and enzymatic synthesis of oligoribonucleotides by D. Beckett and O.C. Uhlenbeck). There are also three useful appendices. The emphasis throughout is most admirably placed on experimental detail. No non-specialist and indeed specialist in the field of oligonucleotide synthesis can afford to be without this excellent little book.

Colin B. Reese

The Bioorganic Chemistry of Enzymatic Catalysis

by M.L. Bender, R.J. Bergeron and M. Komiyama

Wiley-Interscience; New York, 1984

xiii + 312 pages. £42.00

Earlier this year, I remarked in a review of another book that chemists tend to write very different books about enzymes from those written by biochemists, often concentrating on what biochemists would regard as the least interesting aspects of reaction mechanisms to the exclusion of everything else. I did not expect this view to be reinforced so forcibly and so soon as it has been, but this is very much a book for chemists, and they are already reviewing it enthusiastically. Biochemists, however, are likely to find the title misleading, because it is only on page 116 that the authors start to address the subject of enzymes, and then only in a brief interlude before returning to catalysis by bromide ions, etc., in the next chapter. To be fair, the Michaelis-Menten equation does make a brief appearance in the first chapter, but it is introduced in such an obscure way, and illustrated by such misleading curves, that it could easily pass unnoticed if not mentioned by name.

The early chapters do provide an excellent introduction to the theory of catalysis in organic reactions, and contain much valuable material, but very little of it is of direct relevance to enzymes. It is interesting, for example, to know that acidity scales can be devised that effectively extend the pH scale as low as -12 and as high as $+19$; the more important problem to understand in relation to enzymes, however, is their capacity to act as effective catalysts at neural pH, as has been recognized since the days of Sørensen and Michaelis.

The second half of the book is mainly about enzymic catalysis, but written very much from the point of view of organic chemistry. Numerous enzymes are mentioned, but they do not appear to be listed anywhere and are very difficult to track down, because although the index is quite long it is compiled according to a rather haphazard system: there are no entries for chymotrypsin or pyridoxal phosphate, for example, although several pages of the book are devoted to each of them.

In general, although this book can certainly be recommended to anyone who wants to learn about organic reaction mechanisms and catalysis, those interested in a modern treatment of enzyme catalysis would do better to look elsewhere, for example to the excellent second edition of Fersht's *Enzyme Structure and Mechanism.*

Athel Cornish-Bowden

View Enzymatic catalysis Research Papers on Academia.edu for free.Â ABSTRACT Biological fuel cells (BFCs) are energy-producing devices, akin to conventional fuel cells, except that they employ biological materials as catalysts on one or both of the electrodes. All BFCs and biological sensorsâ€“no matter the more. ABSTRACT Biological fuel cells (BFCs) are energy-producing devices, akin to conventional fuel cells, except that they employ biological materials as catalysts on one or both of the electrodes. All BFCs and biological sensorsâ€“no matter the type of deviceâ€“have one important aspect in common: the requirement for effective electronic communication betwee Enzymes are found in all tissues and fluids of the body. Catalysis of all reactions taking place in metabolic pathways are carried out by intracellular enzymes. The enzymes in plasma membrane govern the catalysis in the cells as a response to cellular signals and enzymes in the circulatory system regulate clotting of blood. Most of the critical life processes are established on the functions of enzymes. Enzyme Structure.Â The catalytic site and binding site together constitute the enzymeâ€™s active site. A small number of ribozymes exist which serve as an RNA-based biological catalyst. Enzymatic synthesis enhances the signal so that diverse, scientifically and clinically relevant molecules can be identified and studied, including cancer DNA, viral nucleic acids, and regulatory RNAs. Cite. Download full-text.Â Imines are among the most ubiquitous species in organic and bioorganic chemistry; however, the reactivities of N-alkyl unsaturated imines have not been thoroughly explored due to their instability profiles. Here, we describe the novel reactivity of the N-alkyl-unsaturated imines derived from substituted aldehydes, a chiral aminoalcohol, and parafor