

Abstract Submitted
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Magneto-thermoelectric transport in ferromagnetic $\text{La}_{2/3}\text{Sr}_{1/3}\text{MnO}_3$ thin films¹ CONG TINH BUI, FRANCISCO RIVADULLA, University of Santiago de Compostela — $\text{La}_{2/3}\text{Sr}_{1/3}\text{MnO}_3$ (LSMO) thin films have been widely used in spintronics because of its nearly full spin-polarization and high Curie temperature. However, the spin-dependent thermoelectric effects in this material such as spin Seebeck effect (SSE), anomalous Nernst effect (ANE), planar Nernst effect (PNE), which might either interfere the performance of the spintronic devices or be utilized for other potential applications, have not been attended adequately. Herein, we present the observation of PNE and ANE in thin films of LSMO grown epitaxially on SrTiO_3 substrate. Through a careful control of the thermal gradients, the ANE can be suppressed and separated from the symmetric PNE response. The observation of sign change of ANE over the temperature, which can be understood in terms of Mott relation between anomalous Nernst and Hall coefficients, leads to the intrinsic scattering mechanism of anomalous Hall effect. We also observe a perfect correspondence between the magneto-thermal effects and their electrical counterparts. Finally, the absolutely comparable ANE and PNE signals using either Pt or Au exclude any contribution from SSE within our resolution limit.

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