Supporting Information

TiN, ZrN, and HfN Nanoparticles on Nanoporous Aluminum Oxide Membranes for Solar-Driven Water Evaporation and Desalination

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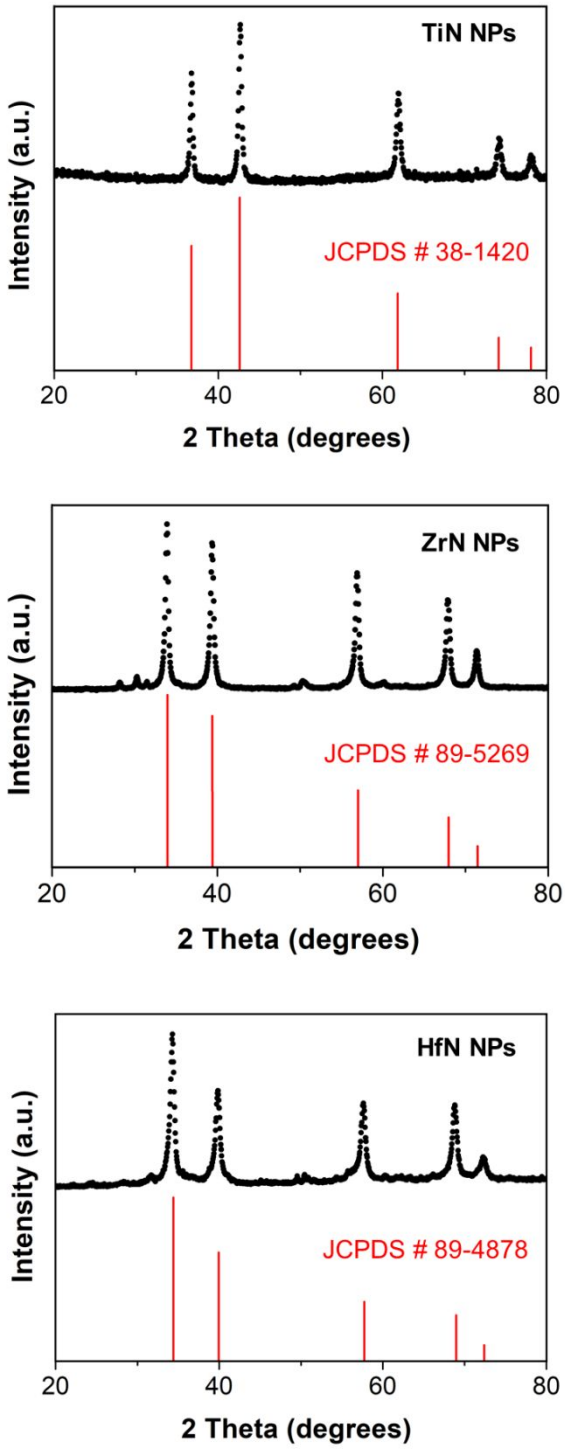

Figure S1. Powder X-ray diffraction patterns of TiN, ZrN, and HfN nanoparticles.

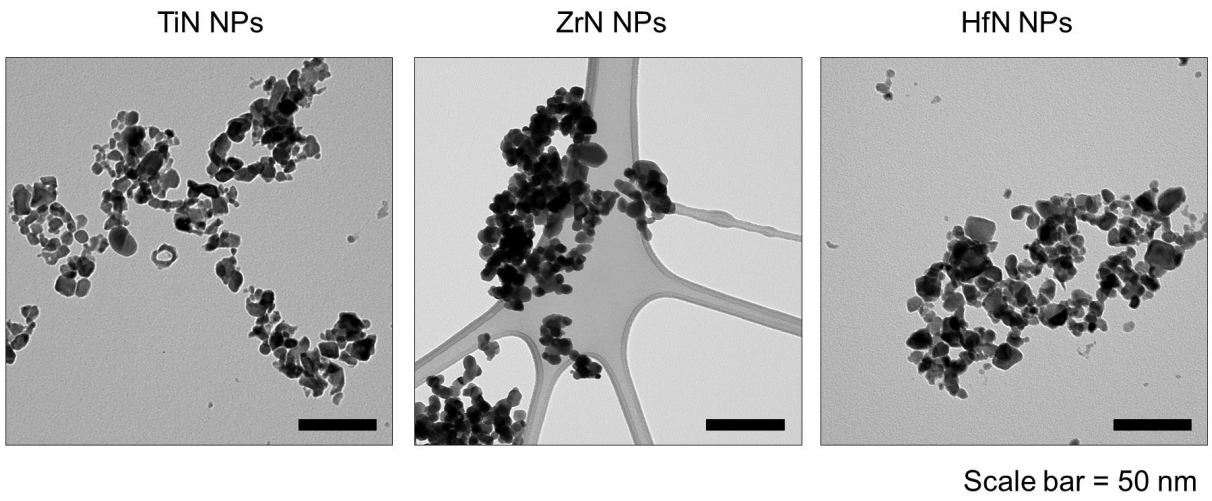

Figure S2. Transmission electron microscope images for TiN, ZrN, and HfN nanoparticles.

