Supplementary information for

Single Nanoparticle of Organic *p*-Type and *n*-Type Hybrid Materials: Nanoscale Phase Separation and Photovoltaic Effect

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This Supporting Information presents the photoresponsive *I-V* characteristic curves of another hybrid single NP at low bias region.

(1) The magnification of the photoresponsive *I-V* characteristic curves of the single NP at low bias region

The magnification of the photoresponsive *I-V* characteristic curves (in Figure 7) for the annealed P3HT/PCBM (1:2 wt%) single NP at low bias region is shown in Figure S1. The open-circuit voltage (V_{oc}) and short-circuit current (I_{sc}) were measured to be about 2.70 V and

39.26 pA, respectively. The value of V_{oc} can be related to energy difference between HOMO and LUMO levels of P3HT and PCBM. We suggest that the relatively high V_{oc} might originate from the thermal effect induced by focused laser and sufficiently high bias on hybrid NP.

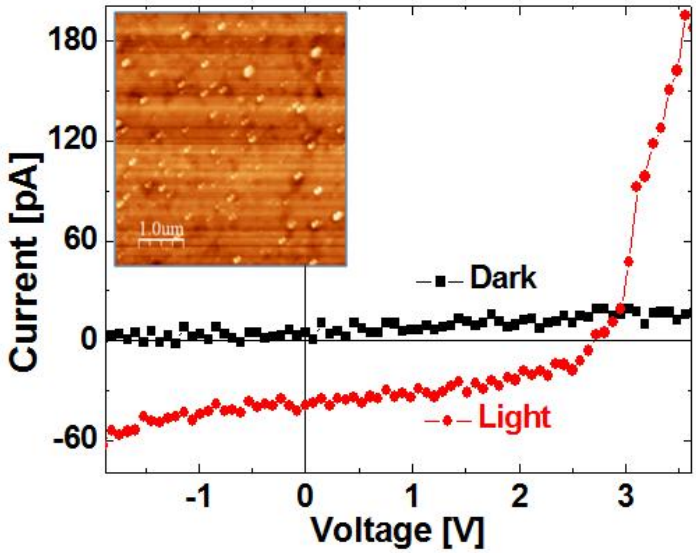

Fig. S1 Photovoltaic *I*–*V* characteristic curves of the annealed P3HT/PCBM (1:2 wt%) single NPs. Inset: AFM topographic image of the P3HT/PCBM hybrid NPs.