copolymer analysis, small molecules and high temperature and aqueous SEC. In the third part of the book, the reader is made familiar with alternatives to SEC, namely field flow fractionation, supercritical fluid chromatography and hydrodynamic chromatography. It is unusual that a book concerned with SEC should give the reader an insight into alternative methods, but this approach can only be recommended since SEC may not be the best method for a particular application.

The book is generally well written and researched and provides valuable information for all those involved with SEC. It is not only aimed at the practising chromatographer, but will also be of great help to the newcomer to this technique. The text includes a large number of illustrations of both instrumentation and chromatograms and each chapter contains extensive up-to-date references. The book will be a useful addition to the library of any polymer scientist be it for research or routine analysis.

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One and Two Dimensional NMR Spectroscopy. By Atta-ur-Rahaman, Elsevier Science Publishers, Amsterdam and New York, 1989. xx+ 578 pp. ISBN 0-444-87316-3. Price $US186.75/Dfl. 355.00.

During the last decade the field of nuclear magnetic resonance spectroscopy has undergone a rapid development with the advent of new one- and two-dimensional techniques. As a consequence, there has arisen a need for an authoritative text on the theory and practice of multipulse experiments, which at the same time is comprehensible to the practical organic chemist and which describes the immense usefulness of the new techniques. The author has written a text which admirably fulfils these needs. In this volume the discussion of such routine subjects as factors governing chemical shifts and coupling constant values is avoided — they are included in many NMR textbooks published during the last two decades. The emphasis has rightly been given to describing recent developments, and the practical applications to solving the structures of complex organic molecules.

The wide scope of this book comprises 14 chapters, discussing *inter alia* the bsic principles of modern NMR spectroscopy; spin-echo and polarisation transfer; the nuclear overhauser effect; basic principles of two-dimensional NMR spectroscopy; heteronuclear and homonuclear

2DJ-resolved spectroscopy; chemical shift correlation through cross-relaxation and exchange; and product operator approach to two-dimensional NMR spectroscopy. A later chapter explains how various modern two-dimensional NMR techniques such as COSY, hetero COSY, COLOC, NOESY and INADEQUATE are applied to solving the structure of a new natural product isolated in the author's laboratory from an indigenous medicinal plant.

The problems and worked examples at the ends of the chapters will help both undergraduate and postgraduate students to acquire knowledge in the application of these new techniques. Descriptions of basic aspects such as shimming, probe tuning, and methods for improvement of resolution and sensitivity will be very useful to technicians who operate modern NMR spectrometers. Organic chemists, biochemists and medicinal chemists will undoubtedly be grateful for this diligent work.

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