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Nota di contenuto	Recoverable and Recyclable Catalysts; Contents; Preface; Acknowledgements; Contributors; 1 The Experimental Assay of Catalyst Recovery: General Concepts; 1.1 Introduction; 1.2 Catalyst Precursor vs Catalyst; 1.3 Catalyst vs Catalyst Resting State; 1.4 Catalyst Inventory: Loss Mechanisms; 1.4.1 Catalyst Decomposition; 1.4.2 Catalyst Leaching; 1.5 Evaluation of Catalyst Recovery; 1.5.1 Product Yield, Conversion, or TON as a Function of Cycle: Poor and Potentially Deceptive Criteria; 1.5.2 Reaction Rate or TOF as a Function of Cycle; 1.5.3 Gravimetric and Other Assays of Recovered Catalyst 1.5.4 Special Caveats when 'Residues' are Recycled1.6 Prospective; References; 2 Surface-functionalized Nanoporous Catalysts for Renewable Chemistry; 2.1 Introduction; 2.1.1 Homogeneous Catalysis vs Heterogeneous Catalysis; 2.1.2 Multi-Site vs Single-Site Heterogeneous Catalysis; 2.2 Immobilization Strategies of Heterogeneous Catalysts; 2.2.1 Supported Materials; 2.2.2 Conventional Methods to Functionalize Silica Surfaces; 2.2.3 Alternative Synthesis of Immobilized Complex Catalysts on a Solid Support; 2.2.4

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 4.3.1 Attachment of Catalysts to Polymer Supports

Sommario/riassunto

Drawing on international research, *Recoverable and Recyclable Catalysts* provides the essentials on recoverable and recyclable catalysts. This practical guide explores the general principles of catalyst recovery and recycling, catalysts on insoluble or soluble supports, thermoresponsive catalysts, self-supported catalysts, and more. Each chapter combines basic general principles, practical information on the design and synthesis of catalysts, and strategies for catalyst recovery. The book presents a comparison of several different catalytic systems. This textbook is essential for student