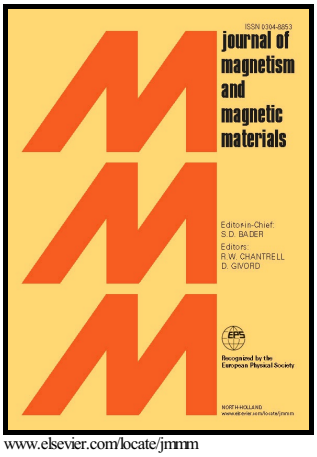

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PII: S0304-8853(16)31417-2
DOI: http://dx.doi.org/10.1016/j.jmmm.2016.10.120
Reference: MAGMA62033

To appear in: *Journal of Magnetism and Magnetic Materials*

Received date: 12 July 2016
Revised date: 15 September 2016
Accepted date: 17 October 2016

Cite this article as: W. Imamura, A.A. Coelho, V.L. Kupfer, A.M.G. Carvalho, J.G. Zago, A.W. Rinaldi, S.L. Favaro and C.S. Alves, A new type of magnetocaloric composite based on conductive polymer and magnetocaloric compound, *Journal of Magnetism and Magnetic Materials* http://dx.doi.org/10.1016/j.jmmm.2016.10.120

A new type of magnetocaloric composite based on conductive polymer and magnetocaloric compound

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Abstract

We introduce a processing route of the first magnetocaloric composite with conductive polymer – wherein the magnetocaloric reinforcement is a compound $Gd_{5.09}Ge_{2.03}Si_{1.88}$ and the ductile matrix is a conductive polymer polyaniline doped by camphorsulfonic acid (PAni-CSA). This new type of composite combines mechanical, electrical and magnetocaloric properties that can be applied in thermomagnetic machines.

Keywords

magnetocaloric effect; magnetocaloric properties; magnetic properties; magnetic refrigeration.