

## **Thermal plasma-synthesized gray-black TiO<sub>2</sub> with abundant oxygen vacancies for high-efficiency solar desalination**

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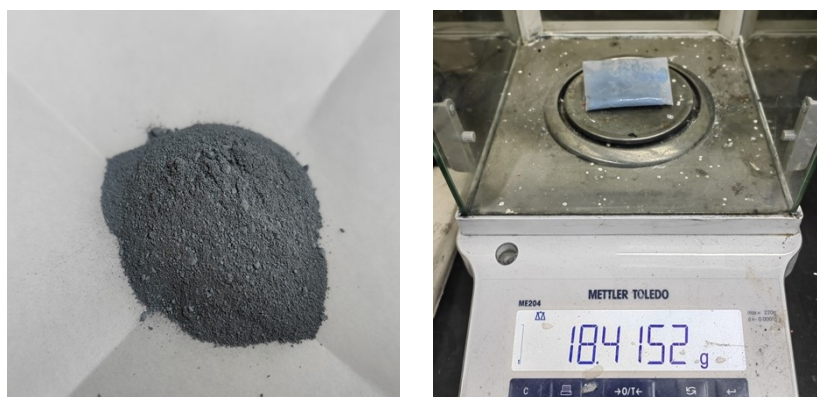


Fig.S1 Images of G-TiO<sub>2</sub> product produced by thermal plasma in one minute.

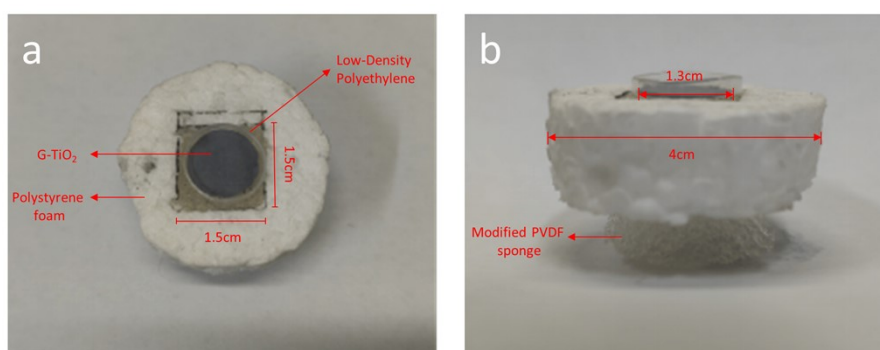


Fig.S2 Top view(a) and side view(b) of the three-dimensional evaporator.

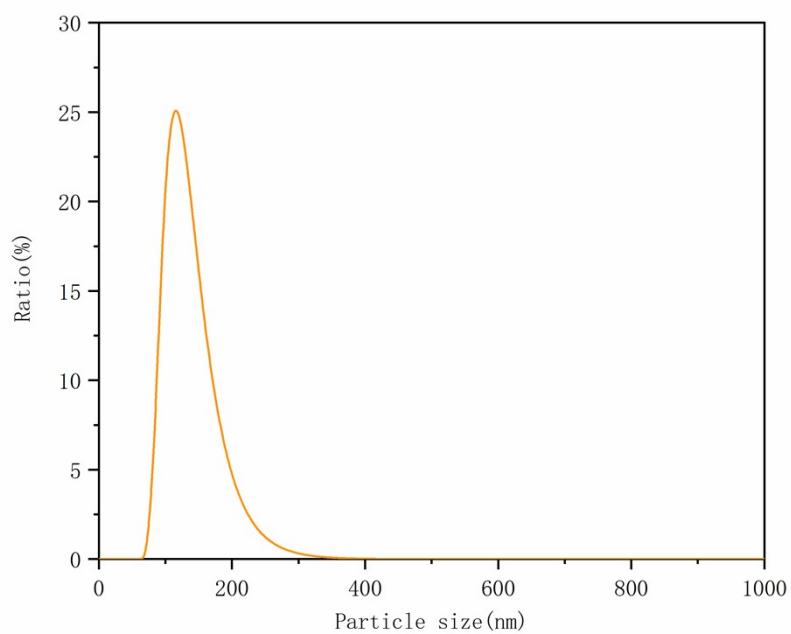


Fig.S3 Particle size distribution of G-TiO<sub>2</sub>.

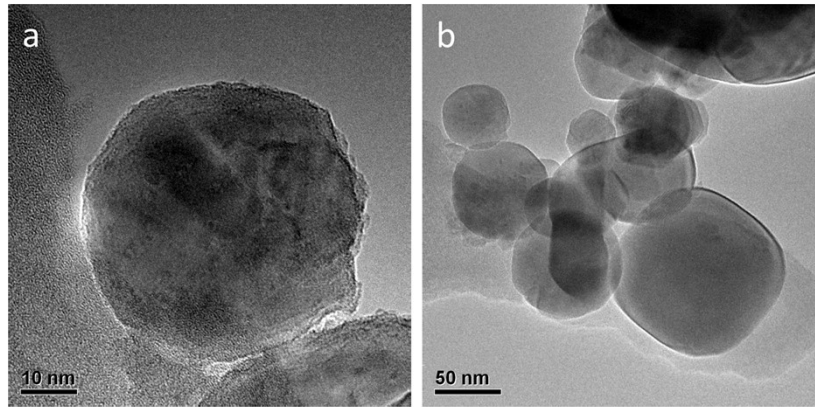


Fig.S4 TEM images of G-TiO<sub>2</sub>.

