

Book review

Advances in Carbohydrate Chemistry and Biochemistry: Volume 25, edited by R. STUART TIPSON AND DEREK HORTON, Academic Press, New York and London, 1970, xiii + 478 pages + Author, Subject, and Cumulative Indexes, \$ 26.00.

Advances has played an important and continuing role in the development of contemporary carbohydrate chemistry; by way of example, two outstanding articles may be mentioned, the first by Richard E. Reeves in Volume 6 on "Cuprammonium-Glycoside Complexes", which pioneered the conformational analysis of carbohydrates, and the second by R. Stuart Tipson in Volume 8 on "Sulfonic Esters of Carbohydrates", which stimulated related work on nucleophilic substitution reactions. The 25th Volume rises to the high standard set by the previous volumes, in that it contains timely articles, written by an array of international experts, on rapidly developing areas such as "Aspects of the Structure and Metabolism of Glycoproteins" (by R. D. Marshall and A. Neuberger), on important but somewhat obscure topics such as "The Sugars of Honey" (by I. R. Siddiqui), and on major advances of technique, in this instance two articles, one dealing with "Gel Chromatography of Carbohydrates" (by Shirley C. Churms) and the other "Crystal-structure Data for Simple Carbohydrates" (by Gerald Strahs).

The book is prefaced by an obituary of Professor Stanley Peat, F.R.S., a fascinating account (by J. R. Turvey) of the life of this grand master of carbohydrate chemistry, who served as an Associate Editor of *Advances* from 1946–1954 and subsequently on the Board of Advisors. It is significant that his pioneering work on "The Chemistry of The Anhydro Sugars", elegantly described by him in Volume 2, should have grown to such proportions that the present volume contains no less than three related chapters, "Oxirane Derivatives of Aldoses" (by N. R. Williams), "2,5-Anhydrides of Sugars and Related Compounds" (by J. Defaye), and "Alditol Anhydrides" (by S. Soltzberg), and that more articles are planned.

The synthesis of nitrogen heterocyclics from carbohydrates is covered by two articles, but using different approaches. The first describes the bewildering variety of heterocycles that can be obtained by "Reactions of Free Sugars with Aqueous Ammonia" (by M. J. Kort), and the second delineates systematically the methods of formation of three-, five-, six-, and higher-membered nitrogen heterocycles (by Hassan El Khadem).

Advances continues to provide mature and critical accounts covering a wide range of topics, many of which have a multi-disciplinary nature and are of interest to scientists in many disciplines.