



## Introduction to Physical Polymer Science

By L. H. Sperling

Wiley-Interscience, 2005. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Preface to the Fourth Edition. Preface to the First Edition. Symbols and Definitions. 1. Introduction to Polymer Science. 1.1. From Little Molecules to Big Molecules. 1.2. Molecular Weight and Molecular Weight Distributions. 1.2.1. Effect on Tensile Strength. 1.2.2. Molecular Weight Averages. 1.3. Major Polymer Transitions. 1.4. Polymer Synthesis and Structure. 1.4.1. Chain Polymerization. 1.4.1.1. Free Radical Polymerization. 1.4.1.2. Initiation. 1.4.1.3. Propagation. 1.4.1.4. Termination. 1.4.1.5. Structure and Nomenclature. 1.4.2. Step Polymerization. 1.4.2.1. A Polyester Condensation Reaction. 1.4.2.2. Stepwise Nomenclature and Structures. 1.4.2.3. Natural Product Polymers. 1.5. Cross-Linking, Plasticizers, and Fillers. 1.6. The Macromolecular Hypothesis. 1.7. Historical Development of Industrial Polymers. 1.8. Molecular Engineering. References. General Reading. Handbooks, Encyclopedias, and Dictionaries. Web Sites. Study Problems. Appendix 1.1. Names for Polymers. 2. Chain Structure and Configuration. 2.1. Examples of Configurations and Conformations. 2.1.1. Head-to-Head and Head-to-Tail Configurations. 2.1.2. Trans-Gauche Conformations. 2.2. Theory and Instruments. 2.2.1. Chemical Methods of Determining Microstructure. 2.2.2. General Physical Methods. 2.2.3. Infrared and Raman Spectroscopic Characterization. 2.2.4. Nuclear Magnetic Resonance Methods. 2.3. Stereochemistry of Repeating Units. 2.3.1. Chiral Centers. 2.3.2. Tacticity in Polymers. 2.3.3. Meso- and Racemic Placements. 2.3.4. Proton Spectra by NMR....



## Reviews

Without doubt, this is actually the greatest work by any writer. It is actually writter in simple terms instead of confusing. I found out this ebook from my i and dad recommended this pdf to understand.

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