

inductive method to the teaching of inorganic chemistry. From simple and well chosen experiments, the fundamental principles are derived. Each set of experiments is chosen with the idea of illustrating some particular law, and is given in advance of the statement of the law itself. The laws of definite and multiple proportions, and Avogadro's law, are all established by experiment before the detailed study of the elements is begun. The order in which the separate elements are taken up is unusual. Beginning with hydrogen, the elements fluorine, chlorine, bromine, and iodine are studied, and then their hydrogen compounds. Subsequently oxygen, sulphur, selenium, and tellurium are taken up, and followed by their hydrogen compounds. Then comes the group of trivalent elements, nitrogen, phosphorus, arsenic, followed by the tetravalent carbon and silicon.

The statements in regard to the occurrence, preparation, properties, and uses of the separate elements are concise, accurate, and comprehensive. Separate theoretical considerations such as the dissociation of substances by heat, the determination of molecular weights, etc., are discussed in appropriate places, which tend to emphasize them and to show their applicability. The book contains the most recent discoveries. The illustrations are frequent, and exceptionally good. HENRY FAY.

LEXIKON DER KOHLENSTOFF VERBINDUNGEN. VON M. M. Richter. Zweite Auflage der "Tabellen der Kohlenstoff-Verbindungen nach deren empirischer Zusammensetzung geordnet." Hamburg und Leipzig: Leopold Voss; New York: G. E. Stechert. pp. about 3100. Price, 39 Lieferungen at M. 1.80 each.

It is, apparently, impossible to secure the adoption of a uniform system of nomenclature for carbon compounds. Indeed some chemists claim, and with good reason, that complete uniformity is not desirable. It becomes, therefore, every year more difficult to be sure of finding, in chemical literature, what is known about particular compounds. The work before us furnishes a lexicon of the carbon compounds arranged in accordance with their empirical formulas. The order is, first, that of the number of carbon atoms, second, that of the number of elements, third that of the elements other than carbon in the order:

H O N Cl Br I F S P Al.....Zr.

The only exception to a rigid use of the above classification

is in the case of salts, which are given under the corresponding acids or bases. After each empirical formula is given the percentage composition for all compounds containing only carbon, hydrogen, oxygen, and nitrogen. Then follows a list of all known isomers of the given composition, giving melting-points and boiling-points, references to the literature, and finally the volume and page of the last edition of "Beilstein" where the compound is described. The number of compounds included in the work is about 75,000, while the last edition of "Beilstein" includes only 57,000.

The usefulness of the principle used for registering organic compounds is so apparent that it has been adopted for the indexes of the *Berichte* and of Liebig's *Annalen*.

The literature is fully covered to the end of 1898, and yearly supplements are promised.

A few errors have been detected, but mostly where confusion exists in the literature and a critical knowledge of the relations involved was necessary to avoid mistake. Even such errors are probably rare and will seldom cause trouble in using the work.

The author complains that the failure to give empirical formulas, on the part of many writers, has added greatly to his labors and requests that such formulas be always given. In the opinion of the writer it would be a misfortune if this request should lead to the use of fewer structural formulas. The needs and advantage of the average reader are of greater importance than the time of the lexicographer.

WILLIAM A. NOYES.

THE URINE AND THE CLINICAL CHEMISTRY OF THE GASTRIC CONTENTS, THE COMMON POISONS, AND MILK. BY J. W. HOLLAND, M.D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College of Philadelphia. Sixth edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 49 illustrations. Cloth. Price, \$1.00 net.

This syllabus for the laboratory aims to guide the student in the chemical examinations that are of service to the physician. The methods are much the same as may be found in similar works, and, while in many instances they are well selected, they include certain methods that might better be omitted or replaced by procedures which yield results of clinical value. The brief text omits much information that would add materially to the work. It is particularly desirable to indicate more definitely to what use the results obtained by the various methods are to be