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Nota di contenuto	Iridium Complexes in Organic Synthesis; Contents; Preface; List of Contributors; 1: Application of Iridium Catalysts in the Fine Chemicals Industry; 1.1 Introduction; 1.2 Industrial Requirements for Applying Catalysts; 1.2.1 Characteristics of the Manufacture of Enantiomerically Pure Products; 1.2.2 Process Development: Critical Factors for the Application of Catalysts; 1.2.3 Requirements for Practically Useful Catalysts; 1.2.3.1 Preparation Methods; 1.2.3.2 Catalysts Cost; 1.2.3.3 Availability of the Catalysts; 1.2.3.4 Catalytic Performance; 1.2.3.5 Separation 1.3 Enantioselective Hydrogenation of C=N Bonds 1.3.1 Catalysts and Scope; 1.3.2 Industrial Applications; 1.4 Enantioselective Hydrogenation of C=C Bonds; 1.4.1 Catalysts and Scope; 1.4.2 Industrial Applications; 1.5 Miscellaneous Catalytic Applications with Industrial Potential; 1.6 Conclusions and Outlook; References; 2:

Dihydrido Iridium Triisopropylphosphine Complexes: From Organometallic Chemistry to Catalysis; 2.1 Introduction; 2.2 $[\text{Ir}(\text{COD})(\text{NCMe})(\text{PR}_3)]\text{BF}_4$ ($\text{PR}_3 = \text{PiPr}_3, \text{PMe}_3$) and Related Complexes as Catalyst Precursors: Is 1,5-Cyclo-Octadiene an Innocent and Removable Ligand?

2.3 The Dihydrido Iridium Triisopropylphosphine Complex $[\text{IrH}_2(\text{NCMe})_3(\text{PiPr}_3)]\text{BF}_4$ as Alkene Hydrogenation Catalysts 2.4 The Dihydrido Iridium Triisopropylphosphine Complex $[\text{IrH}_2(\text{NCMe})_3(\text{PiPr}_3)]\text{BF}_4$ as Alkyne Hydrogenation Catalysts; 2.5 Dihydrido Arene Iridium Triisopropylphosphine Complexes; 2.6 Dihydrido Iridium Triisopropylphosphine Complexes as Imine Hydrogenation Catalysts; 2.7 Conclusions; Acknowledgments; References; 3: Iridium N-Heterocyclic Carbene Complexes and Their Application as Homogeneous Catalysts; 3.1 Introduction; 3.2 Types of Ir-NHC and Reactivity

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Sommario/riassunto

Ranging from hydrogenation to hydroamination, cycloadditions and nanoparticles, this first handbook to comprehensively cover the topic of iridium in synthesis discusses the important advances in iridium-catalyzed reactions, namely the use of iridium complexes in enantioselective catalysis. A must for organic, complex and catalytic chemists, as well as those working with/on organometallics.
