

Supplementary Information for:

Sub-100 Nanometer Channel Length Ge/Si Nanowire Transistors with
Potential for 2 THz Switching Speed

Yongjie Hu[†], Jie Xiang[†], Gengchiao Liang[§], Hao Yan[†], Charles M. Lieber^{,†,‡}*

[†]Department of Chemistry and Chemical Biology, Harvard University, Cambridge,
Massachusetts 02138. [§]Department of Electronic and Computer Engineering, National
University of Singapore, Singapore. [‡]School of Engineering and Applied Sciences, Harvard
University, Cambridge, Massachusetts 02138.

*Corresponding author. Email: cml@cmliris.harvard.edu

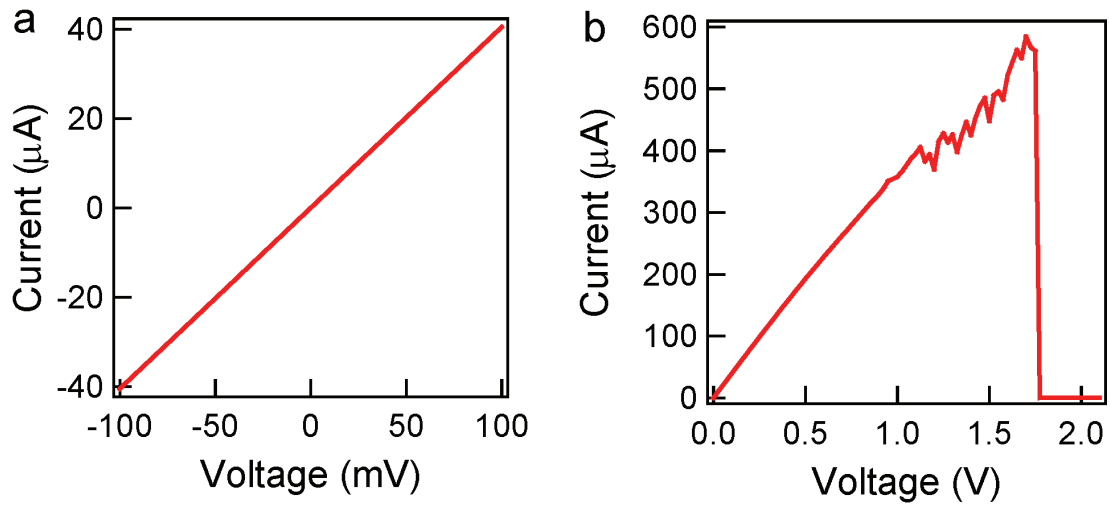


Figure S1. (a) Two-probe current versus voltage curve for a 0.5 μm long NiGe_xSi_y NW. (b) Current-voltage data recorded for a larger voltage range. The rapid drop at approximately 1.8 V corresponds to the failure point for this NW. The resistivity and failure current density of the NW were 130 μΩ-cm and 2.3×10^8 A-cm⁻², respectively. The NiGe_xSi_y NW in this case was made in the same manner as the sub-100 nm channel length devices (Ref. 19) with annealing steps continued until transformation was complete across the entire Ge/Si NW.