Supporting Materials

Thickness Dependent Charge Transport in Few-Layer MoS_2 Field-Effect Transistors

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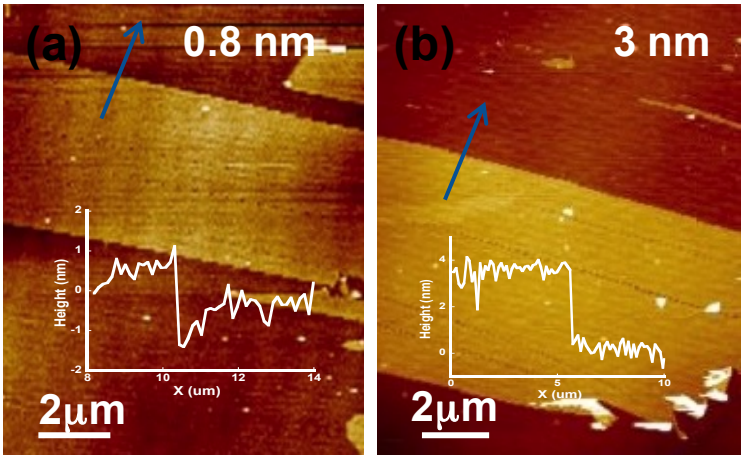

Figure S1. AFM images show the thickness of MoS_2 flakes are (a) 0.8 nm and (b) 3.0 nm corresponding to mono- and four layers, respectively.

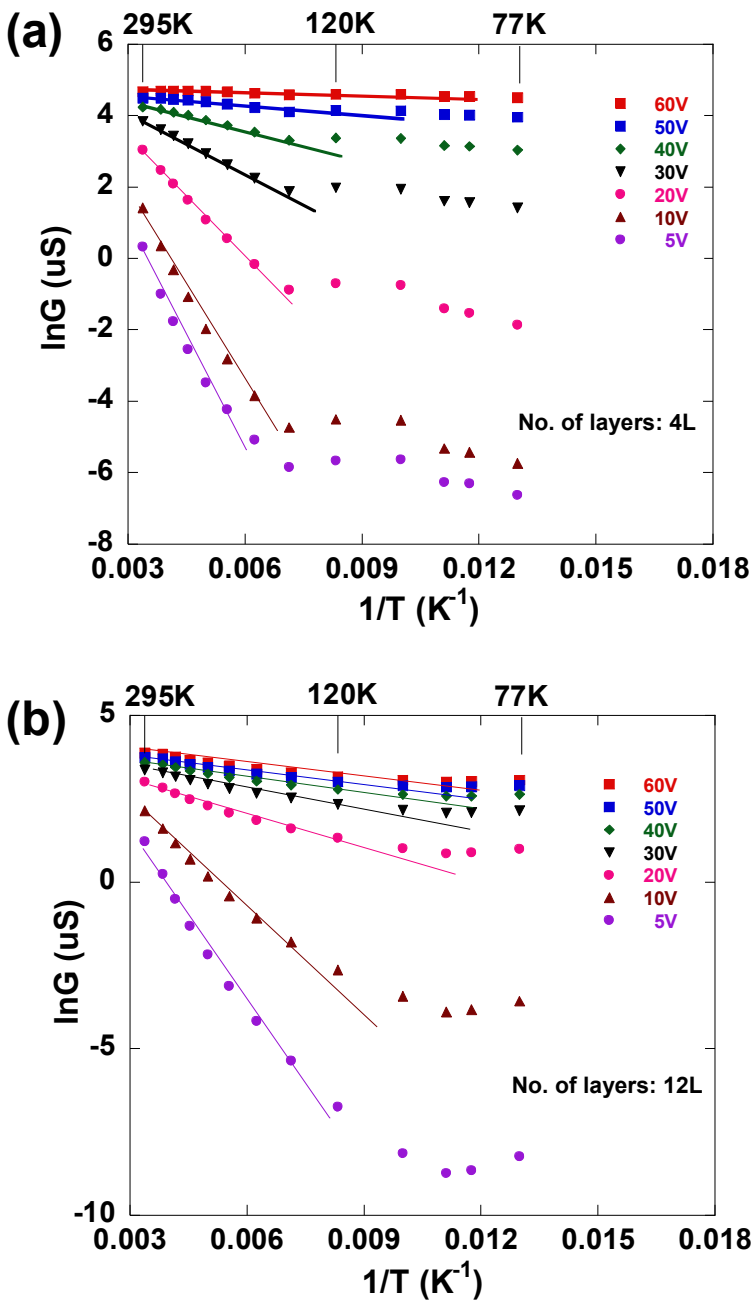

Figure S2. Conductance as a function of temperature with various back gate voltages from 5 to 60 V for a 4L (a) and 12L (b) devices measured at V_{ds} = 100 mV, indicating the process is thermally activated.

