

## Correlating the effective work function at buried organic/metal interfaces with organic solar cell characteristics

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### Supplementary Information

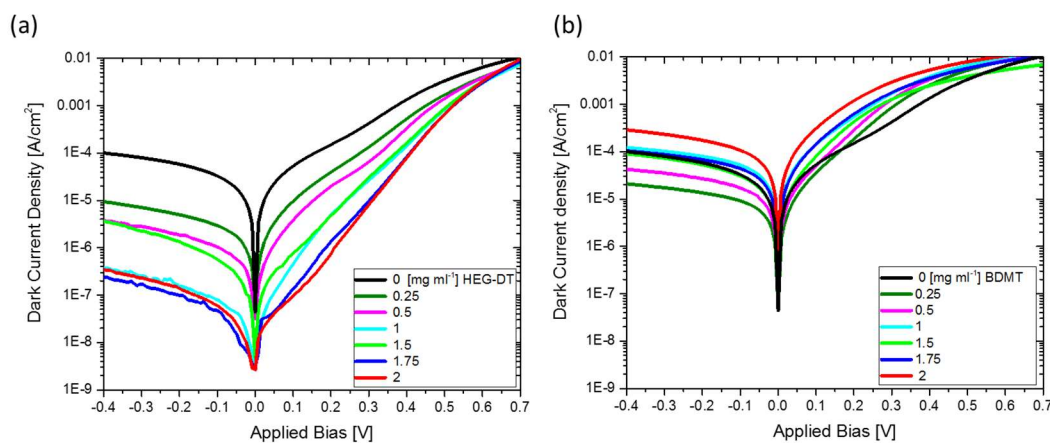


Figure S1: Average J-V curves in dark of P3HT:PCBM OSC devices with different concentration of (a) HEG-DT; and (b) BDMT.

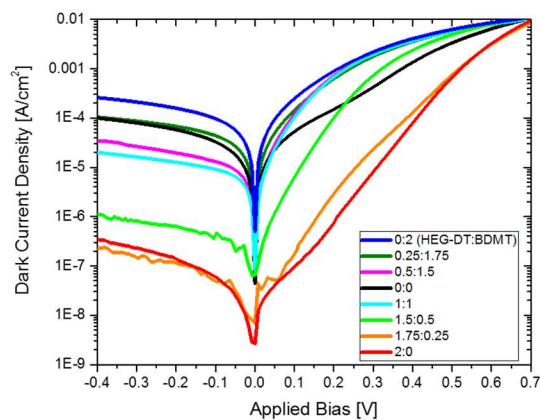


Figure S2: Average J-V curves in dark of P3HT:PCBM (20:20 mg ml<sup>-1</sup>) OSC devices with mixtures of HEG-DT:BDMT additives. The inset lists the composition of additive mixture in [mg ml<sup>-1</sup>] so that the overall concentration of additives is 2 mg ml<sup>-1</sup>.

