ing point with the heptacetyl methyl ester obtained from the naturally occurring aldobionic acid. A mixture of the two substances shows no depression of the melting point. The preparation of the heptacetyl methyl ester is carried out as follows. Esterification of the aldobionic acid with diazomethane yields the crystalline methyl aldobionate which melts at 119° with effervescence. In water its specific rotation is −2.9° after six minutes, mutarotating to a final value of −9.1° (C = 4.2%) (Found: OCH_3, 8.52). On acetylating the ester with acetic anhydride and pyridine, the β-heptacetyl methyl ester of the aldobionic acid is obtained as a well-defined crystalline substance melting at 202–203°, and shows the rotation $[\alpha]^{25}D$ −17.5° in chloroform (C = 3.3%) (Found: C, 48.95; H, 5.77; OCH_3, 4.73; $COCH_3$, 44.7).

In view of the fact that α-acetobromo glucuronic acid methyl ester, when condensed with alcohols in the presence of silver oxide, has been found to yield only β-glucuronides, the biose linkage of the gum acacia aldobionic acid must possess the β configuration. The acid can be definitely assigned, therefore, the structure of a galactopyranose-6-β-glucuronopyranoside.

THE HOSPITAL OF THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH
NEW YORK, N. Y.

ROLLIN D. HOTCHKISS
WALTHER F. GOEBEL

RECEIVED APRIL 20, 1936

NEW BOOKS

The Chemistry of Natural Products Related to Phenanthrene. By L. F. FIESER, Associate Professor of Chemistry, Harvard University. American Chemical Society Monograph. Reinhold Publishing Corporation, 330 West 42nd Street, New York, N. Y., 1936. xii + 358 pp. 15.5 × 23.5 cm. Price, $6.50.

During the past five or six years an amazing increase in research activity in the phenanthrene field has taken place. This has been due especially to the recognition that many naturally occurring, often biologically important, classes of organic compounds are derivatives of phenanthrene or one of its hydrogenation products. Thus, characterized as hydrophenanthrene derivatives are the alkaloids of the morphine and aporphine groups, the acids from resins of conifers and the triterpenoid saponins. Included also are the animal and plant sterols and the many products of related structure probably formed by biological oxidation or reduction of sterols, namely, the bile acids, the male and female sex hormones, the cardiac glycosides or heart poisons secreted by toads and antirachitic agents. Likewise, the cancer-producing hydrocarbons nearly all contain the phenanthrene nucleus. This volume comprises a comprehensive résumé of these fields.

The author has introduced his subject with a general discussion of the chemistry of phenanthrene in order to provide a background for the consideration of derivatives which are of interest either as degradation products or as intermediate products in the synthesis of the compounds under consideration. Each of the succeeding chapters is devoted to the chemistry of an individual group of closely related phenanthrene compounds.

The attempt in this book to present a well-rounded summary of the more significant and useful observations in each of the separate fields and to give prominence to correlating principles and to other matters of central interest has been completely successful. The material has been selected with great care, skillfully organized and written in such a clear, concise way as almost to leave the reader with the impression that these complicated subjects in organic chemistry are actually relatively simple.

The active interest in phenanthrene compounds is at its peak and the publication of this book could not have been more timely. It will serve the general organic chemist as an excellent review of a major field of study, and will prove invaluable to the investigator along these lines as a survey of the significant contributions published prior to February, 1936.

The book is so well printed and so free from errors, and the subject is so superbly presented that the reviewer can merely give it unreserved commendation. No recent book in any specialized field of organic chemistry will prove as generally attractive and useful as this one.

ROGER ADAMS

Lehrbuch der organischen Chemie. (Textbook of Organic Chemistry.) By A. F. HOLLEMAN. Twentieth revised and enlarged edition by Friedrich Richter. Walter de Gruyter and Company, Genthiner Strasse 38, Berlin W 10, Germany, 1935. xii + 546 pp. 78 figs. 15 × 23 cm. Price, bound, RM. 14.

