traditionally trained chemist then faces a dilema—biological testing is far removed from chromatography and spectroscopy, and the techniques for handling living organisms seem at first so different from those used in conventional chemical analysis.

However, recent developments, especially in the use of luminescent bacteria for toxicity testing—commercially available as the Microtox® and Lumistox® test kits—have brought such procedures within the capabilities of the chemist and, moreover, they are now officially recognised by government bodies in many countries. They have been shown to yield toxicity data as effectively as alternative tests involving fish or small animals, but at much lower cost and in a shorter time.

This timely book, taking as its starting point a symposium in Leeds in 1992, and subsequently expanded to include additional invited contributions, presents a broad and well balanced view of this fascinating field. Section 1 covers Microbiological testing, including the use of luminescent bacteria. Section 2 deals with Alternative biological testing, including the use of invertebrates, daphnia, micro-algae, seaweeds and enzymes. Section 3 gives a helpful comparison of the performance of the Microtox® test approach with those of other toxicity tests, and on its applicability for environmental testing. Interesting legal aspects and case histories are presented in Sections 4 and 5.

This volume makes fascinating reading and will be both accessible by and informative for a wide cross-section of scientists of different disciplines. It is well produced, referenced and illustrated. The editor and his team are to be congratulated on the coverage, style and presentation of this essential work of reference.

It is to be hoped that this book will help to establish ecotoxicological testing, not as a "no-man's land" between Chemistry and Biology, but as a key area of common ground, enabling chemical data on environmental samples to be complimented by biological observations. It deserves to succeed.

I. L. Marr

Bioluminescence and Chemiluminescence: A. A. Szalay, L. J. Kricka and P. Stanley (editors), Wiley, Chichester, 1993. Pages xiii + 548. £90.00. ISBN 0-471-941646.

This volume contains the proceedings of the VIIth International Symposium on Bioluminescence and Chemiluminescence held in Banff, Canada, between 14 and 18 March 1993. As contributions were on a world-wide scale it gives a good indication of the current global prolific research activity in this field.

Papers are grouped into five sections: Instrumentation for Light Detection (47 pages); Molecular Biology and Biochemistry (190 pages); Chemiluminescent and Bioluminescent Assays (201 pages); Cellular Luminescence (61 pages) and finally a section on Chemiluminescence and Bioluminescence representing novel approaches to non-assay problems (36 pages).

A useful alphabetically arranged index is given which not only gives subject headings accompanied by appropriate page references but also lists all the names of the contributors and the page(s) where their paper(s) can be found. There is no comment on any discussion which may have ensued from the presented papers.

If one accepts that for rapidity of publication the contents have not been subjected to peer review and that the quality of presentation is variable, there can be no doubt that this volume represents an excellent up-to-date reference source of recent and on-going research in Bioluminescence and Chemiluminescence.

R. R. Moody

Catalysis of Organic Reactions: J. R. Kosak and T. A. Johnson (editors), Dekker, New York, 1993. Pages: xv + 581. US$185.00. ISBN 0-8247-9140-1.

This book is No. 53 in a continuing series of reference books on 'Chemical Industries'. The book is simply a compilation of technical papers and poster synopses presented at the 14th Conference on "Catalysis of Organic Reactions", held in Albuquerque, New Mexico, during April 1992. In all there are 47 articles (*ca.* 580 pages) which cover a diverse array of topics, such as hydrogenations, oxidations, aminations, *etc.* The authors are mainly from North American industries but some are also from American and European institutions. There is no doubting the expertise of the authors and each article is in itself well written, informative and a model account of a precise area.

However, most books which stem from conference proceedings leave this reviewer with serious doubts about their necessity and general usefulness. I consider such books to have a Readers Digest approach—they can be interesting, easy to pick up and to peruse a single article, and useful to while away the time in a doctor's or dentist's waiting room. However, if I want the whole story, then the primary literature is the only source. Library budgets, especially for British universities, are so tight that great care has to be exercised in buying books. The good work contained in 'Catalysis of Organic Reactions' will appear elsewhere (if not already), *i.e.*, in the primary literature—and so spending money on the book becomes more difficult to justify.

The 47 articles (ranging in size from 4 to 48 printed pages) generally have introduction, experimental, results and discussion sections as well as listing references. There is a 7 page general index.

J L. Wardell