Large positive entropy change in several charge-ordering perovskites

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Abstract: The $Nd_{0.5}Sr_{0.5}Mn_{1-x}Cu_xO_3$ (x=0.00; 0.02; 0.10) and $Nd_{0.25}Pr_{0.25}Sr_{0.5}MnO_3$ perovskites have been prepared by solid reaction technology. The manganites are of single phase with orthorhombic structure. The FC and ZFC measurements show an evident existence of charge-ordering effect at low temperatures. At the charge-ordering temperature the magnetic entropy change, ??S, is positive and the $|??S_{max}|$ is larger than that determined at ferromagnetic-paramagnetic phase transition temperature. ?? 2003 Elsevier B.V. All rights reserved.

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