Supplementary Information

Oxide Planar p-n Heterojunction Prepared by Low Temperature Solution Growth for UV-Photodetector Application

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Figure S1. SEM top-view images of the NiO deposited layer on ZnO/FTO/glass substrate at different magnifications.
Figure S2. Schematic energy band diagram of $p$-NiO/$n$-ZnO heterojunction at equilibrium.

Figure S3. (a) Typical current-voltage characteristics of the $p$-NiO/$n$-ZnO heterostructure based device in the dark and under UV illumination ($\lambda = 254$ nm). (b,c) Transient UV ($\lambda = 365$ nm) response at lower intensity at (b) + 1 V and (c) – 1 V applied voltage bias.