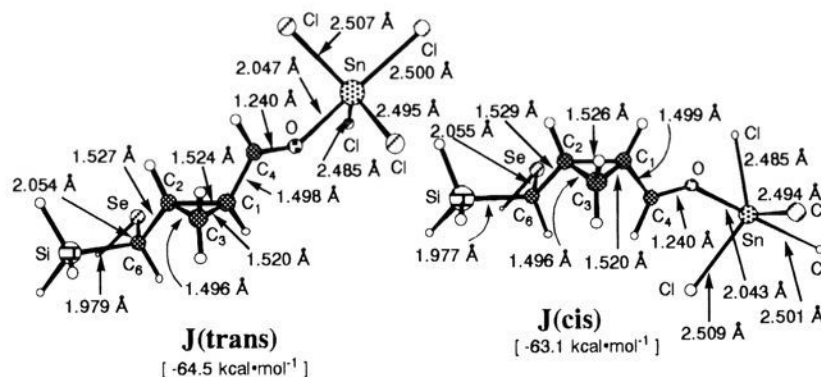


Additions and Corrections

[2 + 1] Cycloaddition of 1-Seleno-2-silylethenes. Selenium-Assisted 1,2-Silicon Shift for Cyclopropanation [*J. Am. Chem. Soc.* **1994**, *116*, 2356–2365]. SHOKO YAMAZAKI,* MAYUMI TANAKA, AKIO YAMAGUCHI, AND SHINICHI YAMABE

Page 2361: Model compounds of cyclopropane–SnCl₄ complexes, **J(trans)** and **J(cis)** in Figure 3, are incorrect diastereomers contrary to the description in the text and should be as shown below.



JA955015P

Book Reviews *

Chemical Safety. International Reference Manual. Edited by Mervyn Richardson (Birch Assessment Services for Information on Chemicals). VCH: Weinheim, Germany. 1994. 632 pp. \$145.00. ISBN 3-527-28630-6.

This book provides a pragmatic guide to the basic tools of chemical safety assessment and pollution prevention, from information retrieval, through hazard and risk assessment, to safety evaluation and legal aspects. It is truly global in coverage with contributors drawn from East and West, North and South. It covers natural and artificial hazards to the environment, including the potentially catastrophic effects of modern warfare, and encompasses all aspects of chemical safety and pollution effects on air, water, soil, and various species including man, as well as occupational exposure to chemicals.

JA945068R

Levoglucosenone and Levoglucosans. Chemistry and Applications. Edited by Zbigniew J. Witczak (University of Connecticut). ATL Press, Inc.: Mount Prospect, IL. 1994. 224 pp. \$169.00. ISBN 1-882360-13-3.

Proceedings of the Symposium on Levoglucosenone and Levoglucosans. Sponsored by the Division of Carbohydrate Chemistry at the 204th National Meeting of the American Chemical Society, Washington, DC, August 26, 1992. Nine chapters cover Levoglucosenone: Chemistry and Applications. The remaining five chapters cover Levoglucosans: Chemistry and Industrial Aspects. The topics have been selected to bring the reader up to date on some of the most significant recent developments and applications of two of the new carbohydrate synthons, levoglucosenone and levoglucosan.

JA9450768

Analytical Biotechnology. Edited by C. van Dijk (Institute for Agrotechnological Research). Elsevier: Amsterdam. 1993. 208 pp. \$151.50. ISBN 0-444-81640-2.

Proceedings of the 4th International Symposium on Analytical Methods, Systems and Strategies in Biotechnology (ANABIOTEC '92), Noordwijkerhout, The Netherlands, September 21–23, 1992. Previ-

ously published as part of the 1993 subscription to *Analytica Chimica Acta* and *Journal of Biotechnology*. ANABIOTEC '92 focused on the further integration of biotechnology and analytical chemistry. The results of this symposium clearly demonstrated that a substantial progress could be reported in the application of both conventional and new analytical techniques, the latter essentially based on natural analytical tools such as biomolecules. The main themes covered during this meeting are fermentation monitoring, chromatography, instrumental analysis, biosensors, and bioanalysis.

JA945071A

Studies in Organic Chemistry 49: Catalyzed Direct Reactions of Silicon. Edited by K. M. Lewis (Union Carbide Corporation) and D. G. Rethwisch (University of Iowa). Elsevier: Amsterdam. 1993. 664 pp. \$265.75. ISBN 0-444-81715-8.

There has been a scarcity of authoritative, published information on the direct reactions of silicon. Nevertheless, the need for up-to-date information on the reactions and their silane products persists across a broad range of scientists. Recent progress warrants documentation of the state-of-the-art and identification of the areas for future research. Some of the highlights of the book are the following: (1) An authoritative presentation of the state of commercial practice on the direct synthesis of chlorosilanes and methylchlorosilanes in more depth and breadth than can be found elsewhere in a single volume. (2) The use of in-line FTIR for time analysis of methylchlorosilane vapors exiting the direct reaction shortening the analysis time from 30 min to 20 s and providing information comparable to that of gas chromatography. (3) The first comprehensive publication on the direct synthesis of tris(dimethylamino)silane. (4) Chemical engineering modeling of the direct synthesis of chlorosilanes and methylchlorosilanes.

JA9450521

Techniques and Instrumentation in Analytical Chemistry. Volume 14. Analytical Applications of Circular Dichroism. Edited by N. Purdie (Oklahoma State University) and H. G. Brittain (Bristol-Myers Squibb). Elsevier: Amsterdam. 1994. x + 348 pp. \$202.75. ISBN 0-444-89508-6.

