

Supporting information

Surface Modification of Hole Transporting Layer for Efficient Perovskite Solar Cell with Enhanced Fill Factor and Stability

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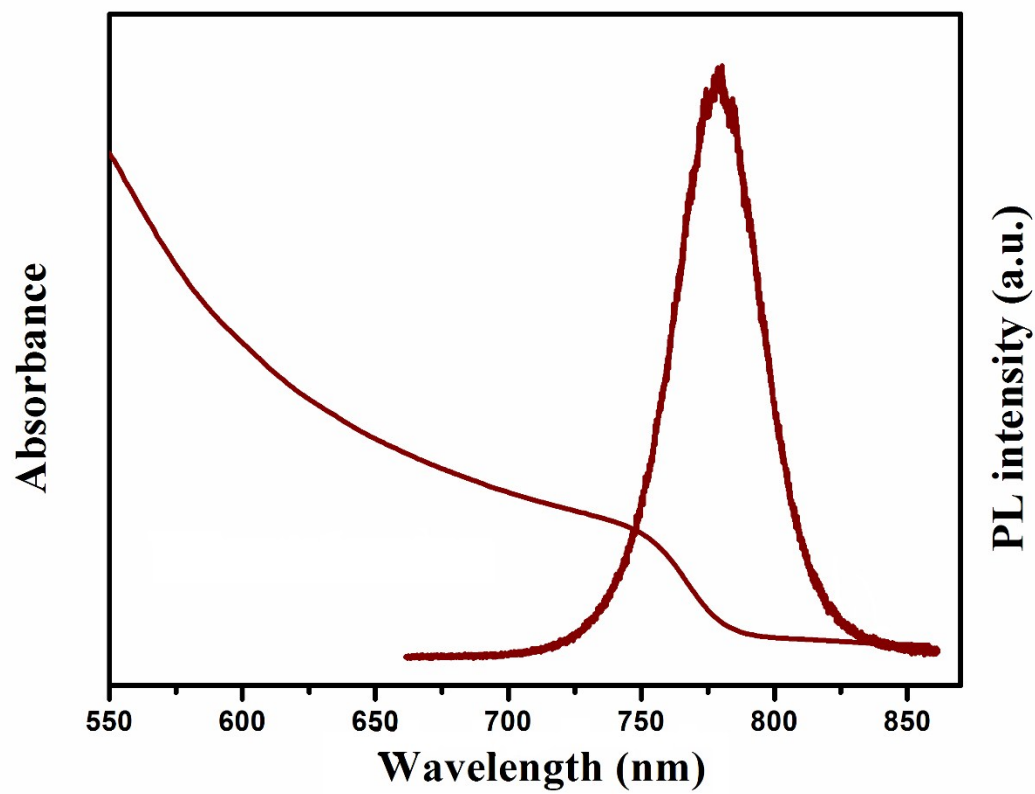


Figure S1. UV-visible and photoluminescence spectra of a representative MAPbI₃ perovskite film.

