

space than is at my disposal, so that a review of these advances as well as those very important ones resulting from the application of physical chemistry to biology must be postponed to some future date, at which time the many errors of omission of which I am conscious may, I hope, be amended.

WASHINGTON, D. C.

NEW BOOKS.

Einführung in die Chemie. Ein Lehrbuch für höhere Lehranstalten und zum Selbstunterricht. By WILHELM OSTWALD, Stuttgart, 1910: Franckh'sche Verlagshandlung. pp. 238; 74 illustrations in the text. Cloth, 3 Marks net.

In this textbook it is the main object of Professor Ostwald to educate the student to "chemical thinking," to supply a basis for chemical understanding and to deepen the logical analysis of the chemical phenomena. Contrary to the methods pursued in most other textbooks, Professor Ostwald prefers to give only the data absolutely necessary for the understanding of the scientific consequences and to describe only the phenomena absolutely essential for grasping the real educational value of chemistry.

This is quite a new departure, since in most of the textbooks such a lot of material is presented, that the students get the impression that by learning the contents of the respective book he will know all about chemistry. Ostwald's book, on the contrary, incites to further thinking and impresses the student with what may be called scientific modesty. The first five chapters contain a discussion of matter, mixtures, physical transformations, solutions and chemical processes. Chapters 6 to 13 describe the metallic and non-metallic elements and compounds in a clear and concise, *i. e.*, really Ostwaldian manner. The book will prove as useful to the teacher as to the student.

OSKAR NAGEL.

Introduction to Physical Chemistry. By HARRY C. JONES, Professor of Physical Chemistry in the Johns Hopkins University. New York: The Macmillan Co. 1910. xv + 279 pp. Price, \$1.60 net.

So far as we know, this is the most recent work from Prof. Jones' pen. Using 'recent' as he uses it, however, we could not feel secure in this statement. "Quite recently" on p. 47 refers to 1895, and on p. 113 to 1899. The epoch of writing may, however, perhaps be fixed from internal evidence for (p. 136) 'Berthelot's experimental work has continued up to the present' and "van't Hoff's paper on the subject of solid solutions appeared about eleven years ago." The purpose of the book is sufficiently obvious from the title. Symptoms of adaptations from the author's larger works appear at times rather prominently. Thus we find, on p. 67, two liquids becoming miscible in all proportions, "as we have just seen." We have not, however, seen it in the present volume.