THE SYNTHETIC USE OF METALS IN ORGANIC CHEMISTRY

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SYNTHETIC USE OF METALS

IN

ORGANIC CHEMISTRY

BY

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PREFACE

THE student of Organic Chemistry will probably be impressed at an early stage with the importance of metallic sodium and its compounds in synthetic work, and will subsequently mark the value of such substances as acetoacetic-, malonic-, and cyanacetic-ester and their sodium compounds.

He will notice the use of aluminium chloride in the preparation of various aromatic compounds, will hear the story of the discovery of the zinc alkyls, and will possibly be attracted by those interesting bodies, the organo-metals.

Various metals and metallic derivatives have been utilised in the development of Organic Chemistry, and during recent years, much attention has been given to the use of magnesium in the Grignard reaction and to the value of the carbides in the fixation of atmospheric nitrogen, while the reduction and synthesis of organic compounds in the presence of reduced nickel and other metals has, by development, led to the discovery of numerous catalytic changes in the presence of certain metallic oxides.

In this volume an attempt has been made to present an account of the uses to which the metals and certain of their compounds have been put, and the work is based upon a course of lectures, on this subject, recently given by the author to the advanced students of Finsbury Technical College.

Each chapter is supplemented by an appendix of practical work exemplifying the methods mentioned in the text.

Most of the preparations have been carried out in the College laboratories, and in connection with this part of the work the author desires to acknowledge the valuable assistance of two advanced students, Messrs. T. McLachlan and E. Mendoza. He is also indebted to Mr. F. W. Streatfeild, F.I.C., Senior Demonstrator, for help during the reading of the proofs.

A. J. H.

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