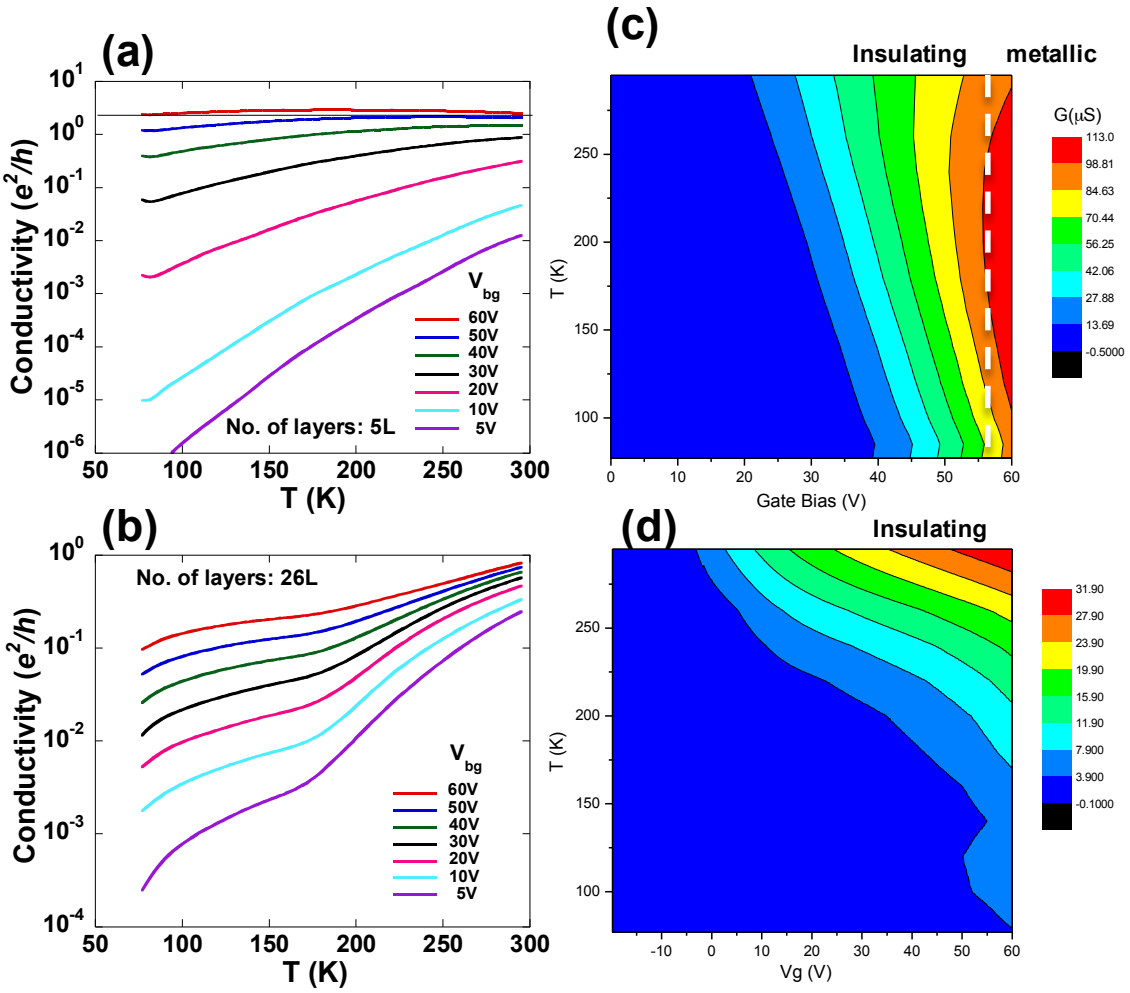

Figure S3. Plots of conductivity as a function of temperature showing metal-insulator-transition (MIT) behavior for a 5L device (a), but not for a 26L device (b), indicating a thickness limit for this behavior. (c) and (d) are the conductance dependence on temperature and gate voltage corresponding to (a) and (b), respectively.