Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.

MXene nanosheets-reinforced chitosan as a stable photothermal evaporator for efficient solar evaporation

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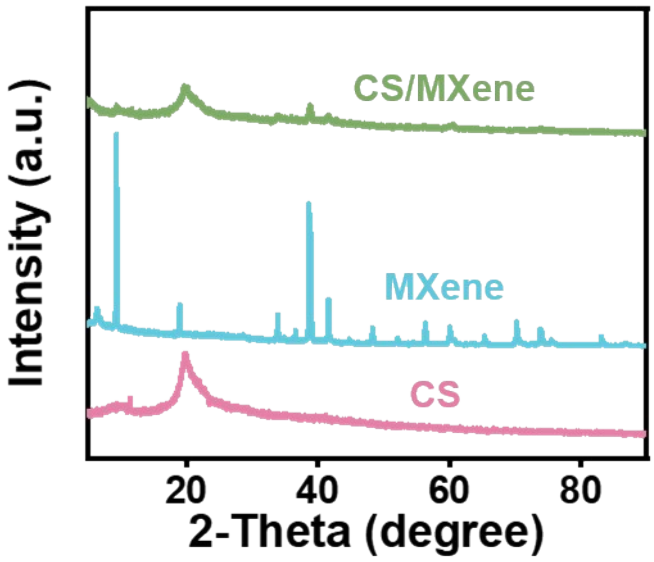

Fig.S1 XRD spectra of MXene, CS, and CS/MXene aerogels.

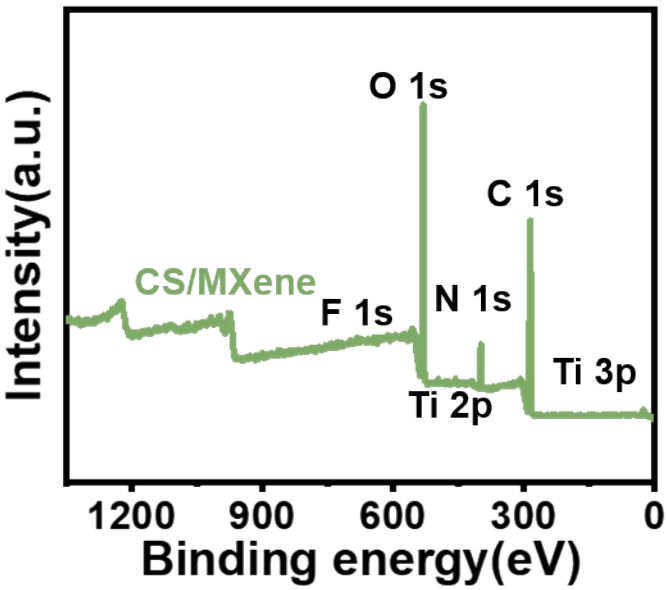

Fig.S2 XPS mapping of CS/MXene aerogel.

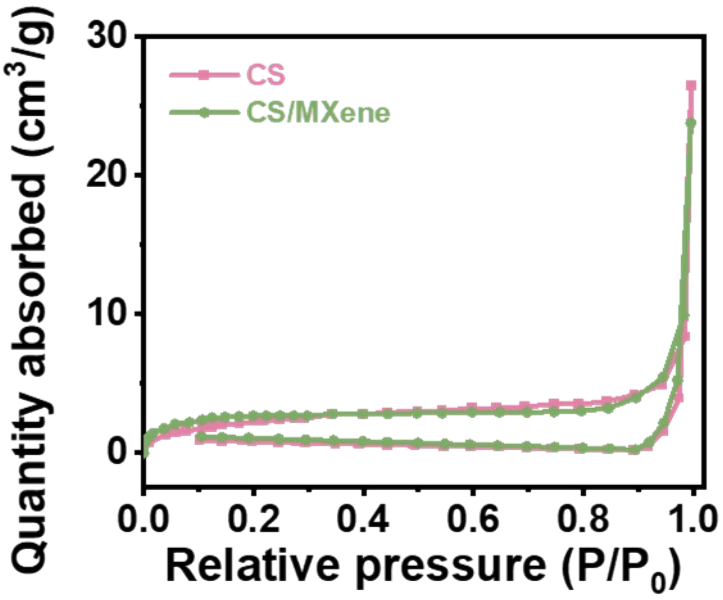

Fig.S3 BET test results for CS and CS/MXene aerogels.