The latest Holleman Lehrbuch, rewritten by Friedrich Richter, is undoubtedly one of the best texts of organic chemistry. The science is considered from the experimental viewpoint of structural evidence, in a manner which should encourage the student to correlate his knowledge and think in chemical terms, rather than memorize facts. By tabulating physical data and condensing purely descrip-

tive material, the author has been able to include a large amount of valuable material usually reserved for advanced texts, without unduly increasing the size of the book. Both the arrangement and treatment stimulate correlations of organic with inorganic chemistry. An unusual feature of the book is the inclusion of physical chemical data useful in organic chemistry. Thus the data furnished by the measurement of free energies, dipole moments, molecular refractions, absorption spectra, reaction kinetics and chemical equilibria are utilized where they are most valuable. A large amount of material of particular interest to biology and medical students is also included.

Criticism may be directed against the failure to use electronic formulas in cases where they are most successful, and the use of the "addition of alkyl halide" mechanism of alkylation, without mention of alternative mechanisms. These omissions may be justified on the basis of simplification, but are not in keeping with the generally advanced and thorough treatment afforded most subjects in the text.

The book cannot be recommended too highly. The style and langnage are simple, and the book should find favor in this country for use by advanced students for the dual purposes of extending their chemical knowledge and improving their reading knowledge of German.

ARTHUR C. COPE

Vitamins in Theory and Practice. By LESLIE J. HARRIS, Sc.D., D.Sc., University of Cambridge. The Macmillan Company, 60 Fifth Avenue, New York, N. Y., 1935. xix + 240 pp. Illustrated. 15.5 × 21 cm. Price, $3.00.

The author states that "this little book forms the subject matter of a series of four 'Thursday afternoon' lectures given at the Royal Institution, London, in 1934." The book is not written for biochemists and physiologists but, to use the author's own words, is designed to present "a readable narrative of that truly romantic subject, the history of vitamin discovery and research, which I hope may be intelligible and of interest to the general reader." That the author has succeeded in this regard, there can be no question.

While the book will appeal to all groups, it can be read with pleasure and profit by all chemists in spite of the fact that Professor Harris (who is a recognized authority in the field of vitamin research) has attempted to avoid a detailed discussion of vitamin chemistry. He has included sufficient chemical data, however, to give the general reader a good conception of the recent advances that have been made during the past few years. The topics are discussed under the following chapter headings: Chapter 1. The discovery of vitamins; Chapter 2. How many vitamins are there? Chapter 3. Beriberi and vitamin B_1; Chapter 4. Pellagra and vitamin B_2; Chapter 5. Scurvy and vitamin C; Chapter 6. Vitamin D and rickets; Chapter 7. Vitamin A; Chapter 8. Vitamin E—Diet and sterility; Chapter 9. Dietetics—What to eat.

In chapter 9 the author stresses the practical and clinical importance of vitamins in nutrition and makes some practical suggestions on "what to eat." This is followed by a brief summary entitled "Retrospect."

The book is written in a simple but interesting style and is replete with whimsical humor and philosophy. Professor Harris combines the rare qualities of the scientist and of the journalist to produce an accurate and up-to-date scientific narrative "that reads like a novel."

The reviewer recommends this book to all readers who desire a brief and authoritative discussion of vitamins in theory and practice.

R. ADAMS DUTCHER

A Brief Course in Qualitative Chemical Analysis from the Standpoint of the Laws of Equilibrium and the Ionization Theory. By LOUIS J. CURTMAN, Professor of Chemistry in Charge of the Division of Qualitative Analysis, The City College, The College of the City of New York. The Macmillan Company, 60 Fifth Avenue, New York, 1936. viii + 249 pp. 13 figs. 15 × 22.5 cm. Price, $2.25.

