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Sommario/riassunto

This contributed volume presents the latest research on additive manufacturing (AM) or 3D printing, one of the key techniques of novel medical devices, which can process complicated or customized structures to match the properties of human tissues. AM allows for the fabrication of devices with optimal architectures, complicated morphologies, surface integrity, and regulated porosity and chemical composition. Various AM methods can now consistently fabricate dense products for a variety of materials, comprising steels, titanium alloys, Co-Cr alloys, metal-based composites, and nanocomposites. This book elucidates the chronology of various techniques that are categorized under additive manufacturing. Moreover, the futuristic techniques or advancements in this area are also described. The available literature focuses on the microstructure and various properties of 3D-printed alloys. However, the research on the wear characteristics, corrosion resistance, and biocompatibility of 3D-printed technology for biomedical applications is limited. This book comprises the helicopter view of different surface analysis trends of additive manufactured alloys. The book can be a valuable reference for beginners, researchers, and professionals interested in bioimplant manufacturing and allied fields.
