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4.2: Terpyridine-Containing Metallo-Macrocycles 4.3: The HETTAP Concept; 4.4: Racks and Grids; 4.5: Helicates; 4.6: Rotaxanes and Catenanes; 4.7: Miscellaneous Structures; 4.7.1: Cyclodextrin Derivatives; 4.7.2: Other Assemblies; 5: CO₂-Conjugated Polymers Incorporating Terpyridine Metal Complexes; 5.1: Introduction; 5.2: Metallo-Supramolecular Polymerization; 5.3: Metallopolymers Based on CO₂-Conjugated Bis(terpyridine)s; 5.3.1: Polymerization by Transition Metal Ion Coordination; 5.3.2: Self-Assembly of Metallopolymers; 5.3.3: Chiral Metallopolymers; 5.3.4: Non-Classical Metallopolymers 5.3.5: Polymerization Using the "Complex First" Method 5.4: Main-Chain Metallopolymers Based on Terpyridine-Functionalized CO₂-Conjugated Polymers; 6: Functional Polymers Incorporating Terpyridine-Metal Complexes; 6.1: Introduction; 6.2: Polymers with Terpyridine Units in the Side-Chain; 6.2.1: Materials Based on Flexible Organic Polymers; 6.2.2: Materials Based on CO₂-Conjugated Polymers; 6.3: Polymers with Terpyridines within the Polymer Backbone; 6.3.1: Polymers from Organic Small-Molecule Building Blocks; 6.3.2: Chain-Extended Polymers from Polymeric Building Blocks 6.3.3: Monotopic Macroligands by End-Group Functionalization

Sommario/riassunto

In recent years, the utilization of terpyridines both in macromolecular structure assembly and device chemistry has exploded, enabling, for example, supramolecular polymer architectures with switchable chemical and physical properties as well as novel functional materials for optoelectronic applications such as light-emitting diodes and solar cells. Further applications include the usage of terpyridines and their metal complexes as catalysts for asymmetric organic reactions and, in a biological context, as anti-tumor agents or biolabels. This book covers terpyridine-based materials topics
