

Supporting information

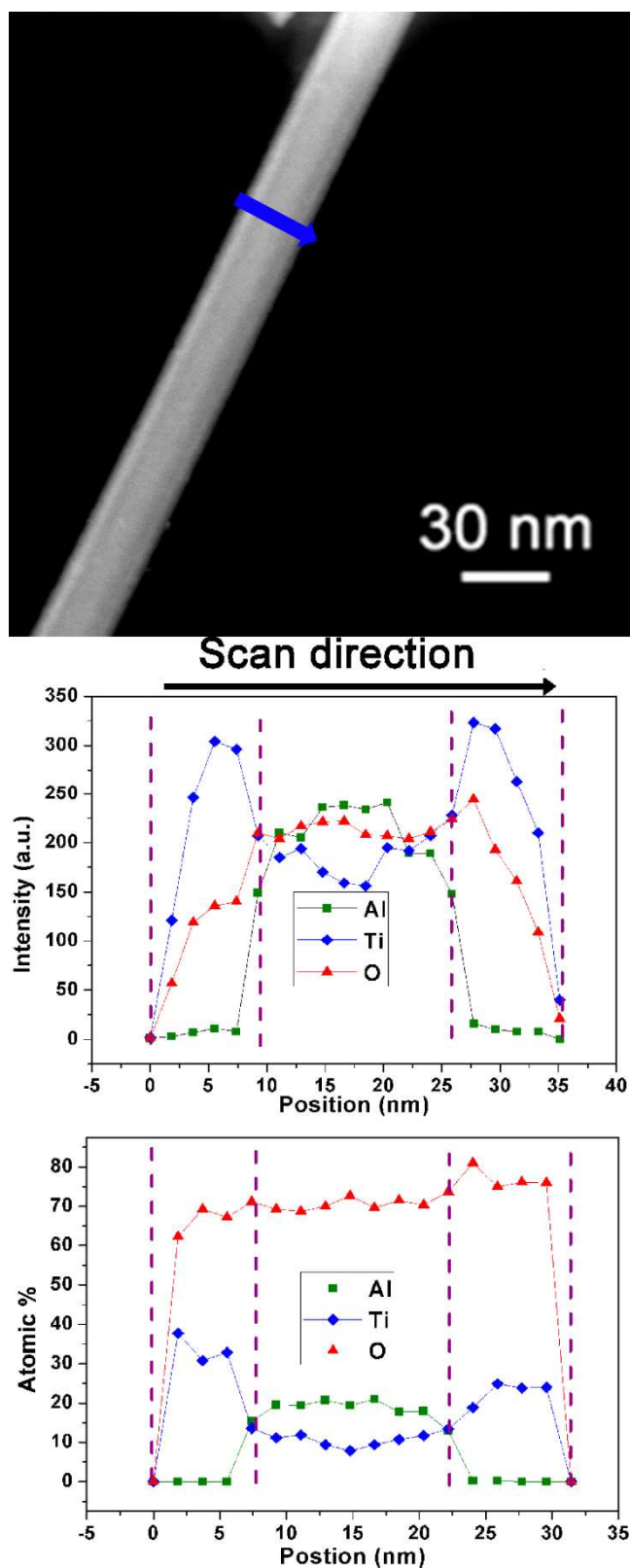


Figure S1. TEM image of a selected nanowire (top), and corresponding STEM-EDX line scan (mid) and energy count in atomic percentage (lower).

