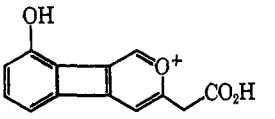
The Dimerization of Styrene [*J. Am. Chem. Soc.*, **90**, 1289 (1968)]. By FRANK R. MAYO, Stanford Research Institute, Menlo Park, California 94025.

In Table I, page 1292, some proportions of compounds **2** and **3** are improperly punctuated and placed. For expt 42 and 41, respectively, "~40–60" and "Mostly" should be placed *between* columns **2** and **3**, to indicate a lack of distinction. For expt B1–B5, 0–40 should appear in column 3.

In the second line of footnote 19 on page 1295, 0.05 to 0.015 *M* should read 0.05 to 1.65 *M*.

The Structure of Frenolicin [*J. Am. Chem. Soc.*, **90**, 1325 (1968)]. By GEORGE A. ELLESTAD, MARTIN P. KUNSTMANN, HOWARD A. WHALEY, and ERNEST L. PATTERSON, Lederle Laboratories, A Division of American Cyanamid Company, Pearl River, New York 10965.

On page 1329, column 2, line 22, frenolicin should be replaced by O-methylfrenolicin. Structure D (*m/e* 229) on the same page should be



Book Reviews

Nuclear Magnetic Resonance for Organic Chemists. Edited by D. W. MATHIESON, School of Pharmacy, University of London, England. Academic Press Inc., Ltd., Berkeley Square House, Berkeley Square, London, W. 1, England. 1967. ix + 287 pp. 16 × 23.5 cm. $10.50.

This book is based on a series of lectures presented at the Royal Institute of Chemistry in 1964, designed to introduce organic chemists to nmr and the interpretation of nmr spectra in terms of molecular structure. It consists of an introductory chapter by N. Sheppard, two chapters on the chemical shift and a chapter introducing spin–spin coupling, all three by J. A. Elvidge, followed by a general chapter on two-spin and three-spin systems by E. O. Bishop, a chapter devoted to ABX spectra by C. N. Banwell, and chapters on more complex spectra by E. O. Bishop, on proton–proton coupling and stereochemistry by R. J. Abraham, and on nuclei other than hydrogen by J. Feeney. There are also appendices containing tables of chemical shifts and coupling constants, and at the end a number of worked examples of spectra, presented as problems and answers.

There is much that is of value and interest in this relatively small book, but it suffers in two ways from its multiple authorship. The first is that it is rather seriously out of date. Many chapters contain no references later than 1963, although an effort has been made to update others, there being, for example, a 1966 reference in Chapter 3, and 1965 references in Chapters 5, 7, and 8. The reason for this state of things in a book bearing a 1967 publication data is probably that, as in all edited volumes, the tardiest contribution is the rate-determining step. It is not so serious as might at first appear because the treatment is elementary or semi-elementary, and the basic principles do not change.

A more serious consequence of the multiple authorship is that there are gaps and overlaps in the discussion. Thus, the important technique of double resonance, which certainly deserves substantial coverage, is given very short shrift indeed at the end of Chapter 7, although referred to in Chapter 6 as something assumed to be understood. There is little or no treatment of experimental aspects, particularly the actual design and working of nmr spectrometers. I find no discussion of spectral integration, although several of the spectra used as worked examples at the end of the book show integral spectra. Presumably, some of these omissions were made good in the actual lectures by direct participation in the operation of a spectrometer, but this is not of much help to the reader of this book. Again, there is no treatment of the use of nmr as a means of measurement of rate processes. There is, to be sure, a brief discussion of this subject in Chapter 1 and several references to the averaging of chemical shifts and *J* couplings throughout the other chapters, but the uninitiated reader will, in the reviewer's opinion, hardly find these adequate.

As an example of overlapping discussion may be cited that of the AX and AB cases in Chapter 5, which essentially duplicates (complete with energy level diagrams) the treatment presented at the end of Chapter 4. This might be valuable as review in a series of lectures but is out of place in a book.

This book can be recommended to the student or research worker who wishes a fairly inexpensive but limited volume that covers certain basic aspects of nmr spectroscopy ably despite the drawbacks indicated above. Banwell's chapter on ABX spectra, for example, is particularly good and useful. For comprehensive and up-to-data coverage, however, this book cannot be recommended.

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BOOKS RECEIVED, *March 1968*

F. ASINGER, Editor. "Chemistry, Physics and Application of Surface Active Substances." Volume 1. Gordon and Breach Science Publishers, 150 Fifth Ave., New York, N. Y. 1967. 549 pp. $39.00.

SUNE BERGSTRÖM and BENGT SAMUELSSON, Editors. "Nobel Symposium 2. Prostaglandins. Proceedings of the Second Nobel Symposium Stockholm, June 1966." Interscience Publishers, John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1968. 299 pp. $18.50.

D. BETHELL and V. GOLD. "Carbonium Ions, An Introduction." Academic Press Inc., Ltd., Berkeley Square House, Berkeley Square, London, W. 1, England. 1967. 387 pp. $16.00.

A. BONDI. "Physical Properties of Molecular Crystals, Liquids, and Glasses." John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1968. 502 pp. $18.50.

J. P. CANDLIN, K. A. TAYLOR, and D. T. THOMPSON. "Reactions of Transition-Metal Complexes." American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York, N. Y. 1968. 483 pp. $30.00.

STIG CLAESSON, Editor. "Nobel Symposium 5. Fast Reactions and Primary Processes in Chemical Kinetics. Proceedings of the Fifth Nobel Symposium held August 28-September 2, 1967 at Södergarn, Lidingö, in the Country of Stockholm." Interscience Publishers, John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1967. 487 pp. $27.50.

ARTHUR C. COPE, Editor-in-Chief. "Organic Reactions." Volume 16. John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1968. 444 pp. $12.50.

VERA V. DANIEL. "Dielectric Relaxation." Academic Press Inc., Ltd., Berkeley Square House, Berkeley Square, London W. 1, England. 1967. 281 pp. $13.00.