Synthesis and characterization of nano-hydroxyapatite/graphene oxide composite materials for medical implant coating applications

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ABSTRACT

In this present work, nano-hydroxyapatite/Graphene Oxide were synthesized, and the composite were prepared in different ratios. The structural and morphological changes of synthesized nano hydroxyapatite, graphene oxide and reduced graphene oxide was investigated. Fourier Transform Infrared Spectrometer (FTIR) was used to investigate the chemical structural composition of the synthesized nano hydroxyapatite and its composite, which confirms that presence of presence of reduced graphene oxide, graphene oxide in the prepared composite. Field emission scanning electron microscopy (FE-SEM) analysis was employed to examine the surface morphology of the composite materials which confirms the presence graphene flakes and nanosized hydroxyapatite on the surface.

KEYWORDS

Bioceramics; Coating Materials; Hydroxyapatite; Microstructures; Nanocomposites; Rgo

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