cause confusion for some readers, is the failure (in chapter 4) to distinguish clearly between the time- and frequency-domain representations of the field quantities.

The above shortcomings notwithstanding, *Fundamentals of Microwave Electronics* provides a clear introduction to the basic physical phenomena of microwave electronics and will be a valuable addition to the library of those who wish a knowledge of the fundamentals of the subject without extreme mathematical rigor.

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Mathematics

The Treasury of Mathematics. A collection of source material in mathematics, edited and presented with introductory biographical and historical sketches. Henrietta O. Midonick, Ed. Philosophical Library, New York, 1965. xxiv + 820 pp. Illus. $15.

It has been said, with good reason, that the real history of mathematics lies in the technical papers and publications of mathematicians. This leads one to conceive the possibility of giving some sort of true and connected picture of the development of mathematics by a well-chosen sequence of original, pivotal, and significant papers in the subject. This is essentially the idea behind Henrietta Midonick's work. Her *Treasury* is a 54-piece collection of source material, each piece carefully edited and prefaced with an appropriate biographical and historical sketch. The 54 papers span a wide range of time, running from Babylonian cuneiform tablet texts and the Moscow papyrus to papers by Boole, Cayley, Cantor, and others.

The problem of selecting material is a difficult one, and undoubtedly lists chosen by almost any two competent editors would differ greatly. The present selection is very good, although one might be surprised to find, on the one hand, Geoffrey Chaucer's *Treatise on the Astrolabe*, but, on the other hand, no excerpt of Bernhard Riemann's famous probationary lecture of 1854.

One cannot resist comparing Midonick's "treasury" with the items similarly gathered earlier by David Eugene Smith in *A Source Book in Mathematics* (McGraw-Hill, New York, 1929). This earlier work contains 96 selections, all chosen from the four and a half centuries running from the invention of printing to the year 1900. Smith classified his selections into the fields of numbers, algebra, geometry, probability, and calculus, and then arranged those in each field chronologically. Midonick has arranged her 54 selections in an alphabetical order by author. It is interesting that there is an overlap of only a half dozen (or less) selections in the two collections! Even the illustrations are different, for Midonick has reproduced pages and parts of original sources, whereas Smith inserted portraits of some of the eminent mathematicians. In general, Midonick's historical sketches are longer, more detailed, and more serviceable than Smith's. In both works, all selections appear in English, with meritorious translations where required. Smith's book contains 701 pages, including an index; Midonick's work contains 820 pages, but no index.

All who are interested in mathematics per se, its teaching or its history, are indebted to Midonick, and will be very pleased to add her source collection to Smith's. Finally, the publisher is to be congratulated on having produced a fine-looking book.

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Biological Systems

The Structure and Properties of Biomolecules and Biological Systems. J. Duchesne, Ed. Interscience (Wiley), New York, 1964. xii + 754 pp. Illus. $27.50.

This book, volume 7 in the series Advances in Chemical Physics, continues the pattern set in the previous issues by presenting a series of timely articles in which each author discusses largely his own views of a subject, rather than attempting a comprehensive literature review. (Among the 18 articles in the present volume there are only a few exceptions that might more properly be classified as general reviews.) However, whereas in the earlier volumes no attempt was made to correlate the articles in a given volume, the latest addition, which is almost twice as long as most of its predecessors, is given over entirely to biological systems. It is not clear whether the decision to devote an entire volume to one class of systems heralds a new trend for this series or represents an expression of the view that biological systems must be considered apart from the general area of chemical physics. Some readers may prefer this more unified approach; it is my feeling, however, that the volume as a whole suffers in comparison with earlier ones in the series because too many articles are included in an apparent attempt to give a comprehensive treatment of biological systems.

One other minor annoyance is the deletion of the dates on which the manuscripts were received. In the previous volumes I found this feature helpful in placing the articles in perspective.

Despite these criticisms as to format, most of the articles are interesting and well written. Space precludes detailed reviews, or even a listing of all titles. There is a brief introduction (Szent-Györgyi); one article on quantum mechanical methods (Fernandez-Alonso); four dealing mainly with the theoretical aspects of nucleic acids (Hoffmann and Ladik), electronic properties (Douzou and Sadron), infrared spectra (Shimanouchi and others), and photoprotection (Jagger); three articles on metal porphyrins and hemoproteins (Braterman, Davies, and Williams; Kotani; and Schoffa); four dealing primarily with applications of magnetic resonance (Jardetzky, Smaller, Ehrenberg, and Nicolau); and one each on thermal effects (Pollard), water adsorption on proteins (Eley and Leslie), radiation of proteins (Braams and Van Herpen), electronic conduction (Kearns), infrared spectroscopy (Lecomte), and enzyme action (Walter).

There is remarkably little duplication among these articles, and the editor has provided a comprehensive author and subject index. I noted few typographical errors; except for an incomprehensible table on page 205, most of these are minor. The high price will preclude many individual purchases of this book, but the volume is clearly worthy of inclusion in any science library.

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