

*Journal of Organometallic Chemistry*, 86 (1975) C41  
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## Book review

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*Polymer Syntheses. Volume 1*; by Stanley R. Sandler and Wolf Karo,  
*Monographs on Organic Chemistry Volume 29-I*, Academic Press, New York,  
1974; 572 pages, \$39.50

This is a book of laboratory techniques for the synthesis of a wide variety of organic polymers. The book is organized by functional group types involved in the polymerization reaction, including virtually all types of such reactions, and as such it compares favorably with the other two such textbook-size monographs on polymer synthesis: namely *Preparative Methods of Polymer Chemistry* by Sorenson and Campbell (1968) and *Techniques of Polymer Syntheses and Characterization* by Braun, Cherdron and Kern (1972). The unique qualities of the present volume, however, are in the greater emphasis on descriptive discussions of the polymerization methods, a broader coverage of step-growth or condensation polymers than the other two books, and in the incorporation of recent material on some of the more specialized polymerization reactions including the preparation of thermally-stable polymers and organophosphorus polymers.

The types of polymerization reactions included and the number of experimental examples given for each, as indicated by the numbers within brackets, are as follows: olefinic and diolefinic polymerization (19), polyesterification (13), polyamidation (11), aldehyde polymerization (14), ring-opening polymerization of epoxides and cyclic ethers (11), preparation of polyureas (6), preparation of polyurethanes (7), preparation of thermally-stable polymers mostly of the aromatic heterocyclic type (22), polymerization reactions of acrylic and methacrylic derivatives (38), miscellaneous organophosphorus polymers (17), and two chapters on the use of free-radical initiators in a variety of polymerization reactions (27). Many tables of data are included in the various chapters, and all discussions are well documented including references up to 1973 in most chapters. Certainly possession of this book as well as the other two previously mentioned would give the research worker ready access to detailed procedures on essentially all types of organic polymerization reactions.

*Polymer Science and Engineering Program,  
Chemical Engineering Department,  
University of Massachusetts,  
Amherst, Mass. 01002 (U.S.A.)*

ROBERT W. LENZ