

# BOOKS

**Wave Mechanics and Valency**, J. W. Linnett, Methuen and Company, Ltd., London, England; John Wiley and Sons, New York (1960). 184 pages + xii. \$3.00.

The person who has studied quantum mechanics in school but has not kept up with the subject will find reading Dr. Linnett's book a pleasant and profitable experience. The presentations are in many places quite novel, and the illustrative examples are frequently different from those given in the standard text books, for example, the use of the "particle-on-a-ring" problem to discuss the quantization of angular momentum as well as variational and perturbation procedures.

The person who has never studied any quantum mechanics will find this book a useful introduction to the subject. As for mathematical background, a knowledge of calculus and ordinary differential equations will suffice. Dr. Linnett uses the complete mathematical solution of several elementary problems as the basis for his entire subsequent discussion. In this respect his treatment is different from that given in other elementary text book discussions on chemical bonds, where intuitive and pictorial approaches are used.

It is refreshing to see a book so cleverly conceived and originally presented. Chemical engineers who are working in such areas as physical properties, reaction kinetics, and applied statistical mechanics would profit from reading this book.

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**Experimental Cryophysics**, F. E. Hoare, L. C. Jackson, and N. Kurti, editors, Butterworth and Company, Ltd., London, England (1961). 404 pages. \$14.00.

This book with nineteen contributors deals with the techniques of laboratory experimentation at low temperatures. The first nine chapters were written by six authors, and the tenth and last chapter is the work of thirteen authors. The scope of the book is indicated by the list of chapter titles: Low Temperature Laboratories, The Mathematics of Gas Liquefaction and Liquefier Design, Liquid Air Production, The Production of Liquid Hydrogen and Helium, Ancillary Equipment for the Production of Liquid Hydrogen and Liquid Helium, Materials and Methods for the Construction of Low Temperature Apparatus, Storage and Transfer of Liquefied Gases, Magnetic Cooling, Low Temperature Thermometry, and Cryogenic Techniques and Miscellaneous Applications.

In addition there is an appendix with twenty-four tables of useful information dealing with properties such as thermal data, density, thermal conductivity, vapor

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