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Sommario/riassunto	This book comprehensively reviews the essential characteristics of biomaterials and their designs important for applications in tissue regeneration. It delves into both past research milestones in tissue engineering and emerging trends poised for future integration. The primary focus lies on the evolution of biomaterial generations and the burgeoning domain of tissue engineering discovery. Furthermore, it examines various biomaterial categories, including bioceramics, bioactive glasses, synthetic and natural polymers, alongside their composite derivatives, all pivotal in scaffold fabrication, a cornerstone

of tissue engineering. The book also looks at diverse scaffold fabrication methodologies, providing readers with a thorough understanding of the technical intricacies involved. The book showcases recent breakthroughs in tissue engineering across multiple fronts such as bone, skin, cartilage, neural, and cardiac regeneration, highlighting their potential as pre-clinical interventions for rehabilitating injured or diseased tissues and organs. Finally, it reviews the contemporary landscape of biomaterials for tissue regeneration, shedding light on emerging trends and confronting the challenges that lie ahead.