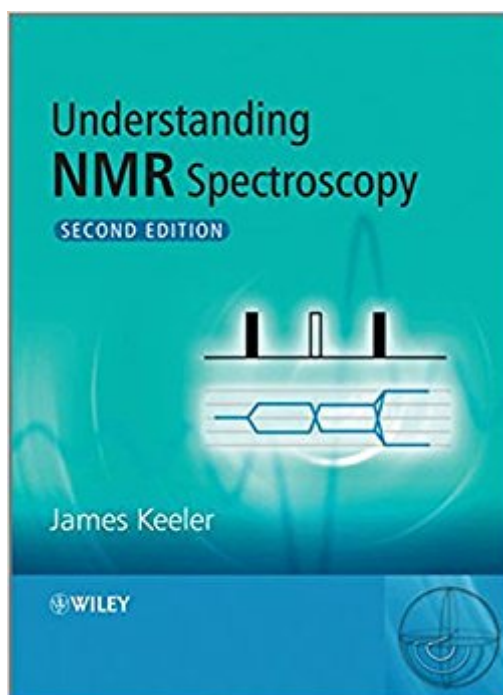


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Understanding NMR Spectroscopy, Second Edition



Synopsis

This text is aimed at people who have some familiarity with high-resolution NMR and who wish to deepen their understanding of how NMR experiments actually *work*[™]. This revised and updated edition takes the same approach as the highly-acclaimed first edition. The text concentrates on the description of commonly-used experiments and explains in detail the theory behind how such experiments work. The quantum mechanical tools needed to analyse pulse sequences are introduced set by step, but the approach is relatively informal with the emphasis on obtaining a good understanding of how the experiments actually work. The use of two-colour printing and a new larger format improves the readability of the text. In addition, a number of new topics have been introduced: How product operators can be extended to describe experiments in AX₂ and AX₃ spin systems, thus making it possible to discuss the important APT, INEPT and DEPT experiments often used in carbon-13 NMR. Spin system analysis i.e. how shifts and couplings can be extracted from strongly-coupled (second-order) spectra. How the presence of chemically equivalent spins leads to spectral features which are somewhat unusual and possibly misleading, even at high magnetic fields. A discussion of chemical exchange effects has been introduced in order to help with the explanation of transverse relaxation. The double-quantum spectroscopy of a three-spin system is now considered in more detail. Reviews of the First Edition • “For anyone wishing to know what really goes on in their NMR experiments, I would highly recommend this book” • “Chemistry World” • “I warmly recommend for budding NMR spectroscopists, or others who wish to deepen their understanding of elementary NMR theory or theoretical tools” • “Magnetic Resonance in Chemistry

Book Information

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Customer Reviews

Dr James Keeler is a Senior Lecturer in Chemistry at the University of Cambridge, and a Fellow of Selwyn College. In addition to being actively involved in the development of new NMR techniques, he is also responsible for the undergraduate chemistry course, and is Editor-In-chief of Magnetic Resonance in Chemistry. Dr Keeler is well-known for his clear and accessible exposition of NMR spectroscopy.

Decent book and effective if you need to understand the physical chemistry basis for NMR. This is definitely too advanced for an undergraduate level unless the student has a significant background in calculus and physical chemistry. There's not a whole lot of the organic approach - such as "here's how to interpret spectra". This book instead relies on a theory based approach to understanding, expecting the student (or reader) to gain that ability through in depth theoretical and mathematical analysis.

I am a grad student with PET and Mass spectrometry experience. Just wanted to dabble a little bit with NMR analysis to further my postdoc .Good side : 1.Very thorough. Everything is explained in great detail. You don't need to have a very good math background to begin with. 2.figures are great and carefully drawn. They assisted my understanding greatly. 3.No buzz words, no weird comparisons. The "English" is very easy to understand.Bad side : 1. Did not stimulate much of the critical thinking, lacks real life case studies 2. A little bit too lengthy in words. After reading the first two chapters, I started to skip words but only focused on figures and italic comments, and it worked better for me. 3. No answers for the exercise problems. The problems are not too hard though.Overall: 4/5 stars

Having spent several years as a graduate student working with solid state NMR spectroscopy, I have had ample time to survey the array of NMR texts on the market. James Keeler's text is one of the best I have found, combining coherent writing with a level of depth sufficient to lay the foundation of a graduate education. I would recommend it to anyone looking to study the practical aspects of NMR spectroscopy.

This book is understandable and very to the point. Moreover, this book printed with double colors,

which looks really nice. I should buy it long before.

Very nice book for learning about NMR. Contain some introductory material in first several chapters and some advanced material in later parts, suitable for both beginners and people who have worked a lot in NMR.

Excellent text.

Very good NMR book!

This book is good. I do Love it! It is really a new one. And I will use it now.

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