

The author also aims for concise presentation and a modern audience. Apparently this is the basis for the occasional practice of introducing subjects abruptly with the more recondite first and the better defined experimental issues following later. For many engineers still becoming re-oriented in the direction of present-day materials science, this will make difficult going at various places. However, if these individuals are interested and do persist they will find the effort well worthwhile. On the whole, the book is an up-to-date readable account from a highly competent person of a fascinating story about an important group of engineering materials.

DEPARTMENT OF METALLURGY  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
CAMBRIDGE 39, MASS.      WALTER A. BACKOFEN

**The Chemistry of Natural Products. Volume IV. The Natural Pigments.** By K. W. BENTLEY, Chemistry Department, University of Aberdeen, Old Aberdeen, Scotland. Interscience Publishers, Inc., 250 Fifth Ave., New York 1, N. Y. 1960. vii + 306 pp. 16 × 23.5 cm. Price, \$5.00.

This is the fourth in a series of brief monographs on various areas of natural products chemistry. The pigment classes described are (1) pyran pigments: flavones and flavonols, anthocyanins and anthocyanidins, xanthones, rottlerin, brazilin and hematoxylin; (2) pyrrole pigments: and porphyrins, the chlorophylls, the bile pigments, prodigiosin; (3) pyrimidine pigments: the pterins; (4) quinonoid pigments; and (5) polyene pigments.

Typical structure proofs are given for representative compounds in some of these groups and for the title compounds in others. Examples of the syntheses of individual substances are chosen to illustrate generally applicable synthetic methods. The examples used are well chosen, and the steps used in the description or structure determination are plainly described with the aid of clear and legible structural formulas. The treatment is spare and succinct but adequately self-explanatory.

A remarkable number of individual compounds are treated within the pages of this rather short work. The degree of detail in the description of the structural chemistry is indicated by the number of structural formulas that are used in illustration of the text: in the section on polyenes the final formula in the chapter is numbered CCLXXVII. It is, however, a pity that the author chose to use roman numerals for his illustrations; the text would be a great deal easier to follow if a formula were numbered (143) instead of (CXL-III).

This book will serve as an admirable complement to more encyclopedic works on the one hand and, on the other, to those that treat not only of the chemistry of the pigments but their biological aspects as well. The reviewer has some small regret that a compound must be colored to gain entrance into the book, for many of the classes of compounds described in it are but segments of larger groups of structurally related substances, many of them colorless. It is

unlikely, for instance, that one would write a book that dealt only with colored alkaloids.

These are minor criticisms. The book achieves its aim to describe in comprehensible detail the course of many interesting and informative structural investigations. The book's educational value for the advanced student should be very high, and to the research workers in the fields that are dealt with it should serve as a convenient source of reference to a multitude of detail.

DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF CALIFORNIA  
LOS ANGELES 24, CALIF.      T. A. GEISSMAN

**An Introduction to Chemical Nomenclature.** By R. S. CAHN, M.A., Dr. Phil. nat., F.R.I.C., Editor to The Chemical Society, London. Butterworth and Co. (Canada) Ltd., 1367 Danforth Avenue, Toronto 6, Ontario, Canada. 1959. viii + 96 pp. 12.5 × 18.5 cm. Price, \$2.25.

Nomenclature is one of the important tools of chemistry. It is the means by which chemists describe their compounds to one another. Like other tools it can be used in several ways and it can be misused. Well qualified by experience as editor of the "Journal of The Chemical Society" (London) and a member of an international nomenclature commission (IUPAC), the author in this introduction to chemical nomenclature discusses the principles of modern systematic nomenclature, based primarily on the recent IUPAC reports. Approximately one-third of this treatise is devoted to inorganic nomenclature, the rest to organic nomenclature, with five pages devoted to physicochemical symbols. A useful index is included. The nomenclature recorded is that accepted by The Chemical Society (London). Differences between British and American practices are noted.

In the inorganic section the following subjects are covered: names and symbols of the elements; compounds between two elements; pseudo-binary compounds; extended coordination principle; acids and normal salts containing more than two elements, including a list of trivial names; ions and radicals; salts and salt-like compounds; coordination compounds; isopolyanions; heteropolyanions; addition compounds, including solvates.

The organic part is of special value in showing how rules are applied in building a name. Principles, more than rules, are stressed. Thus the principal functional group sets the whole pattern of nomenclature and numbering and it is vital to fix that group before anything else is done. Conventions such as punctuation, placement of locants, use of italics, order of prefixes, and elision are discussed. The numbering and naming of cyclic systems are explained.

Except for a series of incorrect formulas for glycolic acid and its thio derivatives, the book is remarkably free of errors.

This small book is a valuable guide to correct nomenclature for the research chemist as well as the teacher and student of chemistry.

THE CHEMICAL ABSTRACTS SERVICE  
THE OHIO STATE UNIVERSITY      LEONARD T. CAPELL  
COLUMBUS 10, OHIO