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Autore	Cruz Carlos R.
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Nota di contenuto	1. Introduction -- 2. Liquid crystals -- 3. Molecular Structures of liquid-crystalline dendrimers -- 4. Fundamentals of nuclear magnetic resonance -- 5. NMR spectroscopy of anisotropic fluid systems : theory and experiment -- 6. NMR relaxation and molecular dynamics : theory -- 7. NMR relaxometry and molecular dynamics : experimental techniques -- 8. NMR spectroscopy of liquid crystal dendrimers -- 9. NMR relaxometry of liquid crystal dendrimers : experimental results.
Sommario/riassunto	Dendrimers are hyperbranched molecules with well-defined nanometer-scale dimensions. Important technological applications of these systems, both in biomedicine and materials science, have been recently proposed. Liquid crystal dendrimers are fascinating materials that combine the characteristics of dendrimers with the anisotropic physical behaviour and molecular self-organization typical of liquid crystals. This unique association of physical and chemical properties, together with the possibility of multi-selective functionalization put forward by dendrimers, opens new perspectives for applications. Nuclear magnetic resonance (NMR) is a powerful experimental technique applied in materials science and an important tool to the study of molecular organization and dynamics. This book presents an

introduction to dendrimers properties with special insight into liquid crystal dendrimers and a detailed description of the NMR theory and experimental techniques used in the investigation of these materials. It also discusses recent NMR research results on liquid crystal dendrimers, with emphasis on molecular order and dynamics studies. This book introduces the properties of dendrimers, with special insight into liquid crystal dendrimers, and a detailed description of NMR theory and experimental techniques used in the investigation of these materials. It also discusses results of recent NMR research on liquid crystal dendrimers, with an emphasis on molecular order and dynamics studies. Advanced undergraduate and graduate students of physics, chemistry, and materials science and researchers in the fields of dendrimers, liquid crystals, and NMR will find the book extremely useful.
