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Nota di contenuto	Physical Properties of Liquid Crystals; Contents; Chapter I: Introduction and Historical Development; 1 Introduction; 2 The Early Years up to About 1925; 3 The Second Phase from 1925 to 1959; 4 The Third Phase from 1960 to the Present Time; 4.1 Lyotropic Liquid Crystals; 4.2 Theory; 4.3 Polymer Dispersed Liquid Crystals (PDLCs) and Anchoring; 4.4 Materials and New Phases; 5 Conclusions; 6 References; Chapter II: Guide to the Nomenclature and Classification of Liquid Crystals; 1 Introduction; 2 General Definitions; 3 Structural Features; 4 Polymeric Liquid Crystals 5 Notation of Thermotropic Liquid Crystalline Properties5 .1 Description of the Solid State; 5.1.1 Description of Soft Crystals; 5.2 Description of the Liquid Crystalline Phases; 5.2.1 Nematic and Chiral Nematic Phases; 5.2.2 Smectic Liquid Crystals; 5.2.3 Chiral Smectic Liquid Crystals; 5.2.4 Columnar Phases; 5.2.5 Plastic Crystals; 5.2.6 Condis Crystals; 5.2.7 Cubic; 5.2.8 Re-entrants; 5.3 Description of the

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1.2.2 A Virtual Work Formulation; 1.2.3 Body Forces and Moments;  
1.2.4 The Equilibrium Equations; 1.2.5 Boundary Conditions; 1.2.6 Proposed Extensions; 1.3 Equilibrium Theory for Smectic Liquid Crystals; 1.3.1 An Energy Function for SmC Liquid Crystals; 1.3.2 Equilibrium Equations; 1.4 Dynamic Theory for Nematics; 1.4.1 Balance Laws; 1.4.2 A Rate of Work Hypothesis; 1.4.3 The Viscous Stress; 1.4.4 Equations of Motion; 1.5 References; 2 Molecular Theories of Liquid Crystals; 2.1 Introduction  
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3.2 Applications of Molecular Modelling

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### Sommario/riassunto

This handbook is a unique compendium of knowledge on all aspects of the physics of liquid crystals. In over 500 pages it provides detailed information on the physical properties of liquid crystals as well as the recent theories and results on phase transitions, defects and textures of different types of liquid crystals. An in-depth understanding of the physical fundamentals is a prerequisite for everyone working in the field of liquid crystal research. With this book the experts as well as graduate students entering the field get all the information they need.

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