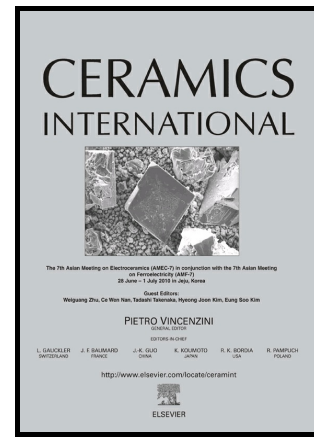


Author's Accepted Manuscript

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TITANATE-BISMUTH POTASSIUM
TITANATE-BARIUM TITANATE
CERAMIC/CEMENT COMPOSITES

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www.elsevier.com/locate/ceri

PII: S0272-8842(17)31046-5
DOI: <http://dx.doi.org/10.1016/j.ceramint.2017.05.225>
Reference: CERI15385

To appear in: *Ceramics International*

Cite this article as: Ruamporn Potong, Rattiyakorn Rianyoi, Athipong Ngamjarrojana and Arnon Chaipanich, INFLUENCE OF CARBON NANOTUBES ON THE PERFORMANCE OF BISMUTH SODIUM TITANATE-BISMUTH POTASSIUM TITANATE-BARIUM TITANATE CERAMIC/CEMENT COMPOSITES, *Ceramics International*, <http://dx.doi.org/10.1016/j.ceramint.2017.05.225>

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PERFORMANCE OF BISMUTH SODIUM TITANATE-BISMUTH
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CERAMIC/CEMENT COMPOSITES**

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Abstract

Lead-free bismuth sodium titanate-bismuth potassium titanate-barium titanate ceramic/cement composites with carbon nanotubes (CNTs) addition were developed for smart structures application. The pores in composite and insulating nature of the cement matrix made the poling difficult and low piezoelectric activities of composites. In this work, CNTs additions as a conducting phase at 0% to 2% by volume was mixed with ceramic and Portland cement by pressing and curing method. The influence and optimum of CNTs content on the microstructure, dielectric, electrical conductivity,

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