

1. Record Nr.	UNINA9910826396403321
Titolo	Liquid crystals beyond displays : chemistry, physics, and applications / / edited by Quan Li
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, Inc., 2012
ISBN	9786613653765 9781280676833 1280676833 9781118259535 111825953X 9781118259993 1118259998 9781118259498 1118259491
Edizione	[1st edition]
Descrizione fisica	1 online resource (598 p.)
Classificazione	TEC008080
Altri autori (Persone)	LiQuan <1965->
Disciplina	530.4/29
Soggetti	Liquid crystals - Research Optoelectronic devices - Research
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 and index.
Nota di contenuto	Machine generated contents note: Preface Contributors Chapter 1. Liquid Crystal Lasers Hideo Takezoe Chapter 2. Self-organized Semiconducting Discotic Liquid Crystals for Optoelectronic Applications Chenming Xue and Quan Li Chapter 3. Magnetic Liquid Crystals Rui Tamura, Yoshiaki Uchida, and Katsuaki Suzuki Chapter 4 Ferroelectric Liquid Crystals for Nonlinear Optical Applications Yongqiang Zhang and Jesus Etxebarria Chapter 5. Photo-Stimulated Phase Transformations in Liquid Crystals and Their Non-display Applications C. V. Yelamaggad, S. Krishna Prasad and Quan Li Chapter 6. Light-driven Chiral Molecular Switches or Motors in Liquid Crystal Media Yan Wang and Quan Li Chapter 7. Liquid Crystal Functionalized Nano- and Microfibers Produced by Electrospinning Jan Lagerwall Chapter 8. Functional Liquid Crystalline Block Copolymers: Order Meets Self-Assembled

Nanostructures Xia Tong and Yue Zhao Chapter 9. Semiconducting Applications of Polymerisable Liquid Crystals Mary O'Neill and Stephen M. Kelly Chapter 10. Carbon Nanotubes in Liquid Crystals and Carbon Nanotube Based Liquid Crystals Giusy Scalia Chapter 11. Liquid Crystals in Metamaterials Augustine M. Urbas and Dean P. Brown Chapter 12. Ferroelectric Colloids in Liquid Crystals Yuriy Reznikov Chapter 13. Fact or Fiction: Cybotactic Groups in the Nematic Phase of Bent Core Mesogens Bharat R. Acharya and Satyendra Kumar Chapter 14. Lyotropic Chromonic Liquid Crystals: Emerging Applications Heung-Shik Park and Oleg D. Lavrentovich Chapter 15. Liquid Crystal-Based Chemical Sensors Jacob T. Hunter and Nicholas L. Abbott Chapter 16. Liquid Crystals for Switchable Windows Deng-Ke Yang Chapter 17. Liquid Crystals for Nanophotonics Timothy D. Wilkinson and R. Rajasekharan Index.

Sommario/riassunto

"The responsive nature and diversity of liquid crystals provide tremendous opportunities as well as challenges for insights in fundamental science, and opens the door to various applications. Most modern electronic displays are liquid crystal-based, but R&D is moving rapidly beyond into such areas as electro-optic devices, energy, molecular motors, tunable lasers, and biosensors. This unique reference guides readers to the advances and directions of liquid crystal research, helping spur continued progress in the field. It emphasizes the chemistry, physics, and applications of liquid crystals in photonics, power generators, lasers, molecular motors, carbon nanotubes, and biosensors"--
