

Atmospheric Physics

J. V. IRIBARNE and H.-R. CHO

1980, xii + 208 pp. + indexes
Cloth Dfl. 40,- / US \$ 15.95
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Atmospheric Physics is an elementary and comprehensive textbook on the terrestrial atmosphere and can be used for second and third year university courses. The book requires only the basic understanding of mathematics and such knowledge of physics as can be acquired in most first year general physics courses. It can be used in two ways. Firstly, a general review of atmospheric physics is provided for students who work or plan to work in other fields (such as geophysics, geography, environmental sciences, space research), but are interested in acquiring general information. Secondly, it will serve as a general and elementary introduction for students who will later specialise in some area of atmospheric science. Each chapter is concluded with a list of questions and problems which will help the reader to attain a more detailed insight into the various subjects discussed.

Microphysics of Clouds and Precipitation

HANS R. PRUPPACHER and
JAMES D. KLETT

1978, xvi + 714 pp.
Paper Dfl. 40,- / US \$ 19.95
ISBN 90-277-1106-2
Cloth Dfl. 85,- / US \$ 44.75
ISBN 90-277-0515-1

'This book no doubt will become a landmark in the realm of cloud physics, not only as an advanced textbook but also as a valuable reference. Its pages contain about as complete an exposition of current knowledge of the subject as one would hope to find anywhere.'

Horace R. Byers, *Bulletin of the American Meteorology Society*

'The book, being a comprehensive, up-to-date description of the subject, is an excellent reference text for lecturers, students and researchers in atmospheric sciences, especially those interested in weather modification and air pollution.' Hans Mörth, *New Scientist*

'There is little doubt that this impressive book will be of central importance to cloud physicists and scientists working in related fields.' J. Latham, *Nature*

'I strongly recommend the book for scientific libraries, serious cloud physics students, and other scientists who need to go in-depth into this subdiscipline.'

Doayne Sartor, *Physics Today*

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own teaching, and it owes much to a course taught by his mentors R.H. Abels and W.P. Jencks.

The approach taken is to classify and present enzyme reaction mechanisms according to their chemical types: (1) group transfer reactions; (2) oxidation-reduction reactions; (3) elimination, isomerisation and rearrangements of substrate skeletons; and (4) the making and breaking of carbon-carbon bonds. This approach to organisation makes eminently good sense as it facilitates understanding of the basic patterns and principles underlying the reactions.

In presenting data which support the various enzymatic mechanisms, Walsh brings to bear evidence obtained from a wide variety of methodologies, including kinetic analyses, isotope exchange studies, protein chemistry, and the results of X-ray crystallography. The fundamentals of enzyme kinetics are presented, but they are treated superficially and are interspersed with discussions of various enzymes.

The grand scope of this text results in, at times, a superficial coverage of material pertaining to many mechanisms. It would have been preferable to have seen fewer examples of enzyme mechanisms examined in greater depth. Nevertheless, this original, ambitious work fills a need, and it is likely to be welcomed by both teachers and students of enzymology.

Principles of Enzymatic Analysis edited

by H.U. Bergmeyer and K. Gawehn is directed not toward the classroom but toward the laboratory. In this book enzymatic analysis means determination of the concentrations of substances with the aid of enzymes and determination of the catalytic activities of enzymes in biological materials. It is derived from a section of a larger work, *Methods of Enzymatic Analysis* by the same editor (Verlag Chemie and Academic Press, 1974), which has already gone through two editions. This revised version is a modest advance over its predecessor.

In this volume 20 authors have contributed to sections describing theoretical principles (including kinetics), the handling of biochemical reagents and samples, measuring techniques and instruments, and evaluation and assessment of experimental results. The derivation, content and format of this book will probably restrict its use to that of a reference work. As such the prospective user should be advised that it is limited in scope and often overly brief. This book is not intended for someone who wants to learn how enzymes function, but it may serve as a practical handbook for someone who is about to do his first enzyme assay. □

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Biochemistry for all occasions

Ernst Noltmann

Biochemistry: The Chemical Reactions of Living Cells. By David E. Metzler. Pp.1129. (Academic: New York, 1977.) \$22.50.

Modern Concepts in Biochemistry. By Robert C. Bohinski. Pp.600. (Allyn and Bacon: Boston, Massachusetts, 1979.) \$17.50.

Biochemistry. By Frank B. Armstrong and Thomas P. Bennett. Pp.504. (Oxford University Press: New York, 1979.) \$19.95

Elementary Biochemistry, An Introduction to the Chemistry of Living Cells. By Julian Davies and Barbara Shaffer Littlewood. Pp.346. (Prentice-Hall: Englewood Cliffs, New Jersey, 1979.) \$20.75.

WITH biochemistry having become a serious (?) topic of prime time television talk shows, including guest appearances by dignitaries such as Linus Pauling, it is not surprising that this popularity is also reflected in an annually increasing onslaught of new textbooks of bio-

chemistry which present a confusing choice to both the instructor and the student. A most telling testimony is perhaps also the fact that this reviewer was asked to render an opinion simultaneously on four different textbooks. An attempt will be made to comment on the four books in the order indicated above which is according to decreasing size but which also reflects an order of value as perceived by this reviewer.

Metzler's coverage of the field is current and thorough. It is supported by many good illustrations and by superb bibliographies for each of the sections. The emphasis appears to be fairly even and the decision of the author to include many fascinating applications of biochemistry in special boxes set off from the main text, rather than to incorporate them into the narrative flow of fundamental material, is of great help to the student whose academic programme may demand a judicious use of study time. The detail of Metzler's text is both an advantage and a disadvantage. It makes reading slow for the novice. However, the writing is good and the style interesting. Moreover, the sentences are varied and well constructed — something rare for a science text. Also, on re-reading, the detail does not appear to be excessive and the opportunity to pursue