation of -Silyl Carbanions Bearing a Lactone Group; 2.3.2.10 Generation of -Silyl Carbanions Bearing Thiocarboxylate or Dithiocarboxylate Ester Groups; 2.3.2.13 Generation of -Silyl Carbanions Bearing an Imino Group; 2.3.2.13 Generation of -Silyl Carbanions Bearing an Amide Group; 2.3.2.13 Generation of -Silyl Carbanions Bearing an Amide Group; 2.3.2.14 Generation of -Silyl Carbanions from Allylsilanes; 2.3.2.15 Generation of -Silyl Carbanions form Allylsilanes; 2.3.2.15 Generation of -Silyl Carbanions
Sommario/riassunto	While this important reaction class is among the most important and most widely used in organic chemistry, this is the first book to summarize the many different olefination methods, including:* Wittig reaction* Peterson reaction* Julia olefination * Utilizing the Tebbe and related reagents* Low-valent chromium, zinc or titanium mediated olefination* McMurry coupling plus the related reactions in each case and the application to asymmetric synthesis. It thus collates in one ready reference the current level of knowledge as well as new developments in this constantly