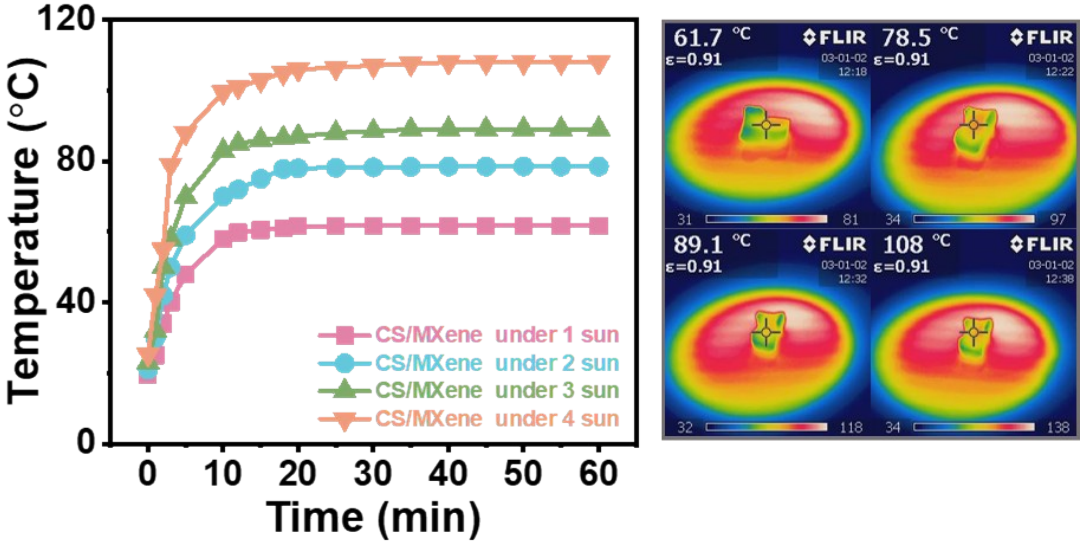

Fig.S4 Temperature and infrared images of dry state CS/MXene aerogel at different light intensities.

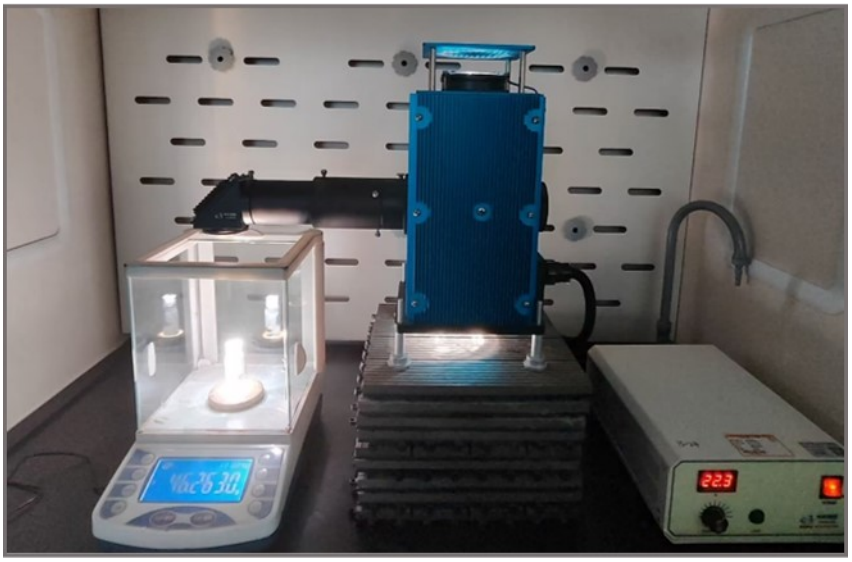

Fig.S5 Actual diagram of a solar-powered evaporation measurement device.

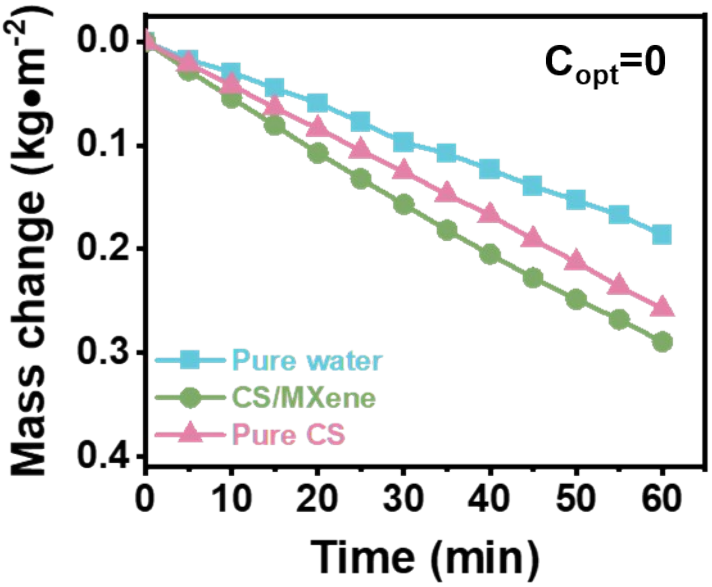

Fig.S6 Evaporation Rate of Pure Water, CS,CS/MXene in Dark Environment.

