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Book reviews

Nucleoside Synthesis — Organosilicon Methods, E. Lukevics and A. Zablocka, Ellis Horwood, Chichester, 1991, 496 pages. U.S. \$221.95. ISBN 0-13-812652-6

This is the English edition of a Soviet monograph first published in 1985. It has been substantially revised and updated to take account of the significant changes which have occurred in the field since the Soviet edition.

Nucleoside chemistry has been increasingly important in recent years owing to the expansion in research on antiviral drugs. The book is therefore a timely monograph on one method of preparing nucleosides, the so-called silyl method of synthesis. This is a modification of the Hilbert–Johnson approach of condensing heterocyclic bases with sugar derivatives. The stability of the silylated bases allows for greater flexibility in the reaction conditions which may be used to achieve this condensation, and the lower electronegativity of silicon compared with carbon makes the synthesis more effective.

The book is arranged in two parts. The first part is a conventional review of the subject in six chapters while the second part consists of cumulative tables on syntheses of nucleosides by the silyl method published before 1990. Apart from chapter 1, which is an eleven page discussion of other ways of preparing nucleosides, the book is entirely devoted to this one method. The effects of solvents, use of Lewis acids and mercury salts in the reaction are described fully and after a general chapter on methodology (chapter two) the chapters in part one are arranged in order of the type of nucleoside being synthesised. This makes the book easy to use and a useful source of experimental detail for the laboratory worker.

The tables in part 2 take up nearly 250 pages, covering 2549 reactions. Compounds are categorised by nucleoside type and listed by IUPAC name. Yields, catalysts, solvents, temperatures, resultant anomeric ratios, and references are easily found from these tables.

This is an exhaustive monograph on one reaction and should appeal to the laboratory chemist involved in the important field of nucleoside synthesis.

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Electron Deficient Boron and Carbon Clusters, G.A. Olah, K. Wade and R.E. Williams (Eds.), John Wiley & Sons, New York, 1991, 379 pages. £47.50.
ISBN 0-471-52795-5

Electron Deficient Boron and Carbon Clusters is a volume dedicated to William N. Lipscomb for the occasion of his 70th birthday. The contents derive from a symposium on Electron Deficient Clusters held in 1989. The initial dedication (F.A. Cotton) illustrates without a doubt the great contributions that Bill Lipscomb