

subsequently by J. S. Brimacombe. They should be forgiven if the odd paper is omitted, or if they sometimes attach a different significance to a paper from that intended by the author. It would be idle to comment on the style of reporting, the divisions made within each volume, *etc.* The reporters themselves have often invited suggestions for the improvements of these *Reports*. It must be plain to everyone that the reporters' task is a Herculean one, which they have accomplished with enthusiasm whilst maintaining a high standard.

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The Glycoconjugates, Volume II, edited by MARTIN I. HOROWITZ AND WARD PIGMAN, Academic Press, New York and London, 1978, xvi + 464 pages, \$39.50.

This two-volume treatise on the glycoconjugates (also known as complex carbohydrates) is welcome literature for both the novice and the expert. Whereas Volume I dealt with chemical aspects of the glycoconjugates, this volume treats the more biological aspects of these substances. It was a wise decision to include glycoproteins, glycolipids, and proteoglycans together in these volumes, because these three groups of substances are closely related, and their closeness seems to grow with time.

The lengths of the articles in this volume range from relatively short (~20 pages) to reasonably long (nearly 100 pages). A regrettable exception (4 pages) is a chapter on "Signals for Degradation of Glycoproteins" by Ashwell and Morell; this is one of the most rapidly developing areas of glycoproteins, and a more expanded coverage would have been well justified.

Most of the chapters are of excellent quality, and expertly written, although many manifest a cavalier disregard for the Rules of Carbohydrate Nomenclature. Especially outstanding chapters are "Structure and Biosynthesis of Connective Tissue Proteoglycans" (by Rodén and Horowitz), "Glycoprotein Biosynthesis" (by Schachter), and "Glycolipid Biosynthesis" and "Glycolipid Catabolism" (both by Dawson). The chapter on "Surface Membranes" (by Glick and Flowers) succinctly presents views on cell-surface membranes from the standpoint of glycoconjugates.

Although both volumes of the treatise clearly reflect the considerable advances that have been made during the years since the publication of such classics as *The Glycoproteins* [2nd edition, Gottschalk (Ed.), 1972] and *The Carbohydrates* [Vols. IA, IIA, and IIB; Pigman and Horton (Eds.), 1970-1972], the materials contained in Vol. II are more refreshing than those in the first volume. The Editors stated that only one volume was originally planned, but that it had to be expanded to two volumes. Considering that these two volumes cover only mammalian glycoconjugates, and assuming that the high rate of progress in these areas will continue, it may not be

surprising to witness the advent of subsequent volumes dealing with nonmammalian glycoconjugates, as well as with progress not covered in the first two volumes. It is to be hoped that the price will not repel students and researchers who are not financially well endowed; lower-priced, soft-cover editions may be a solution.

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Chemistry and Biology of Nucleosides and Nucleotides, edited by ROBERT E. HARMON, ROLAND K. ROBINS, AND LEROY B. TOWNSEND, Academic Press, New York, 1978, xxi + 468 pages, \$22.00.

This volume is a collection of twenty-eight papers that were presented at a Symposium of the Division of Carbohydrate Chemistry at the 172nd meeting of the American Chemical Society, held in San Francisco in 1976. The title of the symposium was the same as that of the present book, and it was also considered to be the Second International Round Table on Nucleosides and Nucleotides, the first one having been held in France in 1974. The papers summarize either ongoing or past research of the laboratories from which they originated.

It appears to the reviewer that the authors' manuscripts must have been retyped in a central office and then directly photocopied. The reproduction is very clear, neat, and easy to read. The drawings, graphs, and photographs of molecular models are excellent. A serious problem, though, is the number of typographical errors running through the volume. One paper is so badly treated that I found it rather amusing to read; it was fun to unscramble the letters in order to discover what the words were supposed to be! On page 382, below the Scheme, part of a sentence or paragraph must be missing, and the same appears to be the case on page 405 below the Figure. It is to be hoped that the publisher will offer some errata pages to purchasers of this book. Another problem is the thoughtless manner in which words, formulas, and numbers are divided at the ends of lines. Words are often divided without respect to proper syllabication. On page 232, the number 1.5 is divided, and, on page 256, the formula $(\text{CH}_3)_3\text{SiClO}_4$ (with the oxygen missing) is likewise broken up between two lines; these are just two examples of an unfortunate pattern that runs throughout the book. In addition, there are many places where spacings between words in chemical names are omitted and the parts are run together. In the text of one paper, the numbers for the formulas of compounds are not underlined, which means that they appear to be the same as reference numbers, leading to confusion in a few places. In spite of this lack of editing and proofreading, those knowledgeable about the work reported here should encounter no serious problems in reading the articles.

A wide range of topics is covered, but, despite the title, most of the papers discuss organic chemistry, with heavy emphasis on heterocyclic aspects. Most of the