

lusion to the existence of) concerning the magnitude of the nuclear coupling constant and the β -decay interaction constant. These play an analogous role in nuclear forces and β -decay to that played by e in the electromagnetic interaction. Though it is true that they are not constants in the sense that their values are currently known, they are parameters of fundamental importance in nuclear physics and their values will certainly be prominent in some future listing of physical constants. It would appear that some statement concerning their order of magnitude and their role could have been made. On the nuclear scale the book seems lacking.

On the non-nuclear scale (omitting chapter 4) "The Fundamental Constants of Physics" is satisfactory. Chapters 2, 3 and 5, which are primarily historical, make very interesting, and in some cases illuminating, reading. Chapter 6 is an adequate summary of the postwar advances (but requires more than a casual acquaintance with modern physics for full appreciation) and chapter 7 on the method of least squares is a highly lucid account of this technique which is well worth reading. The last chapter renders an account of the application of this method to the adjustment of the atomic constants and contains tables of the adjusted values which are quite a valuable adjunct.

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Foam Stability. A Fundamental Investigation of the Factors Controlling the Stability of Foams. By DR. A. J. DE-VRIES, former Staff-member of the Rubber-Stichting. Rubber-Stichting, Oostsingel 178, Delft, The Netherlands. 1957. 88 pp. 16 X 24 cm. Price, hfl. 6.—

This small book contains detailed treatment of the fundamental principles relating to the highly specialized topic of the structure and stability of foams. The author has had extensive experience in the Rubber-Stichting Laboratories at Delft where he has been engaged in extensive researches on properties of foam including foam stability and gelation of foam. The general trend of his researches might be anticipated when one considers the fact that he has had close association with the Colloid Chemistry center at Utrecht.

A fairly good idea of the general contents of this book can be obtained from a glance at its table of contents. The work is divided into five parts as follows: I, Structure and stability of foams; II, Gas diffusion in foams; III, Spontaneous foam destabilization resulting from gas diffusion; IV, Kinetics and activation energy of film rupture; V, Mechanism of film rupture.

The author speaks with authority on the probable mechanism of the physical changes which occur within foams such as bubble growth, bubble shrinkage, bubble collapse etc. These topics are presented and directly related to the influence of surface tension, interfacial tension and changes in concentration through the process of adsorption. The changes postulated and observed are subjected to mathematical treatment. The author presents considerable experimental data to illustrate and to support the theoretical postulates presented.

This book is well written and will be of special value to those who have interest in the rather limited field of highly viscous foams such as are represented by foam-rubber and the like. For this limited field this book represents a very worthwhile contribution.

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BOOKS RECEIVED

April 10, 1958-May 10, 1958

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J. J. HARWOOD, HENRY H. HAUSNER, J. G. MORSE AND W. G. RAUCH, Edited by. "The Effects of Radiation on Materials." Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y. 1958. 355 pp. \$10.50.

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