

Supplementary Information

High voltage and efficient bilayer heterojunction solar cells based on organic-inorganic hybrid perovskite absorber with low-cost flexible substrate

Yi-Fang Chiang^a, Jun-Yuan Jeng^a, Mu-Huan Lee^a, Shin-Rung Peng^a, Peter Chen^{a,b,c*},
Tzung-Fang Guo^{a,b*}, Ten-Chin Wen^d, Yao-Jane Hsu^e, Ching-Ming Hsu^f

^a) Department of Photonics

^b) Advanced Optoelectronic Technology Center (AOTC)

^c) Research Center for Energy Technology and Strategy (RCETS)

^d) Department of Chemical Engineering

National Cheng Kung University

Tainan 701, Taiwan

^e) National Synchrotron Radiation Research Center

Hsinchu 300, Taiwan

^f) Department of Electro-Optical Engineering

Southern Taiwan University

Tainan 701, Taiwan

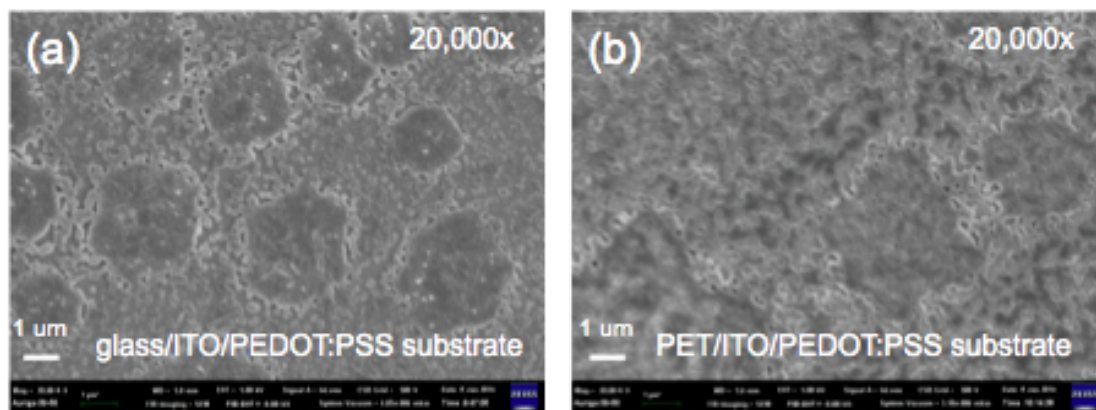


Fig S1. SEM images of $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite film spin-cast (6000 rpm) from γ -butyrolactone solution 14.9 wt% on (a) glass/ITO/PEDOT:PSS substrate and (b) PET/ITO/PEDOT:PSS substrate at the magnification of 20,000x.

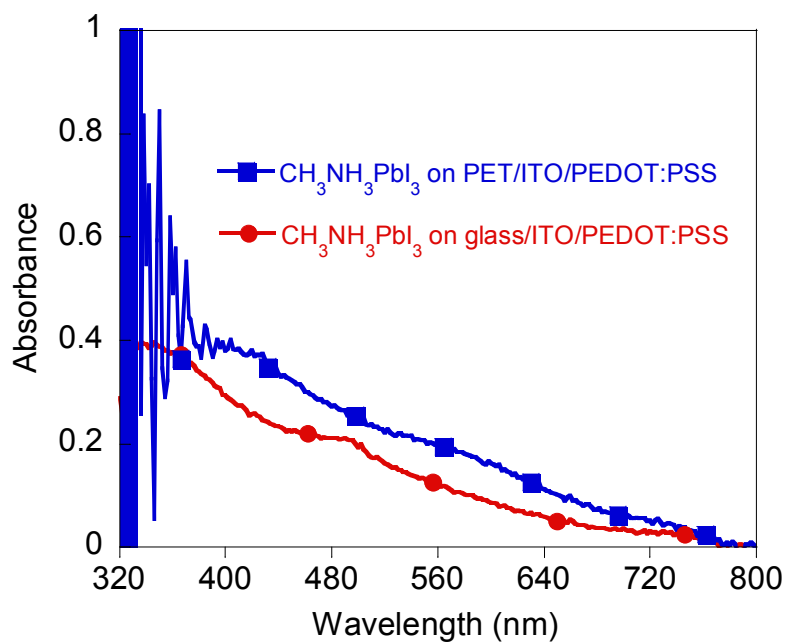


Fig S2. UV-vis absorbance spectra of $\text{CH}_3\text{NH}_3\text{PbI}_3$ from γ -butyrolactone solution 14.9 wt% spin-cast on glass/ITO/PEDOT:PSS (red line) and PET/ITO/PEDOT:PSS (blue line).