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	Generation ZN Catalysts; 3.3.1.3 Third-Generation ZN Catalysts; 3.3.1.4 Fourth-Generation ZN Catalysts; 3.3.1.5 Fifth-Generation ZN Catalysts; 3.3.2 Cossee-Arlman Mechanism; 3.3.3 Stereocontrol; 3.3.4 Regiocontrol; 3.3.5 Chain Termination 3.3.6 Molecular Weight Distributions and Branching3.4 Homogeneous Single-Center Coordination Polymerization; 3.4.1 Molecular Catalysts; 3.4.2 Metallocenes; 3.4.3 Stereocontrol; 3.4.4 Stereochemical Microstructure Analysis; 3.4.5 Cocatalysts; 3.5 Conclusions; Acknowledgments; References; 4 Cobalt-Mediated Radical Polymerization; 4.1 Introduction; 4.2 Mechanistic Considerations; 4.3 Key Parameters of CMRP; 4.3.1 The Cobalt Complex Structure; 4.3.2 Polymerization Conditions; 4.4 Macromolecular Engineering; 4.5 Cobalt-Mediated Radical Coupling (CMRC); 4.6 Summary and Outlook; Acknowledgments References5 Anionic Polymerization: Recent Advances; 5.1 Background; 5.2 Living Anionic Polymerization of Various Monomers; 5.2.1 Styrene Derivatives; 5.2.2 1,3-Diene Monomers; 5.2.3 2- and 4-Vinylpyridines; 5.3 (Meth)acrylate Derivatives; 5.4 Acrylamide Derivatives; 5.5 Cyclic Monomers; 5.6 Other Monomers; 5.7 Reaction of Living Anionic Polymers with Electrophiles: Synthesis of Chain-Functionalized Polymers; 5.8 Synthesis of Architectural Polymers via Living Anionic Polymers; 5.8.1 Block Copolymers; 5.8.2 Graft Copolymers; 5.8.3 Star-Branched Polymers 5.8.4 Complex Architectural Polymers5.9 Anionic Polymerization: Practical Aspects; 5.10 Concluding Remarks; References; 6 Alkyne Metathesis Polymerization (ADIMET) and Macrocyclization (ADIMAC); 6.1 Introduction; 6.2 Catalyst Development; 6.3 Poly(Phenylene Ethynylene)s via ADIMET; 6.4 ADIMAC-Acyclic Diyne Metathesis Macrocyclization; 6.5 Conclusions; References; 7 The Synthesis of Conjugated Polythiophenes by Kumada Cross-Coupling; 7.1 Introduction to Polythiophene; 7.2 Kumada Cross-Coupling; 7.3 Polythiophenes by Kumada Cross-Coupling; 7.3 Polythiophenes by Kumada Cross-Coupling; 7.3 Polythiophenes by Kumada Cross-Coupling; 7.3 Polythiophenes
Sommario/riassunto	Edited and written by the ""Who's who"" in polymer science and technology, this two-volume handbook and ready reference is a must- have compilation on the topic. At once comprehensive and trendy, all relevant topics are covered, with the chapters focusing either on the different types of polymerization reactions, or on the important classes of polymers, or on their applications. The result is an overview that equally provides a generous amount of information on the latest research developments.