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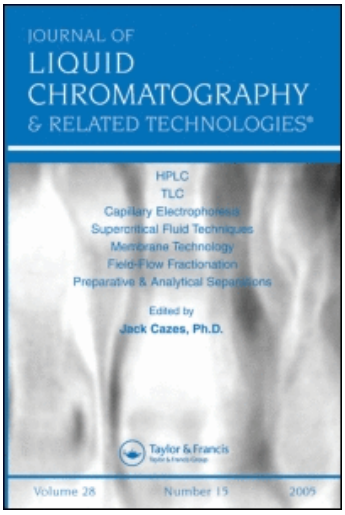


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# The Book Corner

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# THE BOOK CORNER

**ADVANCES IN CHROMATOGRAPHY, VOLUME 33,** Edited by P. R. Brown and E. Grushka, Marcel Dekker, Inc., New York, NY, 283 pages, 1993. Price: $135.00.

The present volume of Advances in Chromatography comprises six chapters representing very interesting and timely topics. The editors should be commended on an excellent job in selecting both the topics and the authors. This volume is enjoyable reading and is recommended to all chromatographers and analytical chemists who deal with separation science.

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**HANDBOOK OF CAPILLARY ELECTROPHORESIS**, Edited by J. P. Landers, CRC Press, Inc., Boca Raton, FL, 649 pages, 1994. Price: $99.50.

The Handbook of Capillary Electrophoresis contains twenty-three chapters which are grouped into 5 parts as shown in the Table of Contents below. The book is well written, well organized and reasonably priced at $99.50. The book lacks a special chapter on the theory of capillary electrophoresis and the chapter on pharmaceuticals, although well written, does not discuss chiral separations in detail and the material presented in the book on this topic is inadequate. The other chapters cover the material to date and are written by experts in their areas of expertise. The Forword is written by Professor B. Karger who asks, then answers, the question "why there is such interest in CE?" He ends his Forword by saying:

"The next few years should see a rapid expansion of capillary electrophoresis, particularly with respect to the number of users and the breadth of applications. In many respects the field is following the history of liquid chromatography. As more workers use capillary electrophoresis, those areas that need improvement are identified and the appropriate improvements developed.

It is thus clear that capillary electrophoresis is on its way to becoming a major analytical/separation tool. Further, it will likely emerge as a significant tool for biological measurements. By examining the chapters in this book, the reader will obtain a good understanding of the current status of capillary electrophoresis."

We agree with his assessment. The book is recommened to all those interested in separation science.

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**INTELLIGENT SOFTWARE FOR CHEMICAL ANALYSIS,** Edited by L. M. C. Buydens and P. J. Schoenmakers, Data Handling in Science and Technology, Volume 13, Elsevier Science Publishers, Amsterdam, The Netherlands, 366 pages, 1993. Price: $200.00.

Various emerging techniques for automating intelligent functions in the laboratory are described in this book. Explanations on how systems work are given and possible application areas are suggested. The main part of the book is devoted to providing data which will enable the reader to develop and test his own systems. The emphasis is on expert systems; however, promising developments such as self-adaptive systems, neural networks and genetic algorithms are also described. The editors' goals can be summarized as follows:

(i) to demonstrate the applicability of expert systems and other "intelligent software" in analytical chemistry, and

(ii) to provide the reader with sufficient detailed information to initiate and conduct his or her own projects.

The editors identify four groups of scientists for whom the book has been written:

(i) Practicing analytical chemists, in industry or elsewhere, who wish to learn about the various exciting new types of software discussed in this book. They may want to find out more about possible applications, potential pitfalls and potential benefits. All of this they can find in this book.

(ii) Chemometricians or, in more down-to-earth terms, all chemists with an interest in developing software systems for use in the laboratory. The present

book will tell them a lot about what can be done and how. It will also give them numerous ideas for directing research and development efforts.

(iii) (Post-) graduate students in (analytical) chemistry or chemometrics can study this book to come to grips with one of the most promising areas of their science and can use the information provided here for their own projects.

(iv) Software engineers or scientists will find, in this book, many possible applications of technologies they may be familiar with. As will be explained in the book,
analytical chemistry offers a very fertile soil for turning abstract new technologies into systems of great practical value.

The book is well written by experts in their fields. Although the price of $200.00 is in the range of other scientific books, it is a little bit expensive for students.

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**CAPILLARY ELECTROPHORESIS THEORY AND PRACTICE**, P. Camilleri, Editor, CRC Press, Boca Raton, FL, 495 pages, 1993. Price: $89.95.

Capillary Electrophoresis (CE) is unique among separation techniques since it combines the separation mechanisms of electrophoresis and chromatography, the

detection techniques of liquid chromatography and the column surface modification procedures of gas chromatography. Capillary electrophoresis is attracting the attention of an ever-broadening spectrum of scientists of diverse backgrounds. At present, capillary electrophoresis encompasses the widest scope of applications in comparison to other microseparation techniques.

Several books covering the subject have appeared in the last year, of which this book is one of the latest. The chapters have been written by experts who have been working in the field for some time, and were designed to be general in order to appeal to scientists of diverse backgrounds. Chapter 1 presents the history and development of capillary electrophoresis. Chapter 2 gives an excellent textbook-style discussion of instrumentation and detection systems, and Chapter 8 completes the presentation on detectors with interfacing capillary electrophoresis and mass spectrometry. Micellar electrokinetic capillary chromatography is discussed in Chapter 4. The other chapters cover applications as is outlined in the following Table of Contents.

The book is mainly about capillary zone electrophoresis and that is not clearly reflected in the title. Isoelectric focusing, isotachophoresis and other electrophoresis techniques are only briefly discussed in a few sections scattered across the various chapters. Furthermore, since theory is part of the book title, one would have hoped to see at least a chapter devoted to the systematic presentation of the theoretical basis of the technique.

One useful feature of the book is the compilation presented in Appendix II, which lists buffer constituents, additives and pH for different practical situations. The book is a useful addition to the libraries of laboratories that practice capillary zone electrophoresis.

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