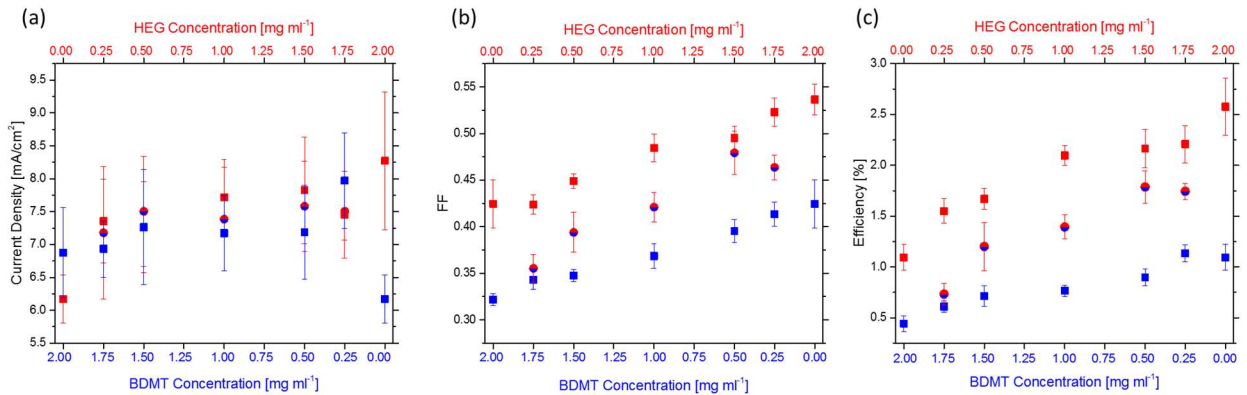


Figure S3: (a) Current density, (b) Fill Factor and (c) Efficiency of the devices as a function of type and concentration of additives and additive mixtures. The red symbols and top x-axis correspond to HEG-DT, while the blue symbols and bottom x-axis correspond to BDMT. The joint red/blue symbols represent  $V_{oc}$  values of devices prepared with additive mixtures.

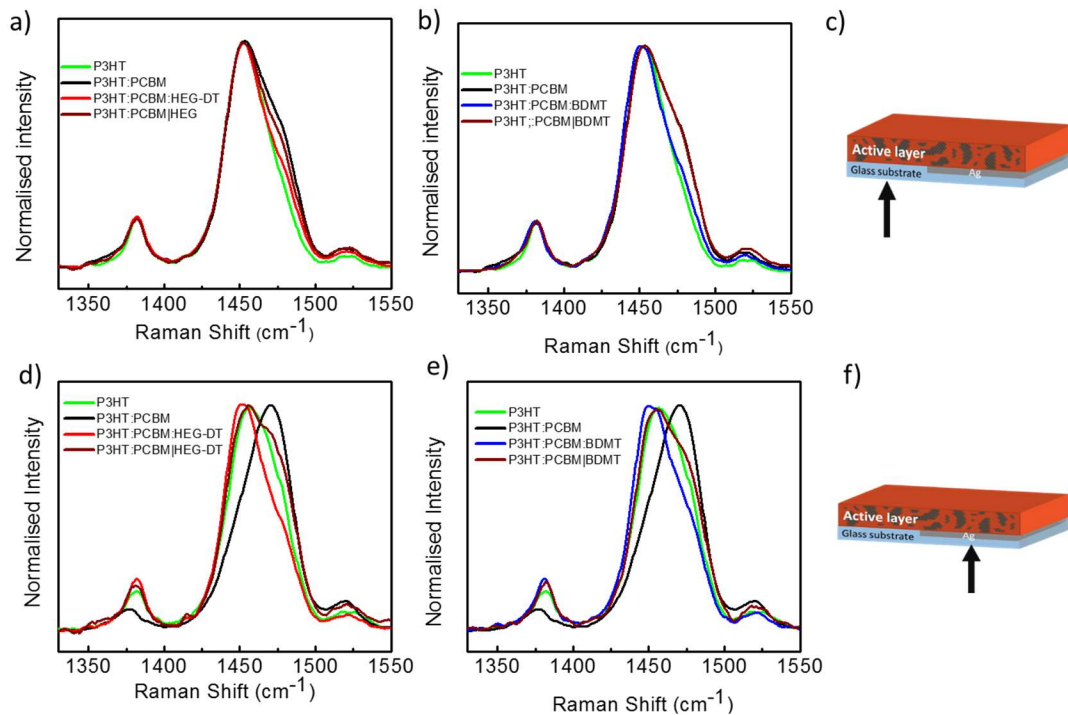


Figure S4: Resonance Raman (a and b) and surface enhanced resonance Raman spectra (d and e) of P3HT at the glass/organic and Silver/organic interface respectively. Both measurement conditions are illustrated in schematics (c) and (d). The films measured are: neat P3HT (green), P3HT:PCBM (black), P3HT:PCBM mixed with 5 [mg ml<sup>-1</sup>] HEG-DT (red) or BDMT (blue) and P3HT:PCBM layer deposited on top of either a HEG-DT or a BDMT layer (dark red).