

discussion, moreover, sparkles with physical applications and illustrations. Following this are an adequate list of references and appendixes on infinite series.

Fundamentals of Mathematical Physics can be recommended as a worthy supplement to courses on electromagnetic theory and other branches of classical physics, especially if these are heavily populated with majors in the engineering sciences. The book can also serve well as a mathematical reference for applied physicists and as a textbook for traditional courses on mathematical physics at the undergraduate level. But be reminded that the way of tradition may yield a joyless physics, starved of the delicious arcana that glue the science together. Indeed, how will the students ever know that a vector space is only an Abelian group with an operator and that physical reality is a ray in Hilbert space?

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Thin solid films

PHYSICS OF THIN FILMS: ADVANCES IN RESEARCH AND DEVELOPMENT, Vol. 3. G. Haas, R. E. Thun, eds. 318 pp. Academic Press, New York, 1966. \$14.00

by Joseph G. Hoffman

The immediate applicability of thin solid films is indicated by the fact that five of the six contributors to this book are at industrial laboratories. The sixth is at Case Western Reserve. Moreover, four papers describe the practical problems of methods and techniques of film making. Although the title of this "Advances" is *Physics of Thin Films*, one should note that the 19 papers in the first three volumes and 14 papers projected for future volumes deal with dry solid state. There is no reference to aqueous or liquid films. The liquid film is notable for its profound role in biological systems. Thin metal or dry dielectric films are, however, of great importance to almost every scientist, for they will influence his work regardless of his specialty. Hence this series may go on indefinitely without having to broach liquid films.

K. H. Behrndt (Bell Labs) reviews

RP--a lab assistant that's a whiz at instrumentation setups

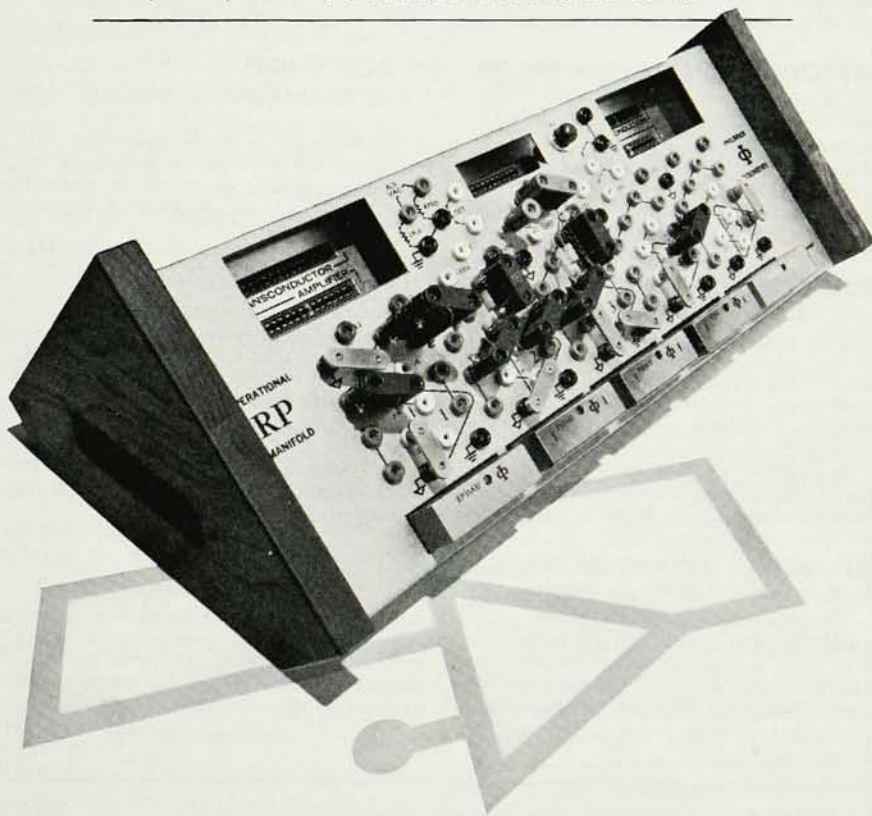
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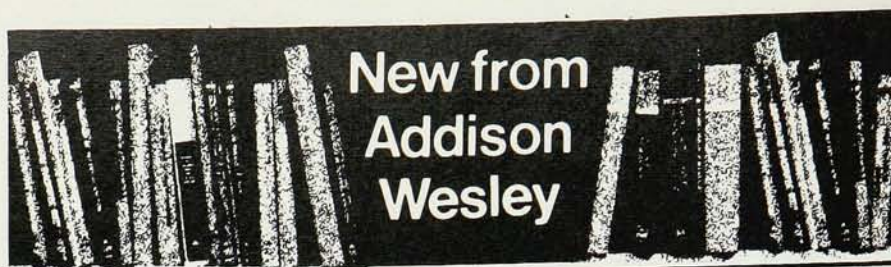
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Features of the book include a broad coverage of topics and the choice of physically interesting problems. The book is intended to be useful to both U. S. and foreign students. The latter will find it particularly helpful if they intend to pursue graduate studies in America.

