

Supporting Information

SrGeO₃ inorganic electron-transporting layer for high-performance perovskite solar cells

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Keywords: SrGeO₃; Electron-transporting layer; Conductivity; Solar cells.

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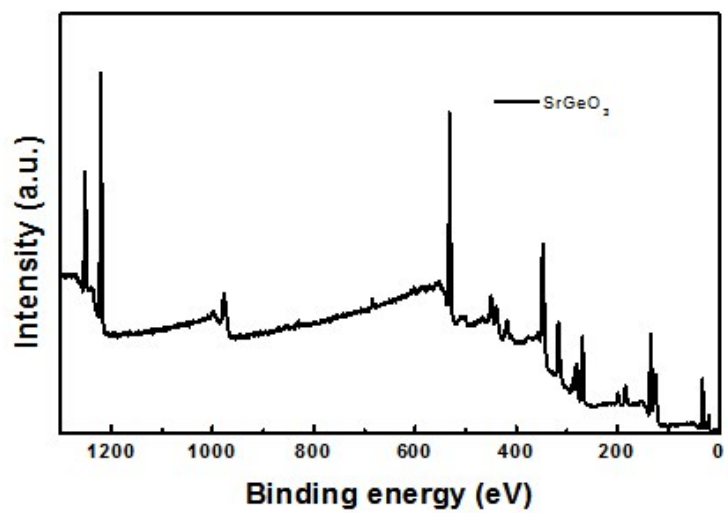


Figure S1. Full scan XPS spectrum of SrGeO₃ film.

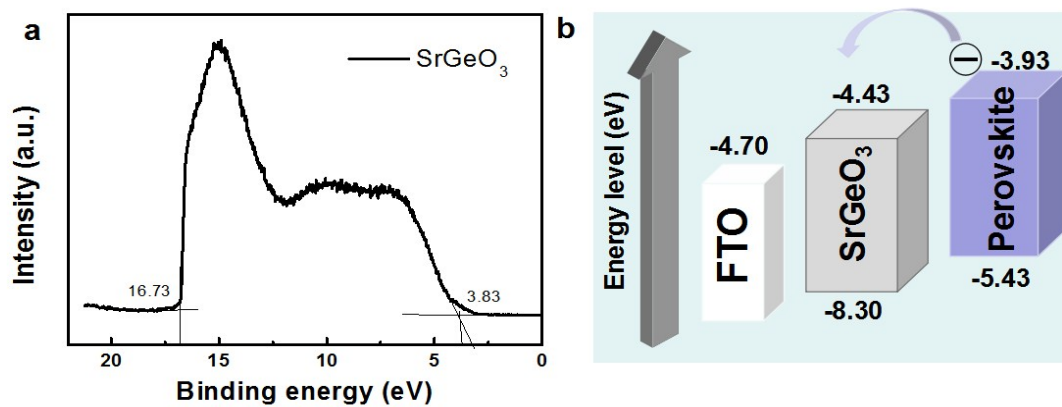


Figure S2. (a) UPS spectrum of SrGeO₃ film. (b) Schematic illustration of the energy levels of FTO, SrGeO₃, and CH₃NH₃PbI₃ films.

