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Room-Temperature Studies of $Li_{0.9}Mo_6O_{17}$ by Scanning Tunneling Microscopy MICHAEL BOYER, LING FU, AARON KRAFT, Clark University, MARTHA GREENBLATT, Rutgers University — The lithium purple bronze ($Li_{0.9}Mo_6O_{17}$) is a quasi-1 dimensional material as evidenced by high anisotropy in resistivity and thermal conductivity measurements. The material has garnered interest due to experimental evidence for Luttinger Liquid physics from 25 K to 300 K. Here we present our room-temperature topographic and spectroscopic scanning tunneling microscopy measurements on $Li_{0.9}Mo_6O_{17}$. We interpret the observed topographic and spectroscopic features in the context of previous bulk and surface measurements as well as theoretical models describing the 1-dimensional physics of the lithium purple bronze.

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