Book Reviews

Elsevier's encyclopaedia of organic chemistry. Vol. XIV: ***Tetracyclic and higher-cyclic compounds***; Series III: ***Carboisocyclic condensed compounds.*** E. Josephy and F. Radt. (Eds.) New York-Amsterdam: Elsevier Publishing Co., 1940. Pp. xx + 736. $60.00; to subscribers of Series III, $52.50; to subscribers of complete work, $45.00.

This new *Encyclopaedia of organic chemistry,* of which Volume XIV is the first to appear, is to be a complete survey of all organic compounds together with their chemical, physical, and physiological properties. It is to be printed in English. Since this series of volumes contemplates the coverage of the literature in a manner somewhat similar to Beilstein, a comparison is pertinent.

The physical and chemical data under any individual compound are less extensive, and the arrangement of references, though space conserving, is less convenient than in Beilstein. Abstract journals have sometimes served as source material for the Elsevier publication; the original literature always, in the case of Beilstein.

Volume XIV is well printed and more readable than Beilstein. The inclusion of numerous structural formulas is advantageous, and the presence of subject and formula indexes will be very helpful. The assembly of the work on tetracyclic and higher-cyclic compounds includes the sterols and many other types of molecules not now appearing in Beilstein. This publication deserves a place in any good chemical library.

Whether Elsevier has adopted a classification which will be preferable to that of Beilstein and whether it will be possible to complete this series by 1962 and then keep it up to date within 10 years remains to be determined. Organic chemists will eventually decide the relative merits of the two publications based on their day-to-day experience with them.

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The chemistry of commercial plastics. Reginald L. Wakeman. New York: Reinhold, 1947. Pp. xii + 836. (Illustrated.) $10.00.

It is some 12 years since the well-known treatise, *Chemistry of synthetic resins,* was published by Ellis. In the preface to the present book, the author states that he makes "no pretense of being encyclopedic in the sense of Ellis" and that "little or no consideration has been given to innumerable journal articles and patents which are not rather directly reflected in current commercial operations." However, he does "attempt to be selective to information particularly pertinent to industrial practice."

In these words the author states both the strength and weakness of the text—strength, because the selection is a natural one, based on sound current commercial considerations; weakness, because the text is dated with no hint that changes have already taken place and that pertinent information is now available in the patent literature. As the writer states in the conclusion, "Daily a new resin is born, a striking application created or a novel process of fabrication perfected." Since any of these announcements are usually first printed in the Official Gazette of the U. S. Patent Office, it is obvious that such recent products and developments are not mentioned. Moreover, a better acquaintance with the patent literature would have allowed much better "guesses" as to the chemical constitution of many plastic compositions.

The book is divided into 26 chapters, the mean chapter length being approximately 30.5 pages. It is perhaps significant that the subject treated most closely to the mean length is that on the new developments in "Contact Resins." The longest chapter (88 pp.) covers "Vinyl Resins," whereas the shortest disposes of the "Aryl Sulfonamide-Formaldehyde Resins" (3 pp.). Other longer chapters include: "The Mechanical Manipulation of Plastics," "Phenolic Plastics," "Alkyds and Allied Resinous Esters," "Polystyrene," "Acrylic Resins," "Natural and Synthetic Elastomers," and "Cellulose Plastics." Although the writer leans heavily on technical data supplied by the sales divisions of various plastic manufacturers, his judgment is not warped by this information, nor is the reader swamped with details on various competitive products. Pertinent references are appended to each chapter. These references, as indicated, are notably free of patent citations, but the general selection of technical information and trade reports is noteworthy. The treatment is comprehensive, from a description of the coating of Noah's ark to a one-page section on miscellaneous German wartime developments.

In any text of this type a good index is almost mandatory. This book contains complete trade names, author, and subject indexes, comprising 3¼, 6, and 30 pages, respectively.

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Scientific Book Register

CULVER, CHARLES A. *Musical acoustics.* Philadelphia-Toronto: Blakiston, 1947. Pp. xiv + 215. (Illustrated.) $3.00.

MORTON, C. V. *The American species of Hymenophyllum section Sphaerocionium.* (Contributions from the U. S. National Herbarium, Vol. 29, Part 3.) Washington, D. C.: Smithsonian Institution, 1947. Pp. viii + 62. $.30.

NATHAN, DAVID S., and HELMER, OLAF. *Analytic geometry.* New York: Prentice-Hall, 1947. Pp. x + 402. $3.50.

SCHELL, IRVING I. *Dynamic persistence and its applications to long-range foreshadowing.* (Harvard Meteorological Studies, No. 8.) Cambridge, Mass.: Harvard Univ. Press, 1947. Pp. 80. (Illustrated.)

THOMPSON, HENRY DEWEY. *Fundamentals of earth science.* New York-London: D. Appleton-Century, 1947. Pp. xiii + 461. (Illustrated.) $3.75.