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BOOK REVIEW

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BOOK REVIEW

Principles of Polymerization by George Odian
McGraw-Hill Book Co., New York 1970

Organic Chemistry of Macromolecules by A. Ravve
Marcel Dekker, Inc., New York 1967

The plethora of books on polymers and polymerization published in recent years raises some new questions and accents some old ones in considering a new addition in the field. The old questions relate to such matters as: Is the book ably written and attractively printed? Is the book stimulating and creative, or is it pedestrian in its approach? And is new or little known material included? The new questions are: What does the new book offer that previous books do not? To what segment of the field is the new book addressed or emphasis given? Does the book fulfill expectations induced by the flyer? Is the book really needed?

Any new book in the field, as a matter of course, will be compared with Paul Flory's Principles of Polymer Chemistry, published in 1953. For stimulation and creativity the new book cannot approach the older one. Certainly, Flory's book continues to be the classic in the field. However, Dr. Odian's book does bring a balance and even an impartiality of treatment to the broad range of topics which may be considered in such a book. For the new student of the field or for the scientist, engineer, and applications technologist, the book offers the brief, workaday answer which sometimes suffices.

Principles of Polymerization does indeed treat principles of polymerization. Included are, for example, types of polymers and polymerizations, mechanism, nomenclature, molecular structure, applications, and, more specifically, discussions of step polymerization, radical, emulsion, ionic, and ring-opening polymerization and copolymerization. Stereochemistry of polymerization and synthetic reactions of polymers are also covered.

Principles of Polymerization may also be compared with Ravve's Organic Chemistry of Macromolecules. This intrinsically excellent

treatise, based on the substantial industrial experience of its author, contains many noteworthy nuggets of memorable information not available outside the original literature. Unfortunately, the book is marred by numerous errors, apparently both of content and typography. However, if one reads the book with a tolerant eye, it can be a most rewarding experience.

Of particular interest are the tabular data on structure-property relationships which must have required many hours of searching from many sources. The book is also enlivened by a discussion of the research, development, introduction, applications, and fate of many commercial polymers. A similar, but more detailed treatment of a particular field is offered by Doak's Crystalline Olefin Polymers.

It is apparent that a single book is unlikely to be all things to all scientists in the field of polymerization. Such books will remain highly individual spoors of their respective authors.

George E. Ham

Dr. Ham has edited and contributed to

Vinyl Polymerization Mechanisms, Marcel Dekker, Inc.
Part I (1967) and Part II (1969)

and

Copolymerization, Wiley, 1964