*Unsigned book reviews are by the Book Review Editor.

Circular dichroism is a special technique which provides unique information on dissymmetric molecules. Such compounds are becoming increasingly important in a wide variety of fields, such as natural products chemistry, pharmaceuticals, molecular biology, etc. The content of this book has been selected in order to feature the unique aspects of circular dichroism and how these strengths can be of assistance to workers in the field. Substantial discussions have been provided regarding the particular phenomena associated with dissymmetric compounds which give rise to the circular dichroism effect. Reviews are also given of the type of instrumentation available for measurement of these effects. A number of chapters cover the wide range of applications illustrating the power of the method. Owing to its broad appeal, the book will be of interest to workers in all areas of chemistry and pharmaceutical science.

JA945053T

Encyclopedia of Spectroscopy. Edited by Heinz-Helmut Perkampus (Dusseldorf, Germany). VCH: Weinheim, Germany. 1995. 669 pp. DM148.00. ISBN 3-527-29281-0.

Encyclopedia of Spectroscopy offers a wealth of information: clear, comprehensive, and richly illustrated accounts cover spectroscopic principles, methods, and applications, ranging from atomic to molecular spectroscopy. Key words from infrared, Raman, AAS, NMR, and UV-vis spectroscopy, from Abb²'s number to Zeeman effect, from ATR to XPS, from absorbance to zero-zero transition. Many entries on instrumentation will help with trouble-shooting at your spectrometer. More than 2000 entries with detailed explanations.

JA9552149

Retention and Selectivity in Liquid Chromatography: Prediction, Standardization, and Phase Comparisons. *Journal of Chromatography Library Volume 57.* Edited by Roger M. Smith (Loughborough University of Technology). Elsevier: Amsterdam and New York. 1995. xv + 457 pp. \$242.75. ISBN 0-444-81539-2.

The major thrust of the text is the theory and practical utility of several retention index scales that have been devised for reversed-phase LC (similar in concept to the Kova's Index for GLC) and how changes in the LC-retention index of probe molecules and be used to characterize the selectivity of the stationary phase or of the mobile phase (as with the Rohrschneider or McReynolds constants in GLC). The text is divided into 12 chapters, and although almost all the chapters have a different author, a very coherent presentation is made. Chapters 1 and 2 discuss the methods used for the prediction of the retention index based on a knowledge of the chemical structure of the test compound. Chapters 7-10 present how the retention index scales can be used to characterize the selectivity of specific columns or mobile phases. Most of the remaining chapters concern the application of the retention index scale concept in the prediction or characterization of the retention properties of compounds peculiar to specific industries or to specific classes of compounds.

On one level, the information provided by the text would be useful to the analytical chemist in solving day-to-day LC problems. Using Hansch substituent constants (π -values), one can easily estimate the retention index of a hypothetical compound without the aid of a computer; then the correlation between estimated retention index and retention time for a specific mobile phase can be easily made for the

tables provided in the text. On a more advanced level, the text provides a detailed view of the approaches that can be taken in developing the theory of column-mobile phase selectivity of reversed-phase systems that would be extremely valuable for those considering doing some basic research in the area.

John K. Baker, *Alcon Laboratories*

JA955148A

Practical Guide to Infrared Microspectroscopy. Edited by Howard J. Humecki. Marcel Dekker, Inc.: New York. 1995. x + 472 pp. \$150.00. ISBN 0-8247-9449-4.

Infrared microspectroscopy continues to enjoy rapid growth in many contexts. The only books previously available on the technique are seven and eight years old and are collections of papers given at special symposia. There is, therefore, a need for a comprehensive book on the subject, written so as to be useful to the novice.

In the reviewer's opinion, the need remains unfulfilled. Books which consist of collections of chapters written by various authors are noted for their uneven coverage and treatment of various subjects. While this is certainly true of this volume, there are added problems of repetitive coverage and an inadequate subject index. For instance, diffraction is discussed in some detail in at least five chapters, but there is no entry for it in the index. Other examples abound. Another problem arises due to uneven proof-reading. Some chapters are well-done, but others have a larger than usual number of misprints, grammatical errors, etc. Further, still, literature reviews are very uneven. Some chapters have references to 1994 works while others have nothing since 1990. Finally, there are a few points in which authors are in disagreement and conflicting statements are made.

All of these characteristics detract from the book's usefulness, especially for the novice. On the other hand, there is a great deal of useful information in the book, some of which would be difficult, or impossible, to find in other places. Many chapters have a good deal of background information on particular kinds of samples and how other techniques, particularly optical microscopy, aid in characterizing these samples. The two most important aspects of obtaining good data from infrared microspectroscopy are proper use of the instrument and proper sample preparation. Almost certainly even the novice will be knowledgeable of the infrared spectrometer, although the peculiarities of the microscope and its interface with the spectrometer may not be so familiar. Sample preparation, however, presents a significant new challenge to the novice, in most cases. It is in this area that the book makes its greatest impact. There is a wealth of information on sample preparation, much of which is not published or is scattered in a wide variety of publications, some of which are obscure. Unfortunately, it is also scattered throughout the book and the minimal subject index makes it difficult to glean what is needed in a short time. The result is a book which will probably be of more use to the experienced infrared microspectroscopist than to the novice. The experienced reader will not be so easily misled by some of the errors and will be able to fill in some of the missing links. The most benefit will probably be gained by reading the book entirely and thus becoming acquainted with its contents. Using it as a reference to look for topics without having previously read it, and thus knowing where to look, will probably lead to a good deal of frustration.

J. E. Katon, *Miami University*

JA955173G