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and Migration; B. Energy Transfer in the Excited Triplet State; C. Interaction of Excited Molecules; 1.4.4 Photochemical Processes; 1.4.5 Scattering Phenomena; 1.4.6 The Laser Principle
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C. Efficiency of Hole Formation and Temperature DependenceD. Applications of Photochemical Hole Burning; References; 3 Photophysical Processes; 3.1 Energy Transfer and Electron Transfer Processes; 3.1.1 Excitation Energy Transfer; 3.1.2 Photoinduced Electron Transfer: Theoretical Background; 3.1.3 Photoconductivity and Organic Photoconductors; 3.1.4 Photoinduced Electron Transfer Membranes; 3.2 Photophysical Molecular Probes; 3.2.1 Luminescence Probes; 3.2.2 Molecular Motion Probes; 3.2.3 Microstructural Probes; 3.3 Chemiluminescence and Electroluminescence; 3.3.1 Chemiluminescence
3.3.2 ElectroluminescenceReferences; 4 The Interaction of Light with Materials; 4.1 Light Scattering; 4.1.1 Rayleigh Scattering; 4.1.2 Raman Scattering; 4.1.3 Brillouin Scattering; 4.1.4 Optical Propagation Loss of Optical Fibers; 4.2 Optical Effects; 4.2.1 Electro-Optic Effects; 4.2.2 Electro-Optic Effects in Liquid Crystals; 4.2.3 Magneto-Optic Effects; 4.2.4 Acousto-Optic Effects; References; 5 The Interaction of Light with Materials II; 5.1 Saturation of Absorption and Multi-Photon Absorption Processes; 5.1.1 Lasers and Coherent Light; 5.1.2 Saturation Spectroscopy
5.1.3 Nonlinear Susceptibility

Sommario/riassunto

New organic compounds with interesting and improved electronic and photonic properties are being reported on a daily basis, with new light-triggered materials being designed for molecular and bioelectronic devices. The relatively new concept of molecular photonics embraces photochemistry and photophysics, dealing with light-induced changes in materials and their electronic states as well as the field of optics. This volume begins with a background and survey of current light-related research fields, moving on to the fundamentals of molecular photonics. Subsequent chapters deal with the c
