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Nota di contenuto	1. Polybenzoxazine-Based Smart Shape Memory Materials: Stimulus methods and applications -- 2. Metallopolymers – A value – Added Approach to the Modern Days Needs -- 3. HCN-Derived Polymers: From Prebiotic Chemistry to Materials Science -- 4. Low pressure plasma modified polymers for advanced automotive applications -- 5. Properties and analytical applications of advanced polymer composites.
Sommario/riassunto	This book delves into a wide array of polymer topics, covering synthesis methods, processing technologies, performances, advanced characterization, and modeling techniques. It highlights recent advancements in polybenzoxazine-based smart shape memory materials, metallopolymer, HCN derived polymers. Advanced polymer composites, polymeric nanomaterials, and their fabrication methods and applications are also discussed. Additionally, the book explores the utilization of emerging polymer materials in biosensor development, covering various classes such as biopolymers, functional polymers, hydrogels, conductive polymers, and nanomaterials. It provides insights into the recent advances in polyaniline copolymers for chemical sensors and cellulose nanocrystals (CNC) and cellulose nanofibers (CNF)-based pickering emulsions with antimicrobial properties, particularly focusing on applications in food and biomedical products. Furthermore, it delves

into polydisperse polymer brushes under compression, detailing their behavior concerning polymer persistence length and substrate stiffness. .
