

Enzyme Technology. By M. F. Chaplain and C. Bucke, Cambridge University Press, Cambridge, 1990. xvi + 264 pp. ISBN 0 521 34429 8. Price: US\$59.50.

Modern biotechnology is undoubtedly founded on the applications of enzymes either in free or in immobilized states, the applications may not always be made directly, because there are fields where microbes are utilized and fields where biologicals are processed. But enzymes play decisive roles in most of biotechnology and thus the art of enzyme technology has become a focal colloquium of modern biology. The monograph *Enzyme Technology* by Chaplain and Bucke is an enlightened addition to this colloquium.

This book begins a new approach to the biotechnology of enzymes. The authors rightly observe that enzyme technology is presently going through a phase of maturation and evolution (concluding remarks, p. 255) and they have made a just approach towards presenting their ideas with that end in mind.

The selection and arrangement of topics discussed in this work are well thought out and precise, though it would have been more logical if the chapter on 'preparation and kinetics of immobilized enzymes' were to be placed after the chapter 'the large-scale use of enzymes in solution'. All the other eight chapters of the book are very concise and at the same time contain many new aspects not covered by other current works in this field. The chapters on 'enzyme preparation and use', the above-mentioned two chapters, the chapters on 'biosensors' and 'recent advances' bear clear signs of this belief. We share the authors view that the relevant equations in this text as they appear, will help make a better utilization of the means of interpretation of data relating to enzyme technology. Inclusions of a summary and an exhaustive bibliography at the end of every chapter of this work have added to the merit of its production.

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Frontiers in Carbohydrate Research — 1 Food Applications. Edited by R. P. Millane, J. N. BeMiller and R. Chandrasekaran. Elsevier Science Publishers Ltd, Barking, 1989, x + 296 pp. ISBN 1 85166 446 7. Price: £35.00.

The search for new carbohydrates, aimed at either replacement of 'older' ones with some better properties or just to place novelties in the

market, has been the objective of an increasing number of industrial researchers in the field of carbohydrate application chemistry. An even more exigent consumer requires new products with improved properties (e.g. flavour, taste, texture, other physiochemical properties) and quality.

Food applications of carbohydrates have been increased mainly due to the intensive use of their chemical, physical and biological properties, e.g. stabilization, emulsification, gel-formation, sweetener, released control, and so on.

This book is a collection of papers presented at the *Frontiers in Carbohydrate Research Conference* held at Purdue University, West Lafayette, Indiana, USA, in September 1988. It shows recent developments in the field of the science of polymers, in particular, gums (xanthan, carrageenans, gellans, curdlan), polysaccharides (cyclodextrin, carboxymethylcellulose (CMC), agarose, alginates, starch). It also shows and discusses methods used for the determination of the main carbohydrate properties, i.e. X-ray fiber diffraction, NMR spectroscopy, differential scanning calorimetry (DSC), ion-exchange, viscometry, and so on.

A captivating title of what promises to be a series of volumes, it would be useful to know what the editors intend for subsequent volumes. The book contains useful information for chemical, biochemical and food scientists, as well as for those who are interested in the application of carbohydrates in the food industry.

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