

Supporting information for

High-performance metal oxide-free perovskite solar cells using poly(bis(4-phenyl)(2,4,6-trimethylphenyl)amine) as the hole transport layer

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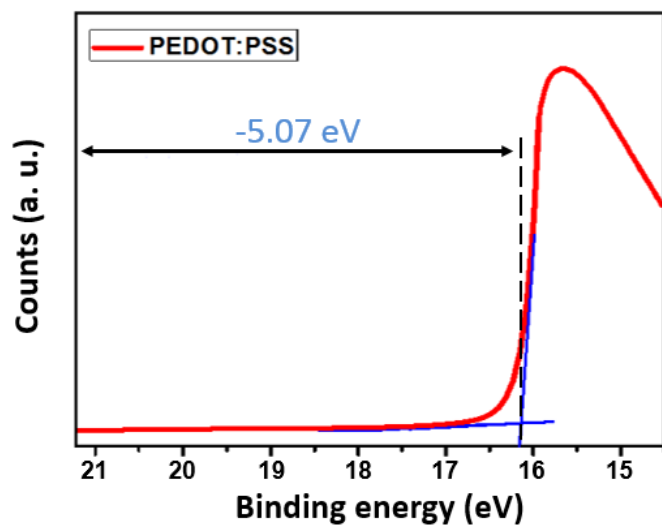


Fig. S1 The UPS spectrum of acid-treated PEDOT:PSS (PH 1000) electrode.

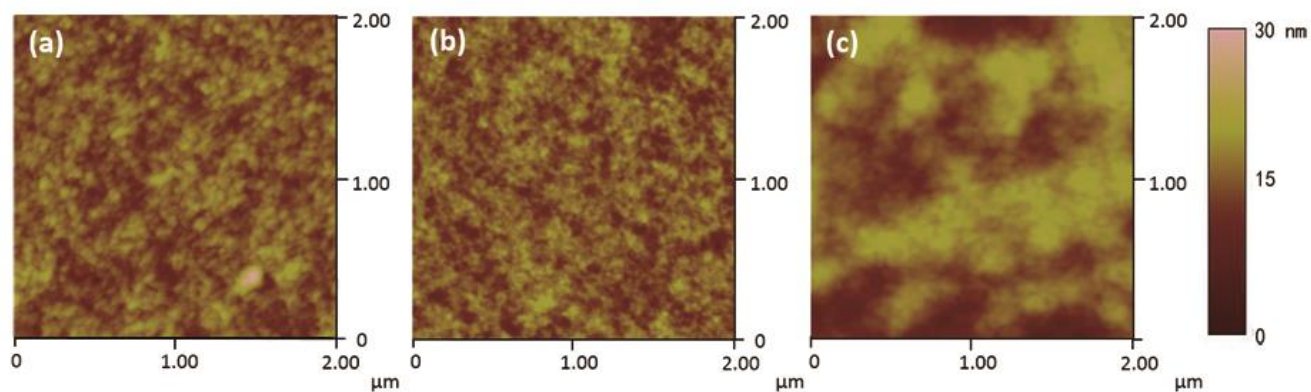


Fig. S2 AFM height images of (a) the pristine PEDOT:PSS (PH 1000) film, (b) the PA-treated PEDOT:PSS (PH 1000) film, and (c) the PTAA layer on PA-treated PEDOT:PSS (PH 1000) film.

