

Investigation of Interfacial Charge Transfer in Solution Processed Cs₂SnI₆ Thin Films

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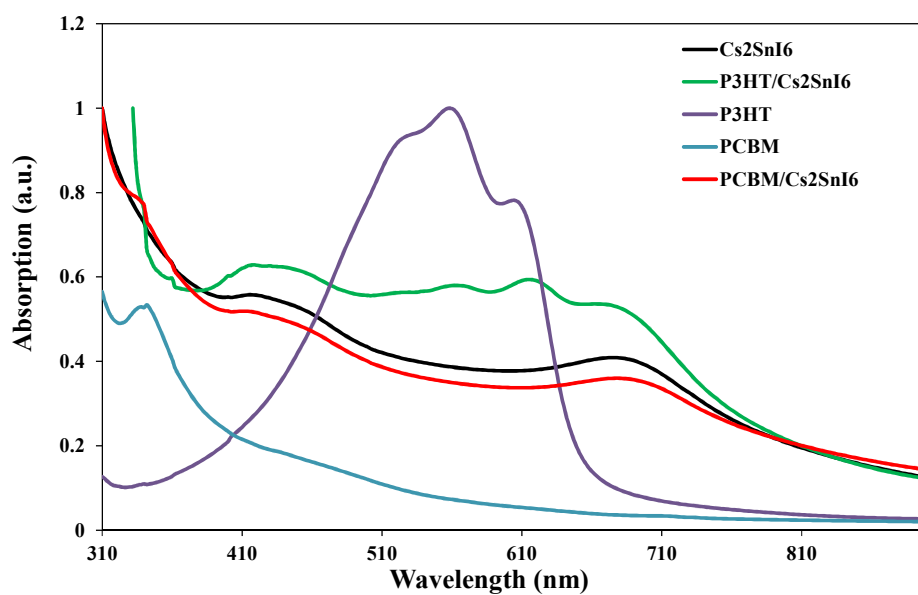


Figure S1. Absorption spectrum of thin films fabricated.

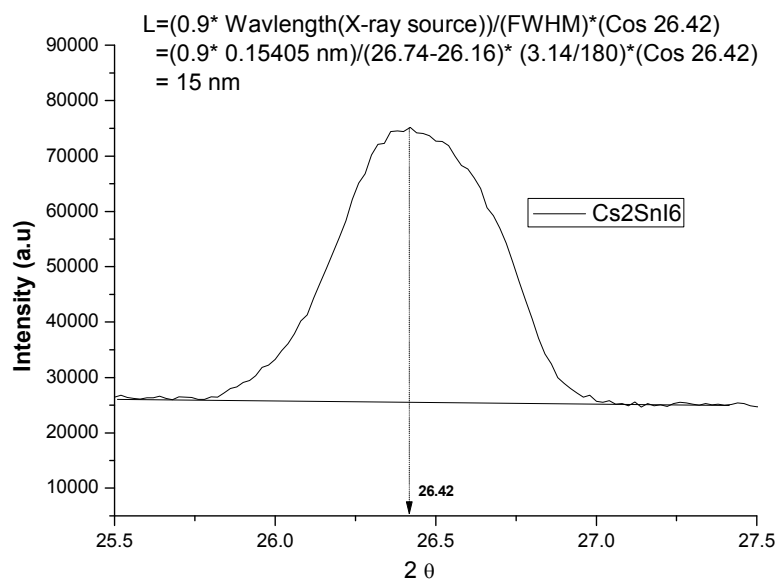


Figure S2. Crystallite size calculated using Scherrer's formula using peak (222)

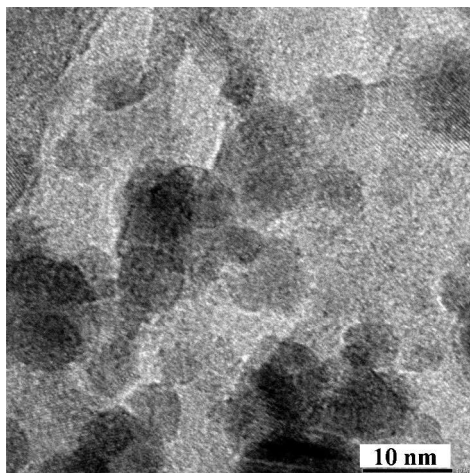


Figure S3. TEM image showing particle size less than 10 nm.

