## **Supporting Information**

## **Boosted Electron Transport and Enlarged Built-in Potential** by Eliminating Interface Barrier in Organic Solar Cells

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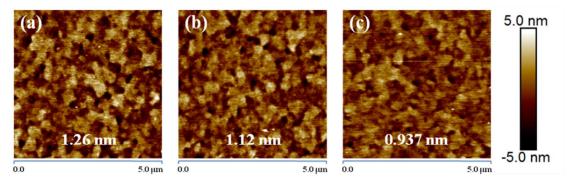


Figure S1. AFM images of (a) ITO/P<sub>1</sub>, (b) ITO/P<sub>2</sub> and (c) ITO/P<sub>3</sub> composite films with a scale of 5  $\mu$ m×5  $\mu$ m.

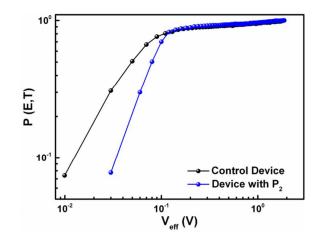


Figure S2. P(E,T) versus  $V_{eff}$  characteristics of the control device and device with P<sub>2</sub> interlayer.

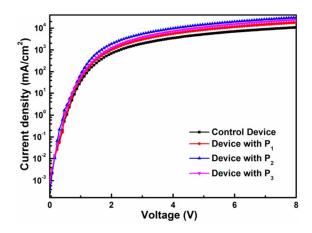


Figure S3. *J-V* characteristics curves of electron-only devices with the structure of ITO/TiO<sub>2</sub>/ PCDTBT:PC<sub>71</sub>BM/BCP/Ag and ITO/TiO<sub>2</sub>/P<sub>1</sub> or P<sub>2</sub> or P<sub>3</sub>/PCDTBT:PC<sub>71</sub>BM/BCP/Ag.