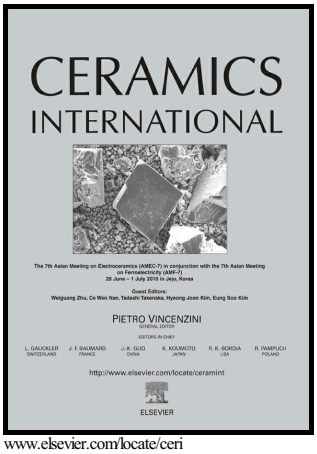

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PII: S0272-8842(17)32167-3
DOI: https://doi.org/10.1016/j.ceramint.2017.09.227
Reference: CERI16398

To appear in: *Ceramics International*

Received date: 31 July 2017
Revised date: 1 September 2017
Accepted date: 28 September 2017

Cite this article as: Cosmin M. Cotrut, Alina Vladescu, Mihaela Dinu and Diana M. Vranceanu, Influence of deposition temperature on the properties of hydroxyapatite obtained by electrochemical assisted deposition, *Ceramics International,* https://doi.org/10.1016/j.ceramint.2017.09.227

Influence of deposition temperature on the properties of hydroxyapatite obtained by electrochemical assisted deposition

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Abstract:

Surface functionalization of pure titanium (cp-Ti) with hydroxyapatite (HAp) was successfully achieved by means of electrochemical deposition (ED) in a solution containing calcium nitrate and ammonium dihydrogen phosphate. The aim of this study is to evaluate the influence of the deposition temperature on the elemental and phase composition, chemical bonds, morphology, and *in vitro* electrochemical behaviour in biological simulated media (simulated body fluid - SBF). The roughness and wettability of the developed coatings are also investigated. By increasing the deposition temperature from 50°C to 75°C, the HAp coatings present a well-crystalized structure, denser and a nobler behaviour in terms of electrochemical behaviour in SBF at 37°C. Also, by increasing the

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