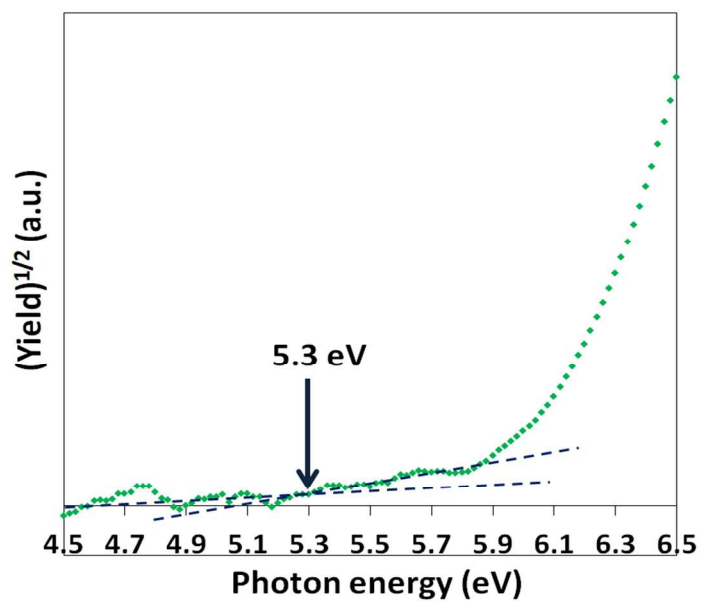


Figure S4. Photoelectron yield spectroscopy (PYS) for HOMO measurement

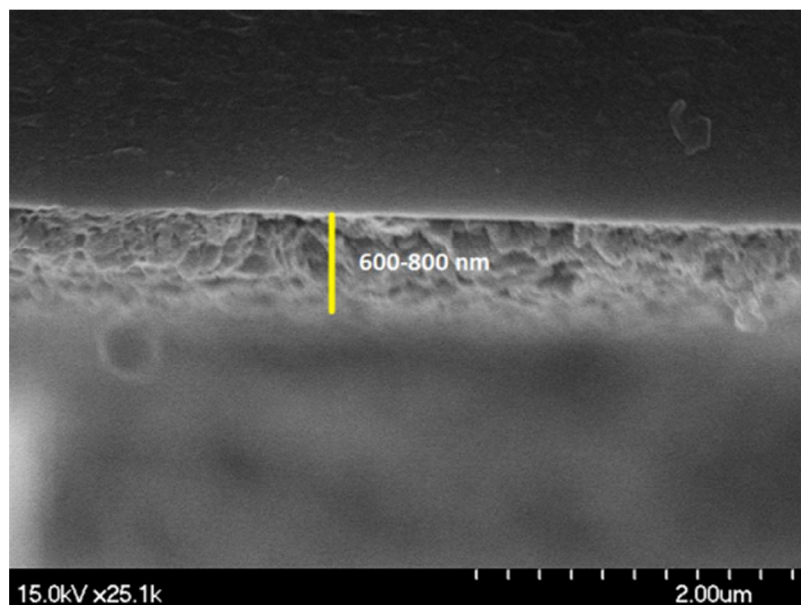
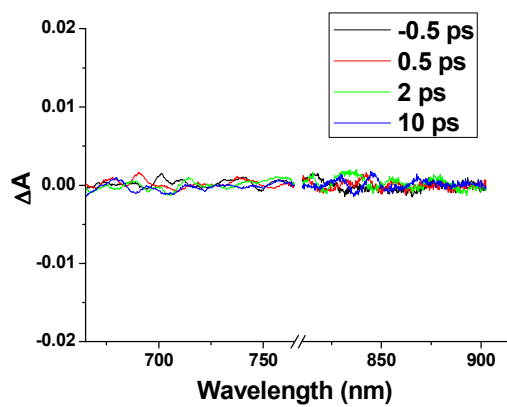
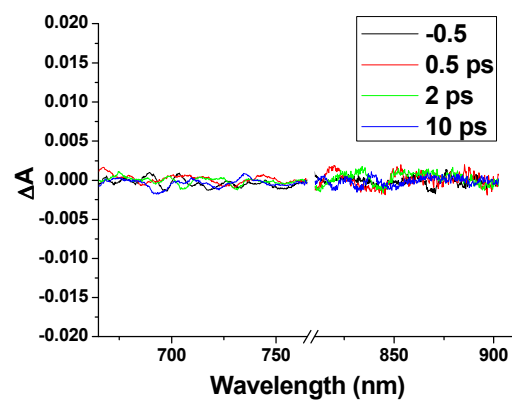


