

artificial silk. The older solvents like acetone have been manufactured by new methods in much greater quantities and at much lower prices; newer solvents are being made and applied to industry all the time, so that, as is often said, what were last year's laboratory curiosities are this year sold in tank waggons. Progress in the new field on the manufacturing side has been largely due to the use of processes involving catalysts, which have led to new syntheses from simple raw materials such as alcohol.

The fact that a new edition of this book has been called for within a year is a proof both of the interest taken in the subject and of the clarity and utility of the work. The method again adopted is to deal with the fundamentals in the first section of fifty pages and to devote Part 2 to the individual solvents in considerable detail. The chapter on plasticising solvents has been considerably extended and now contains notes on forty-one substances suggested for this purpose.

The book is readable, commendably crisp, and will be of value to all who use such solvents.

E. F. A.

Practical Physical Chemistry. By Prof. Alexander Findlay. Fifth edition, revised and enlarged. Pp. xii + 312. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1931.) 7s. 6d. net.

THE fifth edition of Prof. Findlay's "Practical Physical Chemistry" may be regarded as celebrating the half-jubilee of the book, which was first issued in 1906. Throughout this period its general character has been maintained, but its usefulness has been increased by the introduction of new experiments from time to time. In the present edition the preface tells us that these new experiments deal with gaseous dissociation, vapour pressure of liquids, viscosity of highly viscous liquids, potentiometric methods, and the use of indicators for the determination of hydrogen ion concentration, whilst attention has been directed to the concept of the activity of strong electrolytes and to the phenomenon of salt effect. The vapour pressure of salt hydrates and the freezing points of binary mixtures have also received brief treatment.

The new edition does not call for any further comment, except for a word of congratulation to the author on his success in inhibiting the physico-chemical phenomenon of 'ageing' from which books on chemistry are liable to suffer severely.

Die Glykoside: Chemische Monographie der Pflanzenglykoside. Von Dr. J. J. L. van Rijn. Zweite ergänzte und neubearbeitete Auflage von Prof. Dr. Hugo Dieterle. Pp. viii + 620. (Berlin: Gebrüder Borntraeger, 1931.) 48 gold marks.

THE first edition of Dr. van Rijn's book was published so long ago as 1900; it has now been revised and rewritten by Dr. Dieterle.

The chemistry of the individual glycosides which have been found in plants is described in the order of plant families, a method of arrangement which in our opinion, as indeed the author confesses,

leaves much to be desired, as it makes the book merely a catalogue of individual substances and does not bring out any general group relationship among the glycosides or assist the reader to study their significance. For each substance the method of preparation, the physical properties, and the constitution of the non-sugar section or aglucone is indicated; a reference is also made to the physiological activity. The work is costly, and suitable for reference in the library rather than for the inspiration of the research worker. E. F. A.

Physics.

Lectures on Theoretical Physics delivered at the University of Leiden. By H. A. Lorentz. Authorised translation by Dr. L. Silberstein and A. P. H. Trivelli. Vol. 3: *Maxwell's Theory*, edited by Dr. H. Bremekamp; *The Principle of Relativity for Uniform Translations*, edited by Dr. A. D. Fokker. Pp. xi + 326. (London: Macmillan and Co., Ltd., 1931.) 21s. net.

THIS, the last, volume of Lorentz's "Lectures on Theoretical Physics" contains a translation of two courses, namely, "Maxwell's Theory", edited in the Dutch by H. Bremekamp and published in Leyden in 1925, and "The Principle of Relativity for Uniform Translations", edited by A. D. Fokker and published in 1922.

The first section contains chapters on the electromagnetic field, electrostatics, stationary currents, induction currents, and the electromagnetic theory of light. The second section, on the restricted theory of relativity, contains chapters on the principle of relativity, the various transformation formulæ and their interpretation, the mechanics of a particle, the inertia of energy, and electromagnetic phenomena in moving bodies.

Although the work treats of very familiar and almost old-fashioned material, it treats them in a manner which is both stimulating and refreshing, the simplicity and generality of the style being reminiscent of Lorentz at his best. The various topics are dealt with in sufficient detail to bring out all the underlying physical principles and their bearing on the mathematical formulations, and they are woven together so as to form a complete and comprehensive text on the subject.

As with the first two volumes, the translators have not always been too happy in their choice of words and phrases, but on the whole the book is a worthy companion to its predecessors, and does honour to the great master whose thoughts it expounds. It can be strongly commended to all who are interested in the subjects with which it deals and, in particular, to students and teachers in need of an introductory textbook to this side of modern physics. G. H. L.

Magnetism and Electricity. By E. Nightingale. Pp. xvi + 294. (London: G. Bell and Sons, Ltd., 1931.) 4s. 6d.

THE high standard set in the author's "Heat, Light, and Sound" is fully maintained in the present work, which covers roughly the school