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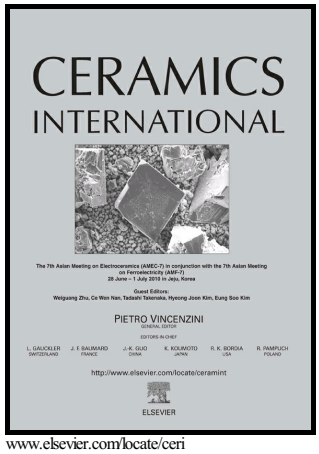

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Fabrication of Biphasic Calcium Phosphates Nanowhiskers by Reflux Approach

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Keywords: calcium phosphate, monetite, hydroxyapatite, nanowhiskers, reflux

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Abstract

Nanowhiskers of biphasic calcium phosphates composed of monetite/hydroxyapatite were fabricated using a cost-effective reflux hydrothermal approach from calcium nitrate and ammonium hydrogen phosphate precursors in presence of urea. The produced nanowhiskers were characterized using, FT-IR-spectroscopy, X-ray diffraction (XRD), field emission scanning electron microscopy (FE-SEM), transmission electron micrograph (TEM) and BET surface area determination. The major phase in Biphasic was (monetite, $CaHPO_4$.) and their grown crystals were morphologically formed with irregular sizes of well defined rod or whiskers crystal structure. The specific surface area of these fabricated nanowhiskers was found to be 8.48 m^2/g

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