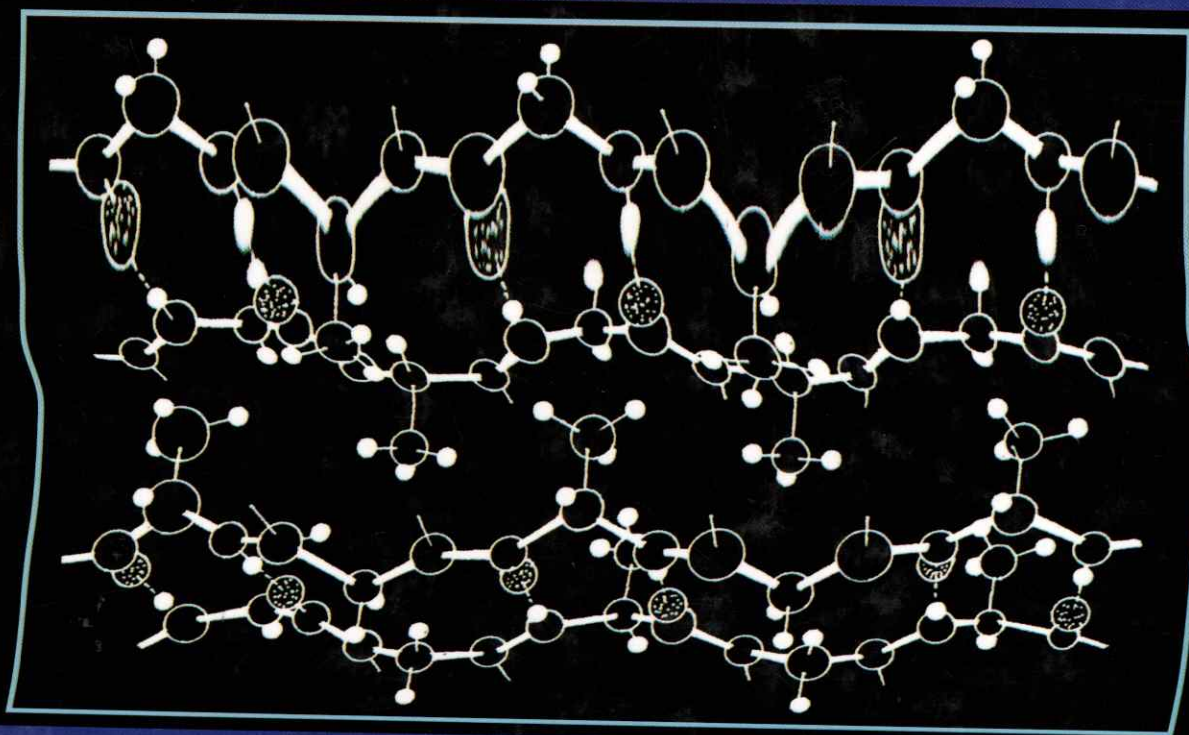
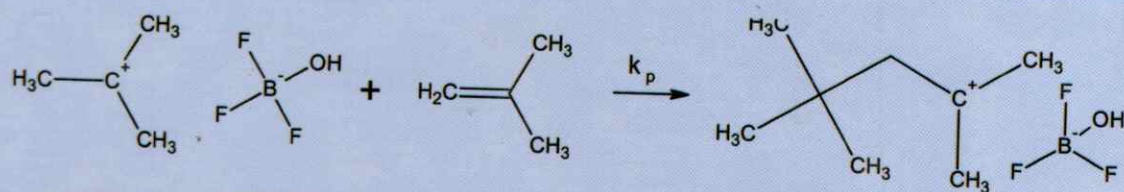


Introduction to **POLYMER CHEMISTRY**



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Introduction to POLYMER CHEMISTRY

Most of the available texts for polymer chemistry are written for graduate students, foregoing some of the concepts that are the basis for understanding polymers. Building on the core elements of organic and physical chemistry, **Introduction to Polymer Chemistry** provides an articulate, well-rounded presentation of the principles and applications for natural, synthetic, inorganic, and organic polymers.

The book organizes its organic-intensive chapters in the front, allowing greater time for students and teachers to become familiar with the topic before embarking on physical aspects. Relating to all types of polymers, the chapters examine synthesis and polymerization reactions, reactivities, techniques for characterization and analysis, energy absorption and thermal conductivity, physical and optical properties, and more. Each chapter contains up-to-date problems, learning summaries, practical glossaries, and recommended Web sites for further study. The author uses compelling examples from real-world applications that underscore the impact of polymers on society and emphasize the increasing role of polymers for resolving worldwide health challenges such as clean and abundant water, food preservation, clean air, and clean energy.

Written by a renowned author in the field, this book—

- Offers a solid foundation in polymer principles, using easy-to-understand terms that can be readily applied to other materials
- Includes numerous, real-world applications that illustrate how polymers are made and used in everyday situations
- Discusses numerous spectrometric techniques for surface characterization, thermal analysis, electrical measurements, optical properties, chemical resistance, and other physical tests
- Highlights the latest areas of research including genomics, optical fibers, self-assembly, recycling codes, and conductive materials
- Covers polymer-based technologies including biomedical polymers, adhesives, lubricants, coatings, reinforced plastics and laminates, additives, fibers, foams, films, and sheets
- Contains special sections on nomenclature and common polymer repeat unit structures

Introduction to Polymer Chemistry contains sufficient coverage of kinetics and thermodynamics to qualify as an advanced course for the American Chemical Society (ACS) Committee on Professional Training approval process. It also fulfills the advanced course requirements of the ACS for the chemistry major, offering a solutions manual for qualifying course adoptions.



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