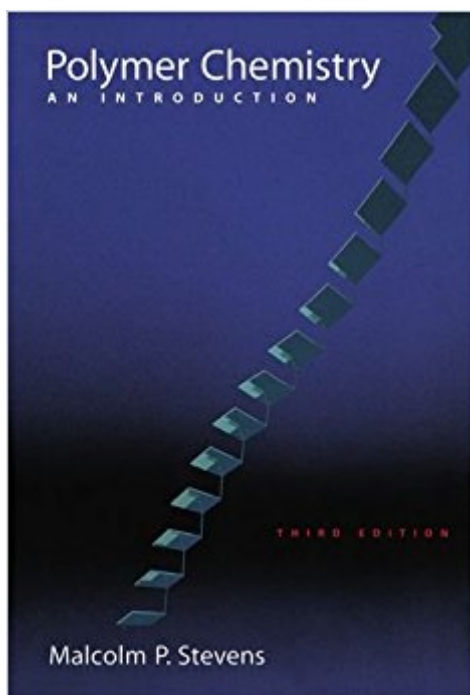


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# Polymer Chemistry: An Introduction



## Synopsis

Now updated to incorporate recent developments in the field, the third edition of this successful text offers an excellent introduction to polymer chemistry. Ideal for graduate students, advanced undergraduates, and industrial chemists who work with polymers, it is the only current polymer textbook that discusses polymer types according to functional groups. It provides a comprehensive and up-to-date overview of the chemistry of macromolecular substances, with particular emphasis on polymers that are important commercially and the properties that make them important. Major topics include polymer synthesis and nomenclature; molecular weight and molecular weight distribution; reactions of polymers; recycling of polymers; methods used for characterizing and testing polymers; morphology; stereoregular polymers; polymer blends; step-growth, chain-growth, and ring-opening polymerization; commercially important addition and condensation polymers; and heterocyclic, inorganic, and natural polymers. Review exercises, many including journal references, are provided to help lead students into the polymer literature. Polymer Chemistry, 3/e, offers the most up-to-date treatment available of new developments in this rapidly changing field. It covers dendritic and hyperbranched polymers, olefin polymerization using metallocene catalysts, living free radical polymerization, biodegradable bacterial polyesters, mass spectrometric methods for determining molecular weights of polymers, atomic force microscopy for characterizing polymer surfaces, and polymers exhibiting nonlinear optical properties.

## Book Information

Hardcover: 576 pages

Publisher: Oxford University Press; 3 edition (November 19, 1998)

Language: English

ISBN-10: 0195124448

ISBN-13: 978-0195124446

Product Dimensions: 9.3 x 1.3 x 6.6 inches

Shipping Weight: 2.1 pounds (View shipping rates and policies)

Average Customer Review: 4.3 out of 5 stars 11 customer reviews

Best Sellers Rank: #234,114 in Books (See Top 100 in Books) #4 in [Books > Science & Math > Chemistry > Polymers & Macromolecules](#) #36 in [Books > Science & Math > Chemistry > Industrial & Technical](#) #42 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Polymers & Textiles](#)

## Customer Reviews

"The best polymer textbook I've seen yet!"--Stuart R. Taylor, Tarleton State University"Organized in a useful fashion, proceeding from fundamental principles to more advanced concepts. This allows an instructor to structure a course following the text, picking some subjects for emphasis and touching others lightly. The end-of-chapter exercises are excellent."--Gary Wentworth, Roosevelt University"Provides a useful and comprehensive survey of the chemical and physical principles that underlie the practice of polymer and composite materials. Easily accessible to the advanced undergraduate chemist and well within the grasp of graduate students trained in allied areas."--Dennis M. Manos, College of William and Mary

Malcolm P. Stevens is at University of Hartford.

Book has great information in it, but you really have to dig for understanding. It is very wordy and doesn't break things down into sections enough.

good quality. reasonable price. like it very much.

Perfect condition!

As a chemistry undergraduate this book was useful in my transition to studying polymer engineering. The text has alot of organic chemistry material in it and bridges over to some of the engineering concepts.

This is one of most well written chemistry books I have had the pleasure of using. I enjoyed the class and book so much that I ended up keeping the book after graduation even though I don't work with polymers at work.

This textbook is an elementary one focusing on undergraduate study. So if you have already had background in polymer chemistry, this book might be easy for you. All in all, this is a helpful book to take you into the polymer world!

Besides this excellent book by Stevens the other good textbooks for one semester university polymer courses are: (1) "Introduction to Polymer Chemistry" 2nd or 3rd Edition by Charles E. Carraher, Jr. (2) "Polymer Science and Technology" 2nd or 3rd Edition by Joel R. Fried (3)

"Polymers" by David Walton and Phillip Lorimer (Oxford Chemistry Primers) If you want high school level material consider (1) "Giant Molecules: Essential Materials for Everyday Living and Problem Solving" 2nd Edition by Charles E. Carraher Jr. (2) "Polymer Chemistry: Introduction to an Indispensable Science" by David Teegarden (3) "The Chemistry of Polymers" by John W. Nicholson, any edition. University-level reference books: (1), "Principles of Polymerization", 4th Edition by George Odian (highly recommended) (2) "Introduction to Polymers" 3rd Edition by Robert J. Young and Peter A. Lovell (3) "Organic Polymer Chemistry" 2nd Edition by K. J. Saunders (4) "Organic Chemistry of Synthetic High Polymers" by Robert Lenz (5) "Contemporary Polymer Chemistry" 2nd or 3rd Edition by Harry R. Allcock and Frederick W. Lampe (6) "Textbook of Polymer Science" 3rd Edition by Fred W. Billmeyer Jr. (7) "Polymer Science and Technology" by Robert O. Ebewele (8) "Introduction to Synthetic Polymers" 2nd Edition by Ian M. Campbell Check out my reviews for other chemistry books.

"Polymer Chemistry: An Introduction" is an excellent text for an upper division undergraduate or graduate level course in polymer chemistry. The book is also enjoyable to read for scientists and engineers in the polymer and materials fields. The content is logically organized, there is fairly in-depth discussion of mechanisms of polymerization reactions and of the origins of stereoregularity in polymers, and the problems at the end of each chapter are more than adequate for reviewing the subject matter. Professor Stevens clearly introduces the reader to the subject of polymer chemistry, relating the physical properties of macromolecular materials to polymer orientation, microstructure, stereochemistry and chemical composition. He also provides an enormous amount of information on the history of polymers in a fashion that effectively reinforces the important concepts being described. I find myself referring to this text far more frequently than the other polymer texts on my bookshelves.

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