All of the material required for a one semester course in qualitative analysis is presented in this single text. The first seventy-five pages are devoted to the theory of electrolytic solutions. The topics required for comprehension of the laboratory work in qualitative analysis are treated clearly and in logical order. It is unfortunate that in this book, as in most similar texts, the old Arrhenius treatment of ionization is presented first and is later corrected according to modern views. The beginning student should not be required to learn and then unlearn an untenable portion of the theory of ionization because of its historical position and importance.

The brief but clear treatment given to the subject of activity and activity coefficients should be helpful to students who wish to consult current literature.

Sixty-five pages are then devoted to a brief consideration of the specific reactions employed in separating and detecting the common ions. In the section which follows, sixty-six pages are devoted chiefly to the actual laboratory procedures. While these follow for the most part the usual lines, several interesting innovations are to be noted. Among these are the application of magnesium uranyl acetate reagent to the detection of sodium in the presence of potassium, and the precipitation of strontium sulfate after removing calcium with ferrocyanide.

A final chapter on calculations is followed by an appendix in which detailed instructions are supplied for the use of Professor Curtman's system of individual reagents.

CHARLES H. GREENE

General Chemistry for Colleges. By HERMAN T. BRISCOE, Professor of Chemistry, Indiana University. Houghton, Mifflin Company, 2 Park Street, Boston, Mass., 1935. viii + 872 pp. 261 figs. 16 × 24 cm. Price, $3.75.

A book written primarily for the elementary college course in chemistry, but adequate in scope and content for use with students who have studied chemistry in a secondary school. Three major objectives of the book and the order of presentation of material are indicated in the preface by the author as (1) historical development of

chemical science; (2) explanation of recently acquired information on the structure of matter and (3) the application of the basic theoretical framework of science through the use of intelligent reasoning to descriptive and applied chemistry.

The author devotes the first 194 pages of the book to the attainment of the first objective. The usual fundamental principles are developed in the conventional, historical method with oxygen and hydrogen. The author leaves the way open for the extension and modification of the older theories, and briefly introduces the concept of the Bohr atom.

In attaining the second objective, the author makes a definite contribution to the amount of modern theoretical material available for elementary study. This information is set forth clearly and simply, and is the most complete presentation of modern concepts of atomic structure and solution chemistry in an elementary textbook that has come to the attention of the reviewer.

The third objective is attained by the application of principles, previously outlined, to a thorough descriptive study of generally accepted material. This portion of the book is well illustrated, the number of new cuts of industrial processes and equipment being noteworthy.

The book appears to be well suited for the use of teachers who wish to employ the historical method and give the student some chemical background before introducing modern electronic and atomic concepts. It is amply adequate to provide a college student with a thorough knowledge of descriptive chemistry and its applications, and, at the same time, an especially good theoretical foundation for further scientific study.

C. R. HOOVER

Introduction to Inorganic Chemistry. By G. H. CARTLEDGE, Head of the Department of Chemistry, The University of Buffalo. Ginn and Company, 15 Ashburton Place, Boston, 1935. vii + 609 pp. 52 figs. 14 × 21 cm. Price, $3.00.

Laboratory Exercises in Inorganic Chemistry. By G. H. CARTLEDGE and H. M. WOODBURN, The University of Buffalo. Ginn and Company, 15 Ashburton Place, Boston, 1935. v + 149 pp. 23 figs. 14.5 × 21.5 cm. Price, $1.00.

A definitely different textbook of elementary chemistry. The author steps boldly in the direction of deducing and correlating the facts of chemistry from an elementary knowledge of atomic structure. In the development of this atomic concept, which begins in its more modern aspects as early as the 20th page, conventional atomic models are not employed but rather what the author describes in the preface as "the more rigid and useful views of the elementary quantum theory." Mass relations and other so-called fundamental generalizations are introduced in a simplified manner as consequences of atomic characteristics. One notices especially the omission of the kinetic theory and the abbreviated discussion of the gas laws.

