SUPPORTING INFORMATION

Device characterisation

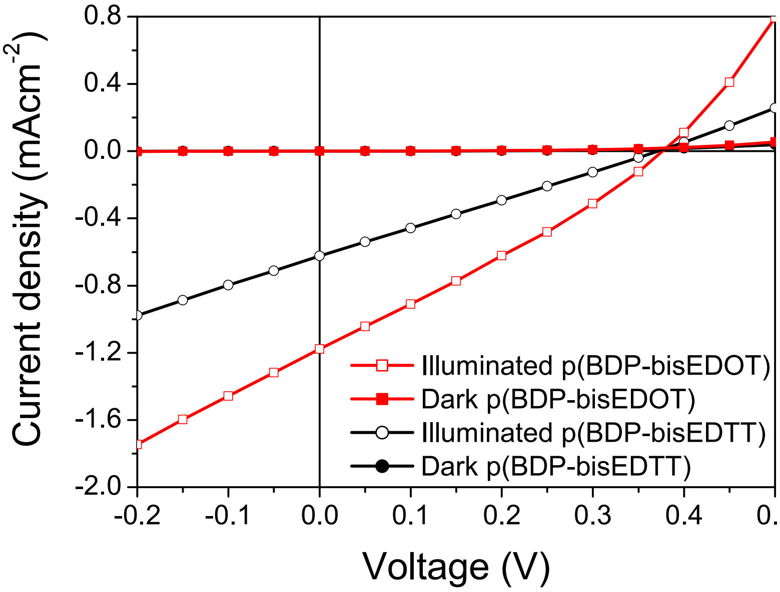

Fig. 1 J-V Characteristics for polymer only devices. Illumination at 100 mW cm^{-2} with a standard AM 1.5G source.

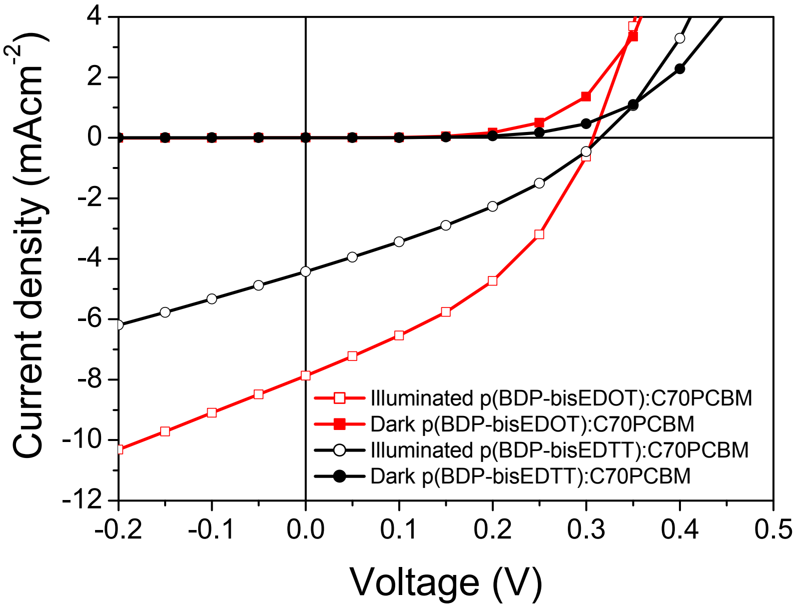

Fig. 2 J-V Characteristics for polymer-fullerene devices. Illumination at 100 mW cm^{-2} with a standard AM 1.5G source.

