

1. Record Nr.	UNINA9910822275603321
Titolo	Palladium-catalyzed coupling reactions : practical aspects and future developments // edited by Arpad Molnar
Pubbl/distr/stampa	Weinheim, Germany, : Wiley, 2013
ISBN	9783527648283 3527648283 9783527648306 3527648305 9781299241312 129924131X 9783527648313 3527648313
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (533 p.)
Altri autori (Persone)	MolnarArpad
Disciplina	541.395
Soggetti	Couplings 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	Palladium-Catalyzed Coupling Reactions: Practical Aspects and Future Developments; Contents; Foreword; Preface; List of Contributors; 1 Palladium-Catalyzed Cross-Coupling Reactions - A General Introduction; 1.1 Introduction; 1.1.1 Historical Reflection; 1.1.2 Characteristics, Recent Developments, and Progress; 1.1.3 Literature Reviews and Organization of the Chapter; 1.2 Carbon-Carbon Cross-Coupling Reactions Catalyzed by Palladium; 1.2.1 Classification and Overview; 1.2.2 Common Mechanistic Features of Cross-Coupling Reactions and Reactivity of the Substrates 1.2.2.1 Choice of the Carbon Electrophile1.2.2.2 Choice of the Carbon Nucleophile - What Makes the Difference?; 1.3 The Catalysts; 1.3.1 The Particular Features of Palladium; 1.3.2 Classes of Palladium Catalysts Applied to Cross-Coupling Reactions; 1.3.2.1 Ligands and Palladium Complexes - Homogeneous Systems; 1.3.2.2 Immobilized or Supported Palladium Complexes and Particles - Heterogeneous Systems; 1.3.2.3

Palladium Colloids and (Nonsupported) Nanoparticles; 1.3.2.4 Activity of Heterogeneous Catalysts; 1.4 Mechanistic Aspects
 1.4.1 General Mechanism of C-C Cross-Coupling and Heck Reactions with Homogeneous Catalyst Precursors; 1.4.2 Models for Heck and Suzuki Reactions with Supported Pd Precursors; 1.4.3 Recent Results on the Reaction Mechanism and the Nature of the Active Pd Species; 1.4.3.1 Observation of Intermediates in Homogeneous Catalysis by Electrochemical Methods; 1.4.3.2 The Question of Pd Leaching; 1.4.3.3 Selectivity Pattern; 1.4.3.4 In Situ Observation by Spectroscopic Methods; 1.4.3.5 Immobilized Pd Pincer Complexes; 1.4.3.6 Palladium Bulk Materials (Pd Foil, Wire, Sponge) as Catalyst
 1.5 Future Challenges
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Sommario/riassunto

This handbook and ready reference brings together all significant issues of practical importance for interested readers in one single volume. While covering homogeneous and heterogeneous catalysis, the text is unique in focusing on such important aspects as using different reaction media, microwave techniques or catalyst recycling. It also provides a comprehensive treatment of modern-day coupling reactions and emphasizes those topics that show potential for future development, such as continuous flow systems, water as a reaction medium, and catalyst immobilization, among others. With i