A striking innovation is the selection of the elements of the third period, beginning with sodium and chlorine, for the first systematic descriptive study. With interspersed chapters on solution, equilibrium and the periodic system, this study is continued beyond the middle point of the book. In later chapters elements are presented in families, and, with the possible exception of nitrogen, some conventional detailed descriptive matter is omitted. Extensive, commendable use is made of tables summarizing the properties of a number of elements, especially the metals. The two concluding chapters are on geo-chemistry and metallurgical processes, and on the sulfuric acid and alkali industries. Industrial applications are almost exclusively confined to these two chapters.

The text is intended for the use of students with or without previous training in chemistry: in the author's classes the latter are segregated for two months. The reviewer feels that the book is especially well suited to students who have had preparatory school chemistry.

While some teachers may be disturbed by the order of presentation and by the absence of some conventional descriptive matter, and may miss what may be called "lip service" to the inductive method, in the opinion of the reviewer the book is logical, unified and teachable. It answers the criticisms of many that the first year course in chemistry is already too crowded to permit the inclusion of modern theory, but at the same time it is entirely adequate for a thorough, first-year course in college chemistry.

The "Laboratory Exercises in Inorganic Chemistry" contain suggestions and directions for 23 laboratory exercises of sufficient length "to lead to a significant result," with an exercise on qualitative analysis and suggested topics for nine additional exercises of the preparation type. Approximately one-half of the exercises are inorganic preparations. New material and methods are indicated in several experiments. Each exercise is introduced by a discussion and concluded by a list of questions. The book is in convenient form and is complete with tables of data and subject index.

As indicated by the number of exercises, each one is supposed to occupy an entire laboratory period. Very few conventional preparations are included as individual experiments, but several such processes are made a part of preparation or analytical work. The order of presentation is arranged to follow that of the "Introduction to Inorganic Chemistry" by one of the authors, but the exercises are sufficiently differentiated to enable them to be used with other texts. The simplicity and originality of the exercises should commend the book for use by teachers interested in the preparation type of experiment.

C. R. HOOVER

Molekülspektren und ihre Anwendung auf chemische Probleme. (Molecular Spectra and their Application to Chemical Problems.) Part I, Tables. By Dr. H. SPONER, Professor at the University of Göttingen. Verlag von Julius Springer, Linkstrasse 23–24, Berlin W 9, Germany, 1935. vi + 154 pp. 14.5 × 22 cm. Price, RM. 16; bound, RM. 17.60.

The first volume of this work, now available, is devoted to tables; all discussion of the theory is being reserved for the following volume. The first section, some 55 pages, deals with diatomic molecules; the usual constants of more than 150 molecules are given, according to the state of knowledge at the beginning of 1935. The tables are

clear and convenient. However, the reviewer does not see why the He_2 table does not conform to the convention adopted for other molecules.

The next section (20 pages), which is devoted to Raman and infra-red spectra of polyatomic molecules, is extremely useful since nothing else quite similar in scope now exists. No attempt has been made here to include all of the data on rather complex organic molecules; of those with more than four or five atoms only the more symmetric ones are considered. Wherever possible the normal modes of vibration have been indicated by drawings, but perhaps more emphasis should have been laid on the uncertainty of some of the assignments given.

The third section is devoted to the electronic spectra of polyatomic molecules and in point of completeness is excellent. Even large molecules with only continuous absorption have been included in the tables.

The last section deals with ionization by electron collision of di- and poly-atomic molecules and is, in so far as the reviewer was able to ascertain, also very complete.

The book can be well recommended as a useful reference source to all interested in molecular spectra.

G. B. KISTIAKOWSKY

Organic Syntheses. An Annual Publication of Satisfactory Methods for the Preparation of Organic Chemicals. Vol. XVI. JOHN R. JOHNSON, Editor-in-Chief, W. H. CAROTHERS, L. F. FIESER, W. W. HARTMAN, C. R. NOLLER, R. C. FUSON and C. F. H. ALLEN. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, 1936. v + 104 pp. 15.5 × 24 cm. Price, $1.75.