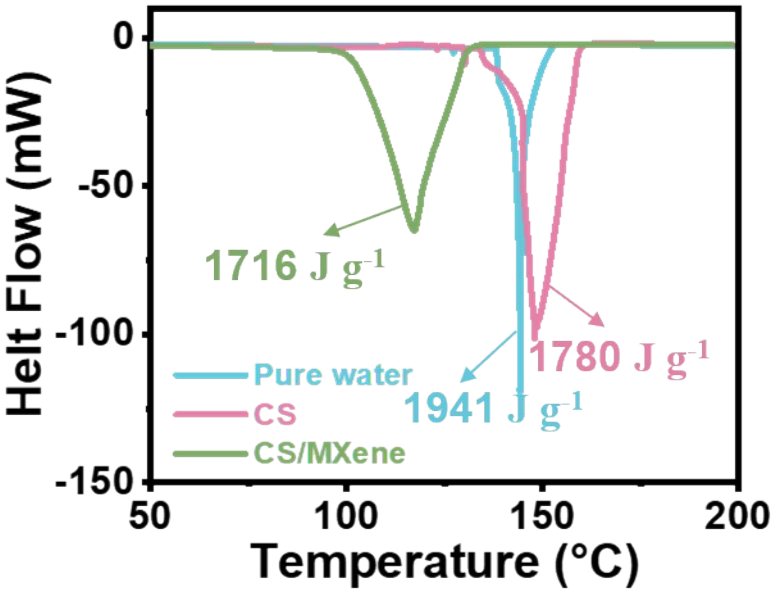

Fig.S7 DSC curves for pure water, CS and CS/MXene aerogels. All tests were performed from room temperature to 200°C under nitrogen (5°C min^{-1} rate).

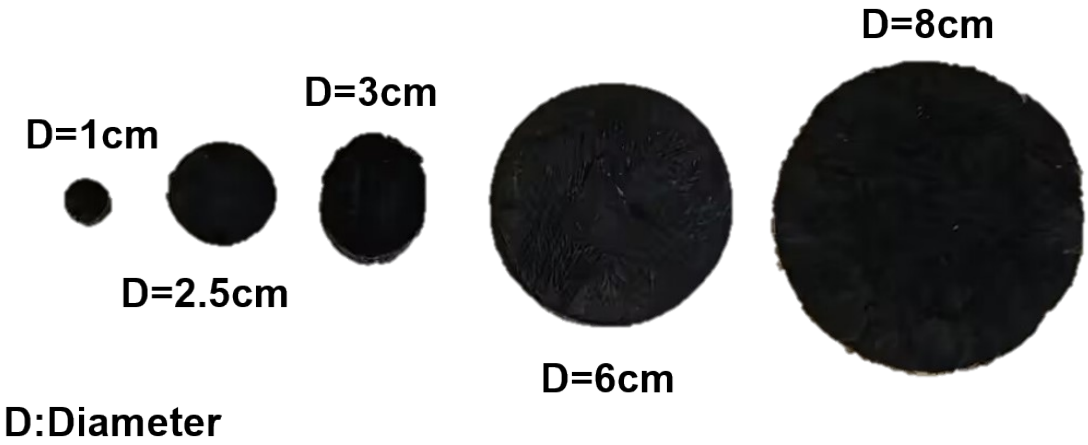

Fig.S8 Evaporators of different diameters.

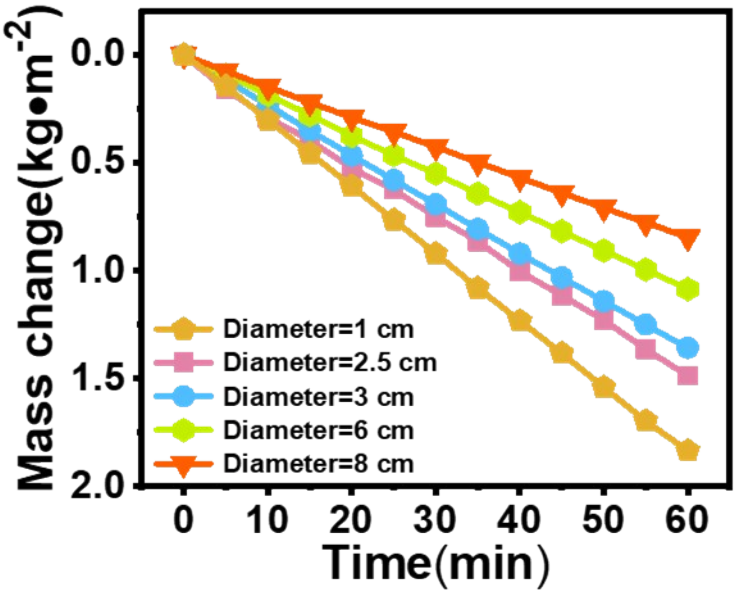

Fig. S9 Evaporation rates of evaporators of different diameters.

