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Book reviews

Properties of Organic Compounds. Edited by D.R. Lide and J.G. Grasselli, CRC Press, Boca Raton, Florida, USA, 1993. 43 pp. + CD. Price $1700.00. ISBN 0-8943-0444-X.

This extremely useful database features physical data, spectral data, and structures for over 27,000 organic compounds. Available data for a specific compound can be rapidly displayed by entering the CAS registry number or the compound name. Information on compounds can also be accessed via the molecular formula. In addition, compounds can be defined and retrieved by searching for specific physical properties or spectral peaks.

Data fields that are covered by this database include: CAS index name and synonym(s), molecular formula and structure, CAS registry number, Beilstein reference, molecular weight, melting and boiling points, density, refractive index, specific rotation, colour, solubility, spectral peaks and source references (mass, IR, Raman, UV and NMR), including information from the NIST Mass Spectral Database.

Whilst data compilation is the core of *Properties of Organic Compounds*, the accessibility of the data and the import and export options available in the software provide the user with features that were previously unavailable in a single database package. The ability to download data and structures (WYSIWYG) to printers and Windows-compatible word processing packages is an important and particularly useful feature.

The system requirements for this software are: an IBM PC (or compatible) with a 386 processor (or higher), 2 MB RAM, 2 MB of available hard disk space, VGA monitor, 5·25″ or 3·5″ high-density disk drive, CD-ROM drive using MSCDEX version 2·0 (or higher), and Microsoft Windows version 3·1. A detailed fully illustrated user manual is included with the software, and the price includes network licensing for up to 10 simultaneous users.

Overall, this is a well presented and easy to use software package that can prove extremely useful to those requiring rapid access to such data on a regular basis. Since virtually all modern laboratories are equipped with a PC, this package is a valuable addition to any science oriented software library.

Charles J. Knill

John F. Kennedy

Synthetic Oligosaccharides: Indispensable Probes for the Life Sciences. Edited by Pavol Kovac, National Institutes of Health, American Chemical Society, Washington DC, USA, 1994. 306 pp. + viii. Price $79.95. ISBN 0-8412-2930-9.

Research in the carbohydrate field is rapidly accelerating with the emphasis now focused on the little understood oligosaccharide branch of carbohydrate chemistry. Oligosaccharides are present in many natural sources and their importance in biological processes has been recognised for some time. Until recently, however, their actual mechanism of involvement could only be based on hypothesis. Now solid scientific research substantiates the vital role oligosaccharides perform in recognition and immunological activity, and other cellular functions.

This is the latest title in the ACS symposium series (No. 560) developed from a symposium sponsored by the Carbohydrate Chemistry division. It reviews the range of uses that synthetic oligosaccharides are now put in biochemistry, immunology, pharmaceutical and medicinal chemistry — with the underlying purpose to create better understanding of the many fundamental processes in the Life Sciences.

This edition covers a range of contemporary research on synthetic oligosaccharides, and focuses on the progress made in this subject area, within the carbohydrate world. It pays particular attention to the synthesis strategies for complex oligosaccharides and their ever-increasing importance and interest in the glycobiological field. The use of synthetic oligosaccharides to identify receptor mechanisms is another major topic dealt with in this edition. It increases the understanding of the binding mode between carbohydrates and biologically important binding proteins (and their use in what has the potential to become a new class of drugs), such as enzymes, immunoglobins and receptor proteins.

The intended audience of this edition — pharmaceutical/medicinal chemists, organic synthetic chemists, pharmacologists, and researchers in drug design will be impressed by the detailed and informative content of this edition. In addition to these, graduates and professionals who are associated with carbohydrate chemistry will find this edition of interest and are catered for in the majority of chapters by a small introduction to the research and chemistry involved. Sadly though, some of the advanced synthesis chapters do not pander to the non-expert.

Overall, the format of the text is good with clear diagrams where necessary, however, the lack of unifor-