The preparations in the sixteenth volume of "Organic Syntheses," having been supplied by an unusually large number of contributors of whom many are connected with industry, are correspondingly varied in character. The list is as follows: β-Alanine, 4-Aminoveratrole, *n*-Butyl Nitrite, *n*-Butyl Phosphate, Coupling of *o*-Tolidine and Chicago Acid, *sym.*-Dimethylhydrazine Dihydrochloride, *unsym.*-Dimethylhydrazine Hydrochloride, 2,5-Dimethylpyrrole, 1,4-Diphenylbutadiene, Epichlorohydrin and Epibromohydrin, Ethyl Phenylmalonate, Ethyl *n*-Tridecylate, *n*-Heptoic Acid, *n*-Hexaldehyde, Isonitrosopropiophenone, Methyl Benzyl Ketone, Methylhydrazine Sulfate, *p*-Nitrobenzyl Bromide, 4-Nitrophthalic Acid, 4-Nitrophthalimide, Pelargonic Acid, Phenanthrene-2- and 3-Sulfonates, Phthalaldehyde Acid, Phthalide, Quinone, Succinimide, Tetrahydrofuran, *sym.*-Trithiane.

E. P. KOHLER

A Systematic Handbook of Volumetric Analysis. By FRANCIS SUTTON. Twelfth edition, revised throughout with numerous additions, by A. D. Mitchell, D.Sc. (Lond.), F. I. C. P. Blakiston's Son and Company, Inc., 1012 Walnut Street, Philadelphia, Pennsylvania, 1935. xvi + 631 pp. 128 figs. 14.5 × 22.5 cm. Price, $10.00.

From the fact that this twelfth edition is published some seventy years after the appearance of the first one, it may be concluded safely that the book has fulfilled a certain need. The present volume has been revised by A. D. Mitchell, who has brought the material up to date, although the signs of old age are quite apparent in various parts of the text. The book would gain in value if it were entirely rewritten, and old material and methods which are obsolete were omitted. The obsolete acid–base indicators litmus, azolitmin, cochineal, phenacetolin, turmeric, lacmoid, Congo red are described in the text, whereas the sulfophthaleins are mentioned only in a table. The indicators given for the titration of alkaloids (p. 46) are out of date, the use of an ammoniacal copper solution in acidimetric titrations (p. 59) is obsolete, etc. In most cases references are made to the older literature although modern methods and reagents are discussed, for example the use of 8-hydroxyquinoline, of β-naphthoquinoline and of adsorption indicators is described. The statement that fluorescein can be used as adsorption indicator in the titration of weakly acid chloride solutions (p. 138) is erroneous. Special emphasis is placed on the English literature; accurate and rapid methods for the determination of chromium, vanadium and manganese in steel, of copper in copper ores (developed in this country), are not included.

The author's attempt to describe only those methods which have given good results in his own hands or in those of his associates, deserves praise; he has succeeded in bringing out a book which is of value to those interested in rapid volumetric methods. It should be particularly useful in technical laboratories since the analysis of various natural and technical products (*e. g.*, oils and fats, butter, soap, water, gas liquor, urine, blood, ores) is discussed in greater or lesser detail.

With the exception of a section on the theory of acid–base indicators (an incorrect structural formula of dissolved phenol red is given on p. 37) the general theory of volumetric methods is not given. From the practical viewpoint it is regrettable that accuracy, precision, indicator blanks and purity of standard substances are not discussed.

A condensed account of potentiometric methods (conductimetric methods are not mentioned) by S. Glasstone (p. 143–168) should stimulate the use of these methods in industrial laboratories.

The last part of the book dealing with the volumetric analysis of gas has been revised by J. S. G. Thomas.

