6TH INTERNATIONAL CONFERENCE on MATERIALS ENGINEERING and METALLURGY
Iran.Tehran 28, 29 Oct. 2017
iMAT CONFERENCE 2017
تهران – ایران ۶ و ۷ آبان ماه ۱۳۹۶
ششمین کنفرانس بین المللی مهندسی مواد و متالورژی و یازدهمین کنفرانس مشترک انجمن مهندسی متالورژی و مواد ایران و انجمن علمی ریخته گری ایران

Comparison between structural and morphological properties of hydroxyapatite nanoparticles synthesized by solution combustion and co-percipitation

H. Anabestani[1]
M. Ghahari[3], AR. Naeimi[2]

1- Department of Materials Science and Engineering, Sharif University of Technology, Tehran, Iran

2- Department of Nanomaterials and Nano coatings, Institute for Color Science and Technology, Tehran, Iran

3- Department of Nanomaterials and Nano coatings, Institute for Color Science and Technology, Tehran, Iran

Hoseinanabestani72@gmail.com
Maghahari@icrc.ac.ir

Abstract

The effect of two different techniques (Co- precipitation and combustion methods) on the properties of hydroxyapatite (HAP) prepared from calcium nitride [$Ca(NO_3)_2$] and phosphoric acid [H_3PO_4] was investigated. The employed precipitation processes were found to be suitable for the production of nano-sized pure HA powders. The combustion method was a new method for syntheses of HAP and we can produce the mesoporous structure with different amount of fuel. Samples characterization were achieved by powder X ray diffraction (XRD), transmission electron microscopy (TEM), and scanning electron microscopy (SEM).

Keywords: Combustion method, Precipitation method, Nano hydroxyapatite

1. B.S, *Department of Materials Science and Engineering, Sharif University of Technology, Tehran, Iran*
2. M.S, *Department of Nanomaterials and Nano coatings, Institute for Color Science and Technology, Tehran, Iran*
3. Assistant Professer, *Department of Nanomaterials and Nano coatings, Institute for Color Science and Technology, Tehran, Iran*