

Supporting information for

Synthesis of *p*-type GaN nanowires

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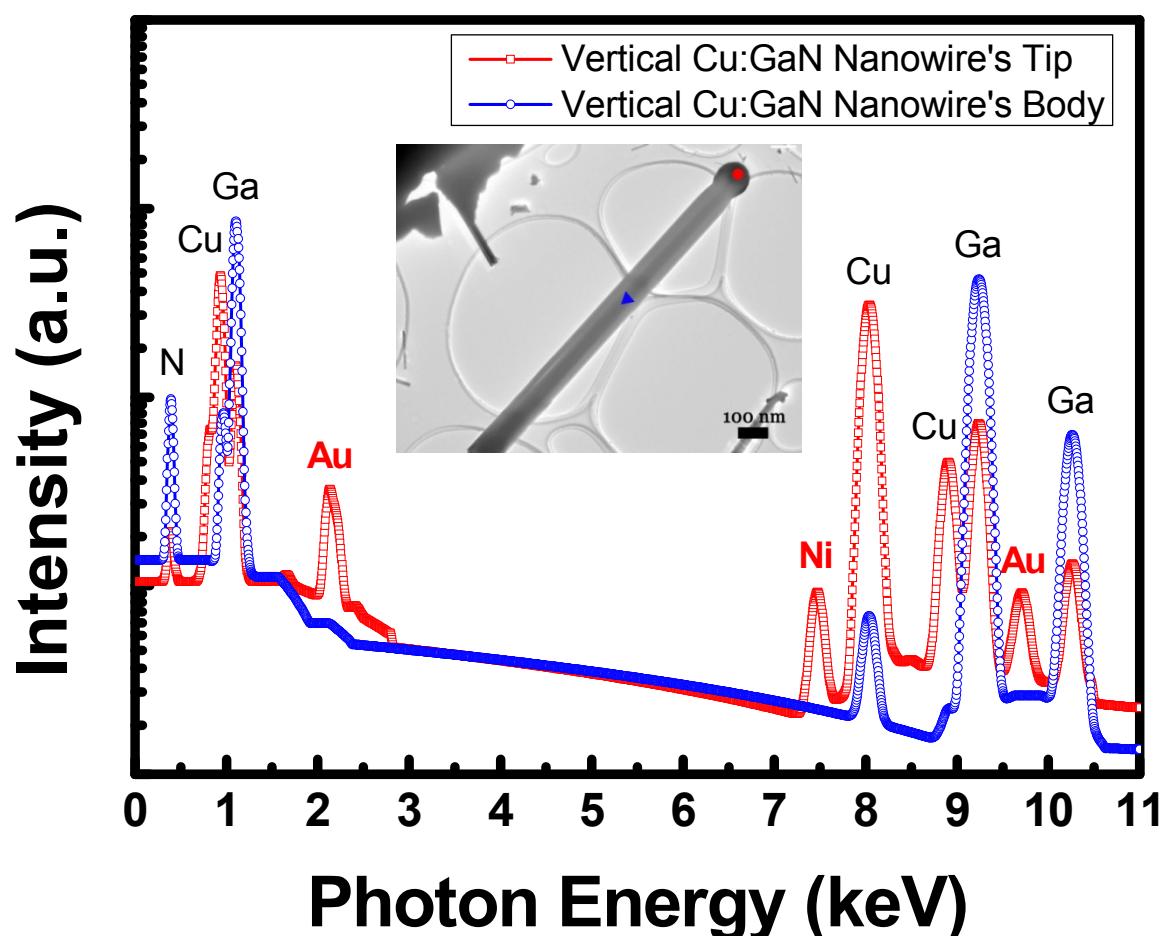


Figure S1. TEM-Energy Dispersive Spectroscopy (TEM-EDS) data of the Cu:GaN nanowire's tip (Red and open square) and body (Blue and closed circle). Inset shows measured point of low-magnitude TEM image of the Cu:GaN nanowire. The catalyst alloy is largely composed of Au, Ni, Cu, Ga, and N at the tip of Cu:GaN nanowire. On the other hand, the Cu:GaN nanowire's body is largely composed of Cu, Ga, and N.

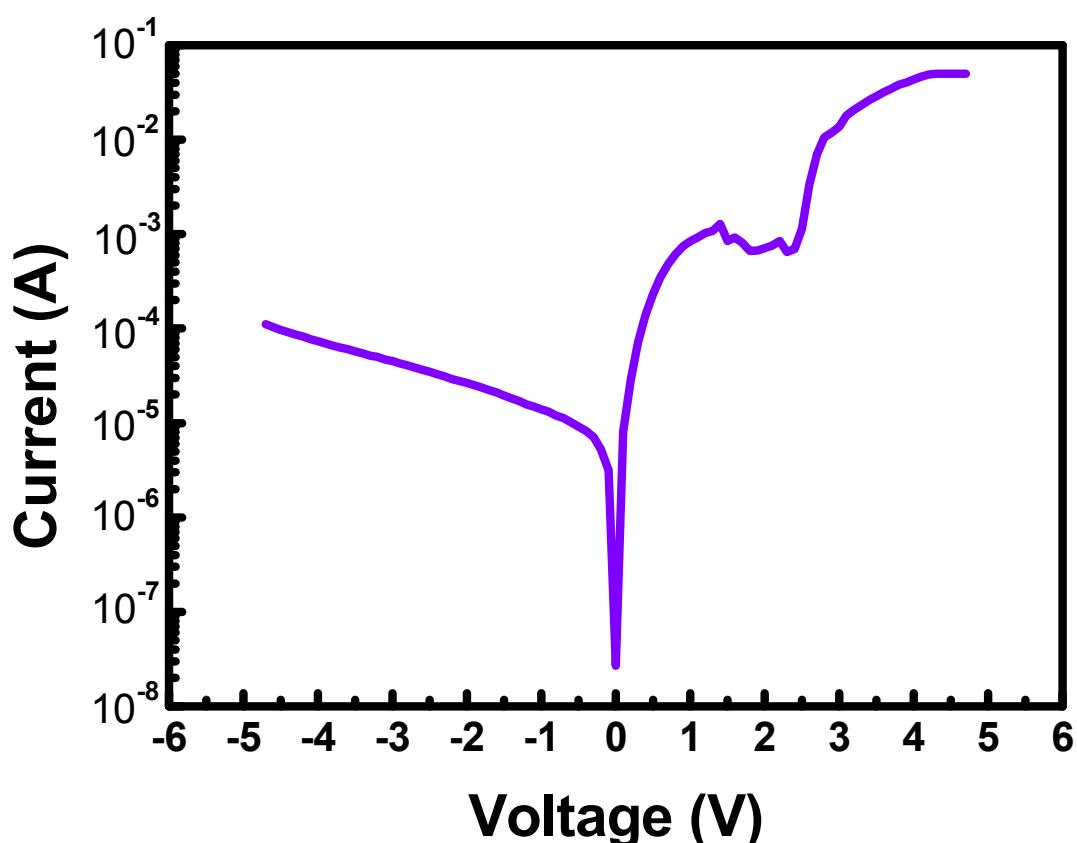


Figure S2. The *p*-*n* junction I-V curve is plotted in logarithmic current scale using annealed Cu:GaN nanowires as a hole injection layer. This I-V curve fitted to a typical p-n junction. This result is an indication for the *p*-type conductivity of the annealed Cu:GaN nanowires. The splatter peak between 1.5V and 3V is appeared because of the leakage current of the device.