Supporting Information

Si / InGaN Core/Shell Hierarchical Nanowire Arrays and their Photoelectrochemical Properties

*Yun Jeong Hwang, Cheng Hao Wu, Chris Hahn, Hoon Eui Jeong, and Peidong Yang**

Department of Chemistry, University of California, Berkeley, California 94720, and Materials Sciences Division, Lawrence Berkeley National Laboratory, 1 Cyclotron Road, Berkeley California 94720

For I-V measurement between Si and InGaN junction, the current was measured while a bias voltage was provided between Si and InGaN nanowires. 300 nm of Ti followed by 100 nm of Au were deposited by e-beam evaporation on InGaN nanowire arrays to have ohmic contact. The InGaN/Si sample was titled (60 degree) to have a continuous contact through InGaN nanowire. On the other hand, 50 nm of Ti and 100 nm of Au were deposited on the backside of Si substrate for electrical contact for Si side.

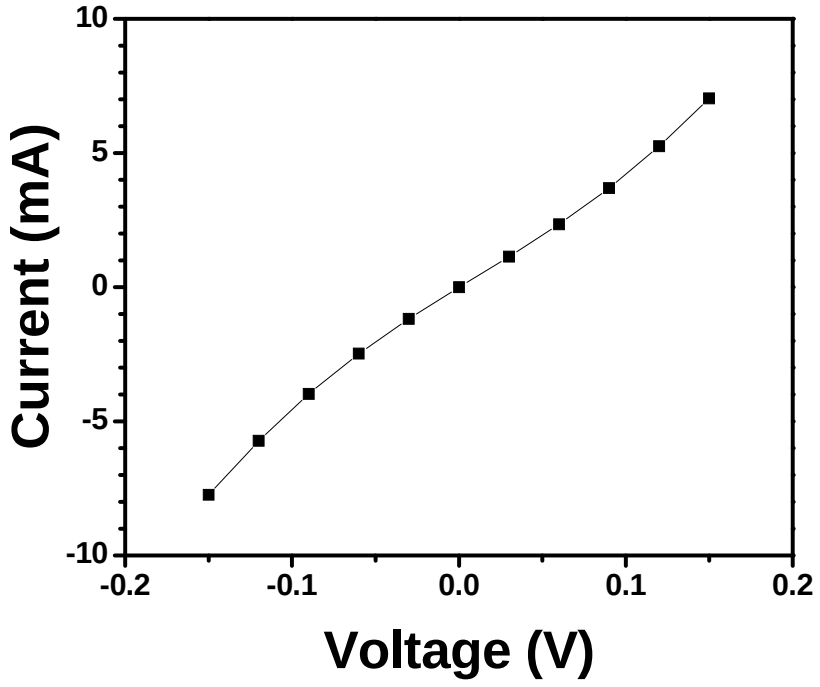

Figure S1. Current- Voltage measurement between Si substrate and InGaN nanowires showing low resistivity between Si and InGaN junction.