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Nota di contenuto	High-Throughput Screening in Heterogeneous Catalysis; Foreword; Preface; Contents; List of Contributors; 1 Impact of High-Throughput Screening Technologies on Chemical Catalysis; 1.1 Introduction; 1.2 Application of HT-R&D Methods in Heterogeneous Catalysis; 1.3 Application of HT-R&D Methods in Homogeneous Catalysis; 1.4 Conclusions; 1.5 References; 2 Mastering the Challenges of Catalyst Screening in High-Throughput Experimentation for Heterogeneously Catalyzed Gas-phase Reactions; 2.1 Challenges Connected to Catalyst Screening in Gas-phase Catalysis; 2.2 Preparative Aspects 2.3 Analytical Aspects2.3.1 Stage I Screening; 2.3.2 Stage II Screening; 2.3.3 King-System: Saving Analysis Time via Intelligent Use of Analysis Techniques; 2.4 Case Studies of Selected Examples in Gas-phase Catalysis in Stage II Screening; 2.4.1 Bulk Chemicals and Intermediates: Partial Oxidation; 2.4.2 Refinery Catalysis: High-pressure Reactions; 2.4.3 Environmental Catalysis: DeNOx Catalysis; 2.5 The Challenge of Ultrahigh-Throughput Screening; 2.5.1 Catalyst Synthesis: the Split & Pool Principle; 2.5.2 Catalyst Testing: Integrated Reactor Formats as Critical Key Components

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4.3.1 Introduction

Sommario/riassunto

Alfred Hagemeyer received his diploma degrees in chemistry, 1985, and physics, 1987, from the university of Dortmund, Germany, did his Ph.D. at the Max-Planck-Institute fuer Polymerforschung in Mainz, Germany, 1987-1989, was postdoc at the university of Bologna, Italy, 1990, was employed at BASF, corporate research, ammonia laboratory, Ludwigshafen, Germany, 1991-1996, and at Hoechst/Aventis, corporate research, department of heterogeneous catalysis, Frankfurt, Germany, 1996-1998, and joined Symyx Technologies, heterogeneous catalysis group, Santa Clara, CA, in 1998 where he is a Distinguished