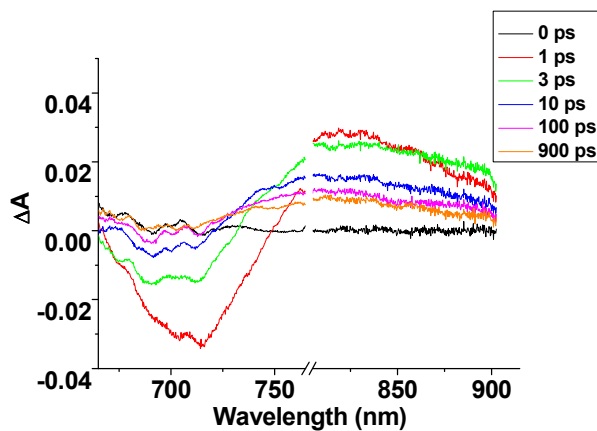
Figure S5. Cross sectional SEM image for spray deposited film



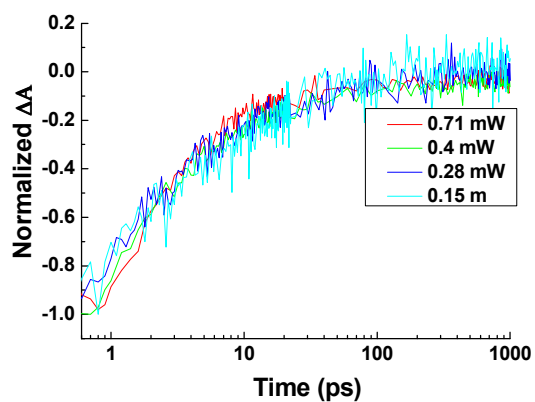
(a)



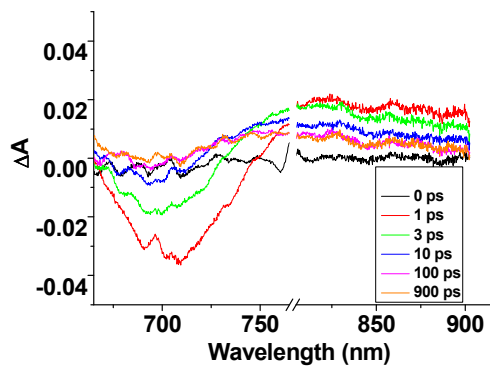
(b)



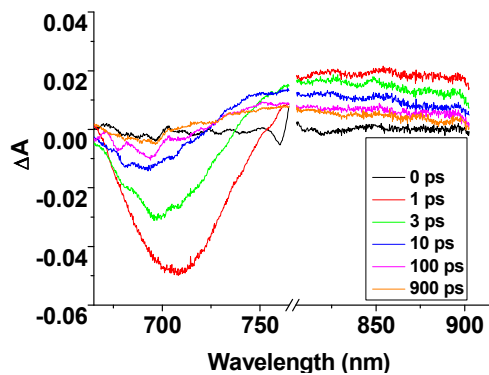
(c)



(d)



(e)



(f)

Figure S6. fs-TA spectra (a) PCBM only (b) P3HT only (c) Cs_2SnI_6 only (d) Cs_2SnI_6 at different pump power (e) Cs_2SnI_6 with PCBM and (f) Cs_2SnI_6 with P3HT pumped at 650 nm.

