

BOOK REVIEW

Synthesis of Organosilicon Monomers, by A. D. PETROV, B. F. MIRONOV, V. A. PONOMARENKO AND E. A. CHERNYSHEV (Translated from the Russian by C. N. TURTON AND T. I. TURTON.) Heywood and Co. Ltd., London, 1964, 492 pages, 130s. For the U.S.A., Consultants Bureau Inc., New York, N.Y., \$ 22.50.

This book is an authorised translation of a Russian text published in 1961, although a few later revisions have been made by the original authors. It makes fully available to readers of English an authoritative account of a large area of organosilicon chemistry by scientists who have made very important contributions to the subject. While it does not neglect the work of Western chemists, its great value lies in its full presentation of published and unpublished information from Russian sources up to about 1959. (A few later references are included.) Its nature is best described in the terms used by Professor E. G. Rochow in his Foreword: "It is a guide to the literature and a survey of the present state of organosilicon chemistry written from the point of view of the many active young groups working in Russia."

The book is divided into four parts. Part One (115 pages) is a general survey of methods of preparation and properties of the main type of compounds; especially valuable is the account of the Direct Synthesis of organochlorosilanes. Part Two (132 pages) is concerned with reactions of alkenyl- and alkynyl-silicon compounds, a field in which Russian authors have been particularly active. Part Three (101 pages) describes methods of preparation and reactions of aryl- and (arylalkyl)-silicon compounds, and outstandingly useful is the account of the high temperature reactions between silicon hydrides and aryl halides which have been intensively studied by the authors. Part Four (112 pages) deals with preparations and reactions of organosilicon hydrides. A brief final section (20 pages) compares some aspects of the chemistry of organosilicon compounds with that of the corresponding organic derivatives of germanium, tin, and lead, and also gives a short summary of work, related to the main text, which appeared after the preparation of that text.

The translation is good, and the account, for a book which is mainly a presentation of factual information, is not too heavy going. The book is most impressive when describing preparations and transformations, and is least impressive when it touches on reaction mechanisms. It has its defects, and in particular it is difficult to locate any specific piece of information required (there is, most regrettably, no index); some facts are stated several times, each time without reference to the other entries. It is not very critical, and occasionally apparently contradictory experimental results are presented without reference to the anomaly. These defects are overwhelmingly outweighed, however, by the good features of the book, and no organosilicon chemist can afford to be without it.

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