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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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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

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