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Soggetti	Polymers Optical materials Electronic materials Nanochemistry Microwaves Optical engineering Energy harvesting Biomaterials Polymer Sciences Optical and Electronic Materials Microwaves, RF and Optical Engineering Energy Harvesting
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Photo-polymerization -- Polymer functionalization -- Electrochemical polymerization -- Polymer processing and rheology -- Porous coordinating polymers -- Silicone based polymers -- Polyurethane and its derivates -- Dielectric polymers -- Dendrimers -- Surface and interface -- Membrane surface modification and functionalization -- Surfactant -- Organic and inorganic hybrid composites -- Fiber reinforced composites -- Micro and nanocomposites -- Blends -- Conducting polymers and composites -- Shape memory materials -- Self-healing materials -- Drug delivery -- Optoelectronic polymers -- Electrochromic polymers for solar cells -- Textile coating --

Anticorrosive coating -- Nanocomposite as gas sensors -- Gas separation -- Proton conductions -- Desalination -- Enhanced oil recovery.

Sommario/riassunto

This reference work provides a comprehensive and authoritative overview of functional polymers and polymeric materials, ranging from their synthesis and characterization, to properties, actual applications and an outlook on future perspectives. Including over 30 comprehensive review chapters, all written by leading international experts, this reference is also a sound introduction to this exciting field. The book is carefully edited by an international team of experts in the field, ensuring complete coverage of the relevant topics and concise representation. Functional polymers and smart polymeric materials play a decisive role for new innovations in all areas where new materials are needed. Optoelectronics, catalysis, biomaterials, medicine, building materials, water treatment, coatings, and many more applications rely on functional polymers. This work is a major reference for researchers, scientists, and practitioners working in any of these fields, or entering this vibrant research area. Key topics of this reference work include: Polymerization methods and polymer synthesis Characterization and properties of new functional polymers and smart materials Functional polymer composites and blends Applications of functional polymers and smart materials: for electro-optics and optoelectronics, in biology and in medical research, as coatings and adhesives, for gas sensing, in functional membranes for separation or proton conduction and many more.
