Supplementary information for:

Design and Synthesis of Diverse Functional Kinked Nanowire Structures for Nanoelectronic Bioprobes

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This file includes:

Supplementary Figures S1-S2

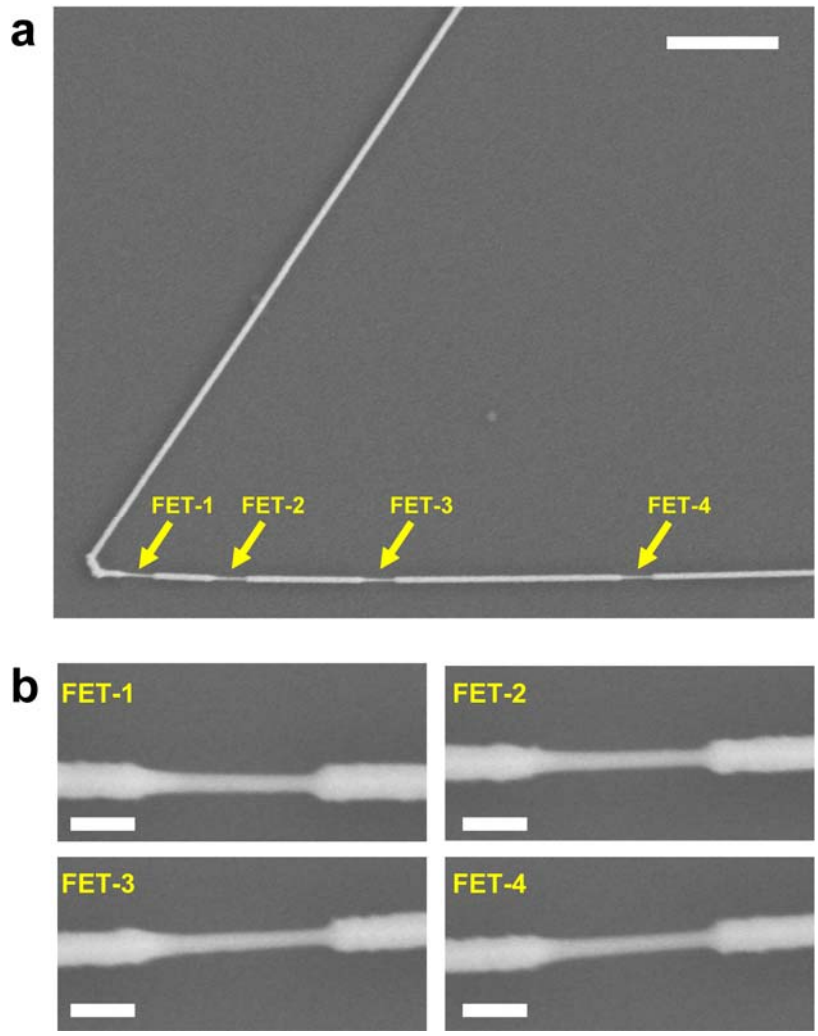

Figure S1. Series multi-nanoFET functional KNW. (a) Representative SEM image of a KOH-etched series multi-nanoFET KNW. The segments with smaller diameter correspond to preferentially-etched lightly-doped nanoFET elements. Scale bar, 2 μm. (b) Magnified images of the 4 nanoFET elements marked with arrows in **a**. Scale bars, 200 nm. Series multi-nanoFET KNWs were dispersed from ethanol solutions onto the nitride surface of $Si/SiO_2/Si_3N_4$ substrates (NOVA Electronic Materials Inc.), and then etched in KOH solution to highlight the lightly-doped nanoFET sections (see reference-34, manuscript).

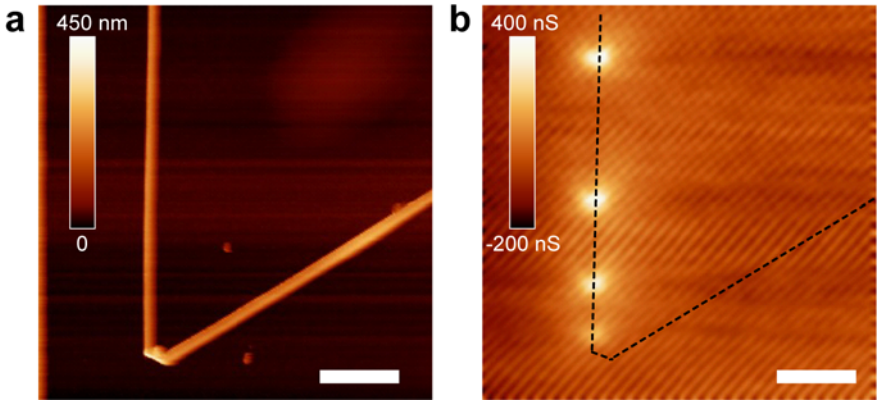

Figure S2. Scanned probe microscopy characterization of a multi-nanoFET KNW. (a) AFM image of series multi-nanoFET KNW. Scale bar, 2 μm. Color scale (0 to 450 nm) corresponds to the z-height of the image; the KNW is ~150 nm in diameter. (b) Corresponding SGM image of the multi-nanoFET KNW with V_{tip} of +10 V. Scale bar, 2 μm. The bright regions in SGM image correspond to increased NW conductance. Color scale (-200 to 400 nS) corresponds to the conductance change. SGM measurements were made as described in reference-38 using a S/D voltage of 0.1 V.