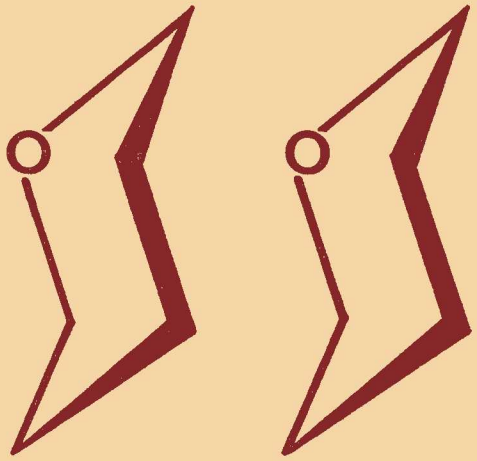
CS Publications News

SPECIALIST PERIODICAL REPORTS

Carbohydrate Chemistry Vol. 10

Senior Reporter: J. S. Brimacombe
University of Dundee



This volume covers literature published between mid-January 1976 and mid-January 1977.
The report is divided into two parts. Part I reviews the chemistry of carbohydrates according to functional type, physical methods of structure determination, and methods of separation and analysis. Part II reviews the literature of polysaccharides, glycoproteins, and glycolipids, whether from plant, algal, microbial, or animal origin, enzymes which utilize carbohydrates as substrates, and procedures for the synthesis and modification of polysaccharides, glycoproteins and enzymes.
"These reports continue to be thorough, well organized, and well written. Carefully chosen figures, structural formulas, and tables provide concise summaries of the work cited, and the breadth of research reported in this volume makes it a very valuable reference for those in any area of research related to carbohydrates."—*Gary R. Gray, Journal of Medicinal Chemistry reviewing Vol. 9*

Brief Contents:
Part I Mono-, Di-, and Tri-saccharides and their Derivatives
Part II Macromolecules

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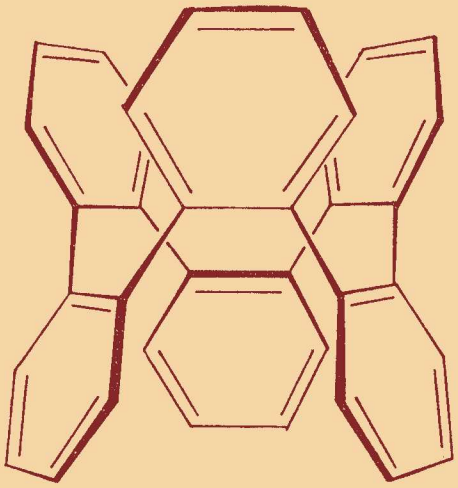

Aromatic and Heteroaromatic Chemistry Vol. 6

Senior Reporters: H. Suschitzky and O. Meth-Cohn
University of Salford

This volume follows a similar format to that adopted in previous volumes and covers the literature abstracted from volumes 85 and 86 of Chemical Abstracts between July 1966 and June 1977.
"All sections of this volume are liberally illustrated with chemical structures and reaction sequences. A random turn of the pages quickly provides information on synthetic work, mechanism studies, stereochemistry, and a fascinating range of exciting and intriguing aromatic and heteroaromatic compounds."—*C. De Witt Blanton, Jr., University of Georgia, reviewing Vol. 5*

Brief Contents:
Three- and Four-Membered Ring Systems; Five-Membered Ring Systems; Six-Membered Heterocycles; Seven-Membered Ring Systems; Medium-sized Rings and Macrocycles; Electrophilic Substitution Reactions; Nucleophilic Substitution Reactions; Aromatic Substitution by Free Radicals, Carbenes, and Nitrenes; Porphyrins and Related Compounds; Naturally Occurring Aromatic Oxygen-ring Compounds; Other Naturally Occurring Aromatic Compounds

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CS Publications News

ACS SYMPOSIA

No. 49 Textile and Paper Chemistry and Technology

Edited by Jett C. Arthur, Jr.

Cellulose is our most abundant raw material, and since it is constantly renewable, it will assume a new importance in the future as oil supplies decrease and their cost sky-rockets. The renewed interest has spurred an increased research effort, the results of which are presented in this volume.

