Joseph B. Lambert, Eugene P. Mazzola, Clark D. Ridge

Hardcover ISBN: 978-1-119-29523-5 January 2019 $95.00

DESCRIPTION

Combines clear and concise discussions of key NMR concepts with succinct and illustrative examples

Designed to cover a full course in Nuclear Magnetic Resonance (NMR) Spectroscopy, this text offers complete coverage of classic (one-dimensional) NMR as well as up-to-date coverage of two-dimensional NMR and other modern methods. It contains practical advice, theory, illustrated applications, and classroom-tested problems; looks at such important ideas as relaxation, NOEs, phase cycling, and processing parameters; and provides brief, yet fully comprehensible, examples. It also uniquely lists all of the general parameters for many experiments including mixing times, number of scans, relaxation times, and more.

Nuclear Magnetic Resonance Spectroscopy: An Introduction to Principles, Applications, and Experimental Methods, 2nd Edition begins by introducing readers to NMR spectroscopy - an analytical technique used in modern chemistry, biochemistry, and biology that allows identification and characterization of organic, and some inorganic, compounds. It offers chapters covering: Experimental Methods; The Chemical Shift; The Coupling Constant; Further Topics in One-Dimensional NMR Spectroscopy; Two-Dimensional NMR Spectroscopy; Advanced Experimental Methods; and Structural Elucidation.

• Features classical analysis of chemical shifts and coupling constants for both protons and other nuclei, as well as modern multi-pulse and multi-dimensional methods

• Contains experimental procedures and practical advice relative to the execution of NMR experiments
• Includes a chapter-long, worked-out problem that illustrates the application of nearly all current methods

• Offers appendices containing the theoretical basis of NMR, including the most modern approach that uses product operators and coherence-level diagrams

By offering a balance between volumes aimed at NMR specialists and the structure-determination-only books that focus on synthetic organic chemists, *Nuclear Magnetic Resonance Spectroscopy: An Introduction to Principles, Applications, and Experimental Methods, 2nd Edition* is an excellent text for students and post-graduate students working in analytical and bio-sciences, as well as scientists who use NMR spectroscopy as a primary tool in their work.

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