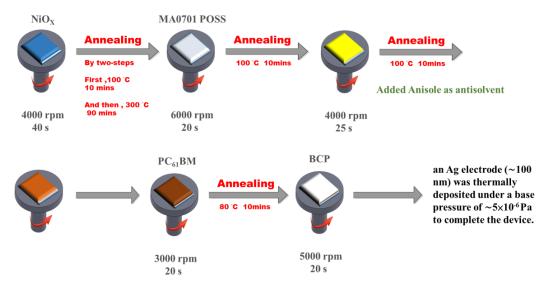
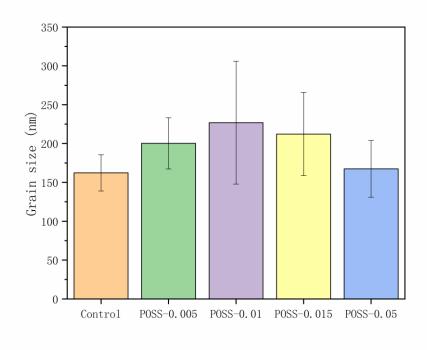
## **Supporting Information**

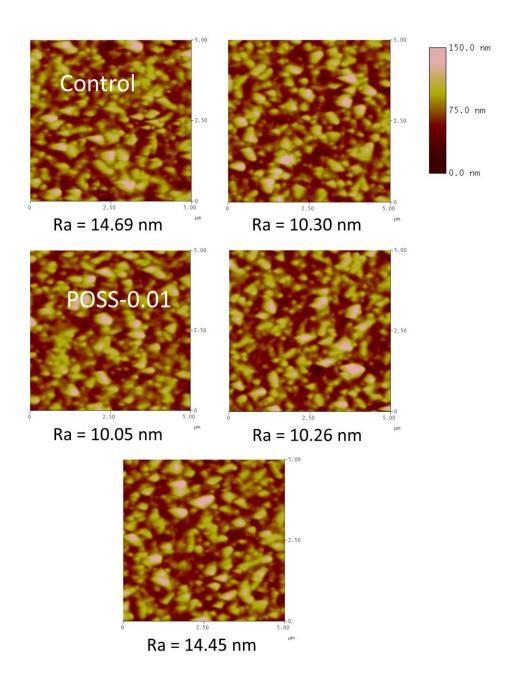
## Fabrication and Characterization of an Efficient Inverted Perovskite Solar Cells with POSS Passivating Hole Transport Layer



**Figure S1.** Schematic representation of PSCs with POSS passivation.



**Figure S2.** Average grain sizes of the MAPbI<sub>3</sub> layers over various FTO/NiO<sub>X</sub>/POSS substrates.



**Figure S3.** AFM topography images of the FTO/NiO<sub>X</sub>/POSS with various POSS contents.

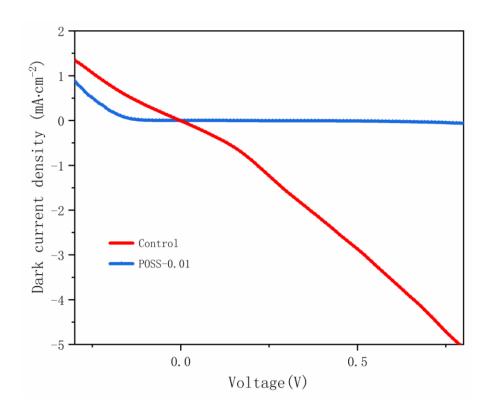


Figure S4. Dark current-voltage curves of the control cell and the champion cell.