263 pp. Hardbound: \$8.50 Paperbound: \$4.95

MATHEMATICAL PHYSICS

by EUGENE BUTKOV, *St. John's University, Jamaica, Long Island*

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In Press

FUNDAMENTAL THERMODYNAMICS

by GABRIEL WEINREICH, *University of Michigan*

This book is designed as a modern text on classical thermodynamics. The presentation is traditional in that it builds on intuitive knowledge of thermal phenomena rather than starting from abstract and seemingly unmotivated axioms.

It differs from other treatments, however, in avoiding many incidental preoccupations that have, for historical reasons, become part of the subject. There is strong emphasis on the practical usefulness of the subject as a way of predicting the behavior of real systems.

In Press

INTRODUCTION TO THE THEORY OF RELATIVITY

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In Press

FOUNDATIONS OF QUANTUM MECHANICS

by J. M. JAUCH, *University of Geneva, Switzerland*

This advanced text is designed to acquaint the reader with the modern approach to the subject and with the mathematical tools used in this approach. The book, which uses modern mathematical language to a greater degree than is customary in other texts, is chiefly concerned with conceptual foundations rather than applications or approximations. The discussion is restricted to the general aspects of nonrelativistic theory.

In addition to the standard reference material, this book provides the student with the results of recent research on the foundations of quantum mechanics, which has been conducted in Geneva during the past few years.

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by J. J. SAKURAI, *University of Chicago*

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336 pp. 52 illus. \$15.00

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THE SIGN OF
EXCELLENCE

"Film-Thickness and Deposition Rate Monitoring Devices and Techniques for Producing Films of Uniform Thickness." L. I. Maissel (IBM) describes "The Deposition of Thin Films by Cathode Sputtering," recently a much exploited method. Also, recent work on "Gas-Phase Deposition of Insulating Films" is described by L. V. Gregor (IBM). The II-VI compounds with their special electrooptical properties will be of increasingly wide interest, as A. Vecht (Associated Electrical Industries, England) notes in his article on "Methods of Activating and Recrystallizing Thin Films of II-VI Compounds." Basic studies are summarized in the paper "The Mechanical Properties of Thin Condensed Films" by Richard W. Hoffman (Case). He succeeds in marshaling the available data and showing how profoundly different the properties of matter are in thin films. The last paper, by Donald E. Bode (Hughes Aircraft), on "Lead Salt Detectors," refers to the most important group of infrared detectors.

This volume, like the first two in the series, has excellent format, generous figures, photographs, references, a table of contents, author and subject indexes. It is highly commendable because it conveys new material on a fascinating subject for scientists in general as well as for thin-film specialists.

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How we see

L'OPTIQUE: SCIENCE DE LA VISION. By Vasco Ronchi. 158 pp. Masson, Paris, 1966. Paper 32 F.

by L. Marton

At the time I agreed to review Ronchi's book, I assumed that it was a French translation of his earlier book. I was aware of a book having been published under the same title in Italian, in 1955. I have also studied to some extent its English translation, which appeared in 1957. My first move, therefore, was to look back in *PHYSICS TODAY* for a review of either the original or the translation. To my surprise it was not reviewed. My second surprise came when I looked for the name of the translator of the French book. Nobody is indicated, thus implying that Ronchi, who is director of the Institute of Optics of Italy