

historical coverage of the natural compounds covered, as well as overview texts.

*ROMPP Encyclopedia Natural Products* is a clearly written and user-friendly compendium brought together by leading German natural products chemists, and containing over 6000 natural substances, which are of the greatest interest to researchers in biology, chemistry, biochemistry, pharmacology and medicine. This volume contains numerous cross references designed to make information readily accessible, and an appendix with an extensive index of Latin species names and a molecular formula index. This encyclopaedia serves as a reference to some important general terms related to natural products, like alkaloids, carotenoids, glycoproteins, and snake venoms. It is an invaluable key reference book for anyone interested in natural products chemistry, regardless of whether they are experts or newcomers in the field.

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### Methods in Non-Aqueous Enzymology

Munishwar Nath Gupta (Ed.), Birkhäuser Verlag, Basel, 2000, x + 218pp, sFr. 228, ISBN 3-7643-6109-3

Low water systems have attracted considerable attention in recent years. Extending the range of enzymatic catalysis by using non-aqueous media increases the range of enzyme applications. This technique has developed into a powerful approach in biochemistry and biotechnology. *Methods in Non-Aqueous Enzymology* gives a comprehensive survey of the potential applications of non-aqueous enzymology.

The book is comprised of 12 chapters, each containing some background information and covering protocols for several specific applications in different types of non-aqueous media, such as nearly anhydrous media, aqueous-organic cosolvent mixtures and reverse micelles. The initial introductory chapter covers some general issues and perspectives on non-aqueous enzymology. Early chapters are concerned with the importance of water activity for enzyme catalysis in non-aqueous organic media, the engineering and stabilisation of enzymes via immobilisa-

tion, especially the immobilisation of lipases for use in non-aqueous reaction systems. In the book, much focus has been placed on lipases, as this class of enzyme is used more often than others in non-aqueous enzymology.

Subsequent chapters deal with applications of enzymes and membrane technology in fat and oil processing, and strategies for improving the lipase catalysed preparation of chiral compounds are described. The text also covers peptide synthesis and sugar transformations using enzymes in non-aqueous media, and enzyme selectivity in organic media is also discussed. Emerging processes, such as the use of reversed micelles as microreactors and the use of biosensors in harsher non-aqueous environments, are covered in two separate chapters. The book concludes with a chapter outlining the importance of the medium for *in vitro* and *in vivo* protein folding mechanisms, and its biomedical implications.

*Methods in Non-Aqueous Enzymology* is a comprehensive clearly written and presented compendium containing illustrations of specific applications and detailed methodology guides (with strategies for optimisation). The protocols described are easy to follow and critical evaluations of results obtained are given, as well as extensive troubleshooting guidelines. This book is highly recommended for scientists and researchers and developers in biotechnology, the pharmaceutical industry and in academia.

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### The Science of Sugar Confectionery

W.P. Edwards, The Royal Society of Chemistry, 2000, x? pp., £17.95, ISBN 0-85404-593-7

The confectionery industry is enormous. It ranges from small shops to branches of the largest companies in the food industry. The industry is divided into three classes: chocolate, flour and sugar confectionery. The manufacture of most confectionery has not been a science-based profession. Few people know the underlying science of sugar confectionery. Traditionally, skilled craftsmen confectioners working

empirically and by trial and error, not by an understanding of the underlying science, developed almost all confectionery products. An exception to this is the development of products resembling sugar confectionery but free of sugar, where more scientific efforts have been required. Sugar confectionery also has a link with the pharmaceutical industry; in the making of sugar tablets and applying panned sugar coatings.

*The Science of Sugar Confectionery* deals with the background science of sugar confectionery. Remarkably the front cover depicts sweets products which come from just one particular manufacturer. The book contains 17 chapters, starting with an introduction covering some basic definitions and commonly used ingredients, followed by several chapters on emulsifiers, colours and flavours. Subsequent chapters give detailed information on various types of sugar confectionery, which include boiled sweets, grained sugar products, pan coating, toffees and caramels, gums, gelled products, liquorice, chewing gums, aerated products and lozenges. The book concludes with chapters covering tabletting and experiments to make various types of sugar confectionery, and information on sugar-free confectionery.

*The Science of Sugar Confectionery* is an interesting and clearly written book, aimed for everyone attracted to the science behind sugar confectionery. Simple recipes are included in the text, enabling the readers to make some of their own sugar confectionery. The book also provides numerous illustrations and examples of manufacturing methods, however, it is not intended as a manual of methods.

quality foods. Today's customer expects convenience, variety, adequate shelf life and reasonable cost among a host of requirements. To meet these demands strategies are continuously being developed: these include modifications to existing food processing techniques and the implementation of novel processing technologies. Food engineering is rapidly gaining worldwide recognition as an important facet of food and engineering-related programmes both in academia and in the food industry.

*Trends in Food Engineering* presents an assembly of edited technical papers based on invited and volunteered contributions from the 2nd Ibero-American Congress on Food Engineering held at the Universidad Nacional del Sur, Bahia Blanca, Argentina from 24–27 March 1998. The book is divided into three sections. The first deals with physical and sensory properties of food and covers structure-property relationships, rheology and correlations between physicochemical and sensory data. The second part concentrates on advances in food processing, including the latest developments in minimal preservation and non-thermal processing. The final part examines state-of-the-art topics such as applied biotechnology, food additives and properties of proteins.

This book is well structured and presented, with comprehensive sets of references at the end of each contribution. It is highly recommended as an invaluable, broad vision of state-of-the-art food engineering for food engineers, technologists and scientists wishing to consolidate and update their knowledge in areas vital to the food industry today.

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## Trends in Food Product Engineering

J.E. Lozano, C. Añón, E. Parada-Arias & G. V. Barbosa-Cánavas (Eds.), Technomic Publishing Co. Inc., Lancaster (PA), 2000, 372pp £96.00, ISBN 1-56676-991-4

Food processing is becoming more and more sophisticated and diverse with the ever-increasing demand for

## High-fiber ingredients

Amy L. Nelson, Eagan Press, St Paul, Minnesota, 2000, vi + 97 pp., \$69.00, ISBN 0-891127-23-3

Fibre is an important part of diet and nutrition, however,