

Supporting Information

Formamidine-Assisted Fast Crystallization to Fabricate Formamidinium-Based Perovskite Films for High-efficiency and Stable Solar Cells

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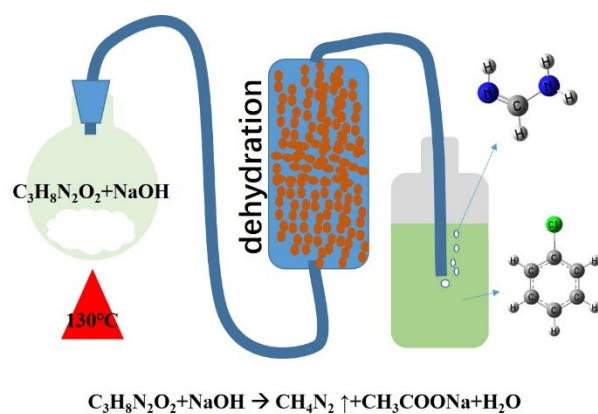


Figure S1. Schematic diagram of preparation of FA-CB.

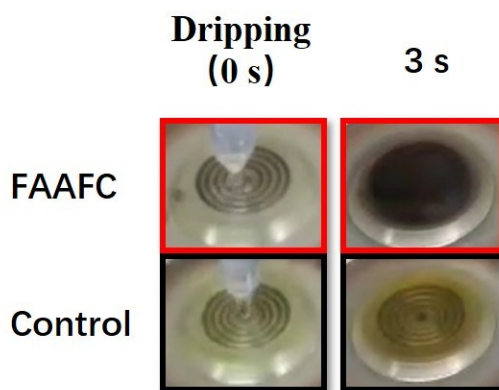


Figure S2. The different crystalline rates of FAAFC and control samples.

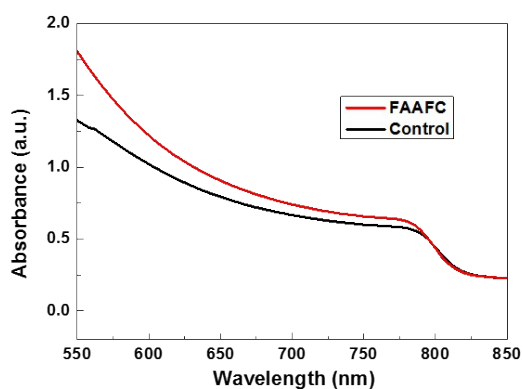


Figure S3. UV-vis spectra of the RbCsFAPbI₃ perovskites with the control method and the FAAFC method.

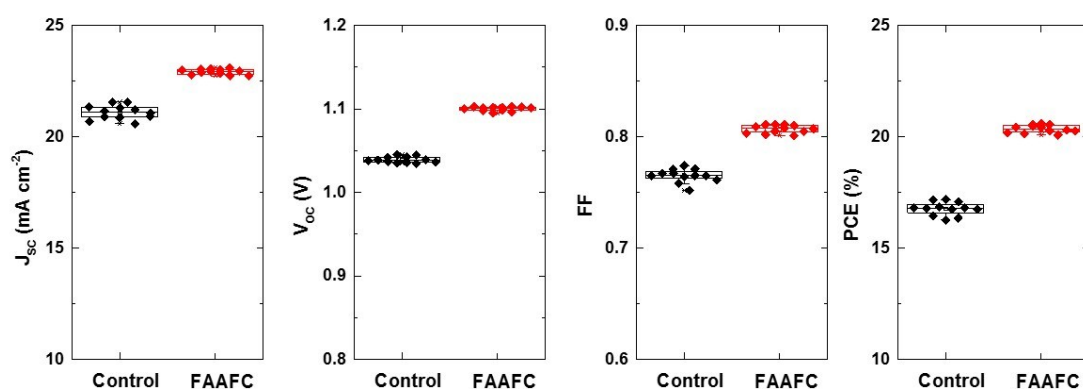


Figure S4. Statistic photovoltaic parameters of PSCs based on the control and FAAFC perovskite.

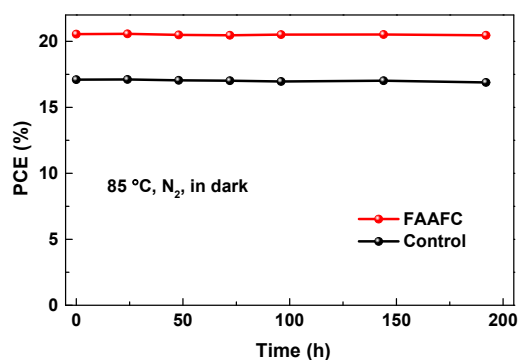


Figure S5. The thermal stability of PSCs based on perovskite prepared by the control and FAAFC method.

Table S1. The fitted parameters from the TRPL result.

Sample	A_1	τ_1	A_2	τ_2	τ_a
Control	0.49	63 ns	0.51	172 ns	118 ns
FAAFC	0.29	56 ns	0.71	286 ns	219 ns

Table S2. Photovoltaic parameters of PSCs before and after light-soaking for 500 h

PSC	V_{oc}	J_{sc}	FF	PCE (%)
	(V)	(mA cm⁻²)		
Before- Control-FS	1.033	21.56	0.756	16.84
Before- Control-RS	1.035	21.42	0.772	17.12
After- Control-FS	0.994	18.46	0.626	11.48
After- Control-RS	0.996	18.34	0.675	12.33
Before- FAAFC-FS	1.101	23.05	0.806	20.45
Before- FAAFC -RS	1.103	23.03	0.810	20.58
After- FAAFC-FS	1.095	21.79	0.797	19.02
After- FAAFC-RS	1.098	21.76	0.801	19.14