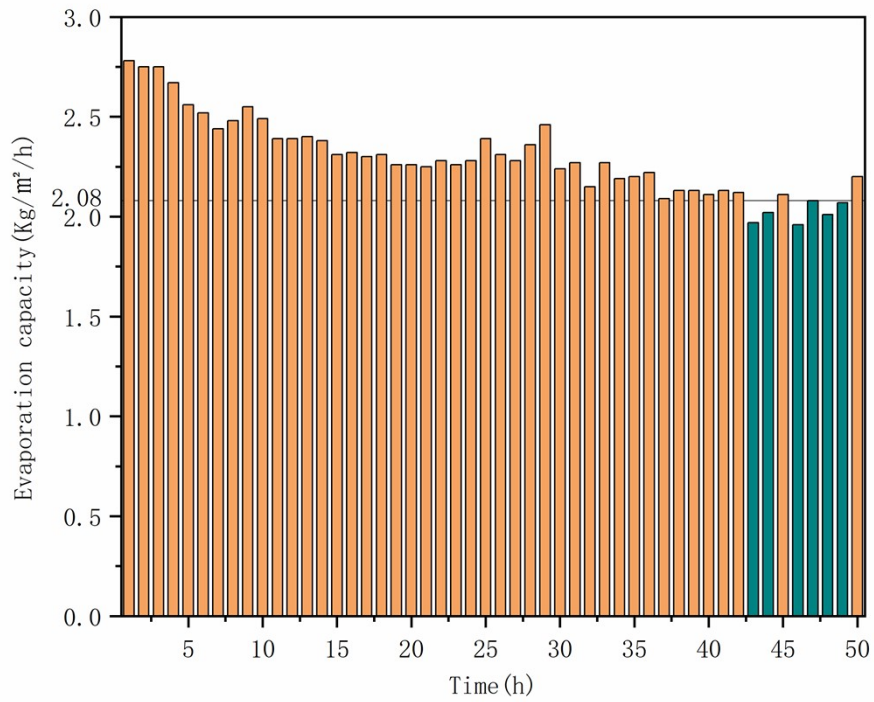


Fig.S5 Schematic diagram of mass change of seawater evaporation for 50h under one solar radiation intensity.

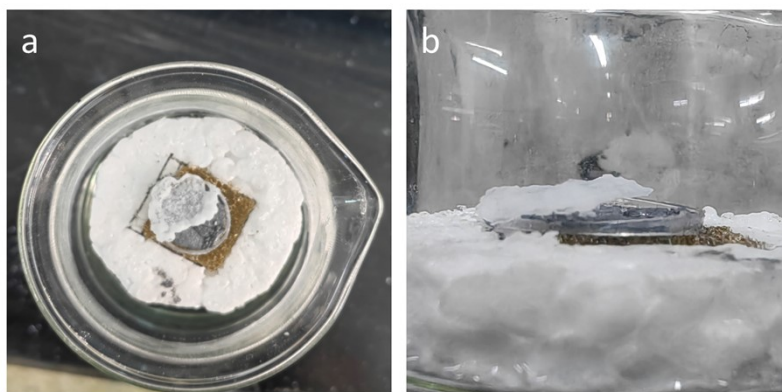


Fig.S6 Top view(a) and side view(b) of the shell formed by salt crystals.

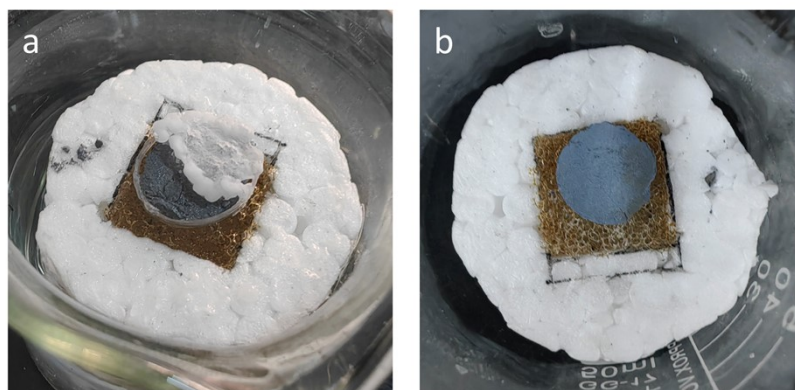


Fig.S7 Comparison of sea water evaporator before(a) and after(b) desalting after 50h evaporation.