

## Electronic Supplementary

### Information(ESI)

**Title: Ultraviolet, self-powered, and large area photodetector based on n-SnO<sub>2</sub>/p-Spiro-OMeTAD organic-inorganic heterojunction**

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## Supplementary Figures

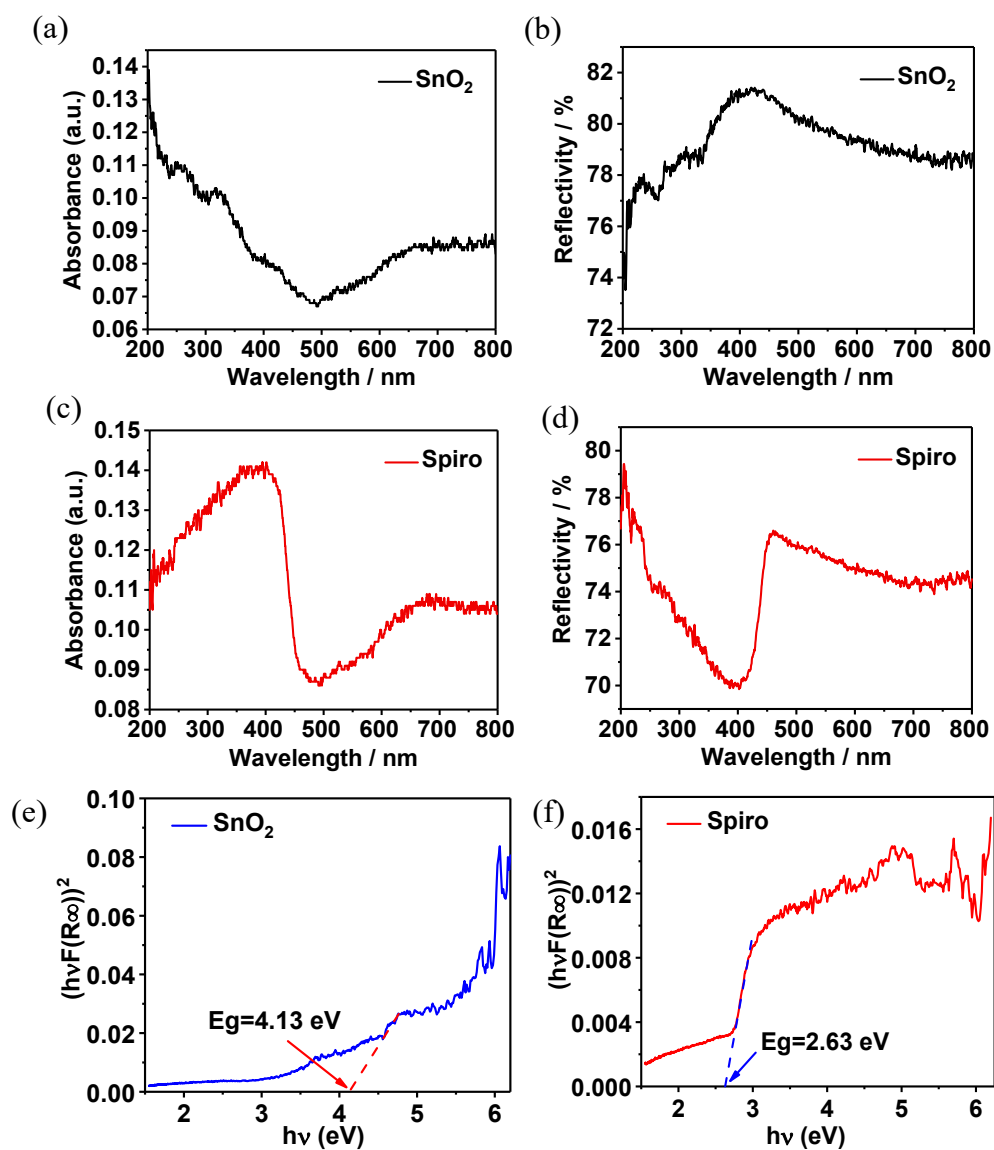


Fig. S1 Ultraviolet-visible absorption (a) and reflection spectra (b) of SnO<sub>2</sub>-P. Ultraviolet-visible absorption (c) and reflection spectra (d) of Spiro-OMeTAD-P.  $h\nu-(h\nu F(R_{\infty}))^{1/2}$  curve of SnO<sub>2</sub>-P (e) and Spiro-OMeTAD-P (f).

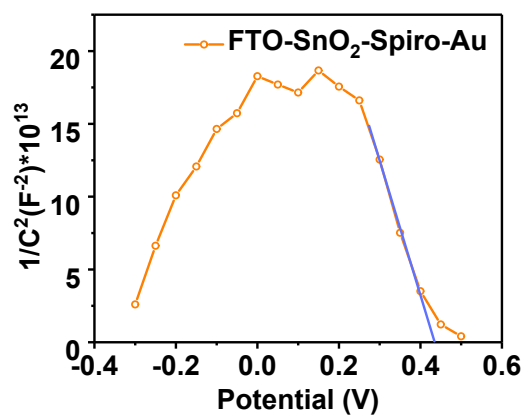


Fig. S2 Mott-Schottky curves of FTO/SnO<sub>2</sub>/Spiro-OMeTAD/Au devices.