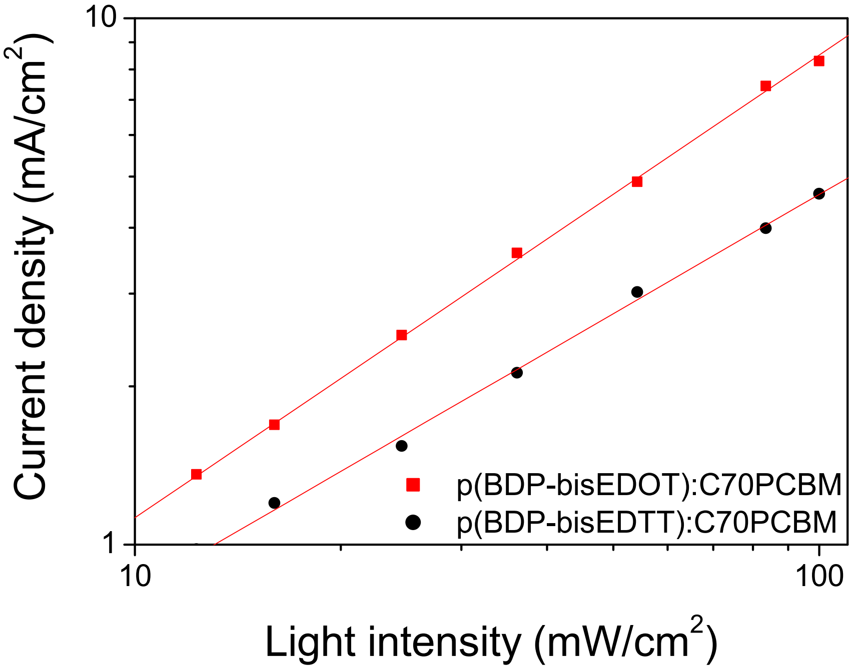

Fig. 3 Current density of polymer-fullerene devices with varying light intensity from a standard AM 1.5G source.

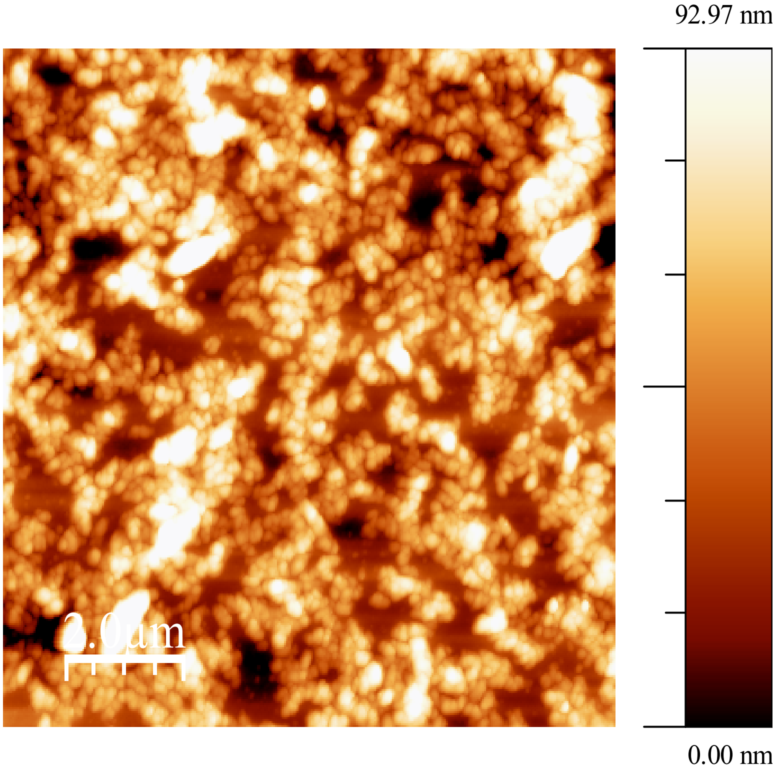

Fig. 4 Tapping mode AFM height images of **p(BDP-bisEDOT)** on glass substrate.

