

SUPPORTING INFORMATION

Achieving above 24% efficiency from non-toxic CsSnI₃ perovskite solar cells through harnessing the potential of the absorber and charge transport layers

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Table S1. Performance of back metal contacts with several studied HTLs

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HTL	Performance parameters	Back metal contact									
		Cu	Ag	Fe	C	Au	W	Ni	Pd	Pt	Se
CuSCN	<i>V</i> _{oc}	0.898	0.538	0.910	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.09	13.55	14.22	14.24	14.24	14.24	14.24	14.24	14.24	14.24
	FF	63.18	45.12	75.89	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	7.99	3.29	9.81	10.10	10.10	10.10	10.10	10.10	10.10	10.10
NiO	<i>V</i> _{oc}	0.906	0.595	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.13	13.63	14.23	14.24	14.24	14.24	14.24	14.24	14.24	14.24
	FF	66.35	46.39	77.44	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	8.49	3.76	10.02	10.10	10.10	10.10	10.10	10.10	10.10	10.10
P3HT	<i>V</i> _{oc}	0.909	0.6749	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.19	13.77	14.23	14.24	14.24	14.24	14.24	14.24	14.24	14.24
	FF	73.33	50.89	78.06	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	9.46	4.73	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
PEDOT: PSS	<i>V</i> _{oc}	0.909	0.761	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.23	13.91	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24
	FF	77.79	56.21	78.11	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	10.06	5.95	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
Spiro-MeOTAD	<i>V</i> _{oc}	0.886	0.508	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.03	13.42	14.18	14.23	14.23	14.23	14.23	14.23	14.23	14.23
	FF	58.3	38.19	71.49	77.99	78.02	78.02	78.02	78.02	78.02	78.02
	PCE	7.25	2.61	9.21	10.09	10.09	10.09	10.09	10.09	10.09	10.09
CuI	<i>V</i> _{oc}	0.909	0.695	0.909	0.909	0.909	0.9086	0.9086	0.9086	0.9086	0.9086
	<i>J</i> _{sc}	14.21	13.81	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24
	FF	75.51	53.09	78.1	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	9.76	5.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
CFTS	<i>V</i> _{oc}	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909	0.909
	<i>J</i> _{sc}	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23
	FF	78.11	78.11	78.11	78.11	78.11	78.11	78.11	78.11	78.11	78.11
	PCE	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10