

Electronic Supporting Information

Effect of guanidinium chloride in eliminating O_2^- electron extraction barrier on SnO_2 surface to enhance the efficiency of perovskite solar cells

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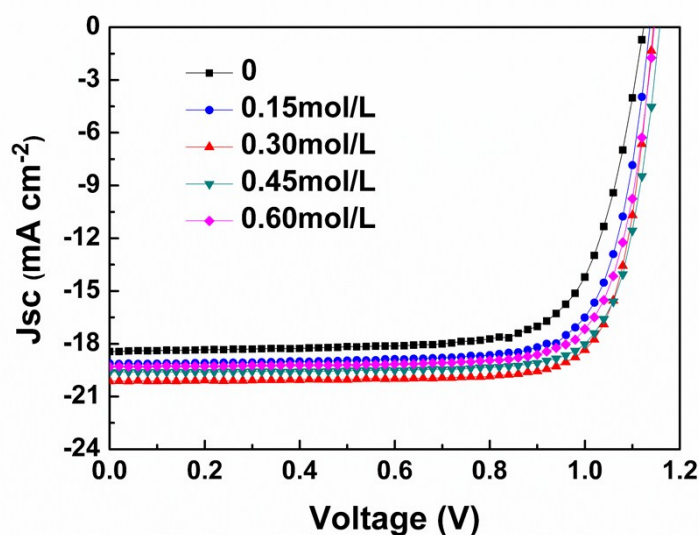


Figure S1. The J - V characteristics of devices with different GA-modification concentrations.

Table S1. The performances of devices with different GA-modification concentrations.

C(mmol/L)	V_{OC} (V)	J_{sc} ($mA\cdot cm^2$)	FF(%)	PCE(%)
0	1.12 ± 0.01	18.04 ± 0.60	72.25 ± 3.20	15.25 ± 1.25
0.15	1.13 ± 0.01	19.10 ± 0.30	76.50 ± 2.40	16.40 ± 0.50
0.30	1.14 ± 0.01	20.00 ± 0.25	79.66 ± 1.25	18.00 ± 0.50
0.45	1.15 ± 0.01	19.42 ± 0.35	77.80 ± 1.50	17.60 ± 0.45
0.60	1.14 ± 0.01	19.13 ± 0.30	76.88 ± 1.70	17.00 ± 0.45

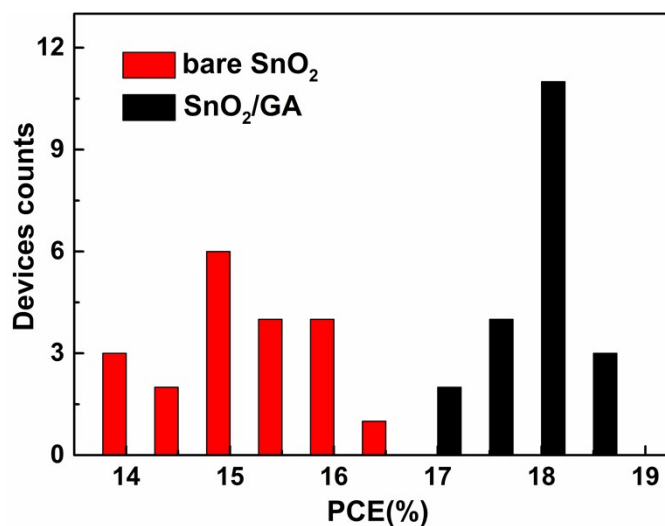


Figure S2. The PCE histogram of 20 bare SnO₂ devices and 20 SnO₂/GA devices

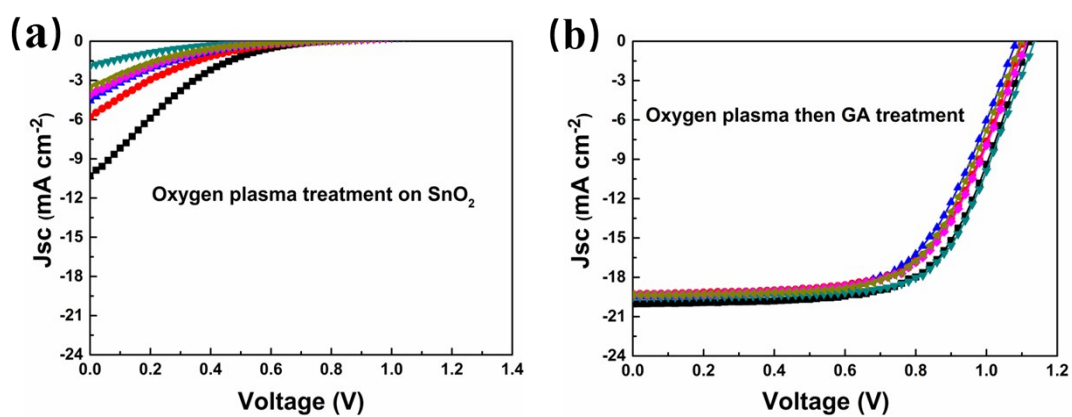


Figure S3. The J-V characteristics of 6 independent SnO₂/oxygen-plasma devices and 6 independent SnO₂/oxygen-plasma/GA devices.

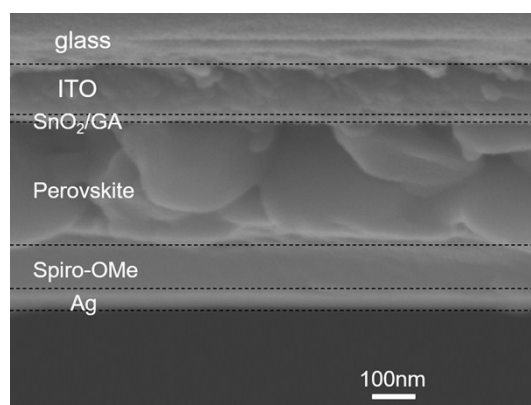


Figure S4. The cross-sectional SEM images of perovskite films on SnO₂/GA

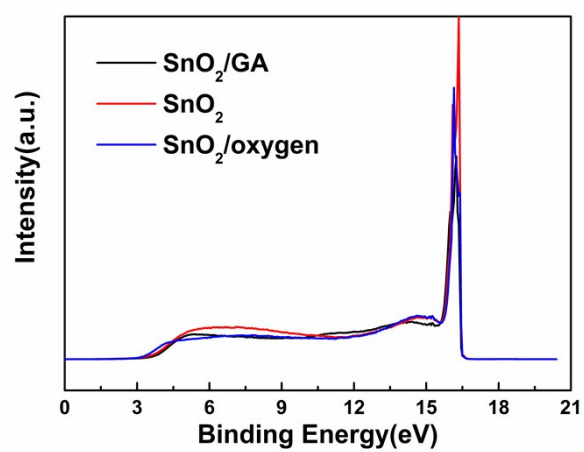


Figure S5. The full UPS spectra of the bare SnO₂, the SnO₂/GA and SnO₂/oxygen film.