CHEMICAL MONOGRAPHS; NO. IV; THE FIXATION OF ATMOSPHERIC NITROGEN

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649543830

Chemical Monographs; No. IV; The Fixation of Atmospheric Nitrogen by Joseph Knox & A. C. Cumming

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

JOSEPH KNOX & A. C. CUMMING

CHEMICAL MONOGRAPHS; NO. IV; THE FIXATION OF ATMOSPHERIC NITROGEN

Trieste

CHEMICAL MONOGRAPHS

EDITED BY A. C. CUMMING, D.Sc.

No. IV

The Fixation of Atmospheric Nitrogen

CHEMICAL MONOGRAPHS

EDITED BY A. C. CUMMING, D.Sc.

THE progress of Chemistry is so rapid that it is becoming a matter of ever-increasing difficulty to keep abreast of the modern developments of the science. The volume of periodical literature is so enormous that few can hope to read, far less assimilate, all that is published. The preparation of summaries has therefore become a necessity, and has led to the publication of various well-known journals devoted to the abstraction of original papers. For obvious reasons, however, these do not fully supply the wants of advanced students and research workers, and it is now generally recognised that monographs on special subjects are also needed.

This series of monographs is intended primarily for Advanced and Honours students. As each monograph is written by an author with special knowledge of the subject, and copious references are given, it is hoped that the series will prove useful also to those engaged in research.

The following volumes are ready or in active preparation :—

THE ORGANOMETALLIC COMPOUNDS OF ZINC AND MAGNESIUM. By HENRY WREN, M.A., D.Sc., Ph.D., Head of the Department of Pure and Applied Chemistry at the Municipal Technical Institute, Belfast.

THE CHEMISTRY OF DYEING. By JOHN KERFOOT WOOD, D.Sc., Lecturer on Chemistry, University College, Dundee.

THE CHEMISTRY OF RUBBER. By B. D. PORRITT, F.I.C., B.Sc., Chief Chemist to the North British Rubber Company.

THE FIXATION OF ATMOSPHERIC NITROGEN. By JOSEPH KNOX, D.Sc., Lecturer on Inorganic Chemistry, University of Aberdeen.

INDICATORS. By H. T. TIZARD, B.A., Oriel College, Oxford. *In Active Preparation.*

Other Volumes to follow.

The Fixation of Atmospheric Nitrogen

BY

JOSEPH KNOX, D.Sc.

Lecturer on Inorganic Chemistry, University of Aberdeen

NEW YORK

D. VAN NOSTRAND COMPANY

TWENTY-FIVE PARK PLACE

1914

PREFACE

In the following pages I have tried to give an account of the more important processes for the fixation of atmospheric nitrogen, and, more especially, of the theory on which they are based. No attempt has been made even to mention all the proposals regarding methods and apparatus to be found in the patent literature of recent years. The mere enumeration of these would almost occupy the space at my disposal, and in many cases there is no evidence that the proposed methods are in any way workable. I have, therefore, confined myself to those methods which are either in actual operation, or which show promise of assuming technical importance in the near future. I am indebted to the admirable consular report on *The Utilisation of Atmospheric Nitrogen*, by T. E. Norton, for some valuable information on the purely technical part of the subject. The report also contains an excellent account of the financial and commercial organisation of the various industries connected with the fixation of nitrogen.

J. K.

Aberdeen, *April* 1914.

CONTENTS