Carbohydrate Polymers **21** (1993) 241-242

Book reviews

Biodeterioration and Biodegradation 8. Edited by H. W. Rossmoore, Elsevier Applied Science Publishers. London, 1991. xxii + 611 pp. Price £135.00. ISBN 1-85166-626-5.

On a very simple level, biodeterioration of materials has a large economic impact. On a similarly simple level, biodegradable materials have an impact on the environment when they are degraded. This entire volume, based on a symposium, deals with these two problems. One initial point that should be made is that biodeterioration and biodegradation are not simply microbially based actions; there is actually a section within the volume on current rodenticide strategies. Rodent action is just as important a part of unwanted degradation as bacterial action, as this book sets out to prove.

'Biodeterioration and Biodegradation 8' is not a standard symposium volume, i.e. it does not simply include a collection of papers presented at the symposium. Instead it includes 23 reviews, which make up about 50% of the volume, and which cover all the main areas of biodeterioration and biodegradation. This ranges from detection of insects in grain to the evaluation of preservatives in latex. In fact, the subject areas covered are so expansive that we feel that it would have been worth sub-dividing them into separate volumes; so great is the feeling of an overwhelming mass of information. The fact that this has not been done may well reduce the potential purchasers of the book by a large amount. One would question the possibility of a fuel expert buying a book which devotes a lot of space to rodent control. This is a shame because this is a well written and incredibly informative book which is likely to end up on library shelves, and not in the personal libraries of experts where it so clearly belongs. As it stands, this book should be treated as an overview, and as such is an excellent purchase for science based libraries everywhere.

David W. Taylor
John F. Kennedy

Bioconversion of Waste Materials to Industrial Products. Edited by A. Martin, Elsevier Applied Science Publishers, London, 1991. xi + 510 pp. Price £90.00. ISBN 1-85166-571-4.

'Recycling' was once a nice ideal but, in most cases, a totally unfeasable economic project. Times have, of course, changed, and in the 1990s recycling has become the word on everyone's lips. What is more, recycling is now becoming not only a valid activity, but a viable one. The bioconversion of waste materials is the logical step in returning to the environment resources previously extracted from it. The production of industrial products from wastes is an every increasing area of importance and is the subject of this volume.

'Bioconversion of Waste Materials to Industrial Products' aims to cover both the scientific and technical basis of the subject, the advantages and disadvantages, the products presently available and possible future trends and products. Not only are the processes traditionally thought of as recyclable (biologically based) included, but also novel bioconversions such as mineral and hydrocarbon based operations.

This volume is broadly divided into two sections; a general principle and techniques section followed by a more specific actual case studies section, with techniques and technologies discussed for all of the main waste groups. The contents are well presented and edited, making it readable and functional, both the index and references are acceptable, and since it is addressing an important topic, we think that this is an important book. Perhaps basing the book in academic, industrial *and* scientific fields may be a little ambitious, but on the whole, it has worked well, and all three of those groups will find valid information in these pages. The introduction, perhaps rather ambitiously, states that 'this book could act as a guide to administrators, consultants and governments'. We hope it does; they could choose many worse books as their guide.

John F. Kennedy
David W. Taylor

Biological Degradation of Wastes. Edited by A.M. Martin, Elsevier Applied Science Publishers, London, 1991. xi + 420 pp. Price £90.00, $153.00. ISBN 1-85166-635-4.

All processes are designed in such a way that the production of a particular product is achieved in the most cost effective and efficient manner. Unfortunately,

Carbohydrate Polymers 0144-8617/93/$06.00

for every desirable product, there also results other 'waste' materials that, if left in an untreated form, are often harmful to the environment. 'Biological Degradation of Wastes' has collected together a broad spectrum of work that concerns the treatment of process wastes using biological methods.

The eighteen chapters in this book have been ordered in such a way that the more general topics are placed at the beginning with more specific topics introduced later. Although not a strict rule, this style of presentation, aided by modern day process examples, helps provide a whole picture of waste treatment.

Good use of appropriate examples emphasises that the biological methods of degradation described in this book are both energy and cost efficient. Moreover, the way in which waste is treated is extremely adaptable such that wastes of either liquid, solid or gaseous origin are equally suited to biological degradation.

It is clearly apparent when one reads this book that it is written for all levels of understanding. Informative introductions to each of the chapters ensures that the reader is brought up-to-date with both recent research developments and current applications. Current phrases and nomenclature are also explained clearly throughout the book ensuring a good understanding of the processes described.

This book is a useful book for scientists and engineers, whether as a student, a specialist or just an interested reader. It is written like a text book — simply but informatively, and, as such, the reader is presented with a source of reference and advice concerning modern methods of biological degradation of process waste.

Lesley Hamilton
John F. Kennedy