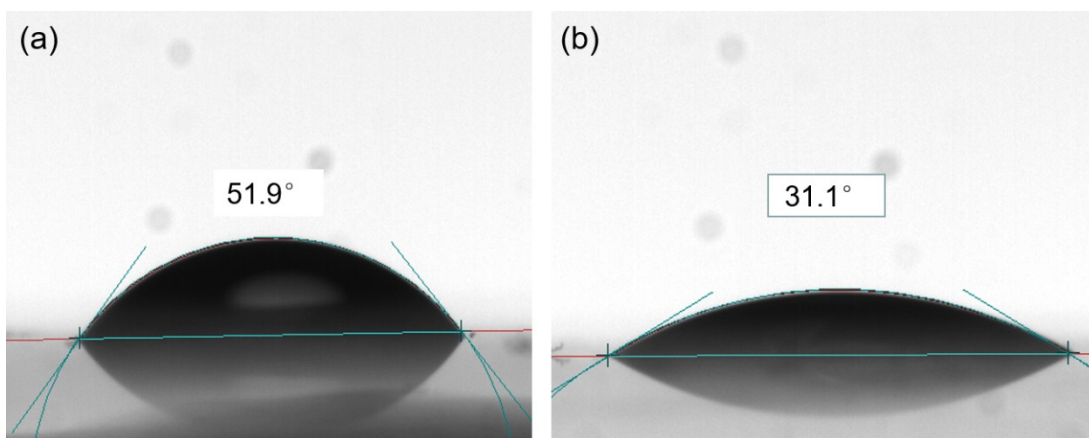


Figure S3. Contact angles of (a) TiO_2 and (b) SrGeO_3 films by dropping the perovskite solution (Solvent, GBL: DMSO =7:3) onto the TiO_2 and SrGeO_3 films

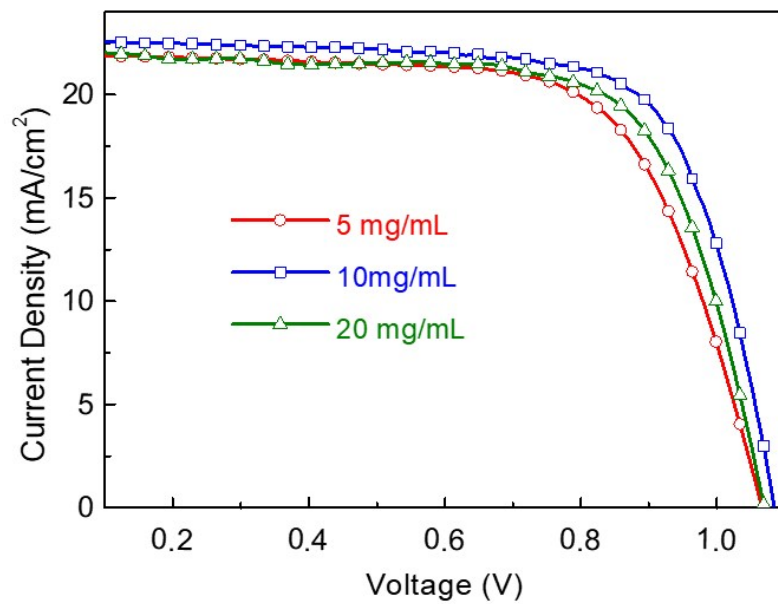


Figure S4. *J-V* curves of SrGeO₃ (varied concentration) based perovskite solar cells measured under simulated AM 1.5 sunlight of 100 mW/cm² irradiance.

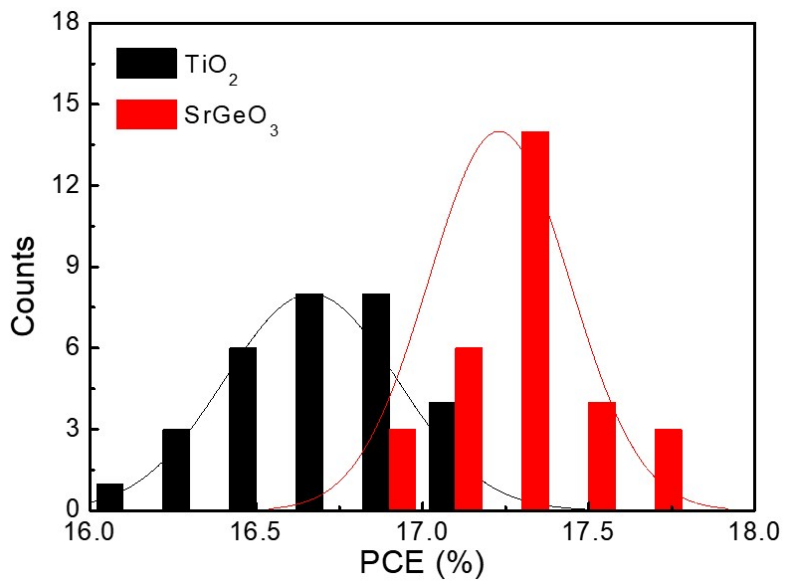


Figure S5. Histogram of PCEs in SrGeO₃- and TiO₂- based PSCs.

