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Nota di contenuto	Fine Chemicals through Heterogeneous Catalysis; Contents; 1 Introduction; 1.1 What are Fine Chemicals?; 1.2 The Environmental Factor; 1.3 The Development of Organic Synthesis and Catalysis; 1.4 Why Heterogeneous Catalysis?; 1.5 Types of Catalysts and Reactions; 1.5.1 Solid-Acid Catalysis; 1.5.2 Solid-Base Catalysis; 1.5.3 Catalytic Hydrogenation; 1.5.4 Catalytic Oxidations; 1.5.5 Catalytic C-C Bond Formation; 1.6 Alternative Approaches; 1.7 Heterogeneous Catalysis in Multi-step Synthesis: Vanillin; 2 Basic Principles/General; 2.1 General Considerations and Types of Catalyst 2.1.1 Introduction 2.1.2 Catalytically Active Surface Area; 2.1.3 Reactors Employed in the Fine-chemical Industry; 2.1.4 Slurry-phase Catalysts; 2.1.5 Fixed-bed Catalysts; 2.1.6 Integration of the Catalyst and the Reactor; 2.1.7 Solid Catalysts Employed in the Fine-chemical Industry; 2.1.8 Metal Catalysts; 2.1.9 Solid-Acid Catalysts; 2.2 Preparation of Solid Catalysts; 2.2.1 Demands on Solid Catalysts; 2.2.2 Preparation Procedures [2]; 2.2.3 Conclusions; 2.3 Characterization of Solid Catalysts; 2.3.1 Total Surface Area and Pore-size Distribution 2.3.2 Catalytically Active Surface Area Per Unit Weight of Catalyst 2.3.3

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3.4.1 Introduction

Sommario/riassunto

Nowadays, the chemical industry is under increased pressure to develop cleaner production processes and technologies. Much effort is devoted to the development of heterogeneous catalysts and their application in industrial-scale organic synthesis. This handbook concentrates on current attempts, focusing on fine chemical production. With contributions from an impressive array of international experts, this is essential reading for everyone interested in the advances in this field.
