

of chlorine, bromine, and iodine were split into two atoms in conformity with Avogadro's surmise in regard to the compound nature of the elementary molecules. In the same manner the vapor-density and the molecular condition of the less volatile elements, zinc, thallium, antimony, and bismuth were successfully determined at a white heat. To-day pyrochemical work is limited to a temperature of  $1,700^{\circ}$  C., because vessels of porcelain and platinum, to the use of which we are limited, fuse above that temperature.

"The possibility of performing quantitative experiments at those temperatures seemed to us, some few years ago, to be an unexpected progress, but to-day we complain that the trivial cause of a want of proper vessels forbids us to increase the temperature to  $2,000^{\circ}$  or  $3,000^{\circ}$  C. There is no doubt that we should arrive at new unthought-of facts, that the splitting of other elementary molecules would be possible, that a new chemistry would be revealed to us, if, being provided with vessels of infusible material, we could work at temperatures at which water could not exist, and at which detonating gas would be a non-inflammable mixture."

In 1885 Meyer published a monograph upon his pyrochemical investigations. In 1888 he published another monograph upon thiophene and its derivatives. At the time of his death he was engaged with his colleague, Professor Paul Jacobson, in the preparation of a manual of organic chemistry, the second volume of which approaches completion. This work, so far as published, is the best extended treatment of the subject known to the writer.

The death of Victor Meyer in the midst of his work and in the prime of life is an irreparable loss to chemistry—it is a loss that will be much lamented wherever chemistry is studied.

G. M. RICHARDSON.

SEPTEMBER 21, 1897.

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## BOOKS RECEIVED.

Electric Smelting and Refining. The Extraction and Treatment of Metals by Means of the Electric Current. Being the second edition of "Elektro-Metallurgie." By Dr. W. Borchers. Translated, with additions, by Walter G. McMillan. London: Charles Griffin & Co., Limited;

Philadelphia: J. B. Lippincott Company. 1897. xx + 416 pp. Price, \$6.50.

Cider Vinegar of Pennsylvania. By Dr. William Frear. Bulletin No. 22, Pennsylvania Department of Agriculture. Harrisburg, Pa. 27 pp.

Verzeichniss sämmtlicher Präparate, Drogen und Mineralein mit Erläuterungen. E. Merck, Darmstadt. 1897. vi + 306 pp.

Soil Moisture: A Record of the Amount of Water contained in Soils during the Crop Season of 1896. By Milton Whitney and Ralph S. Hosmer, U. S. Department of Agriculture, Division of Soils. Washington: Government Printing Office. 1897. 23 pp.

Monthly List of Publications of the U. S. Department of Agriculture, Division of Publications. Washington, D. C. September, 1897. 3 pp.

An Introductory Course in Quantitative Chemical Analysis. By Percy Norton Evans, Ph.D., Associate Professor of Chemistry in Purdue University, Lafayette, Indiana. Boston: Ginn & Company. 1897. pp. iv + 83. Price, 55 cents.

The Principles of Chemistry. By D. Mendeléeff. Translated from the Russian (Sixth Edition) by George Kamensky, A. R. S. M. Edited by T. A. Lawson, B.Sc., Ph.D. Vol. I. xviii + 621 pp. Vol. II. i + 518 pp. 1897. New York: Longmans, Green & Co. Price, 2 vols., \$10.00.

Manual of Qualitative Chemical Analysis. By the late Dr. C. Remigius Fresenius. Authorized translation by Horace L. Wells, M.A. New Edition, Thoroughly Revised, from the Sixteenth German Edition. xvii + 748 pp. 1897. New York: John Wiley & Sons. Price, \$5.00.