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Influence of *B*-site cationic ordering on the magnetic properties of $\text{La}_2\text{NiMnO}_6$ epitaxial thin films. A. VENIMADHAV, D.A. TENNE, M.J. WILSON, P. SCHIFFER, QI LI, J.H. LEE, D.G. SCHLOM, X.X. XI, Penn State University — Monoclinic (0 0 1)-oriented $\text{La}_2\text{NiMnO}_6$ thin films were grown on (0 0 1) SrTiO_3 and (0 0 1) LAST substrates by pulsed-laser deposition. The crystal structures, magnetic properties, and the Raman spectrum have been studied for films with different growth conditions. The magnetic properties were found to be very sensitive to the growth conditions and to the substrate. Analysis of the magnetization, x-ray diffraction, and the Raman spectroscopy measurements demonstrate that the *B*-site cationic ordering, which is sensitive to both the growth conditions and the lattice mismatch with the substrate, affects the magnetic properties.

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