Supporting information for:

All solution-processed Large-area patterned flexible photodetectors based on ZnOEP nanowires / PVK hybrid film

Feng-Xia Wang [a], Jia-Mei Yang [a b], Shu-Hong Nie [a], Wen-Ming Su [a] and Ge-Bo Pan* [a]

[a] Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences, Suzhou 215123, P. R. China;

[b] State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, 710049 Xi'an, P. R. China

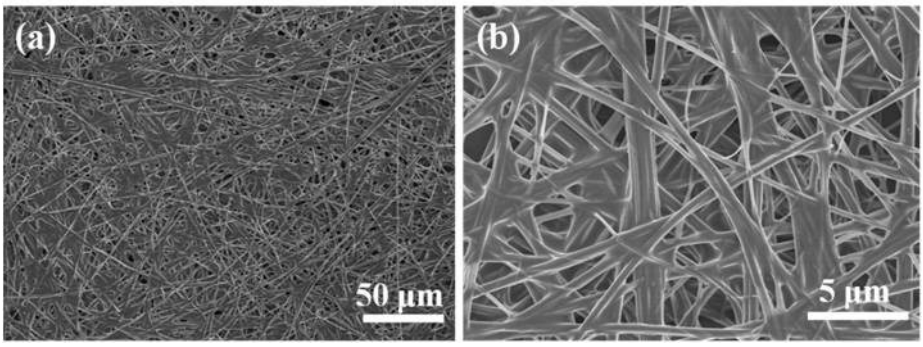

Figure S1. (a) SEM images (b) magnified SEM images of hybrid film.

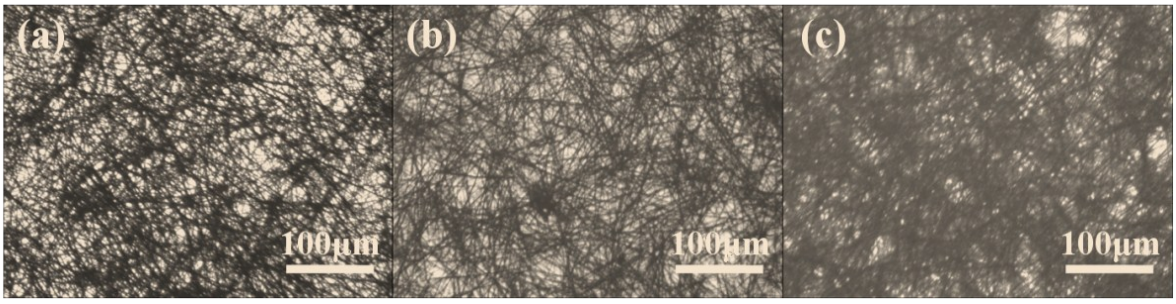

Figure S2. OM images of hybrid films fabricated in different content PVK at Si substrate, (a) 1mg/ml, 3mg/ml, and 5mg/ml.

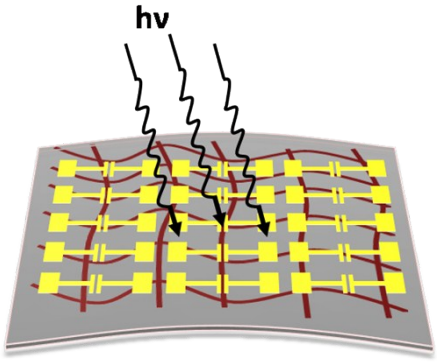

Figure S3. Flexible device of structure based on the hybrid film.

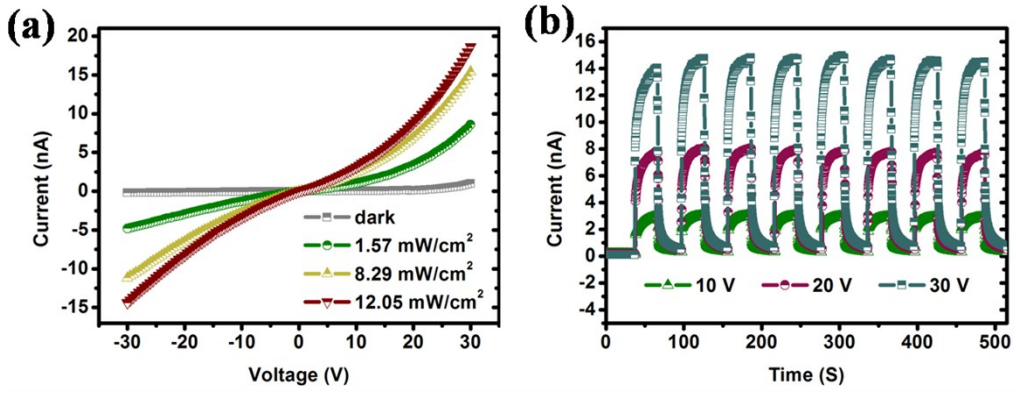

Figure S4. (a) *I-V* curves of the rigid devices based on the hybrid film measured in dark and under inlumination with different intensities. (b) Time-dependent on/off switching of the rigid device based onthe hybrid film with a light power intensity of 12.05 mW/cm^2.

