

1. Record Nr.	UNINA9910424641803321
Autore	Saito Kazuya
Titolo	Chemical physics of molecular condensed matter / / Kazuya Saito
Pubbl/distr/stampa	Singapore : , : Springer, , [2020] ©2020
ISBN	981-15-9023-0
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XII, 220 p. 67 illus., 26 illus. in color.)
Collana	Lecture notes in Chemistry ; ; Volume 104
Disciplina	541
Soggetti	Chemistry, Physical and theoretical Condensed matter
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	1. Molecule and Intermolecular Interaction -- 2. Phase Transition -- 3. Molecular Liquid -- 4. Molecular Crystal -- 5. Lattice Dynamics of Molecular Crystal -- 6. Melting of Molecular Crystal -- 7. Liquid Crystal -- 8. Molecular Glass -- 9. Molecular Flexibility and Material Property -- 10. Importance of Molecular Crystals.
Sommario/riassunto	This book fills a gap in knowledge between chemistry- and physics-trained researchers about the properties of macroscopic (bulk) material. Although many good textbooks are available on solid-state (or condensed matter) physics, they generally treat simple systems such as simple metals and crystals consisting of atoms. On the other hand, textbooks on solid-state chemistry often avoid descriptions of theoretical background even at the simplest level. This book gives coherent descriptions from intermolecular interaction up to properties of condensed matter ranging from isotropic liquids to molecular crystals. By omitting details of specific systems for which comprehensive monographs are available—on liquid crystals and molecular conductors, for instance—this book highlights the effects of molecular properties, i.e., the presence of the shape and its deformation on the structure and properties of molecular systems.