Electronic Supplementary Information

Oil-paper-umbrella-inspired passive radiative cooling using recycled packaging foam

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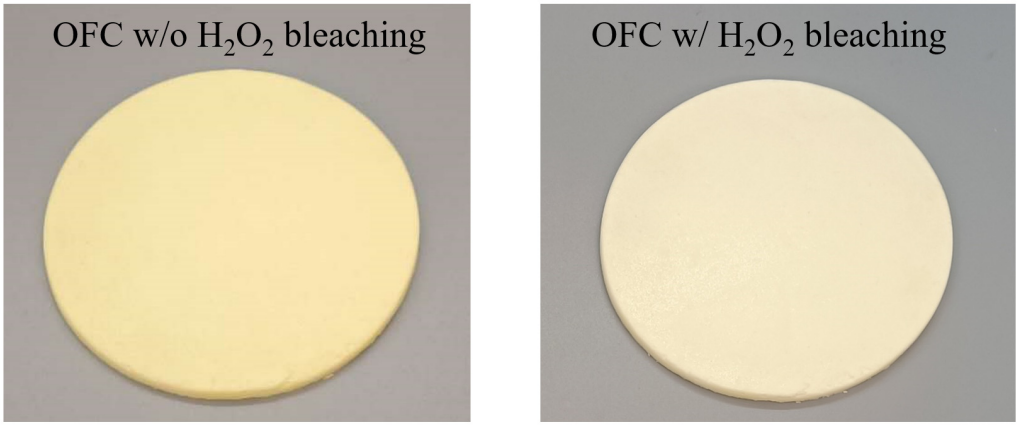

Fig. S1. Optical images of OFC samples with and without H_2O_2 bleaching, respectively.

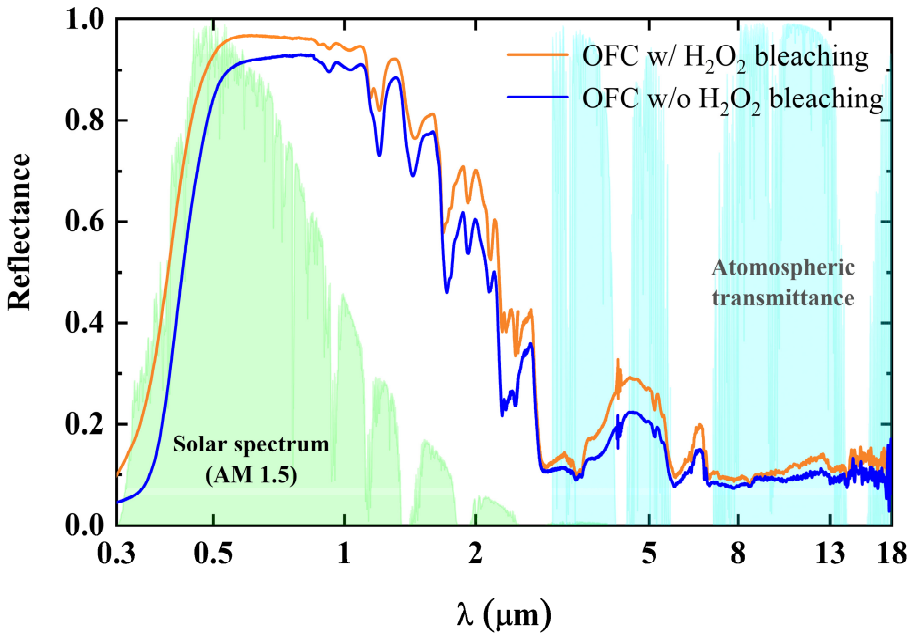

Fig. S2. Hemispherical spectral reflectance of OFC samples with and without H_2O_2 bleaching, respectively, plotted against the normalized AM 1.5 spectrum (ASTM G173) and the atmospheric window.

