

decomposition and also in reference to some of the methods of separation of the rarer elements, but the chief purpose of the book is to bring students of chemistry into actual contact with a neglected series of elements, to learn to know them from their occurrence to the preparation of their derivatives and then to acquire more intimate familiarity by a study of their reactions. Let those who doubt make such a study and the reviewer is certain that they will concur with him in the statement that this book possesses a great value for all chemists. EDGAR F. SMITH.

Einführung in die Kolloidchemie. By DR. VIKTOR PÖSCHL. 47 pp. Theodor Steinkopff, Dresden. 1908.

This is intended as an introduction to colloids, for the use of students of chemistry, pharmacy, etc. The properties, nomenclature and general historical discussion of the subject cover nine pages. Following this are sixteen pages, devoted to methods of preparing specific inorganic colloidal solutions. In the former we note the absence of reference to the interesting fact Picton and Linder pointed out, *i. e.*, the quantitative relationships in coagulating power of different classes of electrolytes, and in the latter colloidal platinum is separately described, but Bredig's method of making it is here omitted, though it appears later. Five or six pages are devoted to the use of the ultramicroscope in colloidal studies. The Brownian movement is described, but the author differentiates between this and the movement of the particles of ultramicroscopic vision, which the reviewer considers incorrect. The migration of colloids under influence of the electric current is touched upon in less than a dozen lines, and the fact is merely mentioned that certain colloids precipitate each other. A score of references to the literature complete the volume. Considering the very great amount of published work on this subject and its wide interest, a still more comprehensive treatment seems warranted, even for an introduction to the subject.

W. R. WHITNEY.

Kolloidchemische Studien am Eiweiss. By W. PAULI. 1908. 28 pp. Theodor Steinkopff, Dresden.

This is a separate publication of an article in the July number of the *Zeit. f. Chem. u. Ind. der Kolloide*. A specially purified blood serum albumen which was amphoteric and did not migrate with the current, was shown to be rendered less easily coagulated by heat through the presence of salts. This effect is apparently due to the surface adsorption of salt on the colloid particles. The viscosity is also affected by the salts, in accord with this idea, while sugar by these tests does not appear to be thus adsorbed.

W. R. WHITNEY.

Grundlagen und Ergebnisse der Pflanzenchemie. Nach der Schwedischen Ausgabe bearbeitet von H. EULER. Erster Teil: Das Chemische Material der Pflanzen.

Braunschweig: Druck und Verlag von Friedrich Vieweg und Sohn. Price, bound, 7 M.

The book is the first part of a work which will consist of three volumes and of which, judging from references in the text, the second part is nearly ready for publication. Starting with the assumption that all the physiological phenomena of plants can be represented as chemical reactions, that each organ of a plant is, so to say, a small chemical laboratory whose work exactly determines the function of the organ, the author intends to describe the transformations of matter and energy taking place in each organ of a plant as due to established chemical and physical laws and to show how the life of a plant can be interpreted in terms of these transformations. The present volume is devoted to the chemistry of plant constituents; the second volume will treat of the laws of physical chemistry which determine chemical changes in plants; in the third volume an attempt is to be made to present the whole life of plants as a series of reactions produced by chemical and physical laws. The book consists of a brief introduction in which these views are expounded and twenty-five chapters subdivided into three groups of nitrogen-free aliphatic compounds, nitrogen-free cyclic compounds and nitrogen-containing substances. It is accompanied by a complete subject index, an author's index and an index of plants mentioned in the text. The method of treatment consists in briefly giving the definition, general method of preparation and characteristic behavior of each class of those organic compounds which have been found in plants and then describing each individual substance belonging to that class, at the same time indicating the particular plant or plants in which the substance is contained. A description of the mode of formation of the substance and its general function in the work done by the plant is given whenever well established data on the subject are obtainable. A very valuable feature of the book consists in short descriptions of methods of quantitative determinations of plant constituents and references to original articles where the details of these methods can be found. While the chemical treatment of the individual substances is necessarily brief, some of the groups, especially the more important ones, are treated quite fully. Such, for example, are the terpenes, carbohydrates, resins and constituents of plant ashes. The book is excellently made up and everything in it is strictly up to date. There are very few clerical errors, and most of these are corrected at the end of the book. An erroneous statement occurs on pages 7 and 8 where it is stated that glycerol can be extracted from its aqueous solution by means of alcohol and ether. The book will make a very valuable addition to every well equipped library. It will be extremely interesting to see how with our present very limited state of knowledge the author will manage to interpret the life history of plants in exact terms of physics and chemistry.

H. M. GORDIN.