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Titolo	Liquid Crystalline Polymers : Volume 2--Processing and Applications / / edited by Vijay Kumar Thakur, Michael R. Kessler
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Descrizione fisica	1 online resource (536 p.)
Disciplina	620.11
Soggetti	Nanotechnology Polymers Thermodynamics Heat engineering Heat - Transmission Mass transfer Polymer Sciences Engineering Thermodynamics, Heat and Mass Transfer
Lingua di pubblicazione	Inglese
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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	Liquid Crystals Order in Polymeric Micro channels -- Novel Liquid Crystal Polymers with Tailored Chemical Structure for High Barrier, Mechanical and Tribological Performance -- Selected Mechanical Properties of Uniaxial Side Chain Liquid Crystalline Elastomers -- Recent Advances in the Rheology of Thermotropic Liquid Crystal Polymers -- Liquid Crystalline Polymer and Its Composites: Chemistry & Recent Advances -- Effect of Polymer Network in Polymer Dispersed Ferroelectric Liquid Crystals (PSFLC) -- Electro-Optic and Dielectric Responses in PDLC Composite Systems -- UV-Cured Networks Containing Liquid-Crystalline Phases: State of the Art and Perspectives -- Liquid Crystal Diffraction Gratings Using Photocrosslinkable Liquid Crystalline Polymer Films as Alignment Layers -- Liquid Crystalline Polymer Blends As Fillers for Self-Reinforcing Polymer Composites -- Optical Fredericks Transition in a Liquid Crystal Layer -- New Liquid

Crystalline Poly (azomethine esters) Derived From PET Waste Bottles --  
Liquid Crystalline Polymer Composites for Optoelectronics --  
Functional Materials from Liquid Crystalline Cellulose Derivatives:  
Synthetic Routes, Characterization and Applications -- Liquid Crystal  
Polymers as Matrices for Arrangement of Inorganic Nanoparticles --  
Side Chain Liquid Crystalline Polymers: Advances and Applications --  
Liquid Crystalline Semiconducting Polymers for Organic Field-Effect  
Transistor Materials -- Azobenzene-Containing Liquid Single Crystal  
Elastomers for Photoresponsive Artificial Muscles -- Liquid Crystalline  
Epoxy Resin Based Nanocomposite -- Synthesis of Functional Liquid  
Crystalline Polymers for Exfoliated Clay Nanocomposites -- Liquid  
Crystalline Polymers as Tools for the Formation of Nanohybrids.

#### Sommario/riassunto

This book introduces various applications of liquid crystalline polymers as the emerging new class of high performance novel materials. The authors detail the advantageous properties of these LCs including optical anisotropic, transparency, and easy control over structure. This interdisciplinary work includes valuable input from international projects with special focus on the use of liquid crystalline polymers and/or nanocomposites.