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Nota di contenuto	A PRACTICAL GUIDE TO MAGNETIC CIRCULAR DICHROISM SPECTROSCOPY; CONTENTS; PREFACE; 1. Introduction; 2. Polarized Light; 2.1. Linear Polarization and Plane Polarized Waves; 2.2. Circular Polarization and Circularly Polarized Waves; 2.3. Absorption Probabilities; 3. Theoretical Framework: Definition of MCD Terms; 3.1. Born-Oppenheimer/Franck-Condon Approximation; 3.2. Rigid-Shift Approximation; 3.3. A(1)-, B(0)-, and C(0)-Term Parameters; 3.4. A Terms; 3.5. C Terms; 3.6. B Terms; 3.7. Pseudo A Terms: Overlapping B Terms; 3.8. Overlapping C Terms; 3.9. Ground-State Near Degeneracy 5.3. The Wigner-Eckart Theorem and Reduced Matrix Elements (RMEs) 5.4. MCD-Term Equations Involving RMEs; 5.5. Evaluation of RMEs for MCD Terms; 5.6. Evaluation of Matrix Elements for LCAO-MO Functions; 5.7. Spin-Orbit Coupling Considerations; 5.8. Herzberg-Teller Approximation for Vibronic Transitions; 6. Case Studies I. Diamagnetic Systems: A and B Terms; 6.1. A and B Terms for Diamagnetic Atoms and Molecules; 6.2. Atomic Mercury Vapor; 6.3. The Sodide Ion Na(-) in a Solid NH(3) Matrix; 6.4. Square Complexes of

D(4h) Symmetry; 6.4.1. Ligand Field Spectra for PtCl₄(2-)(4)
6.9.2. Rydberg Transitions for CH(3)I and CD(3)I in the Vacuum UV

Sommario/riassunto

The book is a technical guide for chemists and spectroscopists, and presents a concise description of magnetic circular dichroism (MCD) spectroscopy and how it has advanced the interpretation of molecular electronic spectra. Provides a practical guide to utilizing MCD spectroscopy for chemists starting in the field. Written by an expert with over twenty years of experience in the field. Helps the reader to visualize the optical spectroscopic effects presented by MCD measurements. Includes practical considerations for experimental MCD measurements based on the author's experience.