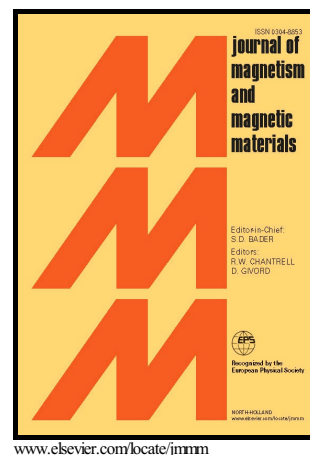


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A new type of magnetocaloric composite based on conductive polymer and magnetocaloric compound

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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 $\text{Gd}_{5.09}\text{Ge}_{2.03}\text{Si}_{1.88}$ 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.

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