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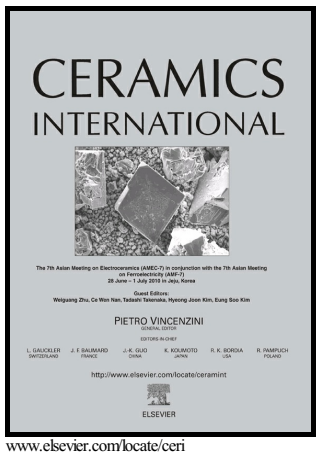

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PII: S0272-8842(16)32177-0
DOI: http://dx.doi.org/10.1016/j.ceramint.2016.11.163
Reference: CERI14251

To appear in: *Ceramics International*

Received date: 11 November 2016
Revised date: 22 November 2016
Accepted date: 23 November 2016

Cite this article as: Govindan Suresh Kumar, Easwaradas Kreedapathy Girija Manickam Venkatesh, Gopalu Karunakaran, Evgeny Kolesnikov and Denis Kuznetsov, One step method to synthesize flower-like hydroxyapatite architecture using mussel shell bio-waste as a calcium source, *Ceramic International,* http://dx.doi.org/10.1016/j.ceramint.2016.11.163

One step method to synthesize flower-like hydroxyapatite architecture using mussel shell bio-waste as a calcium source

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Abstract

Mussel shell, a calcium-rich resource, is found plenty in nature. We have developed a novel and facile method to convert mussel shell bio-waste into hydroxyapatite (HAp) biomaterial using microwave irradiation with the aid of ethylenediaminetetraacetic acid (EDTA) as chelating agent. The obtained HAp had flower-like morphology which can be a potential candidate for developing biomaterial for orthopedic applications. Moreover, the developed method has the potential to recover the bio-waste and reduce environment pollution.

Keywords: A. Microwave processing; B. X-ray methods; D. Apatite; E. Biomedical applications.