

might want to consider a brief scan through its pages prior to investing another \$89.95.

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JM980482D

10.1021/jm980482d

**Analytical Chemistry.** Edited by R. Kellner, J.-M. Mermet, M. Otto, and H. M. Widmer. Wiley-VCH, New York, 1998. xxv + 916 pp. 21.5 × 30 cm. ISBN 3-527-286101. \$84.95.

*Analytical Chemistry* is designed to serve as an approved text for the FECS curriculum in analytical chemistry. As a text for a training course it includes problems, worked example problems, references, and learning objectives to guide students in their study of analytical chemistry. The excellently designed figures are well-drawn and complement the text, providing both practical and theoretical information concerning the analytical technique being discussed. The appendix includes items from statistical tables to dissociation constants arranged in a convenient and workable manner.

The well-organized chapters, which cover an extensive number of analytical techniques, are arranged so that material dealing with "The Analytical Process" and "Quality Assurance and Quality Control" precedes chapters dealing with analytical procedures. The range of topics is comprehensive, including chapters on computer interfacing of analytical instruments, LC-MS, GC-MS, and other hyphenated techniques as well as classical techniques of analytical chemistry. *Analytical Chemistry* will serve as an excellent text as well as a valued reference following completion of the student's course of study.

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JM9804836

10.1021/jm9804836

**High-Performance Capillary Electrophoresis.** Edited by Morteza G. Kahaledi. John Wiley & Sons, New York, NY, 1998. xxxii + 1047 pp. 16 × 24 cm. ISBN 0-471-148512. \$150.00.

This is the most recent addition to *Chemical Analysis, a series of Monographs on Analytical Chemistry and its Applications*. This multiauthored book contains 31

chapters, organized into five sections on theory, detection systems, techniques, applications in chemical analysis, and determination of physicochemical parameters.

The first section on theory takes both beginner and expert reader through a detailed step-by-step description of capillary zone electrophoresis, micellar electrokinetic chromatography, capillary gel electrophoresis, capillary isoelectric focusing, capillary isotachopheresis, and capillary electrochromatography. Rigorous mathematical descriptions of the forces involved in separation are presented for the technically equipped reader. In addition, each chapter gives a brief, "layman's" version of the underlying separation theory for the novice.

The section on detection systems includes chapters discussing light-based detection, electrochemical detection, indirect detection, and mass spectrometric detection. The chapter on light-based methods, the most frequently used detection method in capillary electrophoresis, is particularly well-written. With this said, the other detection methods are newer, less developed, certainly difficult to review, and harder to accurately predict the future directions. The lack of more than a few commercial detectors makes this section of this book somewhat "expert"-oriented limiting its value to the beginner or the casual reader.

The techniques section includes chapters on sample introduction and stacking, coated capillaries, nonaqueous solvent systems, method validation, two-dimensional separations, and fabrication of microchips for separations. These techniques are all clearly written and should be of great interest to the expert and beginner alike.

The section on applications is excellent for those readers specifically interested in the analysis of peptides, proteins, carbohydrates, DNA, enantiomeric mixtures, inorganic ions, and pharmaceuticals. Also included are chapters covering on-line sample preconcentration, microbioanalysis and chemical analysis, and enzyme assays. The selection of these applications, while not all inclusive, clearly establishes the versatility of capillary electrophoresis.

The final section on physicochemical studies contains three short chapters on affinity capillary electrophoresis, determination of physicochemical parameters, and quantitative structure-activity relationships. These give the reader a completely different perspective in how capillary electrophoresis can be applied to obtain useful data about the physicochemical properties of macromolecules and their interactions.

The monograph is surprisingly well-edited and reads better than most multiauthored texts. This reader found only a few errors in individual chapters. While detailed experimental procedures are not presented in each chapter, the reader is directed to carefully selected primary literature; thus, this monograph serves as a helpful guide to those new to the field. The updates presented at the conclusion of many of the chapters are somewhat disconcerting, but the listings of recent publications make this monograph very current. The figures and schemes are of high quality, and the general index is both complete and useful. This reviewer recommends this monograph for all libraries and for any