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THE BOOK CORNER

LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY PRINCIPLES AND APPLICATIONS, by W. M. A. Niessen and J. van der Greff, Volume 58, Chromatographic Science Series, J. Cazes, Editor, Marcel Dekker, Inc., New York, 1992, 496 pages. Price: \$165.00 (U.S. and Canada), \$189.75 (all other countries).

LC-MS is an important and useful analytical technique for the identification and structural elucidation of organic molecules and biomolecules.

The development of on-line LC-MS turned out to be a demanding and challenging task. In the past twenty years many approaches to LC-MS have been described. Some of these are successful and commercially available. LC-MS is no longer a highly sophisticated technique being used in laboratories of specialists only. LC-MS has grown to become a mature and routinely used technique in many areas of application. LC-MS is still an actively developing technique, expanding its analytical power and attracting more and more users. The core of the book therefore is focused more on principles and strategies than on reviewing applications. All aspects of LC-MS are covered in this comprehensive review, giving a survey of the field from various angles for both newcomers and experienced users.

For newcomers, the text affords a comprehensive introduction and review of all important aspects of LC-MS interfacing. Experienced users will find, in addition to an extensive review of the various aspects of LC-MS, some new viewpoints and inspiration for new experiments to develop and optimize LC-MS.

Generously illustrated with over 1000 literature citations, Liquid Chromatography-Mass Spectrometry is a valuable resource for analytical chemists; spectroscopists; operators, researchers, and research managers involved in LC-MS; chromatographers; and for in-house training courses and professional seminars on LC-MS or analytical mass spectrometry.

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GAS CHROMATOGRAPHIC ENANTIOMER SEPARATION WITH MODIFIED CYCLODEXTRINS, by Wilfried A. König, Chromatographic Methods Series, W. Bertsch, H. Frank, W.G. Jennings and P. Sandra, Editors, Huthig Buch Verlag, GmbH, Heidelberg, 1992, 168 pages. Price: DM 138.00.

The use of cyclodextrins in separation science (HPLC, GC, TLC and capillary electrophoresis) is becoming more frequent than ever, especially for chiral separations. This book is published, I believe, at the right time, at time of growing awareness of the importance of stereochemistry for the physiological activity of biomolecules, pharmaceuticals and agrochemicals. As a new generation of chiral stationary phases for capillary GC, lipophilic cyclodextrin derivatives have proved superior to all other previously used chiral stationary phases, due to their almost unlimited range of application.

Numerous examples are given of stereochemical investigations in the fields of natural compounds, determination of enantiomeric composition of the products of asymmetric syntheses and biotransformations, proof of enantiomeric purity of chiral building blocks and auxiliaries for the synthesis of optically active natural compounds and pharmaceuticals, proof of optical purity of drugs, enantioselective metabolism of chiral agrochemicals and mechanistic studies of stereochemical aspects in organic reactions. In addition to covering the data of all the resolved chiral compounds in tables and figures, the preparation and characterization of lipophilic cyclodextrin derivatives, as well as the production and testing of glass and fused silica capillary columns are described in detail.

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LIQUID CHROMATOGRAPHY COLUMN THEORY, by Raymond P. W. Scott, Separation Science Series, R. P. W. Scott & C. Simpson, Editors, John Wiley & Sons, Inc., New York, 1992, 279 pp., \$79.95.

This book brings together, in a single, easy to digest volume, the theoretical aspects of liquid chromatography, starting with those which were first presented by Martin and Synge, and enhancing them with significant, pertinent developments from that time until the present. The greatest contribution of this volume is its concise... yet thorough, its in-depth... yet easy-to-follow presentation of principles which have been usually treated superficially and inadequately by other authors.

Dr. Scott has a knack for discussing that which appears difficult in a way we can all, not only understand, but enjoy reading. It's refreshing to delve into this topic and fathom, with ease, what's going on. This book has been written in a way that the skill needed to comprehend mathematical presentations is minimized. Simple concepts are presented first. Dr. Scott then applies the basic plate theory he develops early in the book to other chromatographic phenomena such as column overload, peak capacity and thermal effects. He shows how dispersion can be controlled through a discussion of rate theory and mechanism of peak dispersion. Simple computer programs are included for the design of packed columns, open tubular columns and preparative columns.

The book has been directly reproduced from a manuscript printed with a Macintosh computer dot/matrix printer. It would have been easier on the reader's eyes if the manuscript had been prepared with a laser printer.

This reviewer heartily recommends this book as required reading for all liquid chromatography practitioners. It will serve as a working reference to all who develop liquid chromatography methods and instrumentation.

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Reviewed by

Dr. Jack Cazes
Editor