

Fig. S1. FTIR spectrum of perovskite (6-ACA)_{0.038}(CH₃NH₃)_{0.962}PbI₃ crystals.

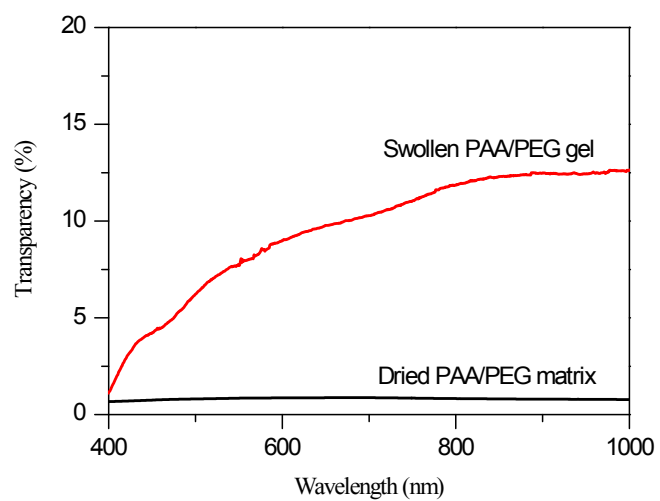


Fig. S2. The optical transmission spectra of dried PAA/PEG matrix and swollen PAA/PEG gel.

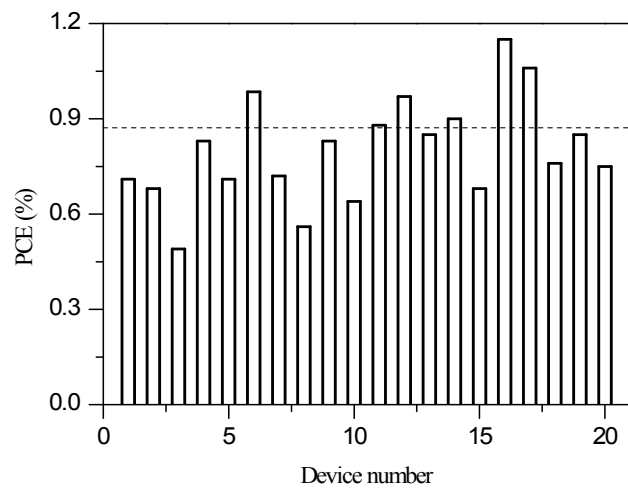


Fig. S3. PCE distribution of 20 randomly selected PSCs at undeformed situation. The dash line means the position of reported 0.88% efficiency.

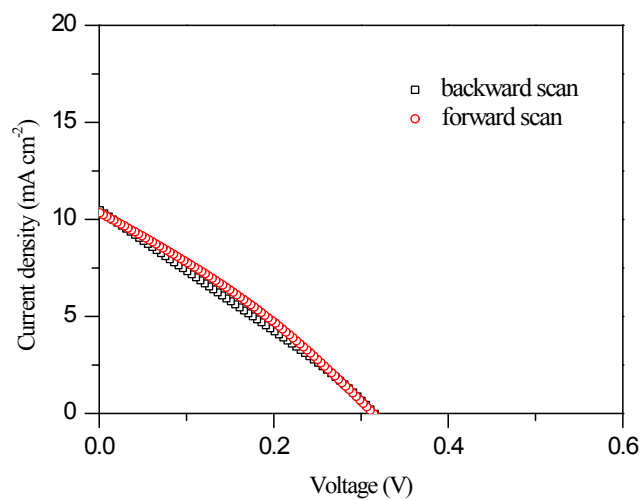


Fig. S4. Characteristic J - V curves of the deformable PAA-PEG/Ti/PANi:(6-ACA)_{0.038}(CH₃NH₃)_{0.962}PbI₃/(6-ACA)_{0.038}(CH₃NH₃)_{0.962}PbI₃/PCBM:(6-ACA)_{0.038}(CH₃NH₃)_{0.962}PbI₃/Ti PSC at forward and backward scanning directions. Backward scan: from +1 to 0 V; Forward scan: from 0 to + 1 V. The scanning rate was 100 mV s⁻¹.

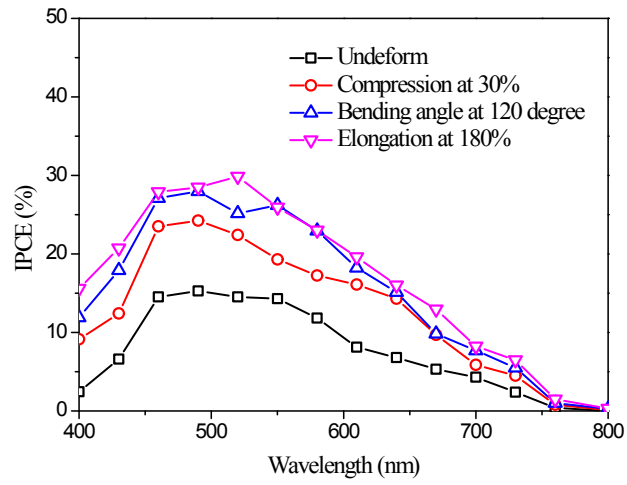


Fig. S5. IPCE spectra of the PSC devices measured at various states.