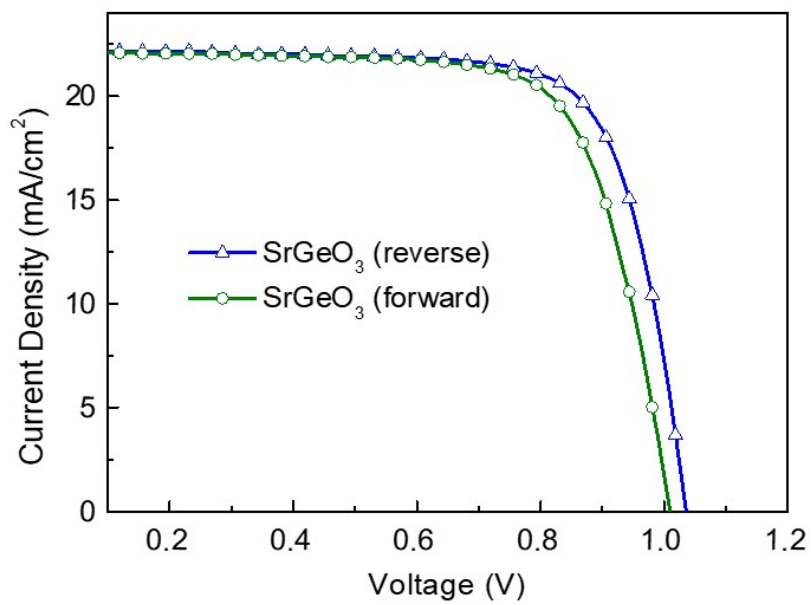


Figure S6. *J-V* curves (forward and reverse scan direction) of SrGeO₃ based perovskite solar cells measured under simulated AM 1.5 sunlight of 100 mW/cm² irradiance.

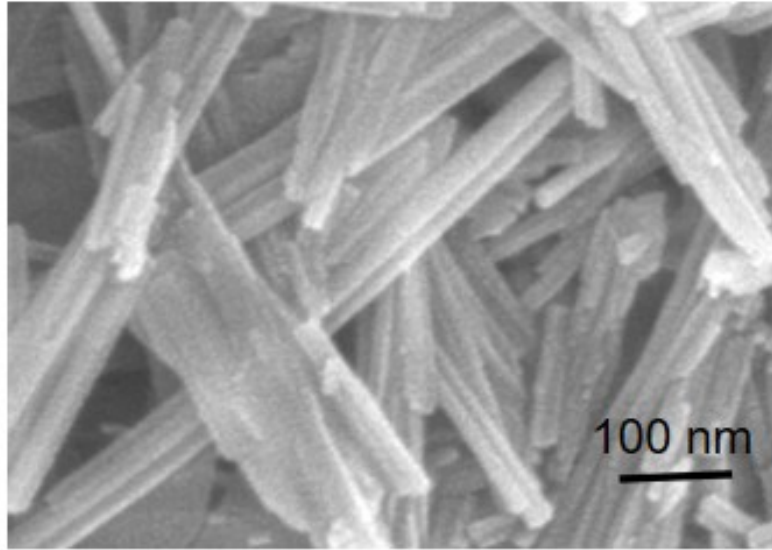


Figure S7. SEM images of SrGeO₃ film.

