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Nota di contenuto	General Concepts of Crystallization: Some Recent Results and Possible Future Developments -- High-Pressure Crystallization Of Glass-Forming Liquids At Varying Thermodynamic Conditions -- Crystallization Of Amorphous Pharmaceuticals At Ambient And Elevated Pressure Conditions -- Ordering Transitions In Short-Chain Alcohols -- Isothermal and Non-isothermal Crystallization in Liquid Crystals as seen by Broadband Dielectric Spectroscopy and Differential Scanning Calorimetry -- Control of Crystallization Pathways by Electric Fields -- Dynamics of water in partially crystallized solutions of glass forming materials and polymers: Implications on the behavior of bulk Water -- Order And Dielectric Relaxation During Polymer Crystallization -- Crystallization of Polymers Under 1d Confinement -- Dielectric Behaviour Of Nonpolar Polymers And Their Composites: The Case Of Semicrystalline Polyolefins -- Confined Glassy Dynamics in a Star-Shaped Polymer Induced by Crystallization: Case study of Polyhedral

Oligomeric Polysilesquioxane-Isotactic Polystyrene (POSS-iPS).

Sommario/riassunto

This book presents new approaches that offer a better characterization of the interrelationship between crystalline and amorphous phases. In recent years, the use of dielectric spectroscopy has significantly improved our understanding of crystallization. The combination of modern scattering methods, using either synchrotron light or neutrons and infrared spectroscopy with dielectrics, is now helping to reveal modifications of both crystalline and amorphous phases. In turn, this yields insights into the underlying physics of the crystallization process in various materials, e.g. polymers, liquid crystals and diverse liquids. The book offers an excellent introduction to a valuable application of dielectric spectroscopy, and a helpful guide for every scientist who wants to study crystallization processes by means of dielectric spectroscopy.