

chemical and pharmaceutical industry and academia, as well as for manufacturers of analytical instruments.

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## Carbohydrates

Paul Finch (Ed.); Kluwer Academic, Dordrecht, 1999, xii + 334 pp., ISBN 0-751-40235-4, £104.00

Increasing awareness of the roles of carbohydrates in biological recognition and regulation has brought about a resurgence of interest in carbohydrate chemistry. The advancements made in recent years in theoretical, physical and synthetic methods have enabled scientists to research further into the properties of carbohydrates and their potential for exploitation. In *Carbohydrates*, a contemporary view of our knowledge of the structures and syntheses of monosaccharides, oligosaccharides and glycopeptide units is presented, as well as the properties of some important examples and derivatives including sulphates and polysaccharides.

The book contains 9 chapters, each containing an introduction as well as detailed referencing. The chapters cover: the geometry and dynamics of monosaccharides and oligosaccharides; the chemical synthesis of monosaccharides; the conjugation of monosaccharides — synthesis of glycosidic linkages in glycosides, oligosaccharides and polysaccharides; the chemistry of glycopeptides; the shapes and interactions of polysaccharide chains; and the chemistry of polysaccharide modification and degradation. A chapter examining carbohydrate sulphates is also included, given that although the structural and mechanical role of sulphates is pre-eminent, several more subtle functions are beginning to emerge. The final chapter discusses carbohydrate–protein interactions. This is a subject of intense contemporary study because of its key importance in the regulatory roles of carbohydrates.

In *Carbohydrates*, an authoritative overview of the current status of some particular areas of structural and synthetic carbohydrate chemistry is presented, with the

aim of underpinning the steady increase in the perception and understanding of the roles of carbohydrates in nature. This very detailed and comprehensive book is written by established experts in the field of carbohydrate chemistry, and provides an informed perspective on key areas of carbohydrate chemistry.

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## Novel Macromolecules in Food Systems

G. Doxastakis, V. Kiosseoglou (Eds.); Elsevier, Amsterdam, 2000, 468 pages, ISBN 0-444-82932-6, £127.00

Polysaccharides and proteins are essential ingredients in both natural and processed foods: they perform key roles that include thickening, stabilisation, gelation and encapsulation. To a large extent, they determine shelf-life, texture and nutritional quality. Advances are continually being sought by developing new macromolecules that perform better than their traditional competitors. Using recent innovations in biological and physical sciences, scientists have created novel food ingredients chemically, microbiologically and enzymatically. As research and technological information in this field is increasing rapidly, it is becoming increasingly difficult to keep track, both of innovations in the field of novel macromolecules and of developments of novel uses for traditional ones.

*Novel Macromolecules in Food Systems* provides a fundamental understanding of novel uses of traditional biopolymers as well as establishing the nature of structure/physiochemical relationships of novel macromolecules in applications where they replace or complement their existing counterparts. The book comprises seventeen chapters that cover the latest information on preparative methods, chemistry, structure and functionality of novel biopolymers or novel applications of more traditional macromolecules. A number of chapters are grouped into those dealing with novel proteins and novel polysaccharides: two chapters cover the interface between these