Supporting Information for

Broadband Self-Powered Photodetector Enabled by a MOF/Organic Heterojunction Architecture

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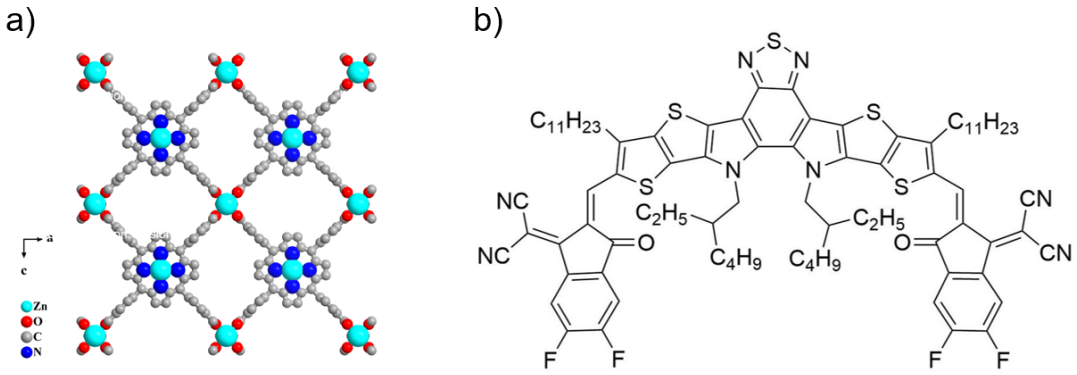

Figure S1. Molecular structures of (a) Zn-TCPP and (b) Y6.

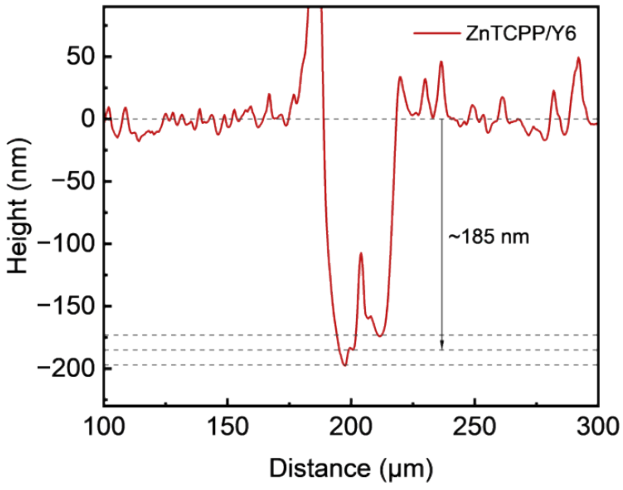

Figure S2. Step-profiler characterization of the Zn-TCPP/Y6 heterojunction film, indicating a thickness of approximately 185 nm.

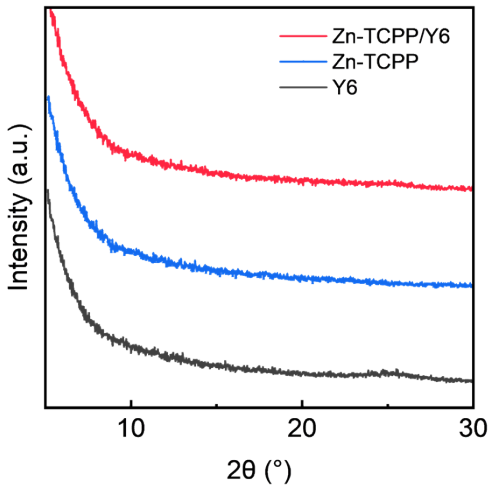

Figure S3. XRD patterns of Zn-TCPP, Y6, and Zn-TCPP/Y6 heterojunction films.

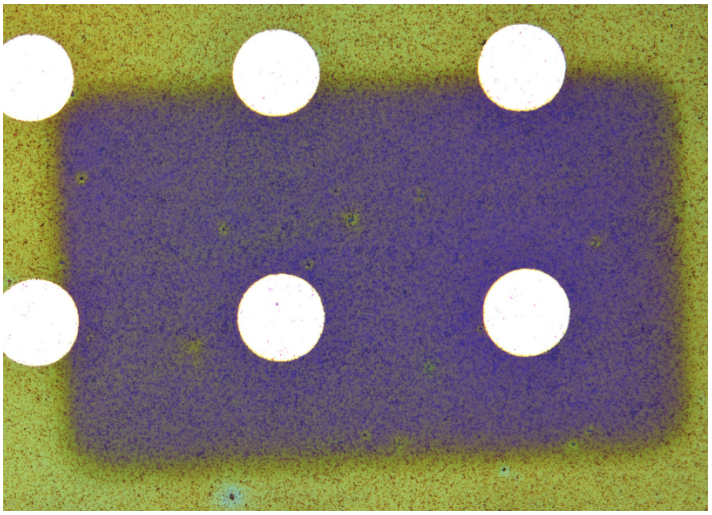

Figure S4. Optical microscope image of the fabricated Zn-TCPP/Y6 heterojunction photodetector.

