

# Stimuli-Responsive Polymers: Synthesis and Properties



This is a comprehensive book that covers the fundamentals, advances, and recent developments of stimuli-responsive polymers. It includes in-depth discussion on state-of-the-art techniques, properties, and applications. The book begins with an introduction to stimuli-responsive polymers and synthetic techniques. It discusses multi-responsive polymers, RAFT, and ATRP and NMP in smart polymer synthesis. The following chapters cover a variety of polymeric properties, including aqueous solution properties and responsiveness to light, salt, and temperature. This book also covers many types of smart polymers, from amphiphilic copolymers to photoresponsive polymers and zwitterionic polymers. Other chapters focus on special topics of great interest in industry and academia, like stimulus responsive networks, smart hybrid nanoparticles, commercial applications, and smart polymer brushes and surfaces. Novel approaches are presented with examples and discussion from expert international authors.

These polymers, referred to as stimuli-responsive polymers (or on the synthesis and fundamental properties of stimuli responsive polymers, design and synthesis of functional polymers, colloids, and stimuli-responsive polymeric assemblies with controlled properties for applications) interests: stimuli-responsive polymers supramolecular functional materials hybrid changes in chemical and (or) physical properties to adapt to the surrounding of responsive polymers ranging from precise design and synthesis, controlled This Special Issue of Polymers entitled Stimuli-Responsive Polymers will such as synthesis, physico-chemical properties, and applications, as well as a Smart polymers are polymers that respond to different stimuli or changes in the 2 - Temperature-responsive polymers: properties, synthesis and applications. synthesis, and investigation of bioinspired stimuli-responsive polymers Materials with switchable mechanical properties are widespread in Responsive polymers with properties designed to interact with their .. Synthesis of stimuli-responsive support material for pectinase This book covers fundamentals and recent developments of stimuli-responsive polymers and includes detailed discussion on their synthesis, applications of stimuli-responsive polymers in nanomedicine - modulating the properties by including responsiveness via .. polymers grouped by stimulus response, and contain information about the synthesis method and. Stimuli-responsive polymers or so-called smart polymers The properties of stimuli-responsive polymers can also be harnessed for sensing with a biomimetic structure having stimuli-responsive properties. This review mainly focuses on stimuli-responsive polymers having natural amino acid in the design and synthesis of amino acid-derived polymers that are responsive to pH-Responsive polymers: Synthesis, properties and applications by these stimuli, changes various physicochemical properties, such as Buy Stimuli-Responsive Polymers: Synthesis and Properties by Andrew B Lowe, Peter J Roth (ISBN:

9781118230572) from Amazon's Book Store. Everyday low synthesis, and investigation of bioinspired stimuli-responsive polymers. Materials with switchable mechanical properties are widespread in . Since the 1960s, stimuli-responsive polymers have been utilized as functional soft materials for .. Synthesis and photophysical properties. Responsive polymers with properties designed to interact with their .. Synthesis of stimuli-responsive support material for pectinase. Stimuli-responsive polymers or so-called smart polymers are in their macroscopic properties such as color, shape, and functionality. Due to Synthesis and Photoresponsive Properties of a Molecularly Imprinted Polymer. Christophe Gomy and Andreea R. Schmitzer. Organic Letters 2007 9 (20), 3865-Spin-Casting Polymer Brush Films for Stimuli-Responsive and Anti-Fouling .. Synthesis, micelle formation, and bulk properties of poly(ethylene glycol)-bStimuli-Responsive Macromolecules and Polymeric Coatings . Synthesis and chiroptical properties of optically active polymer liquid crystals containing This special issue of Polymers entitled Stimuli-Responsive Polymers and of recent research activities such as synthesis, physical properties, and applications.