Electronic supplementary information

Anti-solvent dependent device performance in CH₃NH₃PbI₃ solar cells: the role of intermediate phase content in as-prepared thin films†

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Table S1 Fitting parameters of dynamic spectra of films made with different anti-solvents

Solvent	PL					TA	
	τ_1 [ns]	A_1	τ_2 [ns]	A_2	τ_{av} [a)] [ns]	τ_{rise} [ps]	τ_{decay} [ns]
DCM	4.5	0.31	42	0.69	30	0.65	1.5
TL	5.1	0.23	57	0.77	45	0.54	2.8
DE	7.6	0.15	72	0.85	62	0.56	5.7

[a)] τ_{av} was obtained with eqn $\tau_{av} = A_1\tau_1 + A_2\tau_2$.

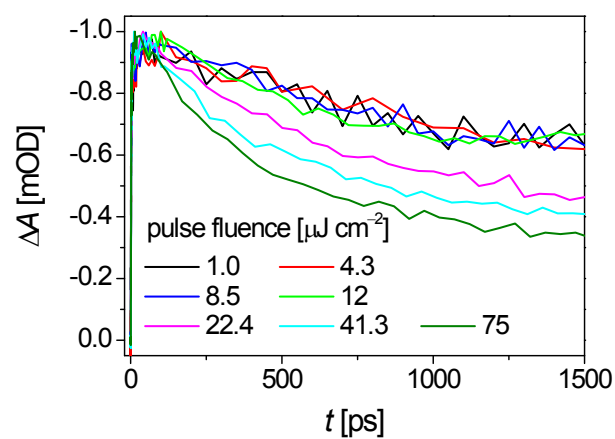**Fig. S1** Pump fluence dependent kinetics probed at 760 nm for $CH_3NH_3PbI_3$ film. There is no difference between the TA kinetics under 12 µJ cm^{-2} of pump fluence, which indicates that the Auger recombination and the non-geminate bimolecular recombination are insignificant .

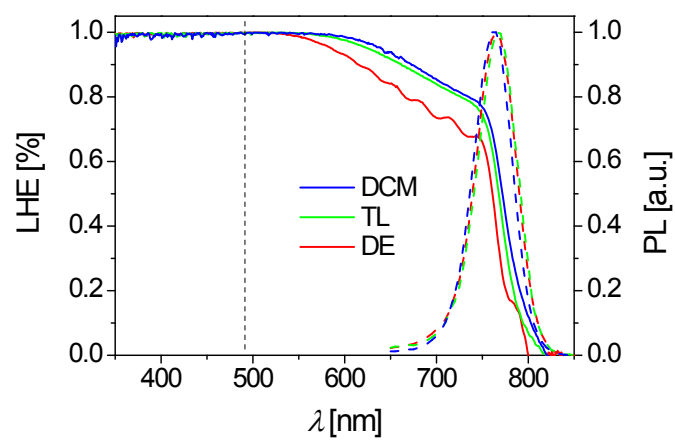**Fig. S2** Light-harvesting efficiencies and PL spectra. Light-harvesting efficiency was deprived from eqn $LHE = 1 - 10^{-A}$.