I. M. KOLTHOFF

Die Bestimmungen der Wasserstoffionenkonzentration (*p*H), und deren Bedeutung für Technik und Landwirtschaft. (The Determination of Hydrogen Ion Concentration (*p*H) and its Importance in Industry and Agriculture.) By HOLGER JÖRGENSEN. Foreword by S. P. L. SÖRENSEN. Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany, 1935. xv + 264 pp. 49 figs. 15.5 × 22.5 cm. Price, RM. 15; bound, RM. 16.

In a subject that is already dealt with in a number of excellent books a somewhat more rigorous and exacting inquiry as to the reason for the appearance of still another book seems justified. Except for the fact that no book in the German language has appeared in recent years on the subject of *p*H or "hydrogen-ion concentration," there does

not seem to the reviewer any good reason for the volume at hand. Though the terminology has to an extent been brought up to date, most of the book could have been written ten or fifteen years ago. There is, for instance, evidence of confusion in the author's mind as to the basis of the *p*H scale. Thus, *p*H, on a concentration basis, and *p*αH, on an activity basis, are stated to differ by 0.04 unit, which would make the hydrogen ion activity differ by a constant from the hydrogen ion concentration. Aside from the fact that hydrogen ion activities are not obtainable from potentiometric, or any other, measurements, this is, of course, far too simple a presentation of the case. It is also inconsistent with the author's statement, immediately following, that the ratios of the hydrogen ion activities and concentrations approach unity with increasing dilution. It is, perhaps, understandable that the references should be weighted in favor of Scandinavian sources, but it results in the inclusion of more or less irrelevant material, and the omission of much of value. This is especially true with respect to experimental technique. Methods in world wide use are not mentioned and quite primitive technique is described in great detail.

The volume closes with brief reviews of the use of *p*H technique in various industries. This is certainly the best portion of the book, but it contains little of novelty for American readers.

D. A. MACINNES

Organic Solvents. Physical Constants and Methods of Purification. By ARNOLD WEISSBERGER and ERICH PROSKAUER. Translated from the German manuscript by RANDAL G. A. NEW. Oxford University Press, 114 Fifth Avenue, New York, New York, 1935. vi + 212 pp. 16 × 24.5 cm. Price, $5.00.

The purpose of this book is well set forth in the opening sentences of the preface. "In recent years improvements in the methods of organic chemistry and the enhanced interest in the chemical physics of non-aqueous solutions have led to an ever-increasing demand for variety and purity in organic solvents. For this reason it has seemed desirable to make a collection of physical constants and of methods of purification for these solvents. The aim of this book is to make readily accessible the abundant material which has been accumulated by chemists and physicists in recent years. To this end an organic chemist and a physical chemist have collaborated."

The physical constants of one hundred and fifty-eight systematically classified solvents are listed, two solvents on a page with twenty-one items and accompanying literature references given for each substance. An almost equal space is then devoted to the purification of each solvent, useful comments, condensed summaries of the methods employed by different investigators and criteria of purity being included. One might wish that the few pages devoted to a discussion of purification in general and drying agents in particular had been considerably expanded. Here, however, as elsewhere, many references are given to the literature.

An inconvenient detail of the tables of properties is the representation of the name of the property by a number, which necessitates reference to a key, instead of by an immediately obvious abbreviation. The fact that "values are given for the most part at 15°" reduces somewhat their usefulness to the American investigator, who finds 20 or 25° more convenient for his measurements. The authors give what they regard as the best value for each constant with the corresponding literature references, but also give references to other determinations, which, to some investigators, may occasionally appear preferable to the value listed.

The book is valuable in bringing together useful material in convenient form and should prove a work of reference frequently employed by many laboratory workers.