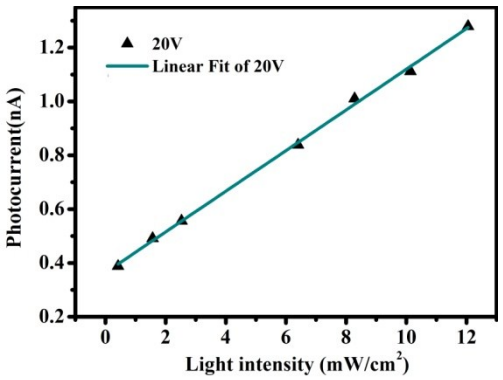

Figure S5 Curve of photocurrents versus incident optical densities at a bias voltage of 20 V.

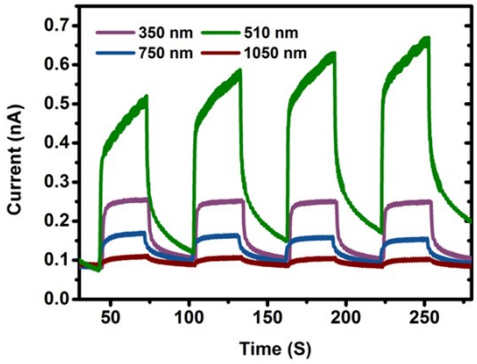

Figure S6. Time-dependent on/off switching of the flexible device at different wavelength.

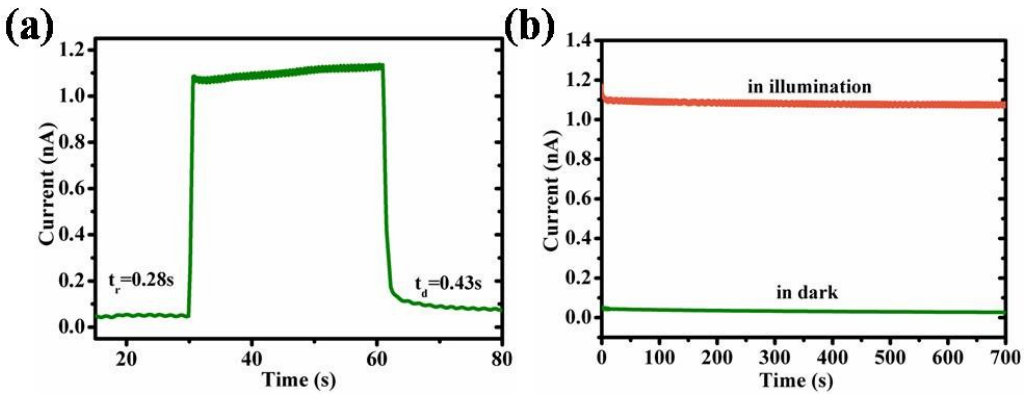

Figure S7. (a) Response time/recovery time of the device. (b) Current of the device measured in the dark and under illumination at a bias of 20 V.

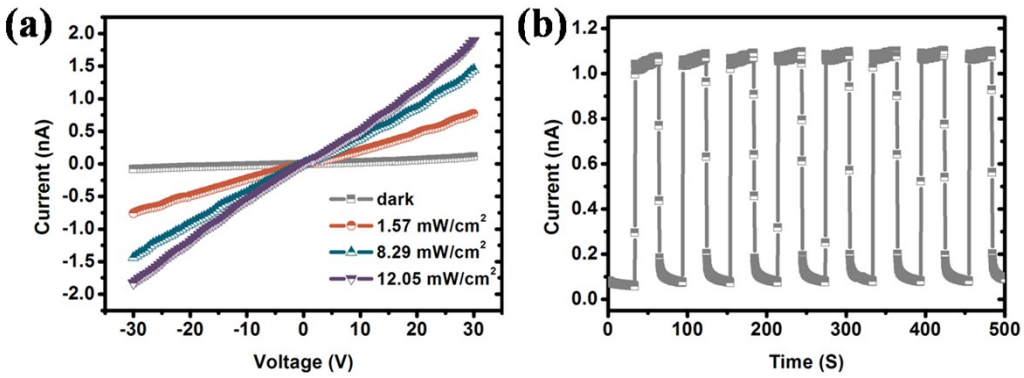

Figure S8. (a) *I-V* curves of the flexible device measured in the dark and under illumination with different intensity after bending for 500 times. (b) Temporal response of the photocurrent of the device bending for 500 cycles. The power intensity is 12.05 mW/cm^2, and the applied bias is 20 V.