FERMENTATION ORGANISMS: A Laboratory Handbook. By ALB. KLÖCKER. Translated from the German by G. E. ALLEN and J. H. MILLAR. New York: Longmans, Green and Co. 1903. xx and 392 pp. Price, 12s. net.

The title of this book is misleading, since it does not deal with fermentations in general, but only with the alcoholic fermentations or those which influence the progress of the same.

The scope of the field covered is well stated by the author in his preface as follows: "The contents of the present work are divided into three sections. The first of these contains a description of the manner in which the science of the organisms of fermentation has gradually developed; at the same time an indication is given of the most important steps which have marked the progress of our science. The second section describes the fitting up of the laboratory and all that is necessary for conducting work. Laboratory methods are then explained, special attention being given to the preparation of pure yeast cultures in large quantities. Finally, the third section treats of the most important micro-organisms of the alcoholic fermentation industry. The book thus deals with that domain in which Hansen has opened up so many new paths."

The book is an excellent one and discusses the subject in clear and concise language. The translators, as well as the publishers, have taken great pains and have admirably succeeded in making the English translation very attractive.

Teachers and students of Technical Micro-biology, in the English speaking countries, will welcome this translation as an indispensable aid. Others working in allied lines, as in biology, bacteriology, pathology, hygiene and chemistry, will find in it much that is helpful and suggestive.

One of the most important features of the work is the very complete bibliography which occupies the last forty pages of the book. The bibliography embraces the titles of the most important researches and contains excellent explanatory notes.

W. D. FROST.

ELEMENTS OF INORGANIC CHEMISTRY. By HARRY C. JONES. The Macmillan Company, 1903. 242 pp.

A glance at the texts on general chemistry of the past fifteen or twenty years leads one to the conclusion that it is not an easy task for a writer to break away from the old order of things and to adopt the new. The discoveries and the developments along

various lines, and especially along the line of physical chemistry, have changed to a certain extent some of the fundamental principles of the science. Nothwithstanding this fact, few have ventured to embody these new theories in a general text, a majority preferring rather to hold to the older theories which have done such great service in the development of the science than to adopt the newer ones, even though they appear to harmonize more closely with the real facts.

Whether or not the time has come for the discarding of the old and the adoption of the new is an open question. It does seem certain, however, that if the science is to grow in the future, the newer theories must be recognized and embodied in our new text-books.

In the "Elements of Inorganic Chemistry," by Harry C. Jones, one finds the embodiment of both the old and the new. In addition to the older theories, the newer ones are taken up and briefly but clearly discussed. What was said in the preface of his larger work, "Principles of Inorganic Chemistry," concerning the aim of the book, applies also to the "Elements of Inorganic Chemistry." "The aim of the book is to add to the older generalizations those recently discovered, and to apply them to the phenomena of inorganic chemistry in such a way that they may form an integral part of the subject, at the same time, be intelligible to the student."

The general arrangement of the subject-matter is much the same as that found in a few of the best texts. The experimental work is well selected and follows each chapter. The book will, therefore, serve both as a text and a laboratory manual. The illustrations are familiar and quite numerous.

The most characteristic feature of the book is the brief, but exceptionally clear introduction to the new theories. More space has been given to these theories than will be found in any other general text yet published.

While the author evidently believes firmly that chemistry is to be a mathematical science, he nevertheless very wisely avoids using anything which is not within the understanding of the average student. The book seems simple enough for high-school text, and yet it is quite comprehensive enough for the average college.

G. B. FRANKFORTER.