

of theoretical chemistry, the older doctrines have attained a consequent and necessary extension, by the same path as that by which the science has made its advances for a century. Scholars who desire to pull down recent additions to the chemical edifice will learn, thinks the author, that their success would involve in ruin the adjacent walls of the older structure, a result which these scholars regard as neither desirable nor possible. Arrhenius asserts that the material and the workmanship of the chemical builders of the day are worthy of Boyle and Lavoisier and Richter and Dalton. In details, methods of workmanship change, for better tools are available; and in details, the older parts of the edifice undergo an almost unconscious architectural restoration, which brings their aspect into perfect harmony with that of the newer additions.

The great facility with which this adjustment of the older doctrines of chemistry to the more recent takes place is asserted to be the best evidence of the soundness of recent ideas, and the lecturer hopes to prove that the more recent developments of theory sustain this test.

The pages of the little book are readable, suggestive, clear. It would be hard to produce a more valuable short account of chemical theories. The sense of proportion shown throughout is well illustrated by the fact that electrolytic dissociation is treated in less than one-tenth of the whole number of pages.

Even when chemical theory shall have outgrown this treatise, it will still be a valued record of the course of thought pursued by the discoverer of the theory of electrolytic dissociation.

EDWARD W. MORLEY.

THE INFLUENCE OF MOLECULAR CONSTITUTION UPON THE INTERNAL FRICTION OF GASES. By FREDERICK MALLING PEDERSEN. Dissertation. 1906. New York: D. Van Nostrand Co.

After an extensive historical review, the author describes a simple form of apparatus for determining the internal friction of vapors at 100°. At this temperature the coefficient of friction was determined for ten ethers and from the values thus found the author calculates the molecular volumes by means of the formula of L. Meyer. These molecular volumes agree roughly with those calculated by Kopp's method, but while the latter method gives identical values for isomeric ethers, the molecular volumes calcu-

lated from the coefficient of internal friction were found in all cases to be greater for the normal propyl than for the isopropyl ethers.

G. N. LEWIS.

KURZES REPETITORIUM DER ORGANISCHEN CHEMIE. Für Studierende bearbeitet von DR. KURT DAMMANN. Freiburg in Breisgau: Herdersche Verlagshandlung. 1906. (B. Herder, agent, St. Louis.) 1—xiii+256 pp. Price, \$1.25 net.

As its name implies this book contains condensed statements of the more important facts in organic chemistry. These are arranged, both typographically and as to descriptive matter, in convenient form for students preparing for an examination in the subject. The book does not purport to be a text-book and, consequently, the author contents himself with giving as briefly as possible the general formula, methods of preparation, and characteristic reactions of the different classes of organic compounds. In small print are given details concerning the important members of the various classes. The compilation has been well done. The convenient size and shape of the book, which can be carried in the pocket, the simplicity of its arrangement, and the fact that the material which has been inserted has been selected with discrimination, will make the book of value for the purpose for which it was written.

J. F. NORRIS.

THE CYANIDE PROCESS. By ALFRED S. MILLER. New York: John Wiley and Sons. 1906. Price, \$1.00.

Much has been written describing the cyanide process and its chemistry, yet there would seem to be a place for just such a little treatise as that here presented.

The first two chapters contain a general description of the process and the elements commonly met with in gold and silver ores which interfere with its successful working. Chapter three contains the chemistry of the process, methods of analyses and instructions for the proper control of the process.

Chapter four includes methods for the determination of the applicability of the cyanide process to the treatment of an ore. Chapter five includes suggestions relating more particularly to the practical operation of the process, and the book closes with a chapter briefly describing some of the numerous modifications of the process patented, and otherwise.

The book is well printed and illustrated. The style is simple