Record Nr. UNINA9910877482503321 Autore Leeuwen P. W. N. M. van (Piet W. N. M.) Titolo Homogeneous catalysts: activity, stability, deactivation / / Piet W.N.M. van Leeuwen and John C. Chadwick Weinheim, Germany, : Wiley -VCH, c2011 Pubbl/distr/stampa **ISBN** 3-527-63600-5 1-283-14092-6 9786613140920 3-527-63599-8 3-527-63601-3 Descrizione fisica 1 online resource (420 p.) Altri autori (Persone) ChadwickJohn C Disciplina 541.395 660.2995 660/.2995 Soggetti Catalysts **Alkenes** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record Includes bibliographic references and index. Nota di bibliografia Homogeneous Catalysts: Activity - Stability - Deactivation; Contents; Nota di contenuto Preface; 1 Elementary Steps; 1.1 Introduction; 1.2 Metal Deposition; 1.2.1 Ligand Loss; 1.2.2 Loss of H+, Reductive Elimination of HX; 1.2.3 Reductive Elimination of C-, N-, O-Donor Fragments; 1.2.4 Metallic Nanoparticles; 1.3 Ligand Decomposition by Oxidation; 1.3.1 General; 1.3.2 Oxidation; 1.3.2.1 Catalysis Using O2; 1.3.2.2 Catalysis Using Hydroperoxides; 1.4 Phosphines; 1.4.1 Introduction; 1.4.2 Oxidation of Phosphines; 1.4.3 Oxidative Addition of a P-C Bond to a Low-Valent Metal 1.4.4 Nucleophilic Attack at Phosphorus 1.4.5 Aryl Exchange Via Phosphonium Intermediates; 1.4.6 Aryl Exchange Via Metallophosphoranes: 1.5 Phosphites: 1.6 Imines and Pyridines: 1.7 Carbenes; 1.7.1 Introduction to NHCs as Ligands; 1.7.2 Reductive Elimination of NHCs; 1.7.3 Carbene Decomposition in Metathesis Catalysts: 1.8 Reactions of Metal-Carbon and Metal-Hydride Bonds:

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Sommario/riassunto

This first book to illuminate this important aspect of chemical synthesis improves the lifetime of catalysts, thus reducing material and saving energy, costs and waste. The international panel of expert authors describes the studies that have been conducted concerning the way homogeneous catalysts decompose, and the differences between homogeneous and heterogeneous catalysts. The result is a ready reference for organic, catalytic, polymer and complex chemists, as well as those working in industry and with/on organometallics

5.3 Metallocenes and Related Early Transition Metal Catalysts