

# Three-Dimensional Bone Printing Using Hydroxyapatite-PLA Composite

**Reza Najafi Zare<sup>a</sup>, Esmail Doustkhah<sup>b</sup>, M. Hussein N. Assadi<sup>c</sup>**

<sup>a</sup>*Department of Mechanical Engineering, Faculty of Mechanical Engineering, University of Tabriz, Tabriz, Iran*

<sup>b</sup>*International Center for Materials Nanoarchitechtonics (MANA), National Institute for Materials Science (NIMS), Namiki, Tsukuba, Ibaraki, Japan*

<sup>c</sup>*School of Materials Science and Engineering, The University of New South Wales, Sydney, NSW, 2052, Australia;*

## 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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