Supplementary Information

Wire-Shaped Ultraviolet Photodetectors Based on Nanostructured NiO/ZnO Coaxial p-n Heterojunction via Thermal Oxidation and Hydrothermal Growth Processes

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Figure S1. FE-SEM images of the NiO NSs grown by thermal oxidation at temperatures of (a) 550 °C, (b) 650 °C, (c) 750 °C, and (d) 850 °C for 1 h in air atmosphere.



Figure S2. (a) Perspective and (b) magnified views of the FE-SEM images for the ZnO seed nanoparticles coated NiO NSs.



Figure S3. (a) Cross-sectional FE-SEM image of the nanostructured ZnO/NiO coaxial Ni wire and (b) magnified FESEM image of the grown ZnO NRs on NiO NSs.



Figure S4. Measured absorbance spectra of the ZnO NRs and NiO NSs in ethanol. For comparison, the absorbance spectra of the NiO NSs in ethanol and pure ethanol are also shown.



Figure S5. Results of repeated measurements for I-V curves and photoresponse characteristics of WUPD with nanostructured NiO/ZnO coaxial p-n junction. The results of (i)-(iii) indicate reasonable output values of devices.



Figure S6. (a) Tollen's test for the Ag film coated glass tube and beaker, and (b) cross-sectional FE-SEM image of the Ag coated glass slide.



Figure S7. (a) Two-dimensional model of the Ag coated glass for FDTD simulations and the cross-sectional view for the calculated electric field distribution at (b) 365 nm and (c) 300 nm of incident lights.