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Nota di contenuto	INTELLIGENT STIMULI-RESPONSIVE MATERIALS; CONTENTS; PREFACE; CONTRIBUTORS; 1 NATURE-INSPIRED STIMULI-RESPONSIVE SELF-FOLDING MATERIALS; 1.1 INTRODUCTION; 1.2 DESIGN OF SELF-FOLDING FILMS; 1.3 MECHANISM OF FOLDING; 1.4 FABRICATION OF SELF-FOLDING FILMS; 1.5 STIMULI-RESPONSIVE PROPERTIES OF SELF-FOLDING FILMS; 1.5.1 pH Responsive; 1.5.2 Thermoresponsive; 1.5.3 Light Responsive; 1.5.4 Solvent Responsive; 1.5.5 Other Stimuli; 1.6 PROPERTIES AND APPLICATIONS OF SELF-FOLDING FILMS; 1.7 CONCLUSIONS AND OUTLOOK; REFERENCES 2 STIMULI-RESPONSIVE NANOSTRUCTURES FROM SELF-ASSEMBLY OF RIGID-FLEXIBLE BLOCK MOLECULES2.1 INTRODUCTION; 2.2 THERMAL-RESPONSIVE NANOSTRUCTURES; 2.2.1 Pulsating Tubules from Non-Covalent Macrocycles; 2.2.2 Stimuli-Responsive Gels from T-Shaped Molecules; 2.2.3 Supramolecular Springs; 2.2.4 Structural Changes of Nanorings and Porous Nanostructures; 2.2.5 Aqueous Nanofibers with Switchable Chirality; 2.2.6 Switching between Helical Coils and Straight Rods; 2.2.7 Dynamic Nanostructures from Laterally Grafted Rod Amphiphiles 2.2.8 Responsive Nematic Gels from the Self-assembly of Aqueous Nanofibers2.3 GUEST MOLECULE-RESPONSIVE NANOSTRUCTURE; 2.3.1 Reversible Conformational Changes in Helical Structures; 2.3.2 Reversible Interconversion of Helical Fibers into Nanocapsules; 2.3.3

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5 PHOTORESPONSIVE CHOLESTERIC LIQUID CRYSTALS

Sommario/riassunto

There has been concerted effort across scientific disciplines to develop artificial materials and systems that can help researchers understand natural stimuli-responsive activities. With its up-to-date coverage on intelligent stimuli-responsive materials, Intelligent Stimuli-Responsive Materials provides research, industry, and academia professionals with the fundamentals and principles of intelligent stimuli-responsive materials, with a focus on methods and applications. Emphasizing nanostructures and applications for a broad range of fields, each chapter comprehensively covers a diffe