

Scatter the surface with pebbles, fill up and place it in the best light, taking care to cover with a glass plate to keep out dust—the organisms prefer vita-glass. When growth has commenced, introduce a few snails as scavengers, change ten per cent of the water weekly and remove debris. When all is well, introduce the fish, which must not be crowded. A pond may be constructed on the same principles and has the great advantage that the small crustaceans, insect larvæ, worms and other life will provide the necessary fish-food. For an indoor tank recourse must be had to dried foods, the best of which consist of the natural food dried, with small parts of meat, biscuit, egg and vegetable powder. We also catch live crustaceans—but any good food will do, provided that too much is not given. Chapters deal with the food and ailments of fish—we have found flavine most useful for fungus—and the plants are shown in thirty illustrations. This is a charming little book.

Cosmetic Dermatology :

with Dictionary of Ingredients ; Discussion of Anatomic, Physiologic and Pharmacologic Bases of Cosmetic Application ; "Shelf-tested" Formulary ; and Appendices on Odor and Color in Cosmetics. By Dr. H. Goodman. Pp. xv+591. (New York and London : McGraw-Hill Book Co., Inc., 1936.) 36s.

THIS encyclopædic work, which forms a valuable addition to dermatological literature, is divided into two unequal parts. The first, which is entitled "Dictionary of Ingredients", contains separate descriptions of the official drugs of the United States Pharmacopœia and of the unofficial drugs used in the treatment of skin diseases. The second part, which forms the bulk of the work and is devoted to practical cosmetic dermatology, consists of fifty-four chapters in alphabetical order (acne-vitamins) containing an account of various skin diseases and modes of treatment. There are three appendixes dealing respectively with cosmetic colours, perfumery and weights and measures.

Color Changes of Animals in relation to Nervous Activity

By Prof. G. H. Parker. (University of Pennsylvania : Leidy Memorial Lectures.) Pp. ix+74. (Philadelphia : University of Pennsylvania Press ; London : Oxford University Press, 1936.) 7s. net.

THIS volume is a somewhat extended form of the Joseph Leidy Memorial Lecture in science delivered in March 1936. Prof. Parker's recent work has led him to the conclusion that the chromatophores in fishes are controlled by neurohumors which are liberated by nerves. They may be divided into two classes—the hydrohumors, such as the substance liberated by the pituitary gland, which are carried in the circulation, and the lipohumors, which are oil-soluble substances liberated by nerve endings in the skin and diffusing slowly from one area of skin to another. The book describes the experiments on which these conclusions are based. It is well illustrated and attractively produced.

Chemistry

Industrial Chemical Calculations :

the Application of Physico-Chemical Principles and Data to Problems of Industry. By Prof. O. A. Hougen and Dr. K. M. Watson. Second edition. Pp. ix+487. (New York : John Wiley and Sons, Inc. ; London : Chapman and Hall, Ltd., 1936.) 22s. 6d. net.

THE title on the cover of this excellent book is a very modest one, and gives little indication of the wealth of information and instruction to be found within. The objective of the book is the development of concise and logical methods by which complex industrial chemical problems may be solved from fundamental scientific principles. Its study is intended not to replace but to supplement a course in physical chemistry, and to prepare the student for advanced courses in chemical engineering. The first nine chapters of Part 1 deal with the more ideal low-pressure system in which simple algebraic methods can be used, and the last five chapters treat non-ideal cases by more general and complicated methods, involving considerable use of the calculus. The first four chapters deal with weights and compositions, stoichiometry, ideal behaviour of gases, and vaporization and condensation respectively. Thermo-physics and thermo-chemistry are the subjects of the next two chapters, which are followed by chapters on industrial reactions, fuels, weight and heat balances of combustion, and chemical and metallurgical processes. A detailed analysis is made, for example, of the chamber acid process and of a blast furnace. Part 2 of the book deals with entropy, free energy, and the other thermodynamic potentials, and their application to the study of chemical equilibria. Here the method of treatment is most helpful to the industrial chemist who desires to make use of all the assistance thermodynamics can give but who lacks the technique.

Detailed solutions of typical problems illustrate the application and combination of the various principles which receive treatment, and emphasis is placed on the necessity of giving each individual step in the calculation, clearly labelled, in order that a correct result may be reached, capable of quick verification. At the end of each chapter, problems are presented for solution by the reader, since only through actual practice can skill in analysing and solving problems be attained. There are more than twenty tables which provide useful physical data for a whole range of chemicals, and there are nearly a hundred figures. The price should place this book within the reach of every industrial chemist who feels the need of a more exact and quantitative approach to his problems.

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Elements of Chemical Engineering

By Prof. W. L. Badger and Prof. W. L. McCabe. (Chemical Engineering Series.) Second edition. Pp. xvii+660. (New York and London : McGraw-Hill Book Co., Inc., 1936.) 30s.

THE first edition of this book was noticed in NATURE of October 10, 1931. Time has proved its utility