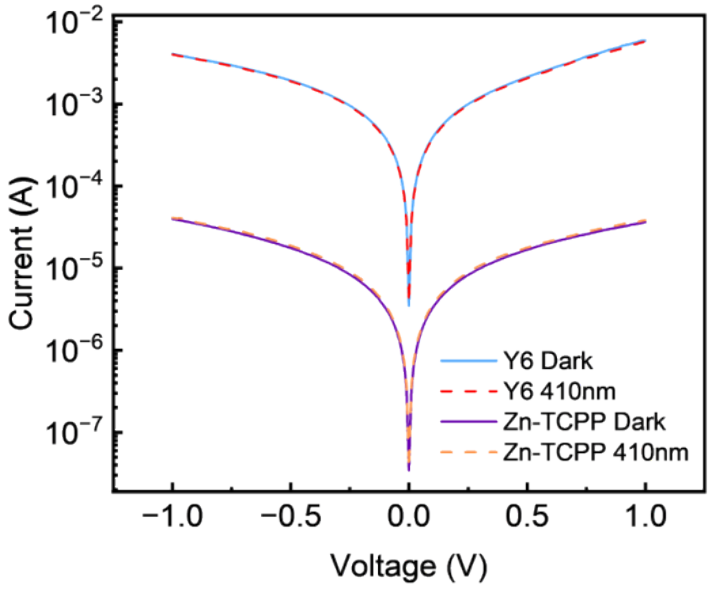

Figure S5. Comparison of the dark and illuminated I-V characteristics of photodetectors based on pristine Zn-TCPP and Y6 films.

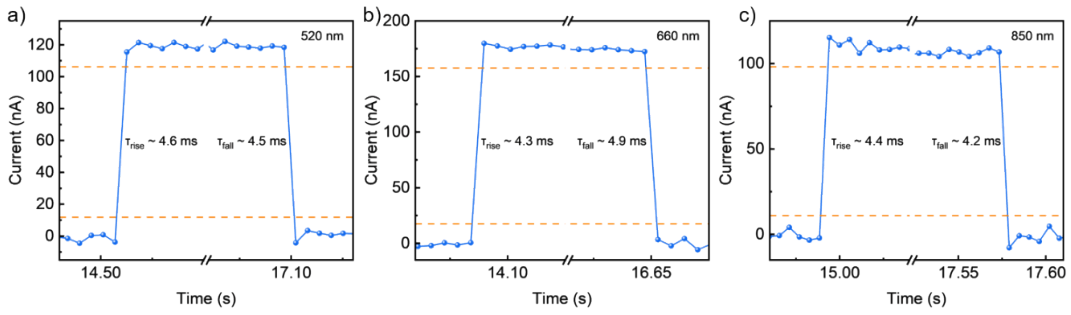

Figure S6. Rise and fall time curves of the photodetector under illumination at 520 nm, 660 nm, and 850 nm.

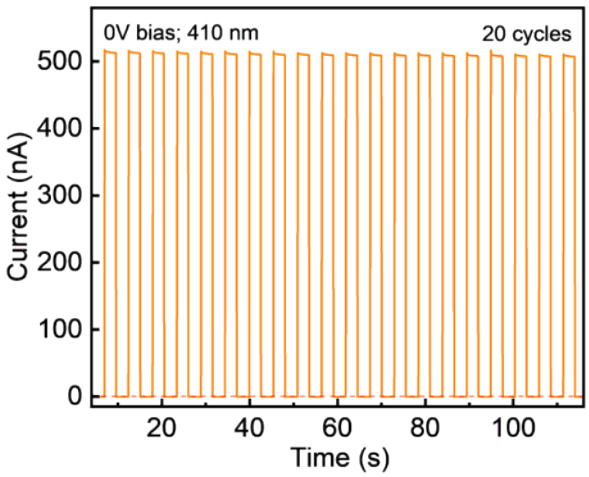

Figure S7. Stability evaluation of the device after 6 months of ambient storage, showing I–t response over 20 on-off switching cycles.

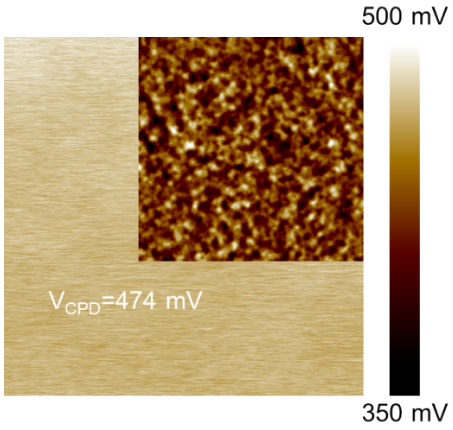

Figure S8. KPFM surface potential image of the Y6 film.