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1.5 Future ChallengesAbbreviations; References; 2 High-Turnover Heterogeneous Palladium Catalysts in Coupling Reactions: the Case of Pd Loaded on Dealuminated Y Zeolites; 2.1 Introduction; 2.2 Various Methodologies to Afford High Turnover Numbers Over Supported Pd Catalysts; 2.3 Structure and Characteristics of Ultrastable Y Zeolites; 2.4 Suzuki-Miyaura Reactions Catalyzed by Pd/USY; 2.4.1 Catalytic Performance of Pd/USY; 2.4.2 Pd Leaching from Pd/USY; 2.4.3 Selectivity in the Homocoupling Reactions; 2.4.4 Characterization of the Active Pd Species by X-Ray Absorption Spectroscopy
2.4.5 A Suggested Mechanism for the Formation of Active Pd Species in Suzuki-Miyaura Coupling Reactions2.5 Catalytic Performance of Pd/USY in Mizoroki-Heck Reactions; 2.5.1 Effect of H2 Bubbling on the Catalytic Reactions of Pd/USY; 2.5.2 Catalytic Reactions Using Chlorobenzene Derivatives; 2.5.3 Characterization of the Pd Species by X-Ray Absorption Spectroscopy; 2.6 Conclusion and Perspective; Abbreviations; References; 3 Palladium-Catalyzed Coupling Reactions with Magnetically Separable Nanocatalysts; 3.1 Introduction
3.2 General Considerations Concerning Magnetic Particles as Catalyst Supports

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