

Supplementary Materials for Ambipolar Transport in Narrow Bandgap Semiconductor InSb Nanowires

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In the main article, we showed the measured ambipolar transport characteristics of an InSb NWFET with a channel length of 1 μm at source-drain bias voltage $V_D=100$ mV and of an InSb NWFET with a channel length of 260 nm at $V_D=50$ mV at different temperatures. Here, we provide in Figure S1 the measurements for the two devices at several lower source-drain bias voltages at a low temperature of $T=4$ K. Excellent ambipolar transport characteristics with three distinct transport regions as defined in Figure 2(d) of the main article can be clearly observed in all these measurements.

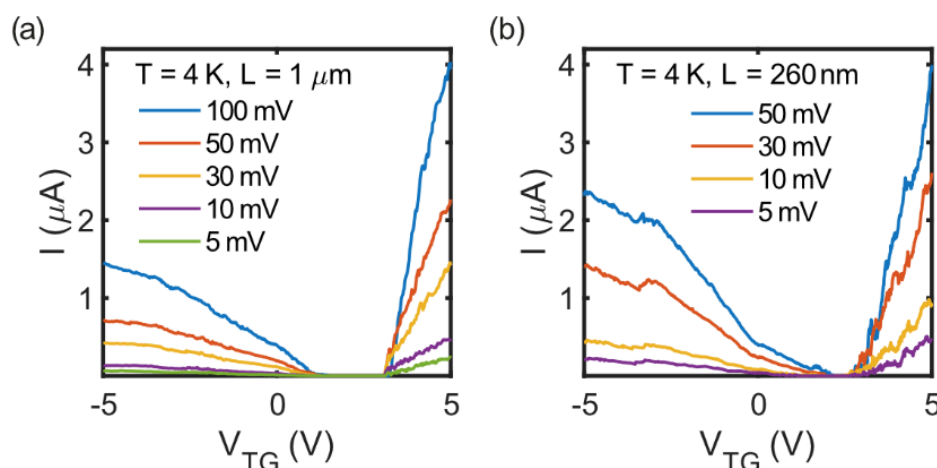


Figure S1. (a) Current I measured as a function of top-gate voltage V_{TG} for the InSb NWFET with a channel length of $L=1 \mu\text{m}$ at different source-drain bias voltages and at a temperature of $T=4$ K. (b) the same as (a) but for the InSb NWFET with a channel length of $L=260$ nm. Clear ambipolar transport characteristics can be seen in the measurements of the two devices at all the considered source-drain bias voltages.