However, some previous knowledge of food chemistry is assumed, so that contents of the book may become complex for inexperienced readers of food technology. This book is a good source of information for food technologists and researchers interested in a wide knowledge of chemical changes in food constituents.

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Computer Modelling of Carbohydrate Molecules. Edited by A. D. French and J. W. Brady, American Chemical Society, Washington, DC, 1990. 406 pp. ISBN 0-8412-1805-6. Price: £84.95.

Nearly 95% of the yearly growing biomass consists of saccharides and thus, carbohydrates provide a cheap and practically unlimited source of raw material for useful products in every day life as well as in research and technology. Present and future applications are ranging from biological active substances in pharmaceutical industry through the use of carbohydrates as detergents and emulgating agents to the use of carbohydrates in biofilm or plastic material production. Most, if not all, of these widespread applications are due to the manyfold conformational and dynamic properties of the saccharides.

However, structural characteristics of many carbohydrates still remain unknown and predictions based on physical and chemical methods alone are often unsatisfactory. The combination of theoretical and physical chemistry with modern computer technology, starting in the 1960s and still developing with increasing velocity, led to the most promising approval of estimating and understanding molecular conformation and dynamics: the computer modelling of molecules. 'Carbohydrate Modelling of Carbohydrate Molecules' (23 chapters) opens with a comprehensive introduction which although it provides a basic knowledge for people who wish to start work in this area, does expect some theoretical chemistry background on the part of the reader.

Following chapters deal with special methods and problems in computer modelling of carbohydrates, in order of increasing complexity. The methods for calculating conformations and dynamics of carbohydrates are based on systems using classical mechanic relationships, on systems using molecule orbital calculations or on systems using NMR or

diffraction data. The spectrum of investigated molecules ranges from the simple monomer glucopyranose through oligo- and polysaccharides to protein-carbohydrate complexes.

In every chapter of this book, the reader is provided with an extensive list of up to date references and, even more helpful, sources of the applied software. The contributions to this book for the sake of publication time are not type-set; thus, the book looks improvised, but the contents are up to date.

Depth and price of the book may not suit undergraduate students or readers with just casual interest in the field of computer modelling, nor is it a book which belongs necessarily in every carbohydrate chemist's library. However, it is strongly recommended for present and future researchers in this area of molecular modelling of carbohydrates. The newcomer may, with some background knowledge in theoretical and physical chemistry, as well as a familiarity with the basic fundamentals of computer modelling, gain a survey of the possibilities and limitations of the methods currently available and lots of information and ideas to start with. For the experienced modeller, the book provides a survey of current research as well as a rich source of stimulations for solving special problems in his own research.

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