

Powder Metallurgical Techniques for Fabrication of Biomaterials

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Different powder metallurgical techniques have been intensively studied as candidates of methods suitable for fabrication of metallic biomaterials intended for orthopedic applications. The main advantage of powder metallurgical products is that they contain porosity which compromises their mechanical properties closer to those of human bone and allows transport of bodily fluid and growth of new tissue through the implant. This enhances the healing process; moreover, the pores may be also impregnated by drugs or growth factors, which are eluted during healing and support the healing process. Recently, Ti-based and Mg-based materials have been the most investigated metallic biomaterials; therefore, the powder metallurgical methods are usually studied on those materials. In this paper, the most investigated methods will be summarized and briefly described.

Keywords: Powder metallurgy, biomaterials, porosity

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