1. Record Nr. UNINA9910704209903321

Titolo	9/11 Memorial Act : report (to accompany H.R. 3036) (including cost estimate of the Congressional Budget Office)
Pubbl/distr/stampa	[Washington, D.C.] : , : [U.S. Government Publishing Office], , [2016]
Descrizione fisica	1 online resource (5 pages)
Collana	Report / 114th Congress, 2d session, House of Representatives ; ; 114-416
Soggetti	September 11 Terrorist Attacks, 2001 Memorials - Law and legislation - New York (State) - New York Legislative materials.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed on Feb. 16, 2016). "February 9, 2016."
Nota di bibliografia	Includes bibliographical references.

2. Record Nr. UNINA9910782323503321

Autore	Warner M
Titolo	Liquid crystal elastomers [[electronic resource] /] / M. Warner and E.M. Terentjev
Pubbl/distr/stampa	Oxford, : Clarendon Press, 2007
ISBN	1-383-02455-3 1-281-34603-9 0-19-152363-1
Edizione	[Rev. ed.]
Descrizione fisica	1 online resource (422 p.)
Collana	international series of monographs on physics ; ; 120
Altri autori (Persone)	TerentjevE. M (Eugene Michael)
Disciplina	530.4/29 530.429
Soggetti	Liquid crystals Polymer networks Elastomers
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous ed.: 2003.
Nota di bibliografia	Includes bibliographical references (p. 382-392) and indexes.
Nota di contenuto	Contents; 1 A bird's eye view of liquid crystal elastomers; 2 Liquid crystals; 2.1 Ordering of rod and disc fluids; 2.2 Nematic order; 2.3 Free energy and phase transitions of nematics; 2.4 Molecular theory of nematics; 2.5 Distortions of nematic order; 2.6 Transitions driven by external fields; 2.7 Anisotropic viscosity and dissipation; 2.8 Cholesteric liquid crystals; 2.9 Smectic liquid crystals; 3 Polymers, elastomers and rubber elasticity; 3.1 Configurations of polymers; 3.2 Liquid crystalline polymers; 3.2.1 Shape of liquid crystalline polymers; 3.2.2 Frank elasticity of nematic polymers 3.3 Classical rubber elasticity3.4 Manipulating the elastic response of rubber; 3.5 Finite extensibility and entanglements in elastomers; 4 Classical elasticity; 4.1 Deformation tensor and Cauchy-Green strain; 4.2 Non-linear and linear elasticity; 4.3 Geometry of deformations and rotations; 4.3.1 Rotations; 4.3.2 Shears and their decomposition; 4.3.3 Square roots and polar decomposition of tensors; 4.4 Compressibility of rubbery networks; 5 Nematic elastomers; 5.1 Structure and examples of nematic elastomers; 5.2 Stress-optical coupling; 5.3 Polydomain textures and alignment by stress

7 Soft elasticity7.1 Director anchoring to the bulk; 7.1.1 Director rotation without strain; 7.1.2 Coupling of rotations to pure shear; 7.2 Soft elasticity; 7.2.1 Soft modes of deformation; 7.2.2 Principal symmetric strains and body rotations; 7.2.3 Forms of the free energy allowing softness; 7.3 Optimal deformations; 7.3.1 A practical method of calculating deformations; 7.3.2 Stretching perpendicular to the director; 7.4 Semi-soft elasticity; 7.4.1 Example: random copolymer networks; 7.4.2 A practical geometry of semi-soft deformation; 7.4.3 Experiments on long, semi-soft strips
7.4.4 Unconstrained elastomers in external fields7.5 Semi-soft free energy and stress; 7.6 Thermomechanical history and general semi-softness; 7.6.1 Thermomechanical history dependence; 7.6.2 Forms of the free energy violating softness; 8 Distortions of nematic elastomers; 8.1 Freedericks transitions in nematic elastomers; 8.2 Strain-induced microstructure: stripe domains; 8.3 General distortions of nematic elastomers; 8.3.1 One-dimensional quasi-convexification; 8.3.2 Full quasi-convexification; 8.3.3 Numerical and experimental studies; 8.4 Random disorder in nematic networks
8.4.1 Nematic ordering with quenched disorder

Sommario/riassunto

Liquid crystal elastomers are an entirely new physical system, occupying a transitional zone between liquids and solids. This book is the foundation treatise in this emerging field of combined chemistry, physics, mathematics and engineering. It reviews experimental techniques and results, theoretical ideas and reviews the foundations of the field. - ;Liquid crystals are fluids with a directionality defined. Polymers are long molecules with a shape that can be changed. As a network, polymers form rubber - a soft solid that is locally liquid-like and capable of huge extension. Liquid crystal ela