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Descrizione fisica	1 online resource (699 p.)
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Soggetti	Organic chemistry Nanotechnology Crystallography Inorganic chemistry Organic Chemistry Crystallography and Scattering Methods Inorganic Chemistry
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Photochemically-induced Crystallization of Protein -- Ultrasonication-forced Amyloid Fibrillation of Proteins -- In-Situ Solid-State NMR Studies of Crystallization Processes -- Nucleation and Crystal Growth in Limited Crystallization Field -- Particle Engineering with CO <sub>2</sub> -expanded Solvents: the DELOS Platform -- Addressing the Stochasticity of Nucleation: Practical Approaches -- Metastability of Supersaturated Solution and Nucleation -- Structure Determination of Organic Molecular Solids from Powder X-ray Diffraction Data: Current Opportunities and State-of-the-Art -- Magnetically Oriented Microcrystal Arrays and Suspensions: Application to Diffraction Methods and NMR Spectroscopy -- Analysis of Intermolecular Interactions by Ab Initio Molecular Orbital Calculations: Importance for Studying Organic Crystals -- Construction of Aromatic Folding Architecture: Utilization of ureylene and iminodicarbonyl linkers -- Crystal Engineering of Coordination Networks Using Multi-Interactive Ligands -- Azacalixarene: An Ever-Growing Class in the Calixarene Family -- Polymorphism in Molecular Crystals and Cocrystals --

Hydration/Dehydration Phase Transition Mechanism in Organic Crystals Investigated by Ab Initio Crystal Structure Determination from Powder Diffraction Data -- Characteristics of Crystal Transitions among Pseudopolymorphs -- Anomalous Formation Properties of Nicotinamide Co-Crystals -- Isothermal Crystallization of Pharmaceutical Glasses: Toward Prediction of Physical Stability of Amorphous Dosage Forms -- Twofold Helical Molecular Assemblies in Organic Crystals: Chirality Generation and Handedness Determination -- Chiral Discrimination in the Solid State; Applications to Resolution and Deracemization. How to Use Pasteur's Tweezers -- Total Resolution of Racemates by Dynamic Preferential Crystallization -- Chiral Recognition by Inclusion Crystals of Amino Acid Derivatives Having Trityl Groups -- Reactions and Orientational Control of Organic Nanocrystals -- Topochemical Polymerization of Amino Acid N-Carboxy Anhydrides in Crystalline State -- Topochemical Polymerizations & Crystal Cross-linking of Metal Organic Frameworks -- Photoinduced Mechanical Motion of Photochromic Crystalline Materials -- Photoinduced Reversible Topographical Changes on Photochromic Microcrystalline Surfaces -- Luminescence Modulation of Organic Crystals by a Supramolecular Approach -- Solid-state Circularly Polarized Luminescence of Chiral Supra-molecular Organic Fluorophore -- Relationship between the Crystal Structures and Transistor Performance of Organic Semiconductors -- Photocurrent Action Spectra of Organic Semiconductors -- Electro-responsive Columnar Liquid Crystal Phases Generated by Achiral Molecules -- Crystal Engineering Approach towards Molecule-Based Magnetic Materials -- Observation of Magneto-Electric Effect in All-Organic Ferromagnetic and Ferroelectric Liquid Crystals in an Applied Magnetic Field.

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#### Sommario/riassunto

For the last decade, the topics of organic crystal chemistry have become diversified, and each topic has been substantially advanced in concert with the rapid development of various analytical and measurement techniques for solid-state organic materials. The aim of this book is to systematically summarize and record the recent notable advances in various topics of organic crystal chemistry involving liquid crystals and organic-inorganic hybrid materials that have been achieved mainly in the last 5 years or so. The authors are invited members of the Division of Organic Crystals, The Chemical Society of Japan (CSJ), and prominent invited experts from abroad. This edited volume is planned to be published periodically, at least every 5 years, with contributions by prominent authors in Japan and from abroad.

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