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Nota di contenuto	Handbook of Ring-Opening Polymerization; Contents; Preface; List of Contributors; 1: Thermodynamics and Kinetics of Ring-Opening Polymerization; 1.1 Introduction; 1.2 Thermodynamics of the Ring-Opening Polymerization; 1.2.1 Equilibrium Monomer Concentration: Ceiling/Floor Temperatures; 1.2.2 Selected Particular Cases; 1.2.2.1 Polymerization in Heterogeneous Systems; 1.2.2.2 Monomer-Polymer-Solvent Interactions; 1.2.2.3 Thermodynamics of Oligomerization; 1.2.3 Thermodynamics of Macrocyclization; 1.2.4 Equilibrium Copolymerization; 1.2.5 Molar Mass Distribution in the Equilibrium Polymerization 1.3 Kinetics of Ring-Opening Polymerization1.3.1 Thermodynamic and Kinetic Polymerizability; 1.3.2 Kinetics of Living Polymerization; 1.3.2.1 Kinetic Criteria of Living Polymerization; 1.3.2.2 Active Center Interconversions and the Determination of Absolute Rate Constants; 1.3.2.3 Departure from Livingness: Kinetics of Selected Side Reactions; 1.3.2.4 Kinetics of Copolymerization; 1.4 Concluding Remarks;

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2.3 Cationic Ring-Opening Polymerization2.3.1 General Mechanism; 2.3.2 Activated Monomer Mechanism; 2.3.3 Isomerization Polymerization; 2.4 Radical Ring-Opening Polymerization; 2.5 Summary and Prospects; References; 3: Siloxane-Containing Polymers; 3.1 Introduction; 3.2 Polydimethylsiloxanes; 3.2.1 Anionic Polymerization; 3.2.1.1 General Considerations; 3.2.1.2 Recent Advances; 3.2.2 Cationic Polymerization; 3.2.2.1 General Considerations; 3.2.2.2 Recent Advances; 3.2.3 Emulsion Polymerization; 3.2.3.1 General Considerations; 3.2.3.2 Recent Advances; 3.2.4 Other Processes
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5.6 Ring Expansion

Sommario/riassunto

This comprehensive, truly one-stop reference discusses monomers, methods, stereochemistry, industrial applications and more. Chapters written by internationally acclaimed experts in their respective fields cover both basic principles and up-to-date information, ranging from the controlled ring-opening polymerization methods to polymer materials of industrial interest. All main classes of monomers including heterocyclics, cyclic olefins and alkynes, and cycloalkanes, are discussed separately as well as their specificities regarding the ring-opening polymerization techniques, the mechanisms, the