Phytochemistry, Vol. 21, No. 9, pp. 2435–2437, 1982.
Pergamon Press Ltd. Printed in Great Britain.

BOOK REVIEWS

Bioenergetics: by D. G. NICHOLLS, Academic Press, London, 1982. 190 pp. Paperback £5.50; hardback £13.40.

During the last fifteen years or so, acceptance of Mitchell's 'chemiosmotic' model, in which coupling of electron transport processes to ATP synthesis is effected through proton electromotive gradients within membranes, has fundamentally changed the study of bioenergetics. Although the pages of most of the better known biochemistry textbooks now contain some outline of Mitchell's theory, there is a noticeable lack of books aiming to present to the advanced undergraduate a more complete account of the model and the evidence for it. Three or four years ago, Racker's excellent little monograph *A New Look at Mechanisms in Bioenergetics* would immediately have sprung to the biochemistry lecturer's mind in this context. Sadly however, Racker's book is now six years out of date. *Bioenergetics* by D. G. Nicholls admirably fills the gap and will undoubtedly be widely used by senior undergraduates in biochemistry and in biology. With this readership in mind, it is a little unfortunate that the author should, by repeated interchange, perpetuate the common misconception that the words 'hypothesis' and 'theory' are synonymous.

I found the style heavier than Racker's and the book a little less readable in consequence. Although figures and tables are, in general, well presented, inadequate description in the legends to some diagrams makes them difficult to follow without repeated reference back to the text. Nevertheless, the book achieves its aim of introducing the topic from first principles and of discussing aspects in sufficient detail to prepare the reader to tackle the primary sources. Over 200 key references are provided by the author to further this latter objective. One feature of the book that will endear it to some and irritate others, is the inclusion of a number of full page cartoons, mainly reprinted from *Trends in Biochemical Sciences*. I must confess to belonging to the latter category, preferring by far Racker's technique of introducing apposite humour in the form of aphorisms at the beginning of each chapter. However, despite my preferences and minor criticisms, at £5.50 the paperback version of the book represents a good investment for the advanced undergraduate and non-specialist postgraduate.

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The Chemistry of Chalcones and Related Compounds: by D. N. DHAR. John Wiley, New York, 1981. 285 pp. £28.50.

This slim volume made enjoyable reading. It is a monograph that should be a companion to any worker in the flavonoid field. In the forward to the book, Sir Derek Barton comments that because of the growth in chemical literature, it is increasingly difficult to read meaningfully what is published and so the habit has grown among chemists to solve this problem by not reading the literature at all or to employ the specialist monograph. *The Chemistry of Chalcones and Related Compounds* is such a monograph and it goes a long distance to fulfil the need in this area.

Dr. Dhar has presented clearly and with admirable brevity an account of the chemistry of the α,β-unsaturated ketones. The text is divided into four sections, an Introduction, Reactions, Physical Properties and Applications. Each section contains a number of chapters with the references placed at the end of each chapter. This leads to some repetition but is advantageous to the reader. The references are extensive with many from the recent literature. The short Part 4 section on Applications contains useful chapters on the naturally occurring chalcones and their derivatives and a list of biologically active chalcones. The list indicates the type of activity for each chalcone. The chapter of miscellaneous uses makes for surprising reading with a total of 72 references. The largest part of the monograph as one would expect is on the Reaction section with a total of 13 chapters one of which is entitled miscellaneous and covers some 41 reagents with a total of 123 references.

Overall this book contains a collection of useful data, is highly readable, free from errors, and is liberally illustrated by formulae. The references are plentiful, are up to date and include not only papers published in scientific journals but also specialist text books and patents. Its initially stated aim has been achieved.

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