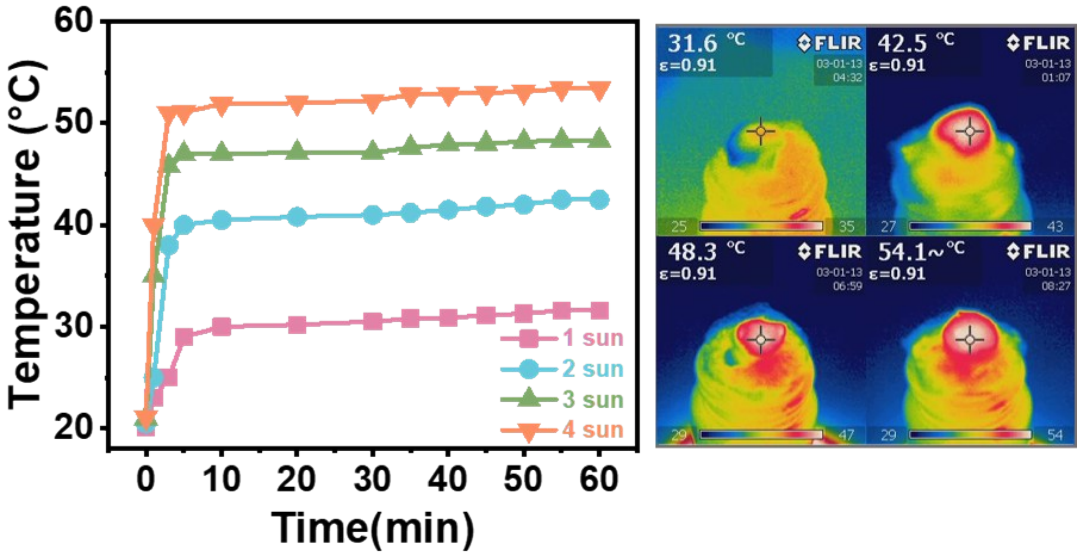

Fig.S10 Temperature and infrared images of CS/MXene aerogel in the wet state at different light intensities.

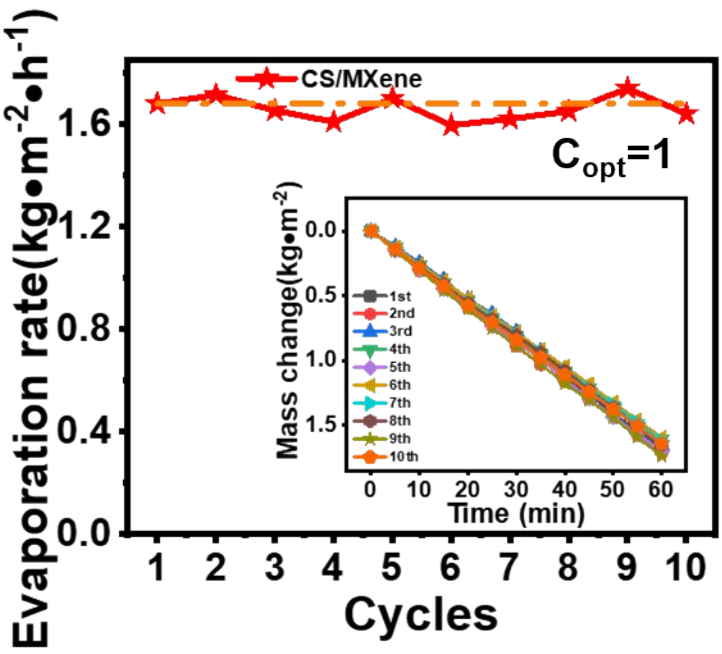

Fig. 11 Cycling stability of CS/MXene aerogel evaporator in seawater.

Fig.12 Comparison of the evaporator before and after 7 days of immersion in seawater.

Table S1. Porous properties of CS and CS/MXene aerogels.

	Surface area (m^2 /g)	Pore size (nm)
Pure CS	**8.2702**	**12.4302**
CS/MXene	**10.4922**	**10.4077**