《低温溶液加工 $CsPbBr_3$ 纳晶薄膜制备钙钛矿太阳电池》的补充材料

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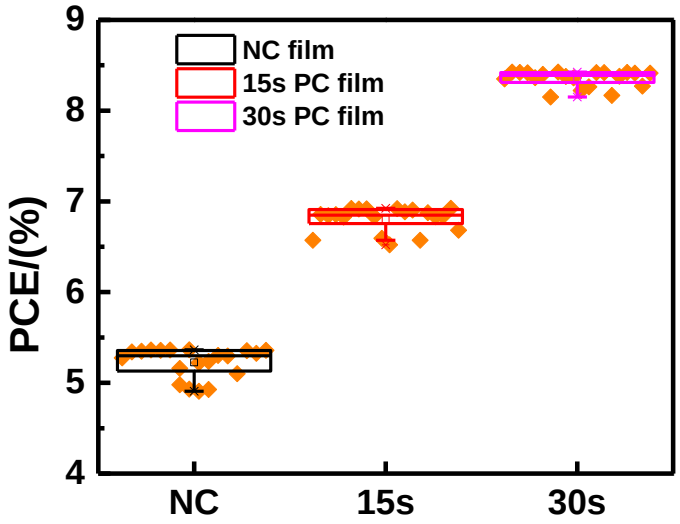

图 S1 $CsPbBr_3$ 纳晶薄膜，饱和溶液处理 15 s 和 30 s 所得 $CsPbBr_3$ 多晶薄膜分别作为吸收层制备太阳电池效率统计图（各 20 个器件）

Fig. S1. The PCE distribution histograms of solar cells with $CsPbBr_3$ nanocrystalline film、polycrystalline films obtained by nanocrystalline film treated with saturated solution for 15 s and 30 s as absorbed layer, respectively (each batch of 20 devices)

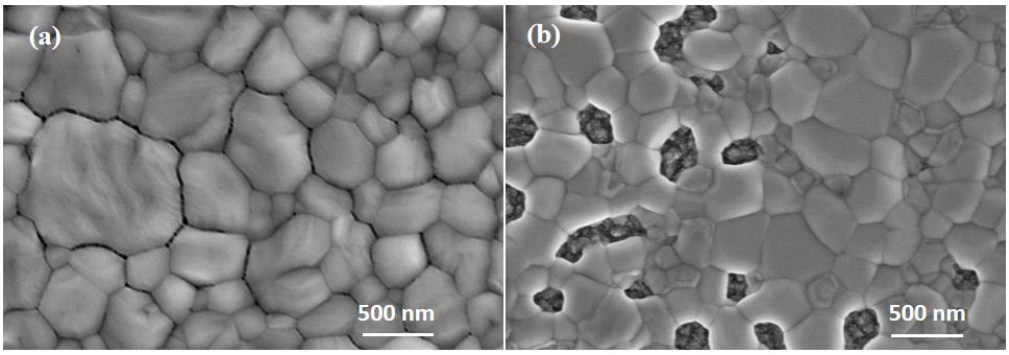

Fig S2 (a), (b) $CsPbBr_3$ 纳晶薄膜经饱和溶液分别处理 40 s 和 90 s 所得的多晶薄膜表面 SEM 图

Fig. S2. (a), (b) SEM images of $CsPbBr_3$ polycrystalline films obtained by treating nanocrystalline films with saturated solution for 40 s and 90 s, respectively.

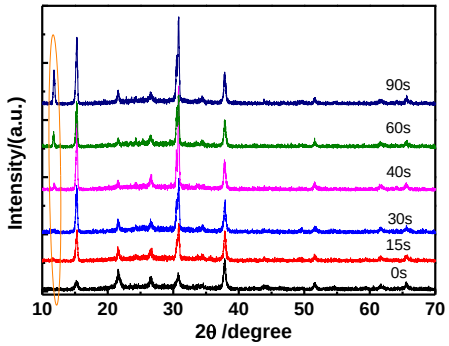

图 S3. $CsPbBr_3$ 纳晶及经饱和溶液处理不同时间所得多晶薄膜的 XRD 谱

Fig. S3. XRD patterns of $CsPbBr_3$ nanocrystalline and polycrystalline films obtained by treating it with saturated solution for different time.

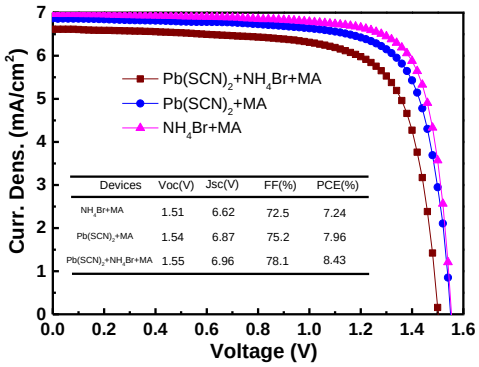

图 S4 采用 $Pb(SCN)_2$ 乙酸甲酯饱和溶液和 NH_4Br 乙酸甲酯饱和溶液分别单独与同时处理 30 s 所得器件的光伏性能

Fig. S4. Photovoltaic performance of the device was obtained by treating $Pb(SCN)_2$ MA saturated solution and NH_4Br methyl acetate saturated solution for 30 s separately and simultaneously

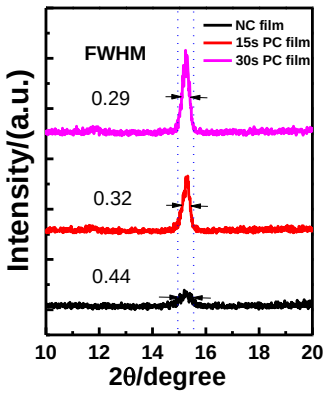

图 S5 $CsPbBr_3$ 纳晶及经饱和溶液处理 15 s 和 30 s 所得多晶薄膜 XRD 对比图

Fig. S5. XRD comparisons of $CsPbBr_3$ nanocrystalline and polycrystalline films obtained by treating it with saturated solution for 15 s and 30 s

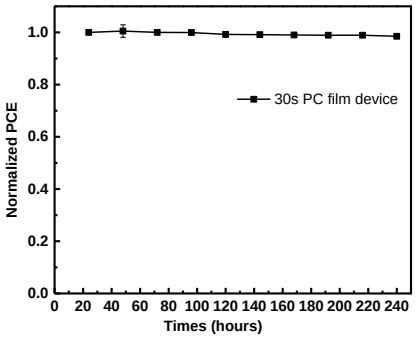

图 S6 $CsPbBr_3$ 纳晶经饱和溶液处理 30 s 所得多晶薄膜所制备的钙钛矿太阳电池的稳定性

Fig. S6. Long-term stability of PCE of the $CsPbBr_3$ solar cells fabricated with polycrystalline films obtained by treating its nanocrystalline film with saturated solution for 30 s

