

# *solid-state* **NMR** *spectroscopy*

principles and applications

*Edited by Dr Melinda J. Duer*

This book is accessible both to those encountering solid-state NMR for the first time and also to those already working in this field. Each chapter has been carefully constructed to present the current understanding and applications of solid-state NMR spectroscopy with a rigorous but readable approach, making it easy for both the in-depth reader and anyone who simply wishes to gain an overall impression of the subject.

The book is divided into two parts: 'Fundamentals' and 'Further Applications'. The section on Fundamentals contains relatively long chapters that deal with the basic theory and practice of solid-state NMR spectroscopy. The essential points of solid-state NMR spectroscopy are dealt with in an introductory chapter, along with the background quantum mechanics necessary to understand these. The basic experimental techniques which all chapters rely on are collected into a second chapter to avoid unnecessary repetition later. Remaining chapters in the 'Fundamentals' part deal with the major areas of solid-state NMR spectroscopy which all solid-state NMR spectroscopists should know about. Each begins with an overview of the topic which sets the chapter in context. Explanation of the basic principles upon which the techniques in the chapter rely are explained in separate sections within each chapter. Each of these chapters exemplifies the principles and techniques with the applications most commonly found in current practice.

The 'Applications' section contains a series of shorter chapters which describe NMR techniques used in specific areas of chemistry, biochemistry and material science. These chapters include detailed discussion of what solid-state NMR spectroscopy can tell scientists about problems of current interest in these areas.

*Solid-state NMR Spectroscopy: Principles and Applications* will be useful to all those in the fields of analytical chemistry and chemical technology both in the chemical and allied industries and in academic and government laboratories.

#### The Editor

Melinda Duer is a Lecturer in the Department of Chemistry, University of Cambridge and has worked in the field of solid-state NMR spectroscopy for more than ten years.

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# **NMR**

## *spectroscopy*

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