



BOOK REVIEW

Multidimensional NMR in Liquids, by FRANK J. M. VAN DE VEN, VCH Publishers, Weinheim, Germany, 1995, 399 pp., DM 85.00. ISBN 1-56081-665-1.

NMR is a complex technique with users split in to two distinct camps. At the practical level of interpreting spectra in order to identify compounds, it is an intellectual exercise rather akin to solving a crossword or a jigsaw puzzle. Yet to understand how the NMR spectrometer is able to generate those spectra and, through varying the pulse sequences employed, how the information gained can be maximized takes one deep into the realms of physics, particularly quantum mechanics. The interface between the two groups, the numerous interpreters and the somewhat rarer breed of basic NMR specialists, has always been a very sparsely populated zone, as many of the former lack the necessary background or interest in quantum mechanics.

The author has recognized this problem and attempted to produce a text that will inform the non-specialist without frightening him or her to death! In

this he has to some extent succeeded although I suspect that the more recalcitrant of the interpreter breed will still feel it is 'far too mathematical'. To such individuals I would offer the challenge to just read Chapter 1. Turning the pages it looks horrendous as equation follows equation and not a 1D or 2D spectrum is to be seen. But read it and there are lucid and easily understood explanations of the nuclear magnetic dipole, rotating reference frame, the relaxation phenomenon, off resonance effects including pulse excitation profiles and the Bloch-Seigert effect, saturation, Fourier transformation, phase correction and much more.

This sets the tone for the whole book. Van de Ven is to be congratulated on his efforts and I am pleased to commend this book to others, like myself, who are concerned primarily with interpretation of spectra. It certainly will add to your understanding of this important technique, without giving you a bad headache in the process!

University of Strathclyde

PETER G. WATERMAN