Dynamic NMR Spectroscopy (DNMR) has been developed over the past 25 years and is now widely in use. It is a technique for determining rate constants for intermolecular and, in particular, intramolecular processes at thermal equilibrium through the study of the effects of exchange on the NMR spectra. The theoretical calculation of exchange-broadened spectra requires considerable computational work although it is not in itself particularly complicated: before the advent of the computer this was usually avoided by the use of approximate bandshape expressions. This inaccuracy, together with the susceptibility of the technique to errors and the late introduction of adequate error analysis, has led to the publication of many unreliable results.

Professor Sandström's book is an attempt to rectify this situation. It is a description of the theory, the experimental technique and the statistical treatment. Principally, it synthesizes much material already in print and a remarkable feature of the book is the coverage it gives to all three areas. However, many of the experimental details have not previously been published.

The value of DNMR Spectroscopy as a tool is widely recognized and this authoritative work will be welcomed by all specialist researchers in physical organic chemistry interested in this method. In addition, graduate scientists in organic, inorganic and physical chemistry will find here much useful information for the planning and execution of new NMR experiments.

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