Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A

Supporting Information

Photoinduced electron and hole transfer in CdS/P3HT nanocomposite films: Effect of nanomorphology on charge separation yield and solar cell performance

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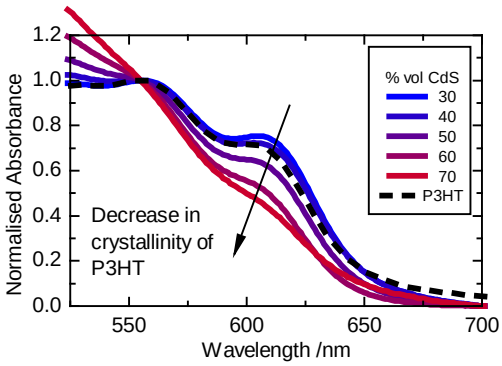

Figure S1. Absorbance spectrum of samples, normalised at 555 nm to elucidate the reduction in the characteristic pi stacking peak in P3HT at 607 nm.

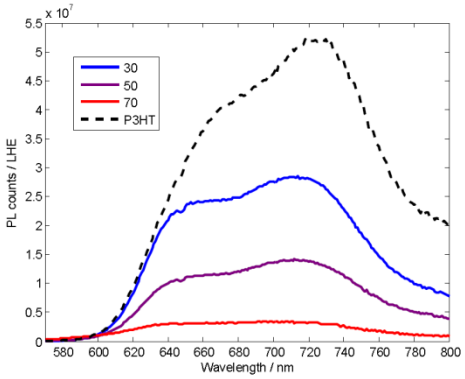

Figure S2. Photoluminescence spectra of pristine P3HT and samples containing 30, 50 and 70% CdS by volume corrected for absorption.

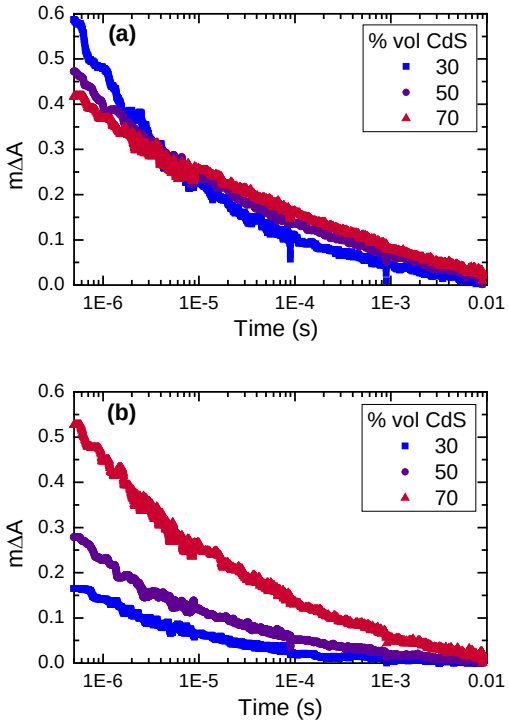

Figure S3. Transient absorption kinetics traces of samples, of varying compositions, corrected for photons absorbed. Samples were pumped at (a) 355 nm and (b) 550 nm and probed at 980 nm to monitor the decay of the P3HT exciton transition.

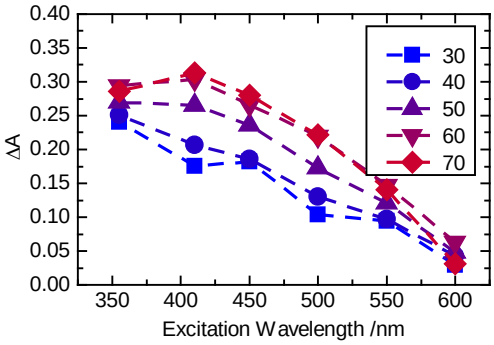

Figure S4. Transient absorption spectroscopy (TAS) measurements corrected for incident photons on sample. Change in optical density averaged over 0.9 µs to 1.1µs. Samples pumped at 355 nm, 410 nm, 450 nm, 500 nm, 550 nm, and 600 nm and probed at 980 nm. These averages were used in the calculation of the relative charges generated in each film displayed in figure 5.