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Magnetocaloric effect in In doped YbMnO₃

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Abstract

Magnetic and magnetocaloric (MCE) properties of Yb_{0.9}In_{0.1}MnO₃ and Yb_{0.8}In_{0.2}MnO₃ polycrystalline samples are presented in this paper. Isothermal magnetization measurements reveal a field induced magnetic transition. Magnetic entropy change of 2.34 ± 0.35 J/mole-K for Yb_{0.9}In_{0.1}MnO₃ and 2.64 ± 0.38 J/mole-K for Yb_{0.8}In_{0.2}MnO₃ field change $\Delta H = 10$ KOe is observed around the ferromagnetic ordering temperature of Yb³⁺. Values of relative cooling power for the same field change are found to be 38.03 ± 9 J/mol, and 40.90 ± 10 J/mol for

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