

Abstract Submitted
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Thin-film growth of the quasi-one-dimensional metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$ ¹
ALEXANDRA COTE, SAEED MOSHFEGHYEGANEH, JOSHUA L. COHN, University of Miami, JOHN J. NEUMEIER, Montana State University — Attempts to grow epitaxial thin films of $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$ by pulsed-laser deposition will be discussed. Single crystals of this quasi-one-dimensional (q1D) metal exhibit² highly anisotropic Seebeck coefficients with $\Delta S = S_c - S_b \approx 200 \mu\text{V/K}$ near 450 K (the b axis corresponds to the most conducting, q1D chain direction). Suitably oriented thin films could enable possible applications in energy detection using the transverse Seebeck effect. X-ray diffraction results will be presented for films grown from a polycrystalline target on several substrates under a narrow range of temperature and pressure conditions.

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