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| Sommario/riassunto      | This volume considers experimental and theoretical dielectric studies of the structure and dynamics of complex systems. Complex systems constitute an almost universal class of materials including associated liquids, polymers, biomolecules, colloids, porous materials, doped ferroelectric crystals, nanomaterials, etc. These systems are characterized by a new "mesoscopic" length scale, intermediate between molecular and macroscopic. The mesoscopic structures of complex systems typically arise from fluctuations or competing interactions and exhibit a rich variety of static and dynamic behaviour. This growing field is interdisciplinary; it complements solid state and statistical physics, and overlaps considerably with chemistry, chemical engineering, materials science, and biology. A common theme in complex systems is that while such materials are disordered on the molecular scale and homogeneous on the macroscopic scale, they usually possess a certain degree of order on an intermediate, or mesoscopic, scale due to the delicate balance of interaction and thermal effects. In the present Volume it is shown how the dielectric spectroscopy studies of complex systems can be applied to determine both their structures and dynamics. |