



Book Reviews

Methods in Enzymology, Biomass (Lignin, Pectin and Chitin) Part B. Edited by W. A. Wood and S. T. Kellogg, Academic Press Inc., California, 1988. Part A, Vol. 161. xxxi + 574 pp. ISBN 0 12 182062 9. Price: £46.50.

There is currently considerable interest in the exploitation of the remarkable catalytic and recognition properties of biological systems. This is associated with the increasing adoption of new processes for the production of higher value fuels and deriving chemicals from renewable biomass.

New ground is already being broken, e.g. much current activity is aimed at exploiting the lignin component of wood, which offers a new route to many of the important aromatic intermediates. Also, the number, importance and variety of industrial uses of chitin, chitin derivatives and chitin-related enzymes are growing rapidly.

Methods in Enzymology comprises an important and voluminous body of scientific literature. Volume 161 collates for the first time an array of procedures related to enzymatic conversion of lignin, as well as related methods for pectin and chitin. The book is organized in three sections. The first section deals with the preparation of substrates for ligninases, assays for ligninases, chemical methods for characterization of lignin, chromatographic methods for lignin and related compounds, nucleic acid preparations related to lignin degradation, and purification of lignin-degrading enzymes. The second section covers assays for pectin-degrading enzymes and purification and pectin-degrading enzymes. The preparation of substrates for chitin-degrading enzymes. The preparation of substrates for chitin-degrading enzymes, assay for chitin-degrading enzymes, analytical methods for chitin, and purification of chitin-degrading enzymes, are discussed in the third section.

This book provides an up-to-date coverage of the subject and definitively is a useful reference for students, researchers working in this field, biochemists and biotechnologists.

John F. Kennedy
Marion Paterson

Studies in Natural Products Chemistry — Structure Elucidation (Part B), Volume 5. Edited by H. E. J. Atta-ur-Rahman, Elsevier Applied Science, Amsterdam, 1989. xiii + 906 pp. ISBN 0 444 88336 3. Price: US\$224.00/Dfl.500.00.

The chemistry of natural products is one of the oldest branches of the chemical sciences. Natural products began to be studied in the first decades of the 19th century. Now, after nearly 200 years of study, natural products chemistry has keen interest continuously shown in it. This interest is in the actual or potential pharmacological activity to be found in antibiotics, coumarins, sugar, alkaloids, flavonoids, terpenoids and lignans, etc.

Nowadays, the sum of the total numbers of chemical compounds known is reaching 10 million. However, only about 50 have been clinically used as anti-cancer agents. Especially significant is that from those 50 compounds, around 35 are natural products, derived from natural products, or are related in some way to natural products.

The present volume is the fifth of the series *Studies in Natural Products*. It is the second volume which covers the area of structure elucidation of new natural products. *Studies in Natural Products — Structure Elucidation* contains 22 chapters which deal with the applications of modern spectroscopy techniques with particular reference to biologically important natural products including coumarinolignans, flavonoids, antimalarials (e.g. artemisinin), furanonaphthoquinones, quassinoids, triterpenes, isoquinoline alkaloids, indole alkaloids, insect pheromones, polysaccharides from fungi and lichens and marine natural products. Other areas which involve studies on carcinogenicity of estrogens, lignans biosynthesis, oligo(*N*-methylpyrrolicarboximide) antibiotics, polyketide antibiotics, antitumor, antifungal and herbicidal antibiotics, sterols, carotane sesquiterpenes, sesquiterpene quinones, prostaglandin synthetase inhibitors and avian hemoglobins are also covered in this volume. It provides a very good overview on the structure