## **Supporting Information**

An Inorganic Hole Conductor for Organo-Lead Halide Perovskite Solar Cells. Improved Hole Conductivity with Copper Iodide.

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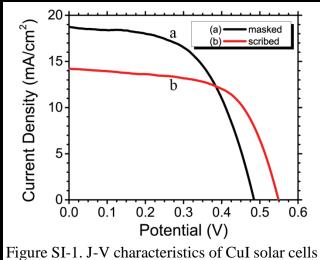
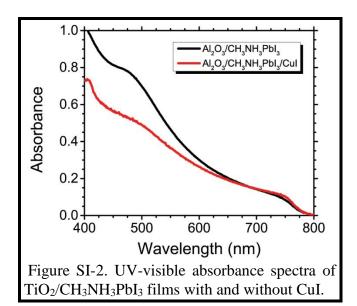
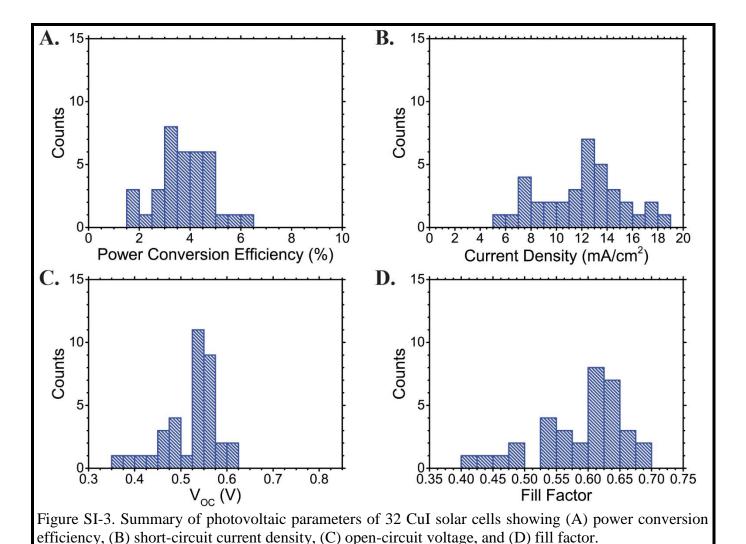


Figure SI-1. J-V characteristics of CuI solar cells with active area masked (a) and with the active area scribed (b).





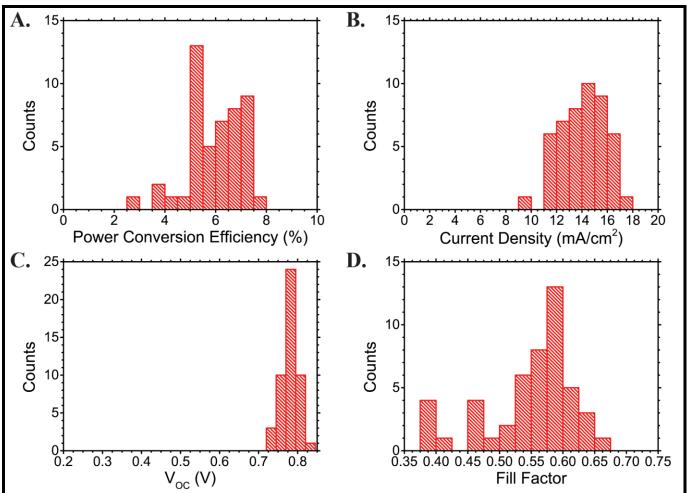


Figure SI-4. Summary of photovoltaic parameters of 48 spiro-OMeTAD solar cells showing (A) power conversion efficiency, (B) short-circuit current density, (C) open-circuit voltage, and (D) fill factor.

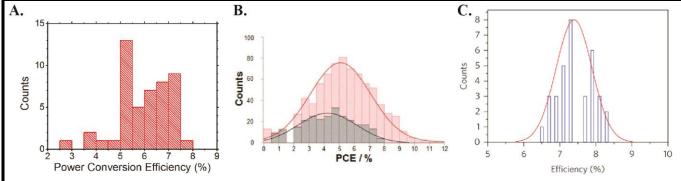


Figure SI-5. (A) Efficiency of TiO<sub>2</sub>/CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>/spiro-OMeTAD solar cells from the current study. (B) Efficiency of TiO<sub>2</sub> (black) and Al<sub>2</sub>O<sub>3</sub> (red) based solar cells by Lee et al. (From ref 1. Reprinted with permission of The American Association for the Advancement of Science.) (C) Efficiency distribution of TiO<sub>2</sub>/CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>/spiro-OMeTAD solar cells by Heo et al. (Reprinted with permission from Macmillan Publishers Ltd: Nature Photonics, ref 2, copyright 2013)

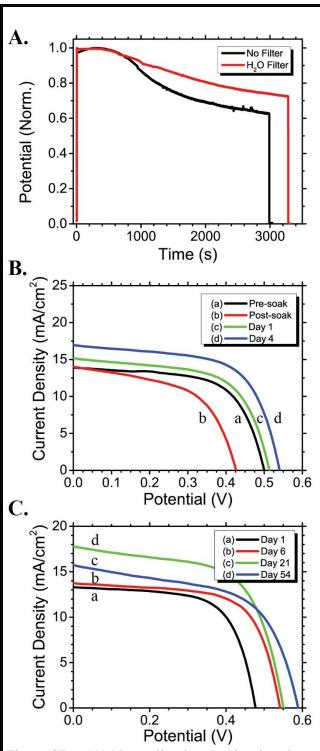


Figure SI-6. (A) Normalized open-circuit voltage of CuI solar cell upon continuous 100 mW/cm<sup>2</sup> illumination with and without a water filter. (B) J-V curve (a) before illumination, following immediately 1 h continuous illumination at V<sub>OC</sub>, and after (c) 1 and (d) 4 days storage in the dark. (C) J-V curve evolution upon storage in ambient conditions with encapsulation over a period of 54 days.