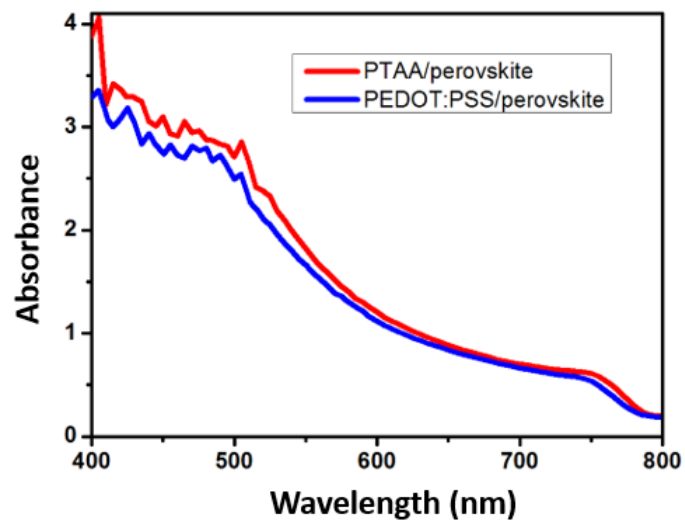


Fig. S3 UV-vis absorption spectra of PTAA/perovskite and PEDOT:PSS (Clevios PVP AI 4083)/perovskite.

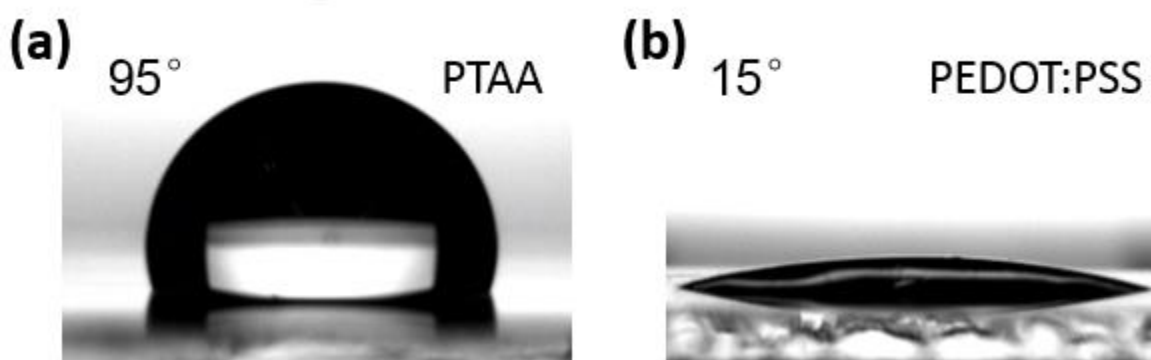


Fig. S4 Contact angle images of a water droplet on (a) the surface of PTAA, and (b) the surface of PEDOT:PSS (Clevios P VP AI 4083).

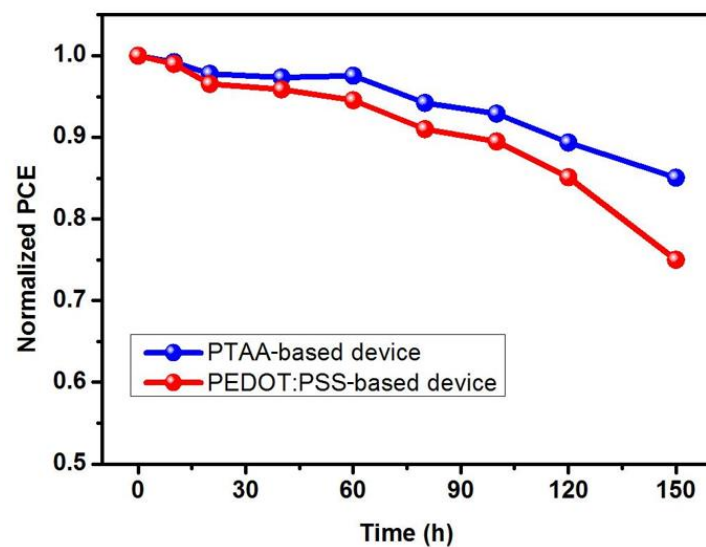


Fig. S5 Variation of the normalized PCE as a function of time for the unpackaged devices (in ambient conditions) using PTAA or PEDOT:PSS (P VP AI 4083) as the hole transport layer.