

Supplementary Information

to

Exploring polymer/nanoparticle hybrid solar cells in tandem architecture

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Table S1 Characteristic parameters of five typical devices for PSiF-DBT/CIS and PTB7/PC₆₁BM solar cells, hybrid-organic (PSiF-DBT/CIS / PTB7/PC₆₁BM) tandem solar cells and hybrid-hybrid (PSiF-DBT/CIS / PSiF-DBT/CIS) tandem solar cells using different recombination layers.

		V _{oc} (V)	I _{sc} (mA/cm ²)	FF	Eff (%)
Single solar cells	PSiF-DBT/CIS	0.46	7.77	0.49	1.8
		0.47	7.61	0.49	1.7
		0.42	8.31	0.49	1.7
		0.44	8.19	0.51	1.8
		0.45	7.74	0.51	1.8
	PTB7/PCBM	0.56	1.04	0.61	3.5
		0.56	1.04	0.61	3.5
		0.56	1.04	0.61	3.5
		0.56	1.03	0.61	3.5
		0.55	1.06	0.62	3.5
Hybrid-organic tandem solar cells	Ag/PEDOT:PSS	1.02	3.53	0.58	2.1
		1.02	3.39	0.53	1.8
		1.00	3.63	0.54	2.0
		1.00	3.67	0.56	2.0
		1.01	3.72	0.56	2.1
	PEDOT:PSS	0.70	7.80	0.52	2.8
		0.70	7.94	0.52	2.9
		0.70	7.94	0.52	2.9
		0.69	7.99	0.53	2.9
		0.69	7.87	0.53	2.8
	TiOx/PEDOT:PSS	0.90	8.04	0.57	4.1
		0.87	7.59	0.58	3.8
		0.90	7.71	0.52	3.5
		0.89	8.58	0.51	3.9
		0.92	7.69	0.59	4.1
	TiOx/Ag/PEDOT:PSS	1.00	3.26	0.61	2.0
		0.98	3.40	0.61	2.0
		0.99	3.41	0.60	2.0
		1.00	3.42	0.61	2.1
		1.01	3.65	0.61	2.2
Hybrid-hybrid tandem solar cells	Ag/PEDOT:PSS	0.71	4.15	0.42	1.3
		0.71	4.10	0.43	1.3
		0.72	4.04	0.43	1.3
		0.71	4.14	0.43	1.3
		0.72	4.19	0.42	1.3
	PEDOT:PSS	0.34	1.65	0.19	0.1
		0.35	1.65	0.19	0.1
		0.35	1.63	0.19	0.1
		0.38	1.68	0.18	0.1
		0.38	1.74	0.17	0.1
	TiOx/PEDOT:PSS	0.41	4.64	0.29	0.5
		0.31	5.48	0.27	0.5
		0.30	6.22	0.26	0.5
		0.46	4.60	0.32	0.7
		0.39	5.09	0.28	0.6