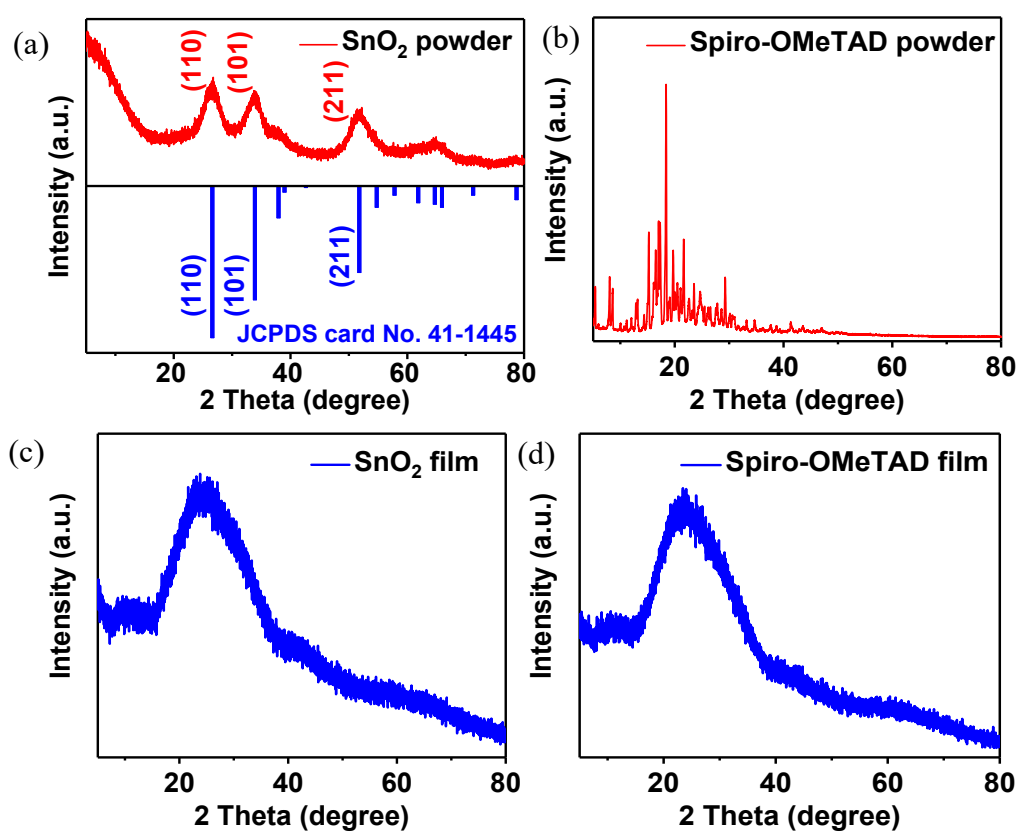


Fig. S3 (a) XRD pattern of SnO<sub>2</sub> powder; (b) XRD pattern of Spiro-OMeTAD powder; (c) XRD pattern of SnO<sub>2</sub> film; (d) XRD pattern of Spiro-OMeTAD film.

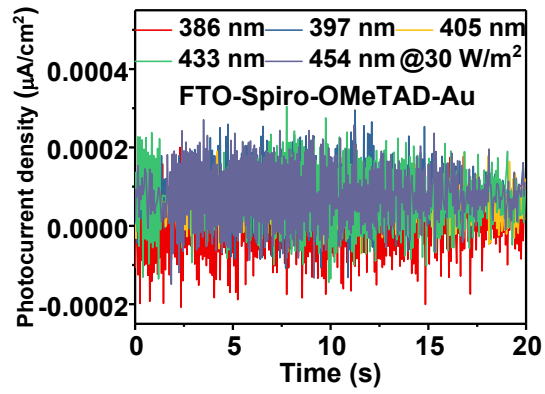


Fig. S4 J-t curves of FTO/Spiro-OMeTAD/Au at different wavelengths with 30 W/m<sup>2</sup>.

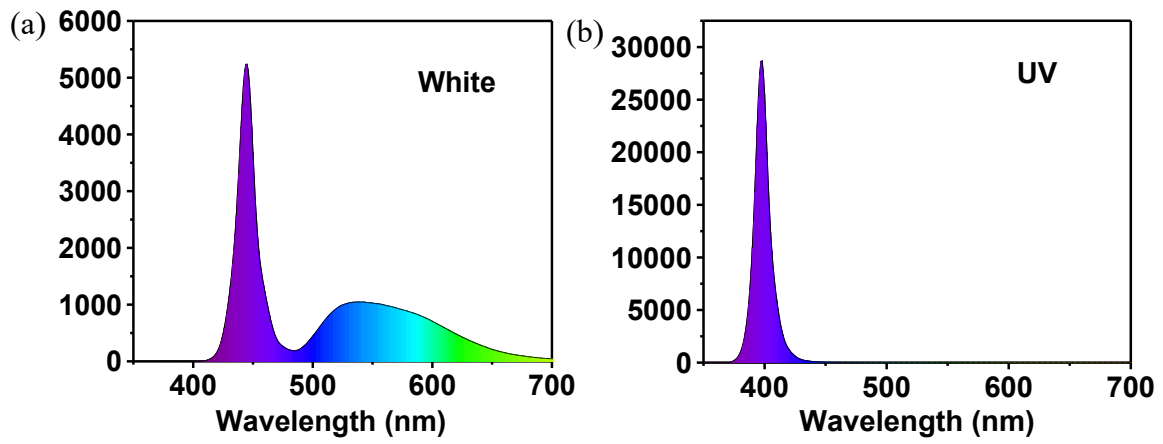


Fig. S5 The spectral profiles of UV and white light.