1.	Record Nr. Autore Titolo Pubbl/distr/stampa	UNINA9910877213603321 Dierking Ingo Textures of liquid crystals / / Ingo Dierking Weinheim, : Wiley-VCH, c2003
	ISBN	1-280-52036-1 9786610520367 3-527-60527-4 3-527-60205-4
	Descrizione fisica	1 online resource (232 p.)
	Disciplina	530.429 548.9
	Soggetti	Liquid crystals - Texture Texture (Crystallography)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Handbook.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Textures of Liquid Crystals; Preface; Foreword; Contents; 1 Introduction; 1.1 States of Matter; 1.2 Liquid Crystal Nomenclature; 1.3 General Structure of Liquid Crystal Phases; 1.3.1 The Nematic Phase; 1.3.2 The Fluid Smectic Phases; 1.3.2.1 The Smectic A Phase; 1.3.2.2 The Smectic C Phase; 1.3.3 The Hexatic Smectic Phases (SmB, SmI, SmF); 1.3.4 The Soft Crystal Phases (B, J, G, E, K, H); 1.4 Chirality; 2 Surface Anchoring and Elasticity; 2.1 Surface Anchoring and Preparation Techniques; 2.1.1 Planar Alignment of Nematics; 2.1.2 Homeotropic Alignment of Nematics 2.1.3 Alignment of Smectic Phases2.2 Bulk Elasticity; 2.2.1 The Nematic and Cholesteric Phase; 2.2.2 The Fluid Smectic Phases; 3 Polarizing Microscopy; 3.1 The Polarizing Microscope; 3.2 Basic Liquid Crystal Optics; 3.2.1 Uniaxial Phases; 3.2.2 Biaxiality; 3.2.3 Optical Activity; 3.3 Conoscopy; 4 The Blue Phases; 4.1 Structure and Textures of Blue Phases; 4.2 Kossel Diagrams; 5 The Nematic and Cholesteric Phase; 5.1 The Nematic Phase; 5.1.1 Nematic Textures Under Planar Boundary Conditions; 5.1.1.1 The Nematic Schlieren Texture; 5.1.1.2 The Thread-like Texture; 5.1.1.3 The Marble Texture 5.1.1.4 Uniform Planar Nematic Samples5.1.2 The Pseudo-Isotropic

	Texture Under Homeotropic Boundary Conditions; 5.2 The Cholesteric Phase; 5.2.1 Natural Textures of the N* Phase; 5.2.2 Short Pitch Cholesterics; 5.2.2.1 Planar Boundary Conditions and Selective Reflection; 5.2.2.2 Homeotropic Boundary Conditions and the Flexoelectric Effect; 5.2.3 Long Pitch Cholesterics; 5.2.3.1 Planar Boundary Conditions; 5.2.3.2 Homeotropic Boundary Conditions; 6 Twist Grain Boundary Phases; 6.1 The TGBA* Phase; 6.1.1 Natural Textures; 6.1.2 Textures for Planar Anchoring Conditions 6.1.3 Textures for Homeotropic Anchoring Conditions 6.1.3 Textures for Homeotropic Anchoring Conditions 6.1.5 Droplet Preparation; 6.1.6 Suppression of the TGBA* Structure; 6.2 The TGBC* Phases; 6.3 The TGBC(A)* Phase; 7 The Fluid Smectic Phases; 7.1 The SmA/SmA* Phase; 7.1.1 Natural Textures; 7.1.2 Planar Anchoring Conditions; 7.1.4 Electric Field Induced Striped Domain Textures; 7.2 The SmC/SmC* Phase; 7.2.1 The Achiral SmC Phase; 7.2.1.1 Natural Textures of SmC; 7.2.1.2 SmC Under Planar Anchoring Conditions 7.2.1.3 SmC Under Homeotropic Anchoring Conditions7.2.2 The Chiral SmC* Phase; 7.2.2.1 Natural Textures; 7.2.2.2 SmC* Under Planar Anchoring Conditions; 7.2.2.3 SmC* Under Homeotropic Anchoring Conditions; 7.2.2.4 Surface Stabilized Ferroelectric Liquid Crystals; 8 The SmC* Subphases; 8.1 General Introduction and Structural Models; 8.2 Textures of the SmC* Subphases; 9 The Hexatic Phases; 9.1 The SmB(*) Phase; 9.2 The SmI(*) and SmF(*) Phases; 9.2.1 Natural Textures and Planar Anchoring Conditions; 9.2.2 Homeotropic Boundary Conditions; 10 Soft Crystal Phases and Crystallization 10.1 The Orthogonal Soft Crystal Phases
Sommario/riassunto	A unique compendium of knowledge on all aspects of the texture of liquid crystals, providing not just detailed information on texture formation and determination, but also an in-depth discussion of different characterization methods. Experts as well as graduates entering the field will find all the information they need in this handbook, while the magnitude of the color images make it valuable hands-on-reference.