1. Record Nr. UNINA9910830515703321

Titolo	Reactivity in molecular crystals / / edited by Yuji Ohashi
Pubbl/distr/stampa	Tokyo, Japan ; ; Weinheim, [Germany] : , : Kodansha : , : VCH, , 1993 ©1993
ISBN	1-281-84295-8 9786611842956 3-527-61613-6 3-527-61612-8
Descrizione fisica	1 online resource (362 p.)
Disciplina	548 548.85
Soggetti	Molecular crystals Chemical reactions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Reactivity in Molecular Crystals; List of Contributors; Contents; Preface; 1. THEORETICAL APPROACH; 1.1 Potential Energy Calculations of Crystals; 1.2 A Novel Molecular-Dynamics Method to Predict Molecular Crystal Structures; 2. PHYSICO-CHEMICAL APPROACH; 2.1 Development of a New X-Ray Diffractometer (IPD-WAS) for Rapid Measurement; 2.2 Reaction Process in Solid State Studied by High Resolution Electron Spectromicroscopy; 2.3 Analysis of Charge Transfer Complex Formation in the Solid State by Penning lonilation Electron Spectroscopy 2.4 Analysis of Reactive Species by Time Resolved Infrared Reflection Absorption Spectroscopy2.5 Molecular Motion in Clathrate Crystals Analyred by Solid-state NMR Method; 2.6 Asymmetric Structure Analysis for Reaction Centers of a Molecular Crystal and on a Crystal Surface by EXAFS Spectroscopy; 2.7 Excitation Energy Transfer Between Metal Complexes in Solids; 3. CRYSTALLINE-STATE REACTION; 3.1 Dynamic Structure Analysis of Crystalline-State Reaction; 3.2 Reversible Intercalation of Guest Molecules in Crystals of Cholic Acid 3.3 How can Crystalline Environment Provide Outstanding Chemistry for

Diarylcarbenes or Arylnitrenes4. Solid-to- Solid Organic Reactions; 4.1 Introduction; 4.2 Pinacol and Benzylic Acid Rearrangement; 4.3 Baeyer-Villiger Oxidation; 4.4 Reduction with NaBH4; 4.5 Grignard, Reformatsky and Luche Reactions; 4.6 Coupling Reactions; 4.7 Witting-Horner Reaction; 4.8 Aldol Condensation; 4.9 Dehydration, Rearrangement, Chlorination and Etherification of Secondary Alcohols; 4.10 Host-Guest Inclusion Complexation in the Solid State; 5. Streoselective Solid-State Photoreaction
5.1 Determining Factors of Molecular Arrangement and Reaction Course in the Crystalline-State Photoreaction of Unsymmetrically Substituted Diolefins5.2 Stereoselectivity in Reactions of Clathrate Crystals; 5.3 Solid-state Photochromism of Tetraphenyldihydro-1,3,5-Triazine and Related Heterocycles; 5.4 Solid-state Photoracemization and Photoisomerization of Alkyl Cobalt Complexes; 6. REACTIVITY AND CRYSTAL STRUCTURE; 6.1 Packing Effect in Solid-State Polymerization of Diethynylbenzene Derivatives by Radiation
6.2 High Selective Reaction Deduced by Tunneling Effect in the Crystalline Environment6.3 Formation of Bimolecular Films and Crystal Structure; 6.4 Reactivity and Reaction Pathway of the Sulfur Compounds; 6.5 Stereoselectivity and Molecular Recognition in Double Macrocyclic Inclusion Crystals; Index

Sommario/riassunto

Do you need to design syntheses that are* highly selective* fast* enantioselective with quantitative enantiomeric yield? This book describes in detail how best to exploit the enormous synthetic potential of solid state reactions. Written by leading experts, it provides in-depth information on* the theoretical and physico-chemical approach to solid state reactions* solid-to-solid organic reactions* stereoselective solid state photoreactions* reactivity and crystal structureAn ideal companion to Dunitz and Burgi's 'Structure Correlation', this