

# Supplementary Information

## High Sensitivity and Fast Response Self-Powered Solar-Blind Ultraviolet Photodetector with $\beta$ -Ga<sub>2</sub>O<sub>3</sub>/Spiro-MeOTAD p-n Heterojunction

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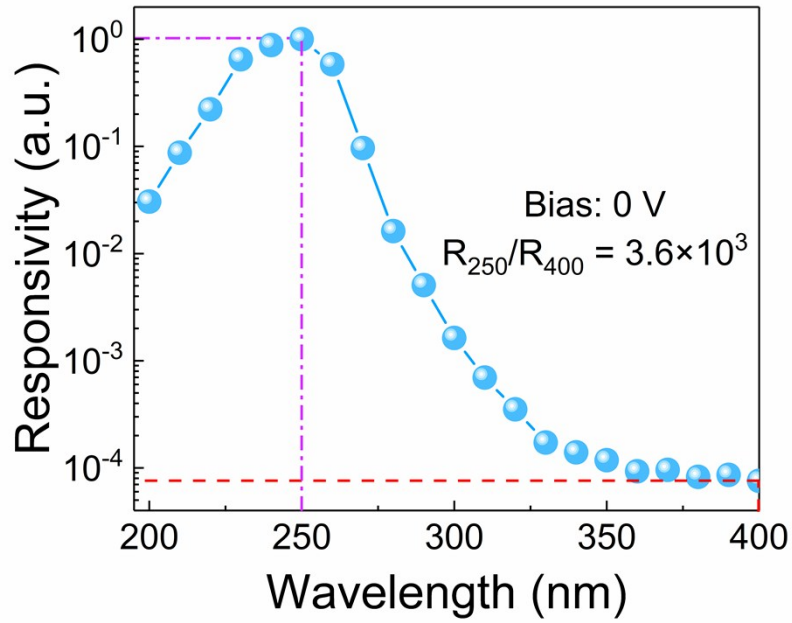
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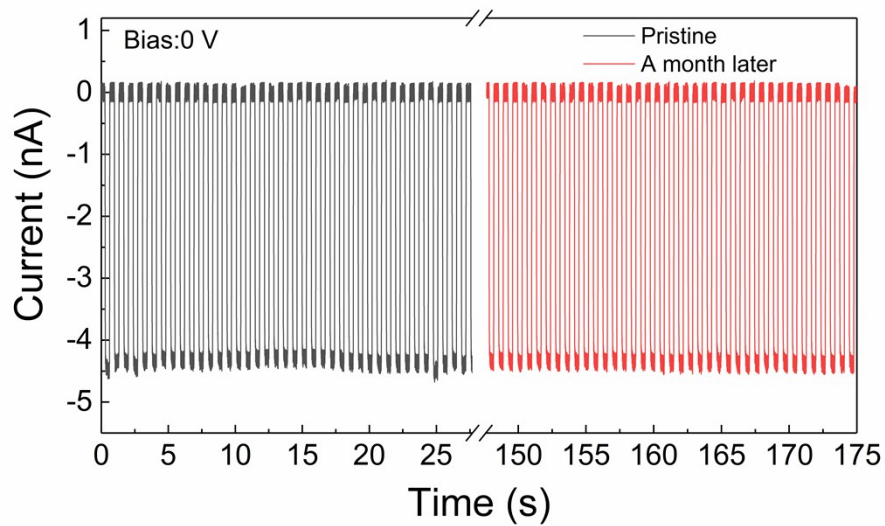
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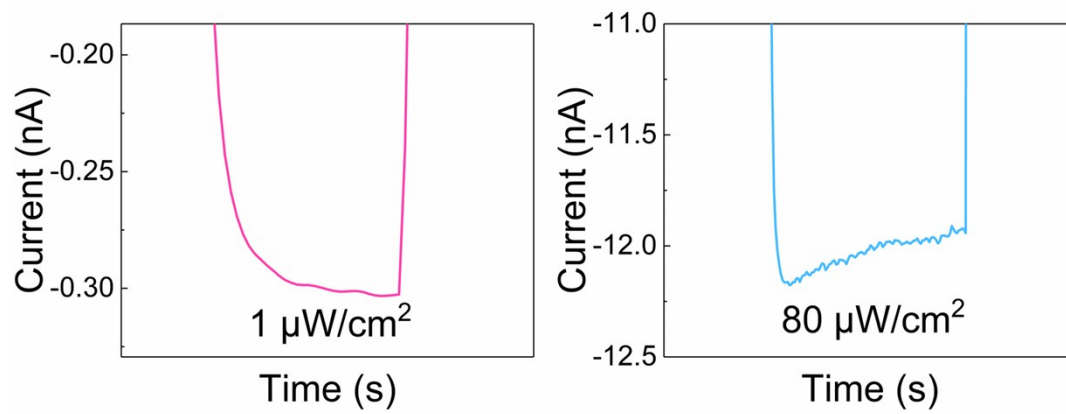
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**Figure S1.** the spectral responsivity in logarithmic scale



**Figure S2.** Comparison of time-dependent response of the Ga<sub>2</sub>O<sub>3</sub>/Spiro-MeOTAD p-n junction device before and after one month under zero bias



**Figure S3.** The shapes of photocurrent curves with a rounded head under UV light with the power intensity of  $1 \mu\text{W}/\text{cm}^2$  and a wedgy head under  $80 \mu\text{W}/\text{cm}^2$ .