

Supplementary Information

Facile Synthesis of Nitrogen-Doped Graphene Frameworks for Enhanced Performance of Hole-Transport Material-Free Perovskite Solar Cells

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This supplementary information containing Fig. S1-S6.

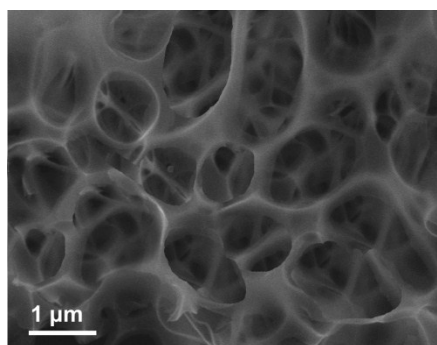


Fig.S1 Top-view SEM image of N-GFs for TiO₂/CH₃NH₃PbI₃/N-GFs PSCs.

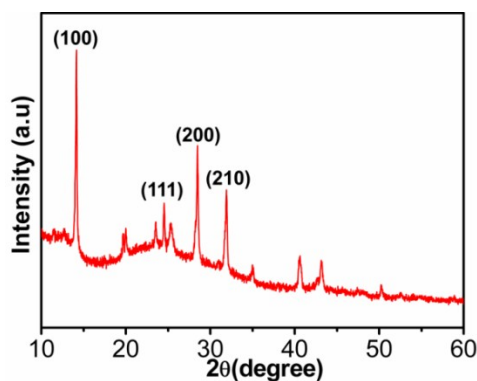


Fig.S2 XRD spectrum of TiO₂/CH₃NH₃PbI₃/N-GFs on glass slide.

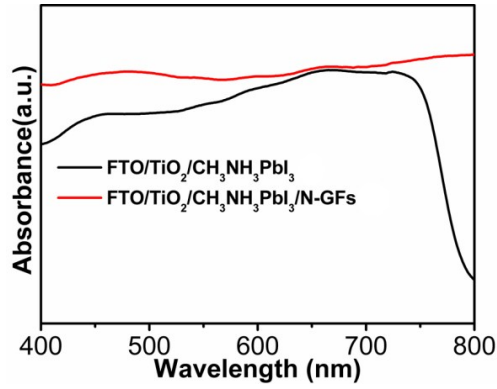


Fig.S3 UV-Vis absorption spectra of FTO/TiO₂/CH₃NH₃PbI₃ and FTO/TiO₂/CH₃NH₃PbI₃/N-GFs.

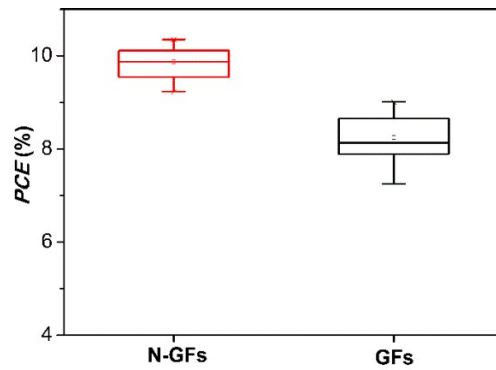


Fig. S4 Statistics on *PCE* variations of the PSCs based on N-GFs and GFs (20 devices for each type).

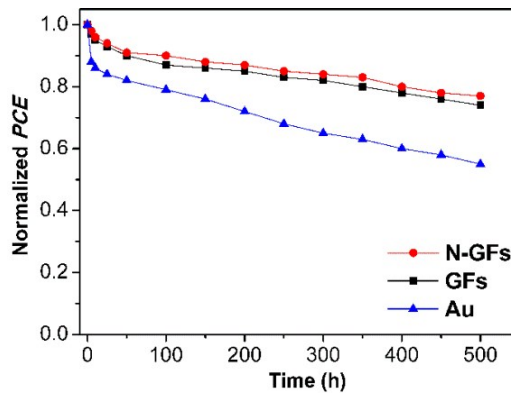


Fig. S5 Normalized *PCE* trend of PSCs based on N-GFs, GFs and Au electrodes under AM 1.5G illumination in ambient air.

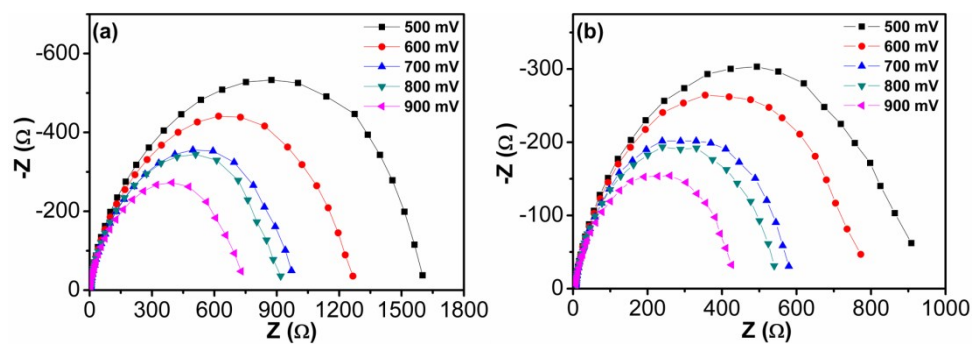


Fig.S6 Nyquist curves of PSCs at different bias for (a) N-GFs and (b) GFs.