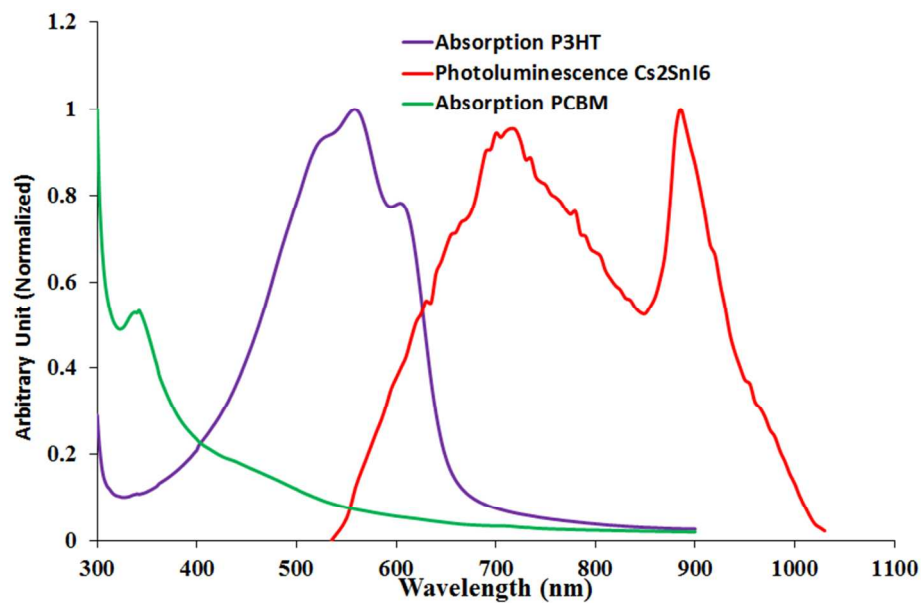


Figure S7. Absorption and PL spectra showing less possibility of energy transfer from Cs_2SnI_6 to P3HT and PCBM

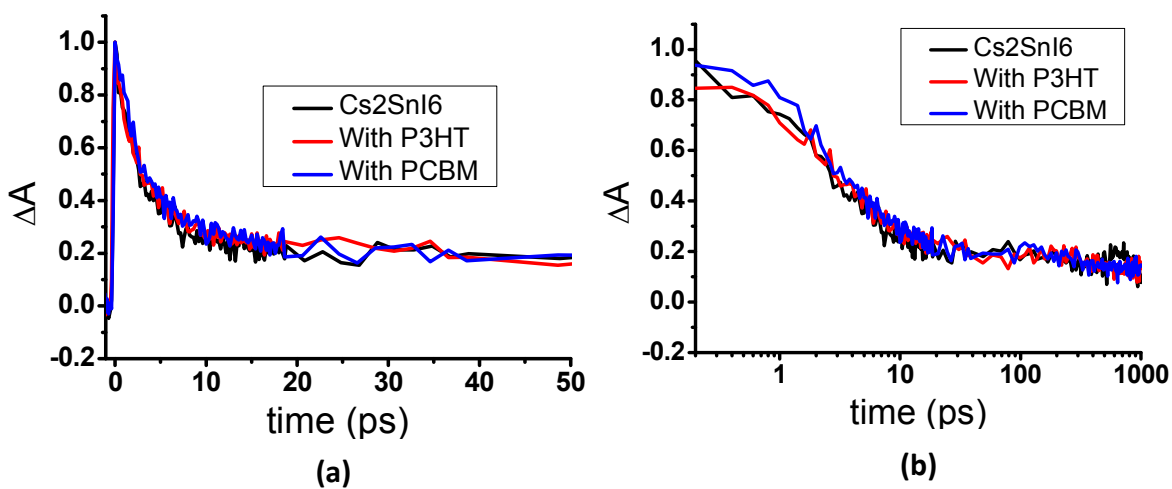


Figure S8. fs-TA decay for different samples pumped at 650 nm and probed at 900 nm from glass side