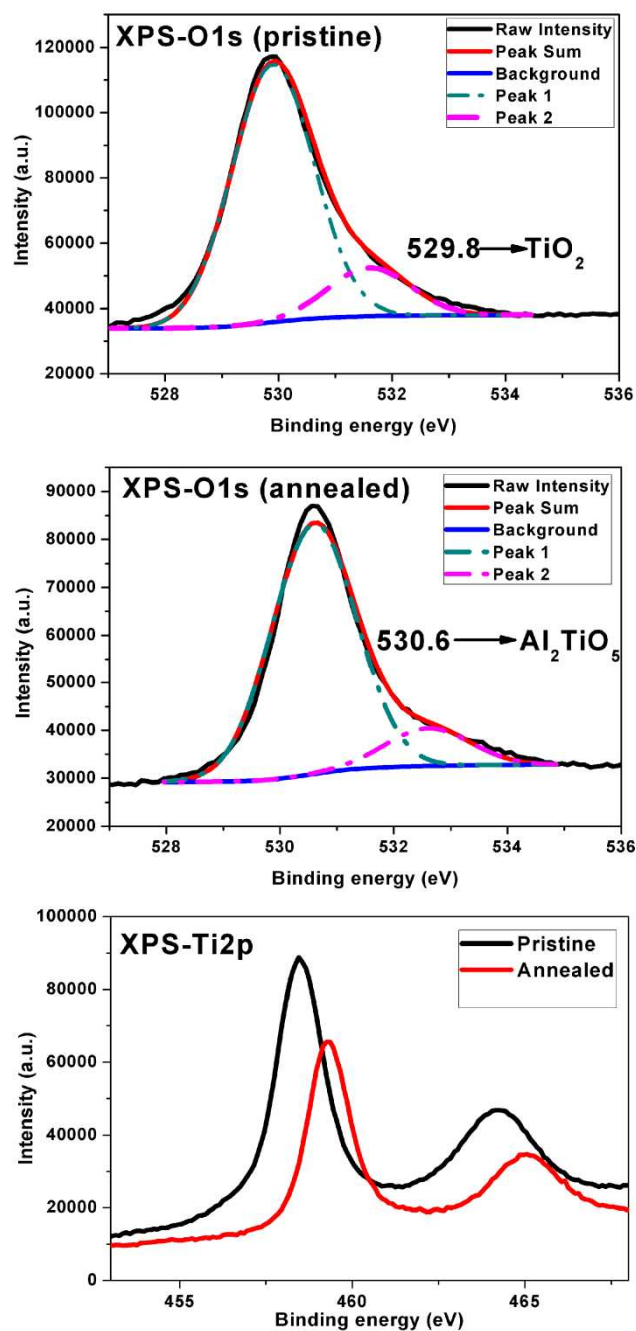


Figure S2. XPS-O1s spectra of pristine (top) and annealed binary nanowires (mid).
XPS-Ti2p spectra of pristine and annealed binary nanowires (lower).

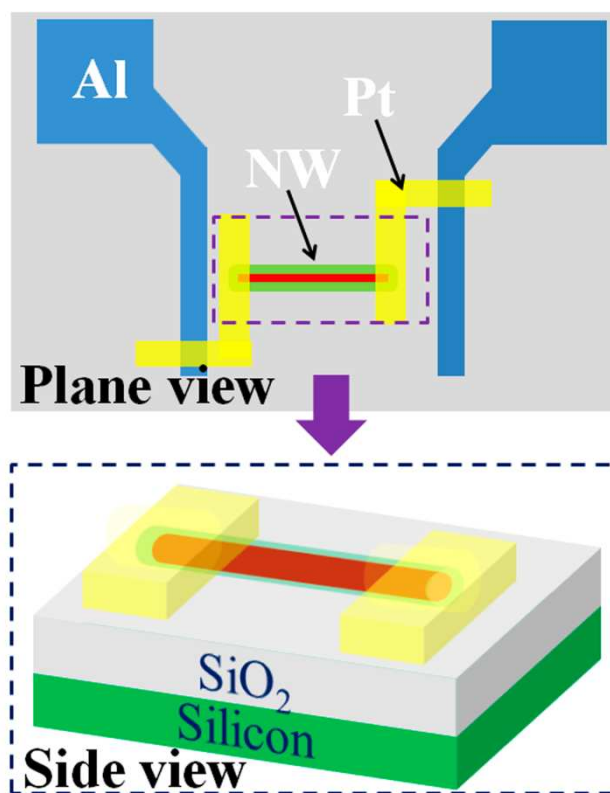


Figure S3. Fabrication schemes of electrical measurements