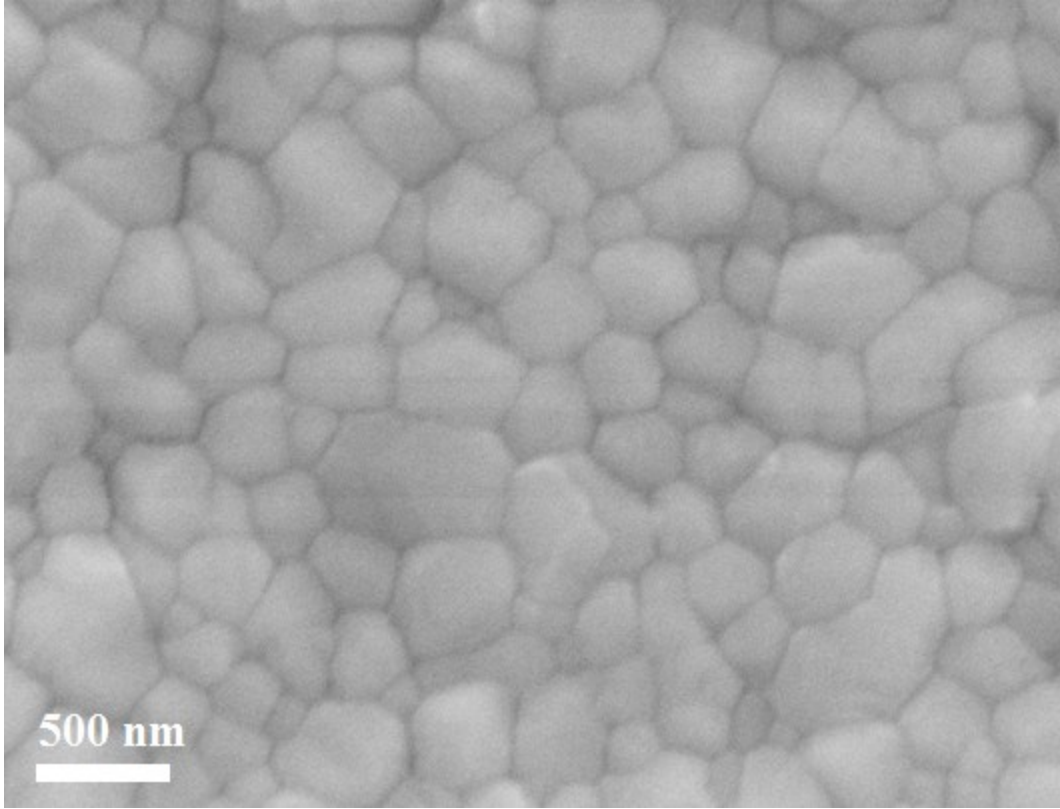


Figure S2. Top-view SEM image of a typical MAPbI₃ perovskite film.

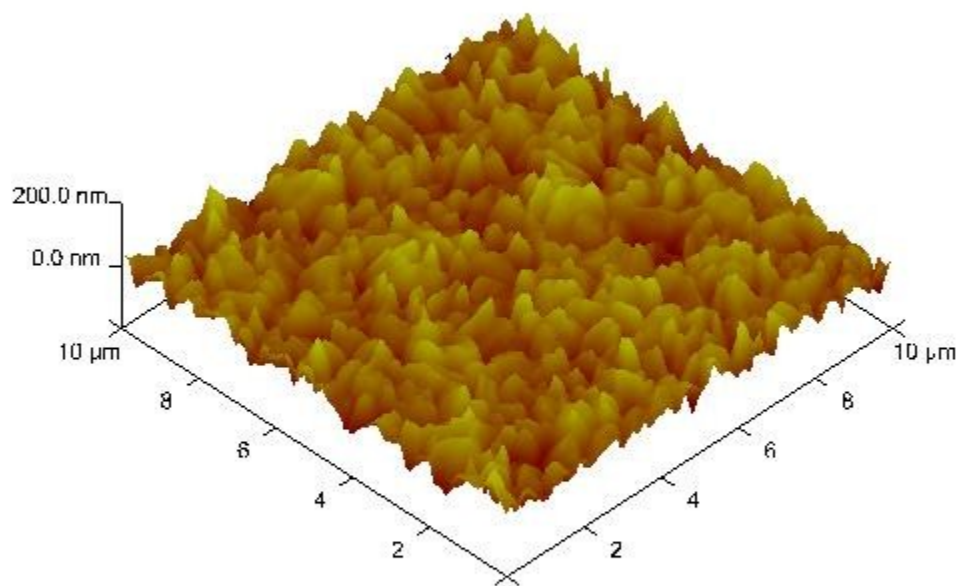


Figure S3. Three-dimensional image of perovskite film fabricated by anti-solvent technique.

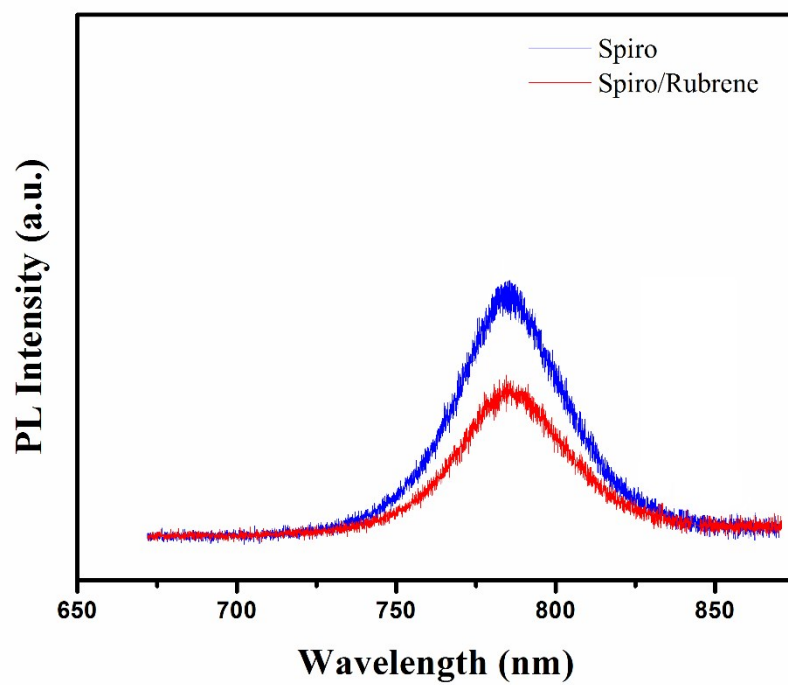


Figure S4. Photoluminescence spectra of perovskite films deposited on glass with spiro and rubrene/spiro HTLs.