Abstract Submitted
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Thermopower of [$LaNiO_3/LaAlO_3$] Superlattices[1] J. L. COHN, N. PRASAI, Physics Dept., University of Miami, M. KAREEV, JIAN LIU, B. GRAY, V. KUNETS, J. CHAKHALIAN, Physics Dept., University of Arkansas, J. FREELAND, APS, Argonne National Laboratory — Thermopower measurements for 4K $\leq$ T $\leq$ 330K will be reported for $LaNiO_3$ films and [$m$$LaNiO_3$/$n$$LaAlO_3$] superlattices ($4 \leq m \leq 10$, $n = 3$ are layer thicknesses in unit cells) grown on (100)-oriented $LaAlO_3$ and $SrTiO_3$ substrates. The influence of in-plane, epitaxial strain (both compressive and tensile) on the magnitude of the thermopower and its relation to changes in the electronic structure will be discussed. The possible role of phonon drag in a sharp maximum at T$\simeq$ 30K and the use of thermopower to distinguish correlation and disorder effects in the upturn in the low-T resistivity, will also be addressed.

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