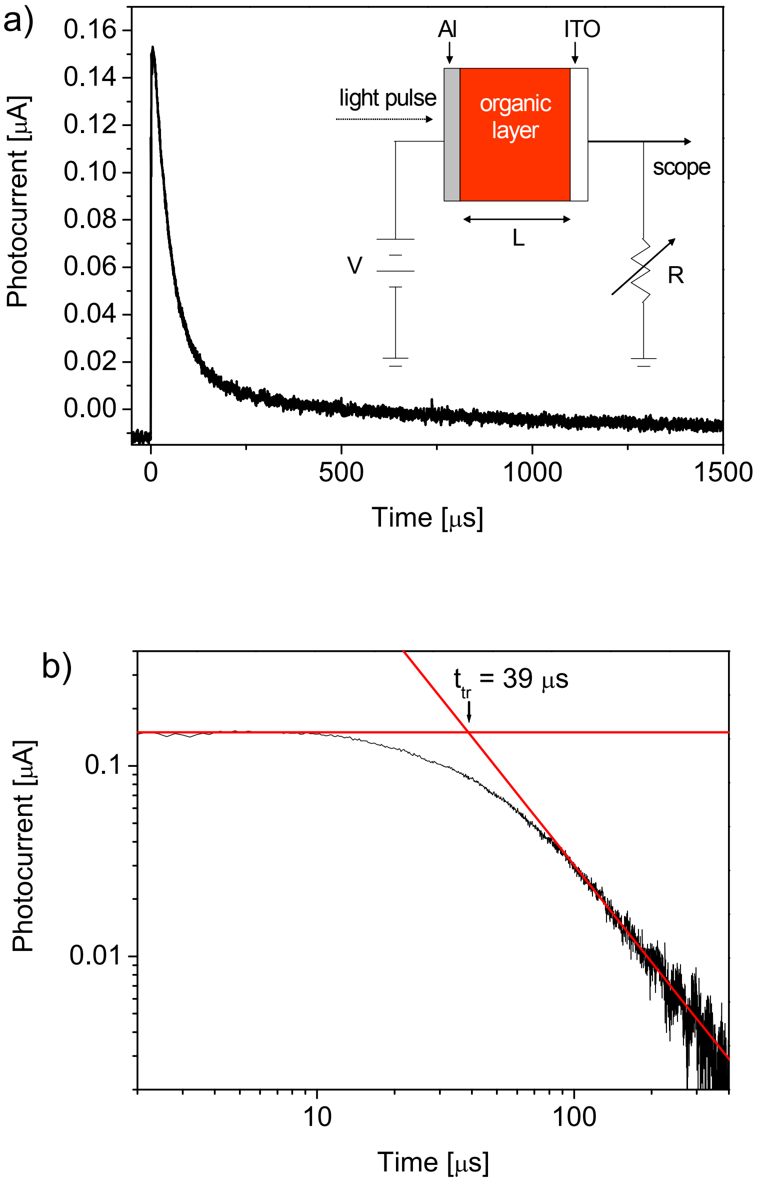

Fig. 5 Holes photocurrent transients of **p(BDP-bisEDOT)** at electric field of 1.8×10^5 V cm^{-1} both in linear (a) and log-log (b) scale. Schematic of the TOF experimental set-up for the hole mobility measurements (inset).

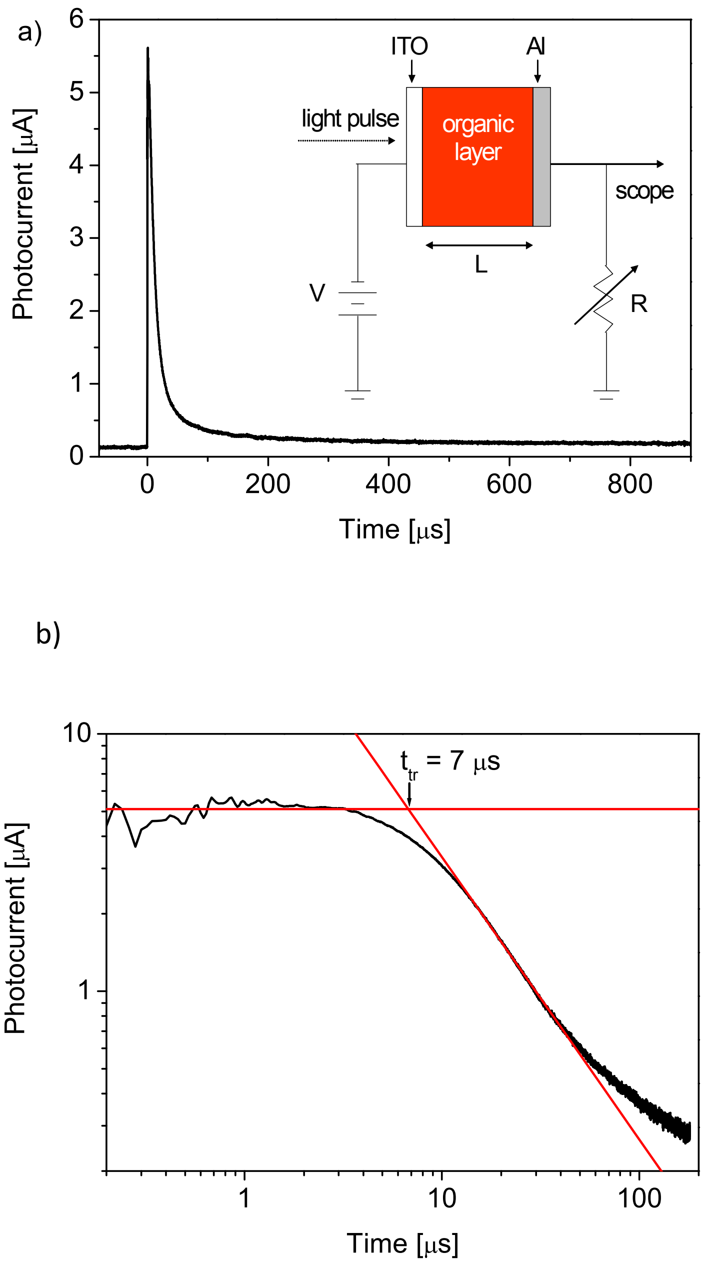

Fig. 6 Electrons photocurrent transients of **p(BDP-bisEDOT)** at electric field of 1.8 × 10^5 V cm^{-1} both in linear (a) and log-log (b) scale. Schematic of the TOF experimental set-up for the electron mobility measurements (inset).