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AND APPLICATIONS; 5 INFRARED VIBRATIONAL OPTICAL ACTIVITY: MEASUREMENT AND INSTRUMENTATION; 6 MEASUREMENT OF RAMAN OPTICAL ACTIVITY
7 NANOSECOND TIME-RESOLVED NATURAL AND MAGNETIC CHIROPTICAL SPECTROSCOPIES
8 FEMTOSECOND INFRARED CIRCULAR DICHROISM AND OPTICAL ROTATORY DISPERSION; 9 CHIROPTICAL PROPERTIES OF LANTHANIDE COMPOUNDS IN AN EXTENDED WAVELENGTH RANGE; 10 NEAR-INFRARED VIBRATIONAL CIRCULAR DICHROISM: NIR-VCD; 11 OPTICAL ROTATION AND INTRINSIC OPTICAL ACTIVITY; 12 CHIROPTICAL IMAGING OF CRYSTALS; 13 NONLINEAR OPTICAL SPECTROSCOPY OF CHIRAL MOLECULES; 14 IN SITU MEASUREMENT OF CHIRALITY OF MOLECULES AND MOLECULAR ASSEMBLIES WITH SURFACE NONLINEAR SPECTROSCOPY; 15 PHOTOELECTRON CIRCULAR DICHROISM
16 MAGNETOCHIRAL DICHROISM AND BIREFRINGENCE
17 X-RAY DETECTED OPTICAL ACTIVITY; 18 LINEAR DICHROISM; 19 ELECTRO-OPTICAL ABSORPTION SPECTROSCOPY; PART III THEORETICAL SIMULATIONS; 20 INDEPENDENT SYSTEMS THEORY FOR PREDICTING ELECTRONIC CIRCULAR DICHROISM; 21 AB INITIO ELECTRONIC CIRCULAR DICHROISM AND OPTICAL ROTATORY DISPERSION: FROM ORGANIC MOLECULES TO TRANSITION METAL COMPLEXES; 22 THEORETICAL ELECTRONIC CIRCULAR DICHROISM SPECTROSCOPY OF LARGE ORGANIC AND SUPRAMOLECULAR SYSTEMS; 23 HIGH-ACCURACY QUANTUM CHEMISTRY AND CHIROPTICAL PROPERTIES
24 AB INITIO METHODS FOR VIBRATIONAL CIRCULAR DICHROISM AND RAMAN OPTICAL ACTIVITY
25 MODELING OF SOLVATION EFFECTS ON CHIROPTICAL SPECTRA; 26 COMPLEXATION, SOLVATION, AND CHIRALITY TRANSFER IN VIBRATIONAL CIRCULAR DICHROISM; INDEX

Sommario/riassunto

This book provides an introduction to the important methods of chiroptical spectroscopy in general, and circular dichroism (CD) in particular, which are increasingly important in all areas of chemistry, biochemistry, and structural biology. The book can be used as a text for undergraduate and graduate students and as a reference for researchers in academia and industry, with or without the companion volume in this set. Experimental methods and instrumentation are described with topics ranging from the most widely used methods (electronic and vibrational CD) to frontier areas such as nonlinear
