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Nota di contenuto	<p>""Front Cover""; ""Characterisation and Design of Tissue Scaffolds""; ""Copyright Page""; ""Contents""; ""List of contributors""; ""Woodhead publishing series in biomaterials""; ""1 Material types for tissue scaffolds""; ""Introduction""; ""Polymers""; ""Naturally occurring polymers""; ""Polysaccharides""; ""Alginates""; ""Chitosan""; ""Xanthan""; ""Proteins""; ""Collagen""; ""Fibrin and fibrinogen""; ""Hyaluronic acid""; ""Synthetic polymers""; ""Polyesters""; ""Polyethers""; ""Synthetic proteins""; ""Ceramics""; ""De-cellularized matrices""; ""Characterization of materials""</p> <p>""Sterilization""""Future trends""; ""Sources of further information""; ""References""; ""2 Designing and modeling pore size distribution in tissue scaffolds""; ""Background""; ""Modeling of pore architecture and its effect on the process of tissue engineering""; ""Selection of fabrication technique in terms of pore size distribution-with emphasis on polymer-based scaffolds""; ""Electrospinning of tissue engineered vascular grafts-the effect of pore morphology on the mechanical and biological functio...""; ""Conclusion""; ""References""</p> <p>""3 Computer modeling of the degradation behavior of polyester-based tissue engineering scaffolds""""Introduction""; ""Tissue engineering</p>

scaffolds"; "Factors controlling the degradation rate of scaffolds";  
"Material factors"; "The effect of geometry"; "Environmental  
conditions"; "A mathematical model for the degradation of  
bioresorbable polyesters"; "Degradation maps"; "Computer modeling  
of scaffold degradation using finite element methods"; "FE modeling  
procedure"; "Foamlike scaffolds"; "Size effect zone"; "Molecular  
weight"; "Scission rate"  
"Short chain diffusion"; "Fibrous scaffolds"; "Size effect zone";  
"Molecular weight"; "Scission rate"; "Short chain diffusion";  
"Conclusion"; "References"; "4 Decellularization of mammalian  
tissues: preparing extracellular matrix bioscaffolds"; "Introduction";  
"Rationale and relevance for clinical use of decellularized tissues";  
"Establishing a criteria for decellularization efficacy";  
"Decellularization agents"; "Hypertonic and hypotonic solutions";  
"Acids and alkaline bases"; "Acids"; "Alkaline bases"; "Detergents";  
"Nonionic detergents"  
"Ionic detergents"; "Zwitterionic detergents"; "Solvents"; "Tri(n-  
butyl)phosphate"; "Alcohols"; "Biological agents"; "Enzymes";  
"Nonenzymatic biologic agents"; "Chelating agents"; "Toxins";  
"Decellularization techniques"; "Immersion and agitation"; "Use of  
pressure as a decellularization technique"; "Supercritical fluid";  
"Perfusion decellularization of whole organ constructs"; "Terminal  
sterilization of decellularized tissues"; "Decellularization agents that  
act as disinfectants"; "Depyrogenation"; "Ionizing radiation";  
"Ethylene oxide exposure"  
"Conclusion"

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