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In situ biomimetic synthesis and characterization of nano hydroxyapatite in gelatin matrix.

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Source

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Abstract

In this work, nano hydroxyapatite (nHAp) composites were synthesized via an in situ biomimetic process at room temperature by using gelatin as a template agent. Formation of hydroxyapatite nanoparticles and the effect of biopolymer concentration on the shape and morphology of the nHAp nanoparticles were confirmed and investigated by using X-ray diffraction (XRD), Fourier Transform Infrared spectroscopy (FT-IR), Scanning and Transmission Electron Microscopy (SEM and TEM). The results indicated that, the gelatin biopolymer as a template agent in the preparation batch has influences the size and morphology of the HAp nanocrystals precipitated in an aqueous solution of gelatin.

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