Book review

Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods, and Techniques: Part 3, edited by Leroy B. Townsend and R. Stuart Tipson, Wiley-Interscience, New York, 1986, xi + 328 pages + Subject Index, \$55.00.

This book presents a compilation of synthetic methods in the field of nucleic acid chemistry. These are sub-divided under seven main topics: I, Heterocyclic Compounds; II, Carbohydrates; III, Nucleosides; IV, Nucleotides and Polynucleotides; V, Isotopically Labeled Compounds; VI, Reagents, Intermediates, and Miscellaneous Compounds; and VII, Instrumental or Analytical Techniques and Applications. The book is intended for the use of organic chemists, medicinal chemists, and biochemists.

Contained herein are seventy-seven preparations from leading investigators working in universities, public and private institutions, and industries in eleven different countries. Each "prep" begins with a short introduction highlighting the importance of the compound and difficulties, if any, in its synthesis, and is followed by a detailed description of its preparation, most often in multi-gram quantities. The instructions are elaborate enough to be understood and implemented by a fresh graduate student. A useful feature is the inclusion of the molecular weight below every structural formula appearing in the reaction scheme that accompanies each method. Also notable is the availability of ¹H-n.m.r. data for most of the compounds described. Key references to original, or related, preparations and techniques appear at the end of each article.

Although a detailed Author Index would be superfluous for a book such as this, a simple list of contributors should certainly have been included; presumably, it was omitted to lower the cost. This reviewer found the formulas in some of the schemes to be somewhat cluttered, in spite of the availability of enough free space. On pages 4, 31, and 273, the required amounts of 5-acetyluracil, p-ribose, and triphenylphosphine, respectively, are not mentioned. Typographical errors are not abundant.

This book is recommended for institutional and group library acquisition.

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