MONOGRAPHS ON INDUSTRIAL CHEMISTRY

Edited by Sir Edward Thorpe, C.B., LL.D., F.R.S.

Emeritus Professor of General Chemistry in the Imperial College of Science and Technology, South Kensington; and formerly Principal of the Government Laboratory, London.

INTRODUCTION

During the last four or five decades the applications of Chemistry have experienced an extraordinary development, and there is scarcely an industry that has not benefited, directly or indirectly, from this expansion. Indeed, the Science trenches in greater or less degree upon all departments of human activity. Practically every division of Natural Science has now been linked up with it in the common service of mankind. So ceaseless and rapid is this expansion that the recondite knowledge of one generation becomes a part of the technology of the next. Thus the conceptions of chemical dynamics of one decade become translated into the current practice of its successor; the doctrines concerning chemical structure and constitution of one period form the basis of large-scale synthetical processes of another; an obscure phenomenon like Catalysis is found to be capable of widespread application in manufacturing operations of the most diverse character.

This series of Monographs will afford illustrations of these and similar facts, and incidentally indicate their bearing on the trend of industrial chemistry in the near future. They will serve to show how fundamental and essential is the relation of principle to practice. They
will afford examples of the application of recent knowledge to modern manufacturing procedure. As regards their scope, it should be stated the books are not intended to cover the whole ground of the technology of the matters to which they relate. They are not concerned with the technical minutiae of manufacture except in so far as these may be necessary to elucidate some point of principle. In some cases, where the subjects touch the actual frontiers of progress, knowledge is so very recent and its application so very tentative that both are almost certain to experience profound modification sooner or later. This, of course, is inevitable. But even so such books have more than an ephemeral interest. They are valuable as indicating new and only partially occupied territory; and as illustrating the vast potentiality of fruitful conceptions and the worth of general principles which have shown themselves capable of useful service.


**Edible Oils and Fats.** By C. A. Mitchell, F.I.C. 6s. 6d net.

**Coal and its Scientific Uses.** By W. A. Bone, D.Sc., F.R.S., Imperial College of Science and Technology, South Kensington.

**The Zinc Industry.** By Ernest A. Smith, The Assay Office, Sheffield. 10s. 6d net.

**Colour in Relation to Chemical Constitution.** By E. R. Watson, M.A., D.Sc., Dacca College, Bengal.


**Liquid Fuel for Internal Combustion Engines.** By Sir Roverton Redwood, Bart, D.Sc., F.R.S.E., and J. S. S Brame, Royal Naval College, Greenwich.

The following Volumes are in preparation:


Synthetic Colouring Matters: Vat Colours. By John E. Thorpe, C.B.E., D.Sc., F.R.S., Imperial College of Science and Technology, South Kensington.


Cement. By Bertram Blount, F.I.C.


Refractories. By J. W. Mellor, D.Sc.


Cellulose-Silk. By C. F. Cross, B.Sc., F.R.S., F.I.C.

The Electric Arc in Chemical Industry. By J. N. Pring, D.Sc., The University, Manchester.

By-Product Coking Practice. By Ernest Bury, M.Sc.


Synthetic Drugs: Local Anaesthetics. By W. H. Hurley, D.Sc., St. Bartholomew's Hospital; and M. A. Whitley, D.Sc., Imperial College of Science and Technology, South Kensington.
MONOGRAPHS ON BIOCHEMISTRY

Edited by R. H. A. Plimmer, D.Sc., and F. G. Hopkins,

F.R.S. Third Edition. 5s. 6d. net.

The Chemical Constitution of the Proteins. By R. H. A. Plimmer
4s. net.

The Vegetable Proteins. By Thomas B. Osborne, Ph.D. 5s. net

The Simple Carbohydrates and the Glucosides. By E. Frank
land Armstrong, D.Sc., Ph.D. 5s. 6d. net.

Alcoholic Fermentation. By Arthur Harden, Ph.D., D.Sc.
F.R.S. 4s. 6d. net.

The Physiology of Protein Metabolism. By E. P. Cathcarti
M.B., Ch.B., D.Sc.

Soil Conditions and Plant Growth. By Edward J. Russell
D.Sc. (Lond.), F.R.S. With Diagrams. Third Edition. 6s. 6d. net

Oxidations and Reductions in the Animal Body. By H. D.
Dakin, D.Sc., F.R.S.

The Simpler Natural Bases. By George Barger, M.A., D.Sc
6s. 6d. net.

Nucleic Acids. Their Chemical Properties and Physiological Be
haviour. By Walter Jones, Ph.D. 4s. net.

The Respiratory Exchange of Animals and Man. By August
Krogh, Ph.D. With Diagrams. 6s. 6d. net.

Lecithin and Allied Substances. By Hugh Maclean, M.D., D.Sc
7s. 6d. net.

MONOGRAPHS ON INORGANIC AND
PHYSICAL CHEMISTRY

Edited by Alexander Findlay, M.A., Ph.D., D.Sc. 8vo.

The Chemistry of the Radio-Elements. By Frederick Soddy
M.A., F.R.S. Part I., 4s. 6d. net; Part II., 2s. 6d. net.

Per-Acids and their Salts. By T. Slater Price, D.Sc., Ph.D
F.I.C. 3s. 6d. net.

Osmotic Pressure. By Alexander Findlay, M.A., Ph.D., D.Sc
3s. net.

Intermetallic Compounds. By Cecil H. Desch, D.Sc., Ph.D
F.I.C. With 17 Diagrams. 3s. 6d. net.

The Viscosity of Liquids. By Albert Ernest Dunstan, D.Sc
(Lond.), and Ferdinand Bernard Thole, D.Sc. (Lond.). With
Diagrams. 3s. 6d. net.

Molecular Association. By W. E. S. Turner, D.Sc., M.Sc. 5s. 6d. net.

The Molecular Volumes of Liquid Chemical Compounds from
the point of view of Kopp. By Gervaise Le Bas, B.Sc. (Lond.
With Diagrams. 8s. net.

LONGLANDS, GREEN AND CO.
LONDON, NEW YORK, BOMBAY, CALCUTTA, AND MADRAS.
THE ZINC INDUSTRY