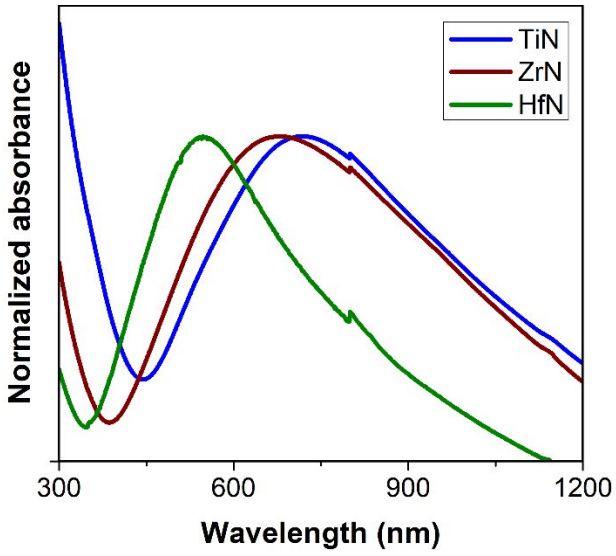

Figure S3. Absorbance spectra of colloidal suspension of TiN, ZrN, and HfN nanoparticles in water.

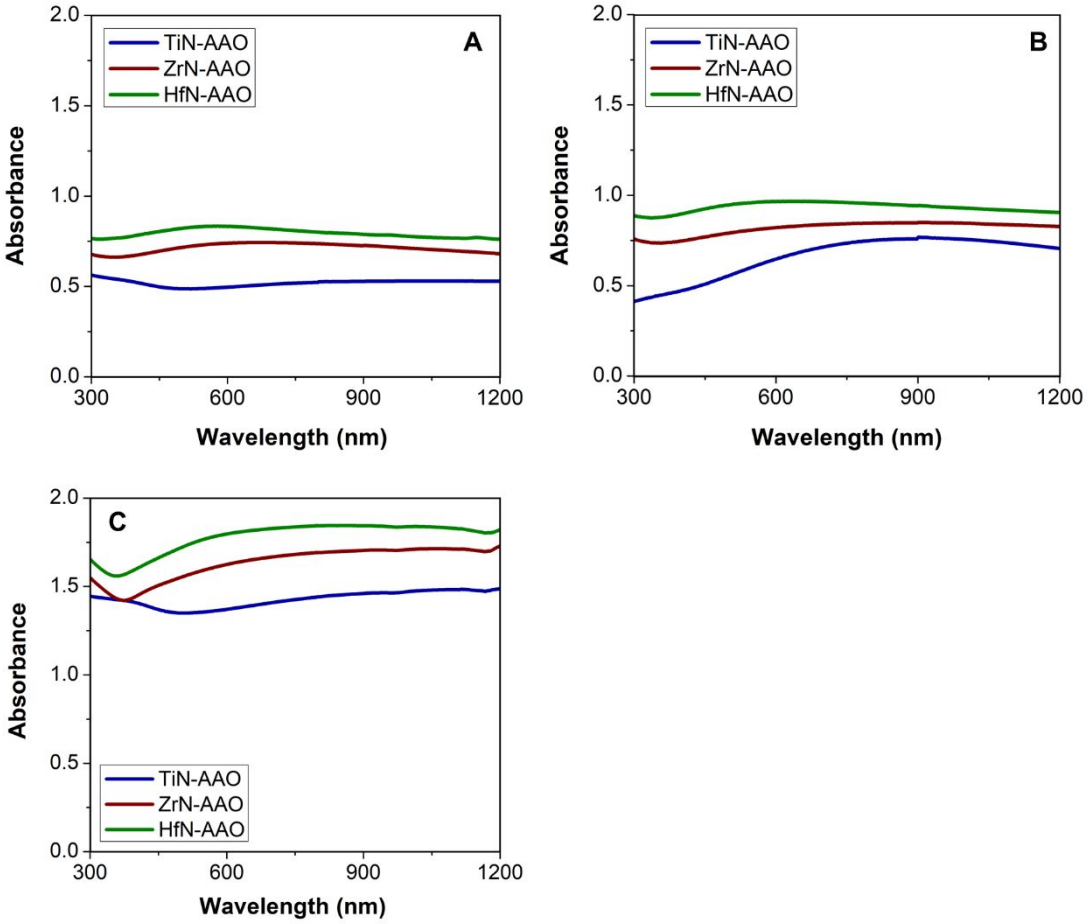

Figure S4. Absorbance spectra of the nitride nanoparticle films on AAO membrane with a mass loading of (A) 0.5, (B) 1.0, and (C) 5.0 g m^{-2}.