CHARLES P. SMYTH

Qualitative Analyse mit Hilfe von Tüpfelreaktionen. Theoretische Grundlagen, praktische Ausführung und Anwendung. (Qualitative Analysis by Means of Spot Reactions. Theory, Practice and Application). By Dr. FRITZ FEIGL, Lecturer at the University of Vienna. Second, revised and enlarged edition. Akademische Verlagsgesellschaft m. b. H., Markgrafenstrasse 6, Leipzig C 1, Germany, 1935. xii + 513 pp. 24 figs. 16 × 23 cm. Price, RM. 26.40; bound, RM. 28.

The first edition of this unusual book in 1931 was so well received as to warrant a second edition, which is about one-third larger. The theoretical part has been expanded to 116 pages; a new chapter of 67 pages has been added, extending the application of spot tests to organic substances, and the number of tests for the presence of certain elements in commercial products, or for the purity of the latter, has been nearly doubled. At the end of the book is a convenient tabulation of the sensitivity of 266 specific tests previously described.

The importance of spot tests as a saving of time and material, particularly in microanalysis, is becoming generally recognized. This book is the most comprehensive work on this subject. It contains, however, much more than its title indicates. It describes the theory underlying the discovery of organic reagents, and the specific effects of certain groups. It shows how a reagent can be modified to make it more satisfactory. It discusses the application of complex formation and induced reactions. It contains a large amount of material not published elsewhere. The reviewer was impressed by the large number of suggestions for further research which it unconsciously furnished. This does not mean that it gives the impression of incompleteness, but that it opens a vista of possibilities in carrying farther the principles already applied.

Among the most interesting and sensitive of all tests are those based on catalysis. For example, palladium can be detected in a concentration of 1:6,600,000,000 by its catalytic effect on the reduction of nickel acetate by hypophosphite; mercury in a concentration of 1:500,000,000 by its action in activating aluminum to form with water the hydroxide, which is made visible by the formation of a lake. Unfortunately, no mention is made of the catalytic determination of mercury by the method of King and Brown, based upon its effect in the Bettendorf test for arsenic. Nor is there any mention of the important use of aurin tricarboxylic acid in testing for aluminum, although attention was called to this omission in a review of the first edition.

The book is well printed and bound and quite free from typographical errors. It is recommended to all who are interested in analytical chemistry and its applications. Others will find portions of it very interesting.

HOBART H. WILLARD

BOOKS RECEIVED

March 15, 1936–April 15, 1936

OSWALD BAUER, OTTO KRÖHNKE AND GEORG MASING, Editors. "Die Korrosions des Eisens und seiner Legierungen." Verlag von S. Hirzel, Königstrasse 2, Leipzig, Germany. 560 pp. RM. 37.50; bound, RM. 39.

NEWTON HENRY BLACK AND JAMES BRYANT CONANT. "New Practical Chemistry. Fundamental Principles Applied to Modern Life." The Macmillan Company, 60 Fifth Ave., New York, N. Y. 621 pp. $1.80.

JAMES BRYANT CONANT. "Organic Chemistry. A Brief Introductory Course." Revised edition. The Macmillan Company, 60 Fifth Ave., New York, N. Y. 293 pp. $2.60.

G. DUPONT. "Cours de Chimie Industrielle. Tome I. Généralités—Les Combustibles. Tome II. Les Industries Minérales." Gauthier-Villars, Éditeur, 55 Quai des Grands-Augustins, Paris, France. 522 pp. Fr. 90 (I + II).

RENÉ FABRE. "Leçons de Toxicologie. Alcaloïdes. (I, Généralités, Ptomaïnes et Lecomaïnes. Drogues a Alcaloïdes Liquides Toxiques. Opium et ses Alcaloïdes. II, Des Salanées Mydriatiques, de la Coca, des Aconits, des Strychnées, Liliacées. Genalcaloïdes)." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 63 + 57 pp. Fr. 12 + 12.

RENÉ FABRE. "Leçons de Toxicologie. Toxiques Minéraux. (I, Généralités. Arsenic, Antimoine. II, Mercure, Bismuth, Plomb, Thallium. III, Cuivre, Zinc, Chrome, Nickel, Manganèse, Baryum, Radium, Metalloïdes Divers)." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 68 + 56 + 68 pp. Fr. 12 + 12 + 15.

