## **Supporting Information**

## Enhanced performance of perovskite solar cells by modulating Lewis acid-base reaction

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This supporting information includes figures from S1 to S3.



**Figure S1.** SEM images of the  $PbI_2$  films fabricated from different concentrations of NMP. The films were annealed at 100 °C for 30 min. (a) 2%, (b) 4%, (c) 8%, (d) 30%.



Figure S2. Photographs of PbI<sub>2</sub>/DMF solutions with different concentrations of NMP.



**Figure S3.** Light *J-V* curves obtained from reverse and forward scans of the PSCs fabricated from  $PbI_2/DMF$  solutions adding with different concentrations of NMP. (a)0%, (b)10%.