sented when necessary, but only to illuminate or justify simpler arguments. Such a book must, of course, be incomplete, even though the approach is downright refreshing.

The chief topics covered are magnetism, superconductivity (including post-BCS), semiconductors, electrical and thermal properties of metals and alloys, and thermal properties of insulators. The study of specific heats is exhumed and shown to have post-dark age utility owing to its application as an introduction to an enormous variety of phenomena. Methods for studying Fermi surfaces are interlarded throughout the book, but by anyone's standards receive less emphasis than they should. A chapter on low-temperature mechanical properties is included, but I find the treatment disappointing. Those who contemplate using the book as background material in a formal course might cavil at the author's choice of topics. This incompleteness is amply balanced by the physical insights that both students and experts will gain from the volume.

The author's style is felicitous, holding Britishisms (whilst and the like) to a minimum, and the book is done up with the usual high quality of Oxford University Press. However, the expert will notice the putative Oxford-Cambridge habit of citing only Oxford-Cambridge research unless recognition of outsiders is absolutely necessary. This has the result that for a book published in 1963 the treatment of a few topics, which I know are of intimate present-day concern to the author, seems curiously outdated.

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Chemistry

Cosmetic Science, 1962. Proceedings of the Second Congress of the International Federation of Societies of Cosmetic Chemists, London, 1962. A. W. Middleton, Ed. Pergamon, London; Macmillan, New York, 1963. xvi + 270 pp. Illus. $12.50.

This book is a compilation of papers presented at the Second Congress of the International Federation of Cosmetic Chemists. The papers were contributed by representatives from nearly a dozen countries and cover subjects pertaining to cosmetic science; they range from analytical tests applicable in production control to methods for determining the performance of skin secretions under normal conditions as well as in the presence of certain compounds or preparations.

This book has been made easily readable by heading each paper with a concise abstract. The discussion at the end of each article gives the reader the benefit of reading the comments made by those who heard the paper delivered. The range of subjects is so diffuse that in a limited space it is impossible to provide an overall summary of the contents.

Many of the tests seek to apply very precise methods of measuring to samples that do not lend themselves to such precision. For example—while it is in a molten condition lipstick gradually changes color. Samples taken at short intervals would differ. Color measurement which is more precise than the sample warrants gives the reader a wrong impression of the degree of accuracy that can be obtained. This same criticism is true with respect to many of the papers in this book.

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Mathematics

Continued Fractions. A. Ya. Khinchin, Translated from the third Russian edition (Moscow, 1961) by Scripta Technica. University of Chicago Press, Chicago, 1964. xii + 95 pp. Illus. Paper, $1.95; cloth, $5.

This little book by a great Russian expositor is an interesting introduction to a generally neglected but significant subject. The casual reader may be discouraged by the blunt introduction of a formal apparatus having little intuitive connection with fractions. But he can quickly recover by writing down a few finite continued fractions and using them to put meat on the formal skeleton. He will soon see that the notation serves to avoid the unmanageable clumsiness of compound fractions, and the payoff comes in chapter 2 on the representation of numbers. Here the reader will get a good idea of the importance of continued fractions and their deep connection with the properties of real numbers. The third chapter, which occupies the second half of the book, cannot be fully understood without some familiarity with the elements of measure theory. However, the reader without such a background will get some feeling for the problem of determining the relative frequency of real numbers enjoying special kinds of rational approximations and continued fraction expansions.

There are a number of errors that indicate carelessness in translation, editing, and proofreading, but they do not seriously detract from the clarity and charm of the exposition.

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Marine Biology

Plankton and Productivity in the Oceans. John E. G. Raymont. Pergamon, London; Macmillan, New York, 1963. viii + 660 pp. Illus. $15.

This book, one of the series of monographs on pure and applied biology, is concerned primarily with the North Atlantic ocean and is based for the most part on literature in which that part of the ocean is considered. Apparently only English versions of the extensive Soviet literature were consulted. Of course, most of the work has been done in the Atlantic, and the general features elucidated are applicable to other temperate seas. The book will serve as a good starting point for students of plankton biology and as a complement to work on fisheries. The author fully recognizes that one cannot consider plankton and productivity in the oceans without reference to the benthos, and he concludes with an excellent chapter on the bottom fauna and nekton, again, however, without serious consideration of fish and fisheries. Nevertheless the book is a valuable summary of a large literature, and it will be useful to marine biologists everywhere.

Although there are many illustrations, most of those that represent organisms lack sufficient detail or are poorly reproduced. While the book is not intended to be a guide to plankton as such, the poor quality of reproduction of many of the figures is an unnecessary economy on the part of the publisher, and it detracts from the value of an expensive book.

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