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Shannon sampling theorem, referring only to the Russian rediscovery of this hoary result. There is no discussion of the analytic properties of impedance functions, which would be a logical addition to a book dealing with spectral analysis.

Perhaps the best chapter is that dealing with the foundations of spectra measurement. Without delving into specific hardware problems Kharkevich manages to give a good appreciation of the advantages and limitations of measurements using resonance devices. The last chapter, on the spectra of random functions, contains little that is not already available in standard English language texts, except for a slight discussion of nonstationary processes. The translation does not read well in places—it is obviously too literal when it uses "statistic spectrum" for "spectral density" and "time characteristic" for "transfer function".

Organic Electronic Spectral Data. Vol. 1 (1946–1952), Mortimer J. Kamlet, ed., 1208 pp., \$28.50. Vol. 2 (1946–1952), Herbert E. Ungnade, ed., 919 pp., \$17.50. Interscience Publishers, Inc., New York, 1960. *Reviewed by Stuart A. Rice, Institute for the Study of Metals, The University of Chicago.*

LITTLE can be said about these two volumes. They represent a compilation chiefly valuable to the organic chemist but probably also of help to those investigators interested in the quantum theory of molecules. The tabulated data are easy to use and the references easy to find. The volumes will be useful additions to a research library.

Seeing Colours. By J. Bergmans. Transl. from Dutch by T. Holmes. 80 pp. The Macmillan Co., New York, 1960. \$3.00. *Reviewed by W. T. Wintringham, Bell Telephone Laboratories.*

IT was a surprise to this reviewer to read the following paragraph from the preface of *Seeing Colours*:

It would be a source of great satisfaction to all those who have collaborated in the preparation of this little book if grammar school teachers would introduce the contents to their pupils, even though the higher school leaving certificate examinations do not require this. This could be a first step towards making the knowledge of human vision a part of the general education.

However, discussion with an associate who was educated in Holland brought out that a grammar school corresponds roughly to Grades 7 through 13 in the American school system. Hence, it does not seem too unreasonable that the use of this book be suggested for teaching in "grammar school".

Probably it would be unwise to recommend the use of this book within the American educational system. The fact that the author has introduced his own terminology would make this an unsatisfactory introduction to the broad field of color measurement and specification. For example, the author talks about "colour according to the eye" and contrasts it with "object

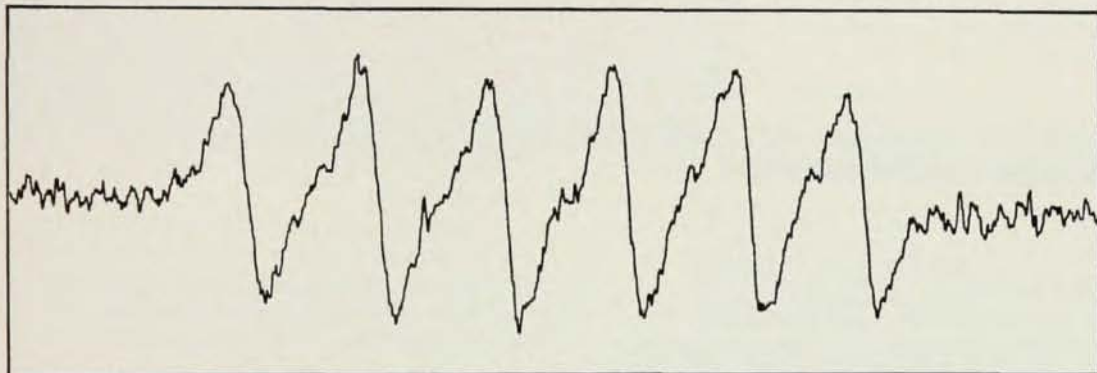
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colour". This in itself might not be too disastrous. However, by "colour according to the eye", it appears that chromaticity is meant; that is, the whole discussion in this book is based not on the tristimulus values but on the chromaticities of colors. In American practice, however, the word color includes both chromaticity and luminance.

The following quotation illustrates another shortcoming of this book.

We must point out here that although it is scientifically established that all normal trichromats possess, in their eyes, three types of colour-sensitive receptors, in good agreement with each other from person to person, it has not yet proved possible to determine precisely the sensitivity of each of these receptor-types.

A cursory examination of the literature on color vision would have revealed to the author that there are widely held theories (such as the opponent-color theory) which do not depend on a set of red-, green-, blue-receptors; yet the quoted paragraph is a summary of earlier statements which would lead the reader to believe that this was the only theory of color vision.

The best part of this book seems to be Color Plate 2 which illustrates the color rendering of several color chips under four different illuminations of the same chromaticity. The apparatus used for this demonstration is simple and the experiment might be a useful one if it were included in a course in physics at the college-freshman level.

It is unfortunate that in a book intended for use as a text the name of the International Commission on Illumination has been abbreviated to ICI. In 1951, the CIE recommended that the abbreviation ICI never be used as a designation for that body.

Computer Logic. The Functional Design of Digital Computers. By Ivan Flores. 458 pp. Prentice-Hall, Inc., Englewood Cliffs, N. J., 1960. \$12.00. *Reviewed by John McCarthy, Massachusetts Institute of Technology, Computation Center.*

WHILE it covers a number of topics in the use and construction of digital computers, the main emphasis in this book is on the hardware of business computers. It gives general information on logical design and detailed information on how the various kinds of memory, arithmetic elements, control elements, and input-output devices work. The detailed treatment of specific devices makes early obsolescence inevitable, but the treatment of a number of topics seems more out of date than necessary for a book published in 1960. The hypothetical computer "polyvac" used in examples is especially old-fashioned and so is the treatment of programming. Such topics as floating point arithmetic, magnetic disk storage, symbolic assembly programs, compilers, interrupt systems, and time-sharing are not mentioned. The main strength of the book is the detailed treatment of input-output hardware which, though obsolete, is unfortunately still with us.