1.	Record Nr.	UNINA9910830654803321
	Titolo	Modern carbonyl olefination [[electronic resource] /] / Takeshi Takeda (ed.)
	Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2004
	ISBN	1-280-52047-7 9786610520473 3-527-60538-X 3-527-60188-0
	Descrizione fisica	1 online resource (367 p.)
	Altri autori (Persone)	TakedaTakeshi
	Disciplina	547.036 547.05621046
	Soggetti	Carbonyl compounds
	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	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; 2.2.3 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; 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 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 a Halogen Group; 2.3.2.7 Generation of -Silyl Carbanions Bearing an Ester Group2.3.2.9 Generation of -Silyl Carbanions Bearing a Lactone Group; 2.3.2.10 Generation of -Silyl Carbanions Bearing a Lactone 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; 2.3.2.1
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