Biomimetic Biomaterials : structure and applications /

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Monografía

A significant proportion of modern medical technology has been developed through biomimetics, which is biologically inspired by studying pre-existing functioning systems in nature. Typical biomimetically inspired biomaterials include nano-biomaterials, smart biomaterials, hybrid biomaterials, nano-biocomposites, hierarchically porous biomaterials and tissue scaffolds. This important book summarises key research in this important field. The book is divided into two parts: Part one is devoted to the biomimetics of biomaterials themselves while part two provides overviews and case studies of tissue engineering applications from a biomimetics' perspective. The book has a strong focus on cutting edge biomimetically inspired biomaterials including chitin, hydrogels, calcium phosphates, biopolymers and anti-thrombotic coatings. Since many scaffolds for skin tissue engineering are biomimetically inspired, the book also has a strong focus on the biomimetics of tissue engineering in the repair of bone, skin, cartilage, soft tissue and specific organs. With its distinguished editor and international team of contributors, Biomimetic biomaterials is a standard reference for both the biomaterials research community and clinicians involved in such areas as bone regeneration, skin tissue and wound repair. Places strong focus on cutting edge biomimetically-inspired biomaterials including chitin, hydrogels, calcium phosphates, biopolymers and anti-thrombotic coatingsProvides overviews and case studies of tissue engineering applications from a biomimetics perspectiveAlso places focus on the biomimetics of tissue engineering in the repair of bone, skin, cartilage, soft tissue and specific organs

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