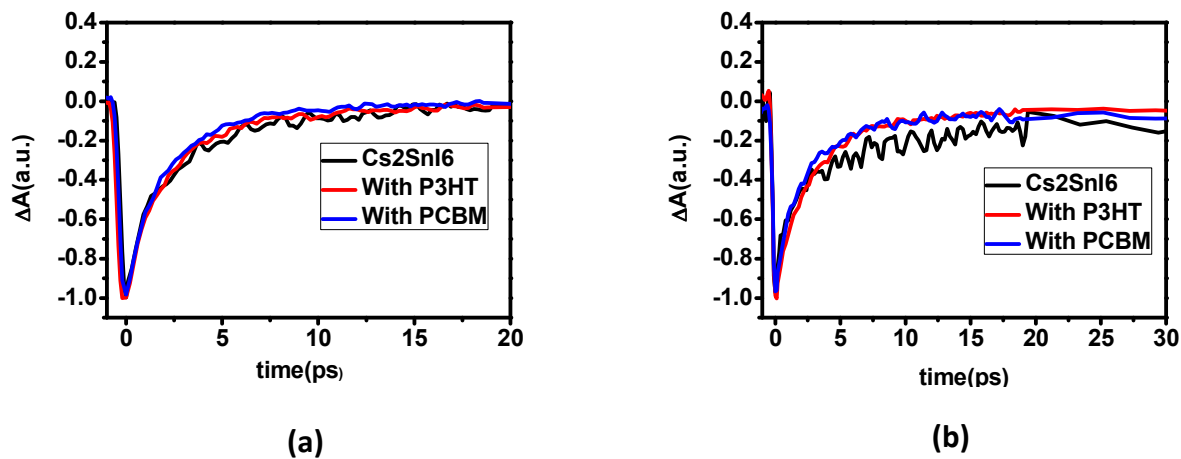


Figure S9. fs-TA decay for different samples pumped at 650 nm and probed at 710 nm from (a) glass side (b) film side

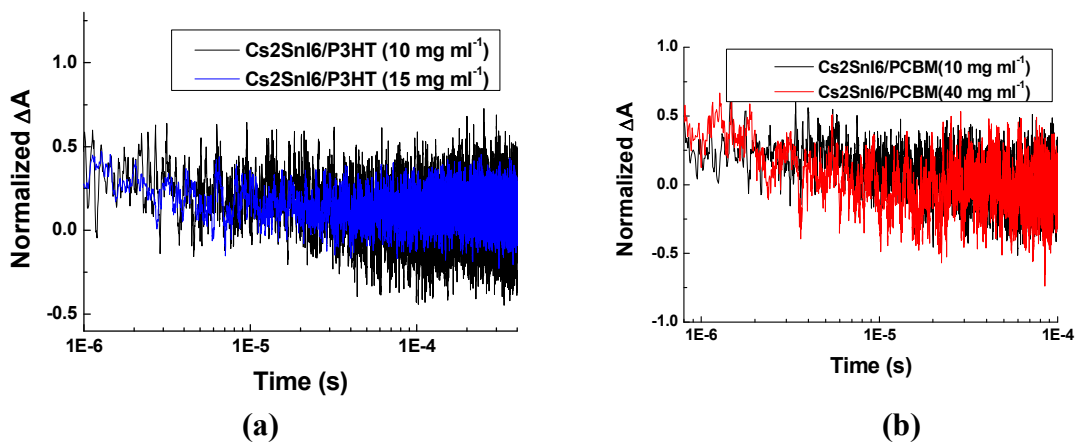


Figure S10. ns-TAS of (a) Cs₂SnI₆/P3HT (b) Cs₂SnI₆/PCBM at different concentration.