of fermentation and of the physiological processes. To those who are interested in these branches, as well as to the working organic chemist, and the teacher who is called on to give more than a bare outline of the subject, as well as to every one who wishes to keep up with the development of the science, this work may be heartily recommended. H. N. STOKES.

A TEXT-BOOK OF ORGANIC CHEMISTRY. BY A. BERNTHSEN, PH. D., DIRECTOR OF THE SCIENTIFIC DEPARTMENT IN THE CHIEF LABORATORY OF THE BADEN ANILINE AND ALKALI MANUFACTORY, LUDWIGSHAFEN-AM-RHEIN; FORMERLY PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF HEIDELBERG. TRANSLATED BY GEORGE MCGOWAN, PH. D. pp. 596. New York: D. Van Nostrand Co. 1894. Price, $2.50.

This book is a translation of the fourth German edition, appearing as the second English edition. The usefulness of Dr. Bernthsen's work is indicated by the fact that the fourth edition is called for within the brief space of six years. A comparison of the former and present editions impresses one with the tremendous activity and rapid development that have been going on recently in this field of chemical research. While this edition follows closely the plan of the previous ones, every part has been carefully revised and several chapters have been entirely rewritten, in order to present the most recent knowledge about the subjects considered. Among such specially revised subjects may be mentioned the following: stereochemical isomerism; the determination of molecular weights by physical methods; aldoximes and ketoximes; carbohydrates; ketonic acids, di-ketones, etc.; special benzene formulas; aromatic compounds of phosphorus, etc.; hydrogenized phthalic acids; dyes of the diphenylene-methane oxide, phenazine, oxazine, and thiazine groups; certain naphthalene derivatives; the quinoline and acridine groups; alkaloids, especially the derivatives of tropine; the terpenes and camphors. The system of international nomenclature adopted at the recent Geneva convention of chemists is used in connection with the former names. The book, as a whole, can well be pronounced a comprehensive embodiment of our present knowledge of the essential facts and theories of the organic chemistry of to-day. The author has made a very judicious use of references to original articles which have a historic value. There is a valuable index of nearly thirty pages.

While this book is intended primarily for the use of students, it can hardly be recommended as a desirable work for those just entering upon the study of organic chemistry, since it is much too full for such. It will be found most helpful to those who have such a knowledge of the subject as can be obtained from a work like Remsen's little book on organic chemistry. It will also be a most grateful help to those who are engaged in various lines of chemical work and who desire to keep informed of the present state of knowledge of organic chemistry, but who have not time or means to get their knowledge at first hand from the literature of the various chemical journals. L. L. VAN SLYKE.

MANUAL OF CHEMISTRY. BY W. SIMON, PH.D., M.D., ETC. Fifth Edition. pp. 502. Lea Bros. & Co. 1895.

Professor Simon has found it desirable to issue a revised edition of what is correctly termed a manual of chemistry. When to the title is added that it is especially a manual for medical students, the experienced reader knows tolerably well what advantages and shortcomings are to be looked for; and if the reviewer adds that the advantages are well represented, and the shortcomings are such as are identical to the plan of the book, it will be easy to form a general idea of its character.

The first fifty pages go over the theory of chemistry from the most elementary definitions to a discussion of the periodic law. Now it is manifestly impossible to give in a couple of hours' reading a satisfactory treatise on such a subject. On the other hand, it is desirable for medical students to have some knowledge of chemical theory; and as the medical student's chemical library consists too often of but one book, it is necessary to put the main facts in that book. It is, of course, understood that the book is to be supplemented by an extended course of lectures, and is intended to give, first, elementary knowledge to the young student, and second, a repository of all the principal things he subsequently learns, for future reference. Now this book gives these things very well indeed; and what has been said of the theoretical part applies to the whole book. It goes into descriptive chemistry, and analysis, qualitative and quantitative, and physiological chemistry, and treats of all the chemicals men-