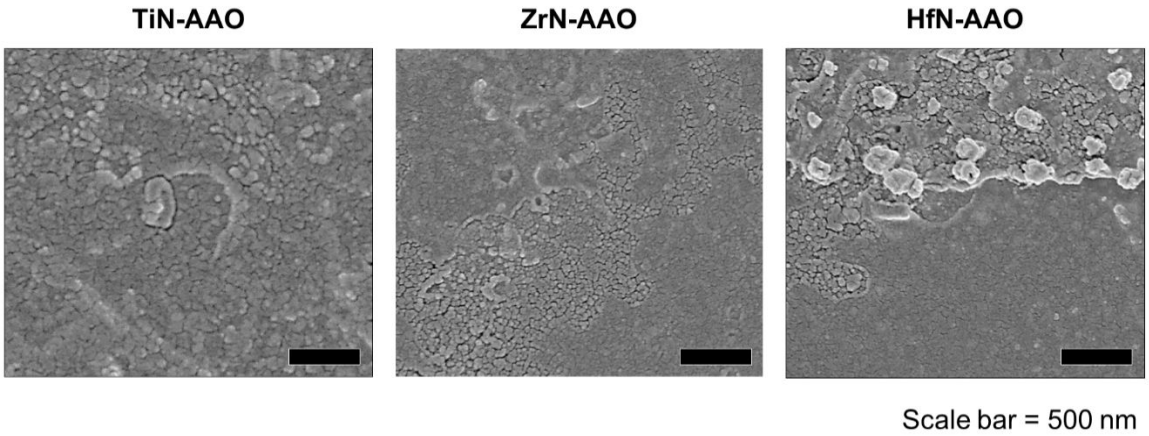

Figure S5. Top-down scanning electron microscope images of nitride nanoparticles on AAO membrane at mass loading of 5.0 g m^{-2}.

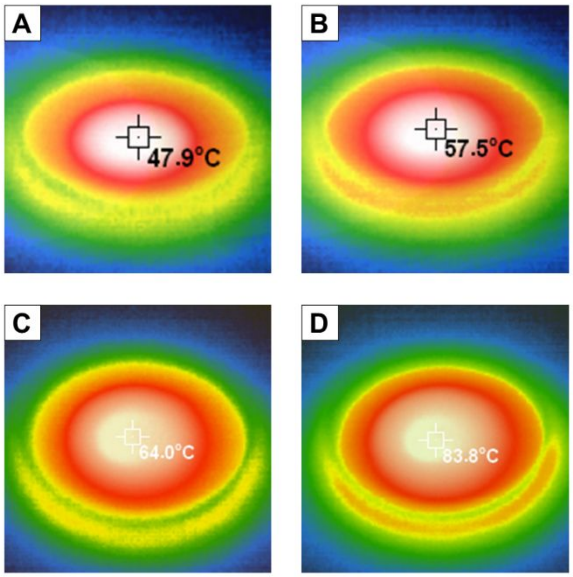

Figure S6. Representative IR thermal images of HfN-AAO interface on saltwater under (A) 1, (B) 2, (C) 3, and (D) 4 sun illumination.

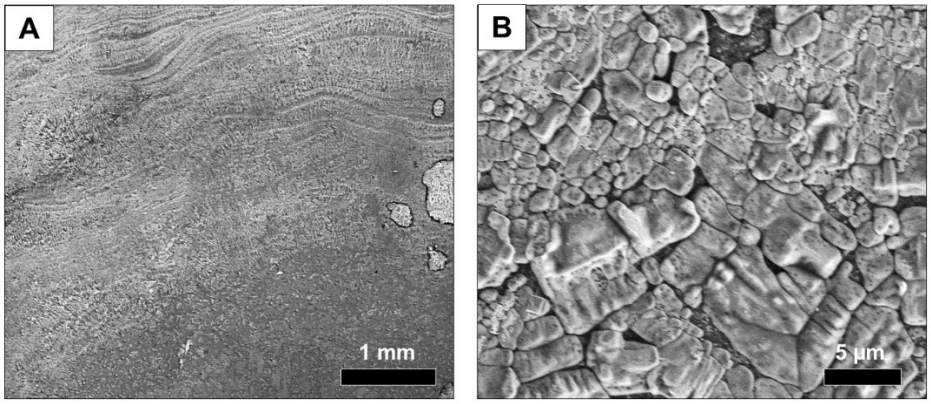

Figure S7. (A) Low and (B) higher magnification SEM images of HfN-AAO interface showing salt deposits after cycle 8 of desalination.