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Nota di contenuto	NMR Spectroscopy: Modern Spectral Analysis; Table of Contents; 1 Introduction; 1.1 Scope and Audience; 1.2 Organisation; 1.3 Personal Qualifications; 1.4 Contents; 1.5 Technical Requirements; 1.6 Software; 1.6.1 General Remarks; 1.6.2 Installation; 1.6.3 Basic Program Knowledge; 1.6.4 Book Formatting; 1.7 Recommended Reading and References; 2 General Characteristics of Spin Systems; 2.1 The Chemical Shift; 2.1.1 Spin Systems Without Coupling; 2.1.2 The NMR Resonance Frequency; 2.1.2.1 The NMR Transition Frequency; 2.1.2.2 The NMR Transition Intensity; 2.1.2.3 The NMR Lineshape 2.1.3 Two Non-Coupled Spins 2.1.3.1 Two Isochronous Spins; 2.1.3.2 Two Non-Isochronous Spins Without Coupling; 2.1.4 Basic Notation of Spin Systems; 2.1.5 Summary and Examples; 2.2 First Order Spin Systems; 2.2.1 Introduction to Spin-Spin Coupling; 2.2.2 The AX Spin System; 2.2.2.1 Heteronuclear AX Spin Systems; 2.2.2.2 Homonuclear AX Spin Systems; 2.2.2.3 Summary; 2.2.3 The AMX Spin System; 2.2.4 Extended First Order Spin Systems; 2.2.4.1 AMRX Spin Svstems; 2.2.4.2 Fragmentation of Spin Systems; 2.3 Second Order Spin Systems; 2.3.1

Notational Aspects; 2.3.2 The AB Spin System
2.3.2.1 The Graphical Spectrum Analysis
2.3.2.2 Suppression of Particular Transitions; 2.3.3 The ABX Spin System; 2.3.3.1 Analytical Solution for the ABX Spin System; 2.3.3.2 First Order Based ABX Solution; 2.3.4 Extended Spin Systems; 2.3.4.1 Taking Advantage of Field Effects; 2.4 Magnetic Equivalence; 2.4.1 Notational Aspects; 2.4.2 The Coupled A₂ Spin System; 2.4.3 The Composite Particle Approach; 2.4.4 The A_n Spin Systems; 2.4.5 First Order Spin Systems; 2.4.5.1 The A₂X Spin System; 2.4.5.2 The AX₃ Spin System; 2.4.5.3 A_nX_m Spin Systems
2.4.5.4 First Order Spin Systems with more than one Coupling
2.4.6 Second Order Spin Systems; 2.4.6.1 The A₂B Spin System; 2.5 References; 3 Structure and Spin System Parameters; 3.1 Symmetry Effects; 3.1.1 Structural and Notational Aspects; 3.1.2 The [AX₁]₂ Spin System; 3.1.3 The [AB]₂ spin system; 3.2 Configuration Isomers in NMR; 3.2.1 Cis/trans Isomerism; 3.2.1.1 Determination of the Signs of Coupling Constants; 3.2.1.2 Extended Spin Systems; 3.2.2 Enantiomers and Diastereomers; 3.3 Conformation and NMR; 3.3.1 Taking Advantage of Field and Solvent Effects; 3.3.1.1 Linewidths
4.2.3 Spin Systems Containing ²⁹Si

Sommario/riassunto

The state-of-the-art in NMR spectral analysis. This interactive tutorial provides readers with a comprehensive range of software tools and techniques, as well as the necessary theoretical knowledge required to analyze their spectra and obtain the correct NMR parameters. Modern Spectral Analysis provides expert guidance, by presenting efficient strategies to extract NMR parameters from measured spectra. A database of selected spectra and modern, powerful WIN-NMR software designed by Bruker are provided on the enclosed CD-ROM. The programs provided are 1 D WIN-NMR, WIN-DAISY, WIN-DR and WI
