

On the magnetic and magnetocaloric properties of perovskite $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$

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Abstract: Structural, magnetic and magnetocaloric studies on $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$ ($0.20 \leq x \leq 0.50$) were reported. The crystal structure of the samples is rhombohedral with $x = 0.20-0.45$ and is cubic with $x = 0.50$. Magnetization, Curie temperature (T_c) and maximum magnetic-entropy change (ΔS_{\max}) depending on the Sr content in the samples are discussed. $\text{La}_{0.55}\text{Sr}_{0.45}\text{CoO}_3$ exhibits the largest value for ΔS_{\max} and T_c among the compounds investigated. © 2002 Elsevier Science B.V. All rights reserved.

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