L. F. FIESER. "The Chemistry of Natural Products Related to Phenanthrene." Reinhold Publishing Corporation, 330 West 42nd St., New York, N. Y. 358 pp. $6.50.

ARTHUR HAAS. "Atomtheorie." Third edition, revised and enlarged. Walter de Gruyter and Co., Woyrschstrasse 13, Berlin W 35, Germany. 292 pp. RM. 8.50; bound, RM. 10.

LOUIS P. HAMMETT. "Solutions of Electrolytes, with Particular Attention to Qualitative Analysis." Second edition. McGraw-Hill Book Co., Inc., 330 West 42d St., New York, N. Y. 238 pp. $2.25.

I. M. HEILBRON, Editor-in-Chief. "Dictionary of Organic Compounds." Vol. II. Oxford University Press, 114 Fifth Ave., New York, N. Y. 846 pp. $30.00.

JOHN R. JOHNSON, Editor-in-Chief. "Organic Syntheses." Vol. XVI. John Wiley and Sons, Inc., 440 Fourth Ave., New York, N. Y. 104 pp. $1.75.

WILLIAM DUNCAN MACMILLAN. "Dynamics of Rigid Bodies." McGraw-Hill Book Co., Inc., 330 West 42nd St., New York, N. Y. 478 pp. $6.00.

LOUIS MARTINEAU. "Thèse. Contribution a l'Étude de la Catalyse." Imprimerie G. Santai, 46 Rue Gauthier-de-Châtillon, Lille, France. 129 pp.

E. B. MILLARD. "Physical Chemistry for Colleges." Fourth edition. McGraw-Hill Book Company, Inc., 330 West 42d St., New York, N. Y. 524 pp. $3.75.

CARL OPPENHEIMER. "Die Fermente und ihre Wirkungen." Supplement, Lieferungen 2–3, Bd. I, Specieller Teil, Hauptteil VIII, IX. W. Junk Verlag, Scheveningsche Weg 74, Den Haag, Holland. 320 pp. Each part, $6.80.

E. L. RAWLINS AND M. A. SCHELLHARDT. "Back-Pressure Data on Natural Gas Wells and Their Application to Production Practices." Bureau of Mines, U. S. Department of the Interior, Washington, D. C. 210 pp.

RUFUS D. REED AND ROBERT W. MCLACHLAN. "General College Chemistry for the Laboratory." Lithoprinted by Edwards Brothers, Ann Arbor, Mich. 87 pp. $1.80.

R. C. ROARK AND R. L. BUSBEY. "A Third Index of Patented Mothproofing Materials." Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington, D. C. 104 pp.

JEAN TIMMERMANS. "Les Solutions Concentrées. Théorie et Applications aux Mélanges Binaires de Composés Organiques." Masson et Cie., Éditeurs, 120 Boulevard Saint-Germain, Paris VI^e, France. 646 pp.

M. VON LAUE AND R. VON MISES. "Stereoscopic Drawings of Crystal Structures. Part II." Verlag von Julius Springer, Linkstrasse 23–24, Berlin W 9, Germany. 56 pp. + diagrams. RM. 18.

WALTER WEISS. "Bestimmungstabelle zur Benutzung bei mikroskopischen Arbeiten." Walter Weiss, Bergstrasse 59, II, Dresden A 24, Germany. 78 pp. RM. 3.

"Spectrographic Outfits for Metallurgical and General Chemical Analyses." Seventh edition. Adam Hilger, Ltd., 98 Kings Road, Camden Road, London, England. 60 pp.

"Tables Annuelles de Constantes et Données Numériques de Chimie, de Physique, de Biologie et de Technologie." Vol. X, Part II. McGraw-Hill Book Company, Inc., 330 West 42nd St., New York, N. Y. 610 pp. $20.00.