

## Aromatic Diazo-Compounds in Industry

### The Aromatic Diazo-Compounds and their Technical Applications

By K. H. Saunders. Pp. xii + 224. (London: Edward Arnold and Co., 1936.) 12s. 6d. net.

**I**N this very concise treatise the author has summarized the history of the industrially important diazo-compounds since their earliest recognition by Peter Gries in 1858 until the present time. The various methods of preparing diazonium salts are reviewed, including the recent outstanding discovery made independently by Hodgson and Schoutissen that *o*-diamines can be made to give the reactions of bisdiazonium compounds.

The rapid development of industrial activity in the ice colours based on Naphthol AS and its analogues has led to many devices for stabilizing diazo-compounds. Among these the use of the stable forms of diazo-sulphonates is noteworthy as leading to valuable monoazo-dyes of the variamine blue class. The author presents a clear and comprehensive account of the abstruse researches on the constitution of diazo-compounds carried on for a number of years by Hantzsch, Bamberger and many others, and more recently by Angeli.

At present the industrial utilization of diazo-compounds is much in advance of our theoretical knowledge concerning their constitution. It is pointed out that the score or more of aromatic amines supplied commercially in a high degree of purity for ice-colour work could now furnish for research purposes diazo-derivatives which were not available formerly. In addition to the couplings which lead to industrially important hydroxyazo- and aminoazo-dyes, the diazo-compounds serve for many synthetic operations in aromatic chemistry, whereby the halogens, including fluorine, and several other non-metals and some metals are introduced into benzenoid nuclei. All these reactions are described and there is a full bibliography which includes references to the literature of heterocyclic diazo-compounds.

In spite of the intricacy of the subject matter, the text is remarkably free from errors and there are adequate author and subject indexes, although the former does not always tally with the references at the end of each section. This book may be recommended with confidence as the most up-to-date monograph on the diazo-reaction in the English language. G. T. M.

## Racial Portraiture: a Sculptor's View

### A Sculptor's Odyssey

By Malvina Hoffman. Pp. xxii + 416 + 128 plates. (London and New York: Charles Scribner's Sons, Ltd., 1936.) 24s. net.

**S**IX years ago, the Field Museum of Chicago formulated a bold and novel project. Dissatisfied with the conventional lay-out of the anthropological section of the average ethnographical museum, it conceived the plan of a sculptural Hall of Man, to consist of one hundred sculptured heads and figures, modelled from life, and embracing the main surviving anthropological types—a far-sighted break with museum tradition, which, if judged solely on the statistical evidence of subsequent visitors, has amply justified the trustees' vision. To Miss Malvina Hoffman, who already at that time filled a unique and outstanding position in the world of sculpture, was entrusted this colossal task; and this volume—well named her Odyssey—leads up, through her

early years of struggle, to the inner story of its achievement.

As an unassuming record of travel and observation, of perseverance in the face of unexpected difficulties, of the transport of the hundred precious clay figures in China and Japan, Java and the South Seas, Burma, India, and Europe, it is a fascinating piece of writing, though marred at times—particularly towards the close—by an odd sentimentality: but for the technical reader it has a wider and two-fold significance. Here was a comprehensive anthropological problem, which might have been approached *ex cathedra*, from the academic angle, each sculptured figure being created an elaborate synthesis of exact facial angles and accurate anatomical measurements. In practice, mercifully, the task was planned and executed by an artist: and, as Sir Arthur Keith writes of Miss Hoffman's work, "we professional anthropologists can never hope to obtain by mere measurements the accuracy of racial portraiture