

Multidimensional Chromatography —Techniques and Applications

Edited by H. J. Cortes, Marcel Dekker, New York, NY, 1990, 424 pp. \$99.75 (U.S. and Canada), \$119.50 (all other countries)

This book, a collection of articles written mainly by chemists, describes coupled column chromatography or, more generally, multidimensional chromatography. Applied principally to analytical chromatography, this is a technique for selectively transferring a fraction from a separation system to one or more secondary separating systems to enhance sensitivity and resolution, and to reduce analysis times. Separate cuts of a chromatographic output, for example, can be injected into other kinds of chromatographic columns for further resolving the components. For thin-layer chromatography, the secondary separation can be achieved by an orthogonal development with a different solvent on the same plate

(two-dimensional chromatography in physical space).

Organized into ten chapters, the book covers multidimensional separations: from a general point of view presented in the first chapter, indicating the broadest possible interpretation of the subject, to specific applications of the concept in the remaining chapters. The modes of chromatography represented are gas, high-performance liquid, supercritical-fluid, capillary, and thin-layer chromatography. One chapter focuses on batch-mode supercritical-fluid extraction coupled with supercritical-fluid chromatography for identification of the extract. Another chapter treats in detail several issues of selecting hardware for automation of multidimensional chromatography.

The book will be particularly useful to analytical chromatographers and chemists, since it treats all significant aspects of multidimensional separations applied to quantitative determination of chemical

components in mixtures. The problem of scale-up of the method to preparative or production separations is not specifically addressed. The mathematical basis presented for the method is restricted to descriptions of separation resolution and to combinatorial analysis of component peaks for n -dimensional components. The chapters are rich in chromatograms and diagrams of apparatus, but discussions of kinetic and transport processes and of thermodynamics are lacking.

Chemical engineers may be interested in analytical chromatography not only to quantify complex mixtures, but also to apply fundamental ideas of chemical engineering science for the purpose of measuring physical properties. The chemical engineer will want this book at hand when in need of specific information on multidimensional analytical chromatography.

Benjamin J. McCoy
Department of Chemical Engineering
University of California
Davis, CA 95616

Chemical Information—Information in Chemistry, Pharmacology, and Patents

*Proceedings of the International Conference, Montreaux, Switzerland
Edited by Harry R. Collier, Springer-Verlag, 1990, 311 pp., \$75.00.*

This volume is the unedited and unreviewed proceedings of an international conference. As judged from this volume, the conference contained a good overview of approaches being tried around the world. The collected tanks do not add up to a structured review of advances in the field.

People experienced in the field will probably be familiar with most of the concepts discussed here. This volume, however, is useful overview for the inexperienced reader who wants to know what is being done in the area. Given that use, it is the reader new to the field who most needs the benefit of critical editorial comment. A well-edited monograph with comparable content would be a useful contribution to the field.

It is refreshing in that the conference actually dealt with information without becoming a review of computer applica-

tions. The use of the expression "information technology" to mean "computer technology" results in unfortunate communication problems. The English language desperately needs more than one accepted word for "information," which is currently used for (at least) data, knowledge, and computer resources.

The publisher chose to sacrifice editorial practices to the speed of publication. This emphasized the current awareness role of the document at the expense of its long-term value. The absence of an index, which is inherent in the rapid publication procedure, limits this volume to being of use to the casual reader. This would not be a problem except when one considers that this volume is presented and priced as a rather expensive library book.

Volumes like this affect another important problem in the information area. Libraries across the country are being overwhelmed by the cost of additions to their collections. Many feel the need to be more evaluative than in the past in adding to their holdings. Any additions must offer long-term values to the library's users. At a list price of over \$75 this volume is a very expensive current aware-

ness resource, designed for those who are, however, in most need of the structure and authority of a properly edited monograph. The price raises the question of whether rapid publication does more for rapid dissemination of information than for rapid return of investment. As an industrial scientist, this reviewer sees nothing wrong in a substantial price which is commensurate with the value of the product to the purchaser. This volume may have been worth its cost if the quality expected in a library book were built in. (An opportunity may have been missed in not converting the information assembled by the speakers to a structured review of the field.)

One final point. A good case can be made for alleviating the massive overproduction of printed pages by requiring that presentations at meetings be published in the existing technical journals and that only if they meet the standards defined by the editors. There are ample opportunities for the publication of review articles by this accepted route.

M. Panar
Du Pont
Central Research & Development
Wilmington, DE 19880