Specific topics covered include: viscose rayon production, pore structure of cellulose, liquid ammonia treatment, fibre-forming polymers, controlled vapour release devices, man-made fibres, non-fuming spin finishes, difluoro-chloropyriminine dye, shrink resist polymers for wool, paper industry, pulp mills, caprolactam recovery, and radial tyre yarn.

This volume contains much new information written by internationally recognized scientists from government, industry, and academia.

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No. 51 Flavor Quality: Objective Measurement

Edited by Richard A. Scanlan

During the past 15 years, many advancements have been made in the area of objective measurement of flavour quality.

Brief contents

Objective Measurements of Flavour quality—General approaches, Problems, Pitfalls, and Accomplishments; Correlation of Odour Intensities and Vapour Pressures with Structural Properties of Odorants; Flavour Chemical Mixtures—A Psychophysical Analysis; Structural and Mechanical Indicators of Flavour Quality; Relations between Sensory and Objective Measurements for Quality Evaluation of Green Beans; Measurement of Flavour Quality in Apples, Apple Juices, and Fermented Ciders; Objective Measurements of the Flavour Quality of Beer; Use of Regression Models in Objective Flavour Evaluation of Processed Orange Juice During Four Seasons.

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No. 55 Industrial and Laboratory Alkylations

Edited by Lyle F. Albright and Arthur R. Goldsby

In this volume an eminent group of alkylation experts describe their research on the chemistry and mechanism involved in engineering and industrial problems.

The book consists of 27 papers—all relating in some way to alkylation. Slightly over half the papers deal with the alkylation of isobutane with light olefins to produce high quality gasoline blending hydrocarbons. New information is presented for isobutane alkylation relative to the chemistry and mechanism, process improvements, recovery of acid catalysts, and status of commercial units. Papers are also presented for the alkylation of aromatics, heterocyclics, coal, and other hydrocarbons. Alkylations using transition metal catalysts, strong acids, free radicals, and bases are also reported.

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No. 58 Solvent Spun Rayon Modified Cellulose Fibers and Derivatives

Edited by Albin F. Turbak

This volume discusses cellulose in three main areas.

The first section, on solvent spun rayon, deals with diverse efforts to develop a totally recoverable and recyclable solvent spinning system to overcome viscose process deficiencies.

The second section on cellulose ethers and esters covers first-release information on Cytrel synthetic tobacco as well as added technology on cellulose acetate and amic acid esters.

The final section on modified cellulosics includes details on the new Viloft hollow rayon fibres, lignin-modified rayon, microscopic techniques for nowovens, drying of super absorbent fibres, ultrasonic fibre treatment, and improved cellulose flame retardants.

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No. 59 Ring-Opening Polymerization

Edited by Takeo Saegusa and Eric Goethals

The products of ring-opening polymerization reactions often exhibit properties that are very useful to and important in industrial applications. Since monomers suitable for ring-opening polymerizations have a great variety of functional groups and ring sizes, the patterns of polymerization reactions and the properties of the resulting polymers vary greatly.

This volume, based on an international symposium, contains new developments on the polymerizations of cyclic amines, sulphides, oxides (cyclic ethers), formals, esters (lactones), amides (lactams), and olefins. The polymerization of carbon bicyclic compounds and cyclic zwitterion monomers as well as spontaneous alternating copolymerization involving heterocyclic monomers is also discussed.

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No. 61 Computer Assisted Organic Synthesis

Edited by W. T. Wipke and W. Jeffrey Howe

Chemists and computer scientists have been stimulated by the application of digital computers to the design and study of organic syntheses.

Ten papers describe the state of the art of computer synthesis as viewed by some major research groups. Topics cover logic and heuristics, deductive solution of chemical problems, formal languages from a chemist's view, reaction path synthesis, simulation and evaluation of chemical synthesis, rapid generation of organic synthesis programs, artificial intelligence systems, computer-assisted synthetic analysis in drug research and computer-assisted structure elucidation. LHASA, CICLOPS, EROS, SYNCHEM, MATCHEM, CHEMONICS, REACT, SECS, and CONGEN programs are also discussed.

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