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5.3.1 Experimental Patterns for G1, G2 and so on as a Function of Frequency

Sommario/riassunto

"A substantially updated version of the previous 1983, combined with material from the highly regarded 2004 edition with the detailed mechanics of the first edition. Providing an updated and comprehensive account of the properties of solid polymers, the book covers all aspects of mechanical behaviour. This includes finite elastic behavior, linear viscoelasticity and mechanical relaxations, mechanical anisotropy, non-linear viscoelasicity, yield behavior and fracture. New to this edition is coverage of polymer nanocomposites, and molecular interpretations of yield, e.g. Bowden, Young, and Argon. The book begins by focusing on the structure of polymers, including their chemical composition and physical structure. It goes on to discuss the mechanical properties and behaviour of polymers, the statistical molecular theories of the rubber-like state and describes aspects of linear viscoelastic behaviour, its measurement, and experimental studies. Later chapters cover composites and experimental behaviour, relaxation transitions, stress and yielding. The book concludes with a discussion of breaking phenomena"--