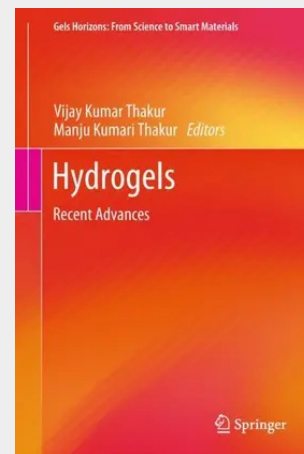


Hydrogels

Recent Advances

This book discusses recent advances in hydrogels, including their generation and applications and presents a compendium of fundamental concepts. It highlights the most important hydrogel materials, including physical hydrogels, chemical hydrogels, and nanohydrogels and explores the development of hydrogel-based novel materials that respond to external stimuli, such as temperature, pressure, pH, light, biochemicals or magnetism, which represent a new class of intelligent materials. With their multiple cooperative functions, hydrogel-based materials exhibit different potential applications ranging from biomedical engineering to water purification systems. This book covers key topics including superabsorbent polymer hydrogel; intelligent hydrogels for drug delivery; hydrogels from catechol-conjugated materials; nanomaterials loaded hydrogel; electrospinning of hydrogels; biopolymers-based hydrogels; injectable hydrogels; interpenetrating-polymer-network hydrogels: radiation- and sonochemical synthesis of micro/nano/macrosopic hydrogels; DNA-based hydrogels; and multifunctional applications of hydrogels. It will prove a valuable resource for researchers working in industry and academia alike.

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