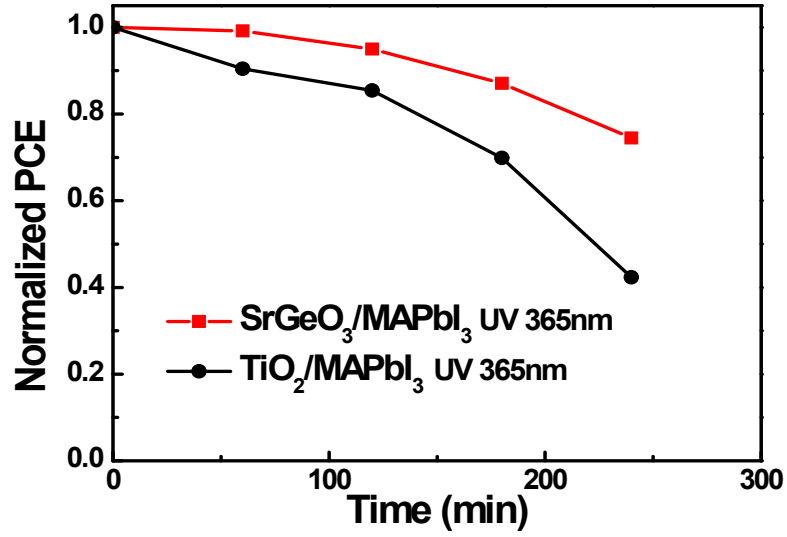


Figure S8. Normalized PCEs as a function of time in TiO₂ and SrGeO₃ based PSCs under UV irradiation without encapsulation.

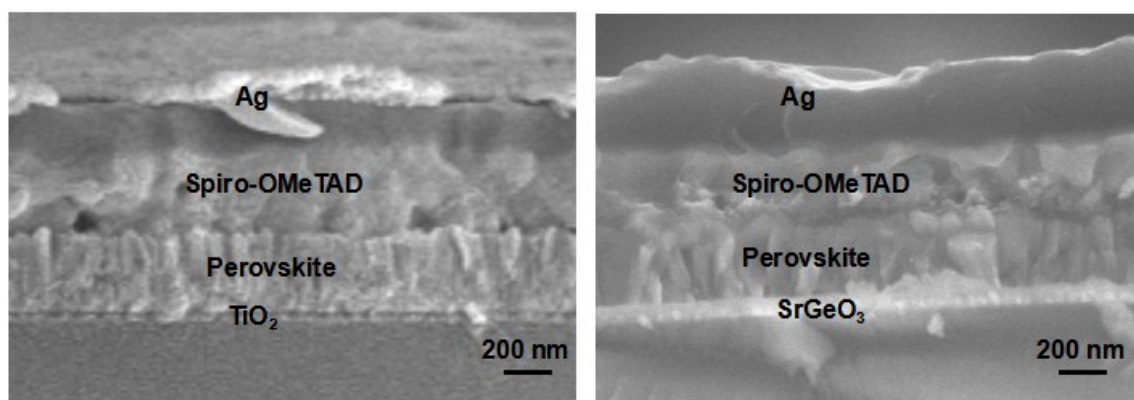


Figure S9. Cross-SEM images of TiO₂ and SrGeO₃ based PSCs.

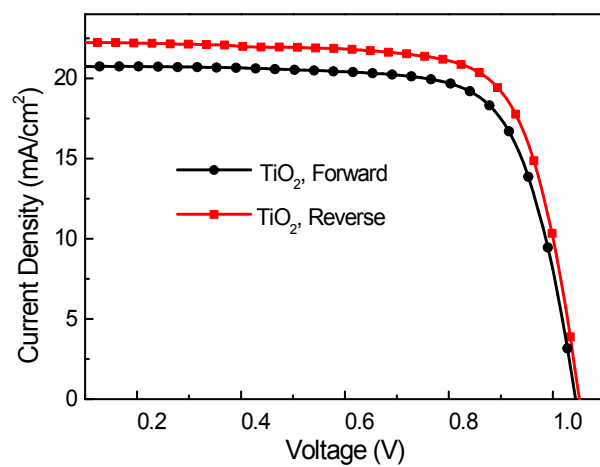


Figure S10. J - V curves (forward and reverse scan direction) of TiO₂ based perovskite solar cells measured under simulated AM 1.5 sunlight of 100 mW/cm² irradiance.