Supplementary Materials

Growth Temperature Influence on Atomic-Layer-Deposited In_2O_3 Thin Films and Their Application in Inorganic Perovskite Solar Cells

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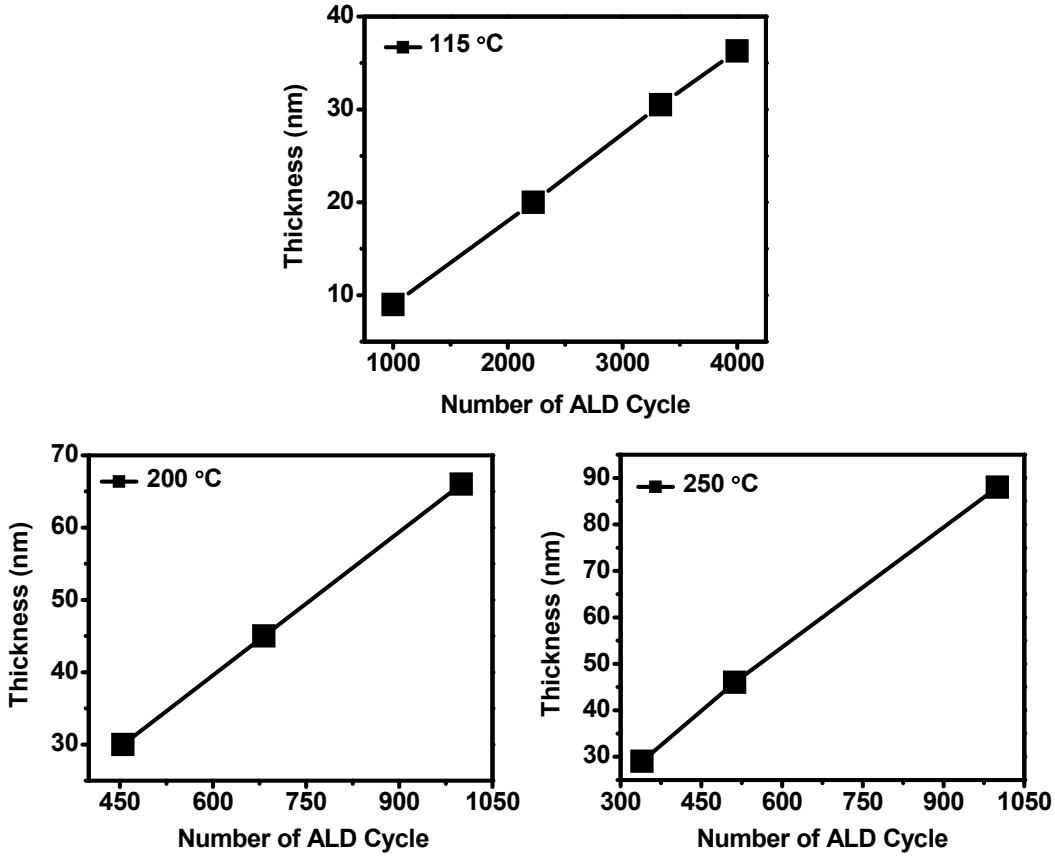

Figure S1. ALD deposited In_2O_3 film thickness as a function of the number of ALD cycles for film deposited at 115 °C, 200 °C and 250 °C on the Si substrate.

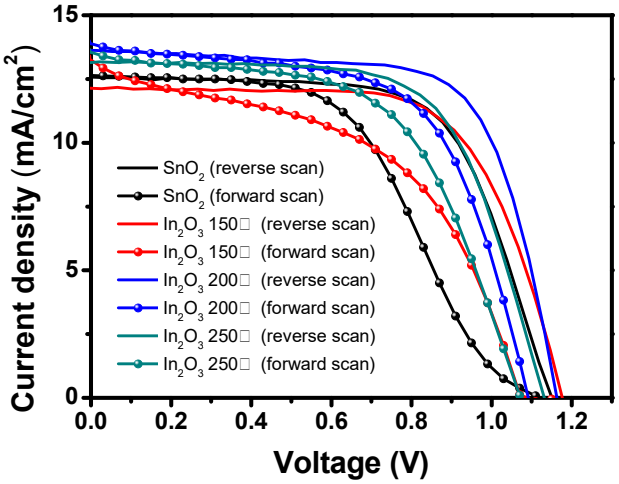

Figure S2. Hysteresis observation for developed $CsPbI_2Br$ perovskite solar cells with different ETLs.

Table S1. Photovoltaic parameters and hysteresis index of fabricated $CsPbI_2Br$ perovskite solar cells with different ETLs.

Sample	J_{SC} (mA/cm^2)	V_{OC} (V)	FF (%)	PCE (%)	Hysteresis Index (HI)
SnO_2 reverse scan	12.54	1.12	67.89	9.52	0.75
SnO_2 forward scan	12.62	1.11	50.76	7.11	
In_2O_3 150°C reverse scan	13.18	1.10	67.37	9.77	0.85
In_2O_3 150°C forward scan	13.41	1.07	58.06	8.33	
In_2O_3 200°C reverse scan	12.13	1.15	68.54	9.53	0.74
In_2O_3 200°C forward scan	12.92	1.07	50.71	7.01	
In_2O_3 250°C reverse scan	13.64	1.13	70.99	10.97	0.85
In_2O_3 250°C forward scan	13.75	1.07	62.99	9.27	