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Nota di contenuto	ELECTRON PARAMAGNETIC RESONANCE; CONTENTS; PREFACE; ACKNOWLEDGMENTS; 1 BASIC PRINCIPLES OF PARAMAGNETIC RESONANCE; 1.1 Introduction; 1.2 Historical Perspective; 1.3 A Simple EPR Spectrometer; 1.4 Scope of the EPR Technique; 1.5 Energy Flow in Paramagnetic Systems; 1.6 Quantization of Angular Momenta; 1.7 Relation Between Magnetic Moments and Angular Momenta; 1.8 Magnetic Field Quantities and Units; 1.9 Bulk Magnetic Properties; 1.10 Magnetic Energies and States; 1.11 Interaction of Magnetic Dipoles with Electromagnetic Radiation; 1.12 Characteristics of the Spin Systems; 1.12.1 The g Factor 3.7 Deviations from the Simple Multinomial Scheme3.8 Other Problems Encountered in EPR Spectra of Free Radicals; 3.9 Some Interesting - Type Free Radicals; References; Notes; Further Reading; Problems; 4 ZEEMAN ENERGY (g) ANISOTROPY; 4.1 Introduction; 4.2 Systems with High Local Symmetry; 4.3 Systems with Rhombic Local Symmetry; 4.4 Construction of the g Matrix; 4.5 Symmetry-Related Sites; 4.6 EPR Line Intensities; 4.7 Statistically Randomly Oriented Solids; 4.8 Spin-Orbit Coupling and Quantum-Mechanical Modeling of g; 4.9 Comparative Overview; References; Notes; Further Reading; Problems

6.2 Spin Hamiltonian for Two Interacting Electrons

Sommario/riassunto

This book provides an introduction to the underlying theory, fundamentals, and applications of EPR spectroscopy, as well as new developments in the area. Knowledge of the topics presented will allow the reader to interpret of a wide range of EPR spectra, as well as help them to apply EPR techniques to problem solving in a wide range of areas: organic, inorganic, biological, and analytical chemistry; chemical physics, geophysics, and minerology.Includes updated information on high frequency and multi-frequency EPR, pulsed microwave techniques and spectra analysis, dynamic effects, relax