

Three-Dimensional Bone Printing Using Hydroxyapatite-PLA Composite

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Abstract

Hydroxyapatite (HA) is one of the basic materials in construction of the bones. In this study we investigate the new Nano-architecture of HA in a polymer base material like PLA to 3d printing of the bones. We have introduced a simple soft-template approach for Nano-plates from HA. HA nanostructure have been produced which has a thickness and dimension nano and micro meter scales, respectively. Also, XRD, SEM, and TEM experiments have been done to characterized HA. Moreover, the different weight ratios of HA/PLA have been prepared for bone 3D printing and mechanical tests have been done.

References

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