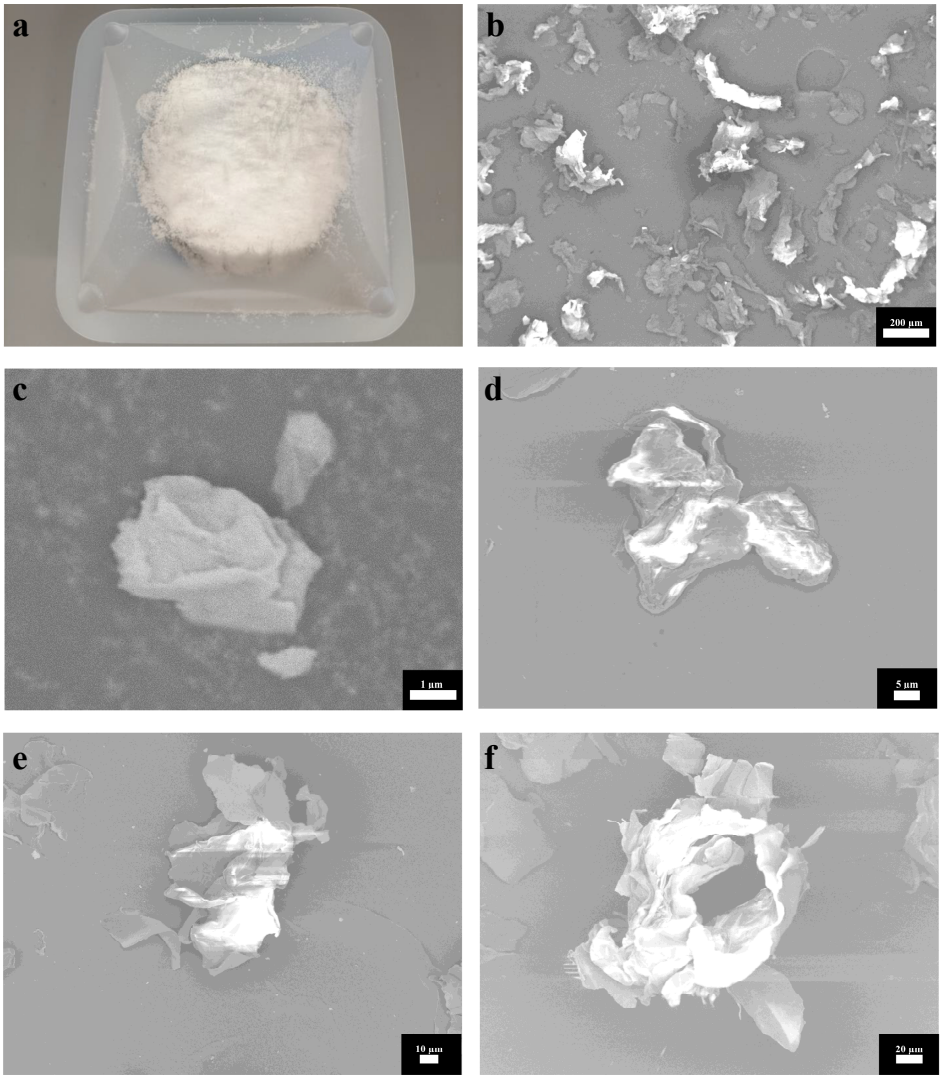

Fig. S3. (a) Image of mechanically crushed PS powder. (b-f) SEM images of the irregular-shaped PS microparticles.

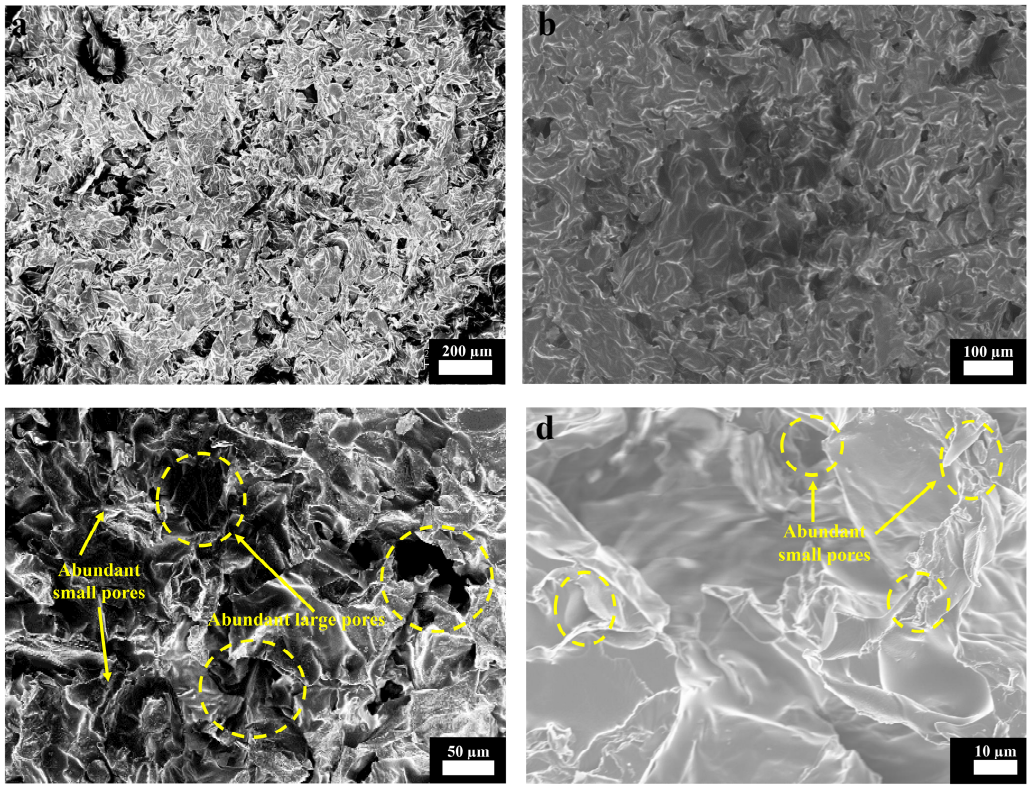

Fig. S4. SEM images of a 90 mm-diameter and 3-mm-thick OFC sample at different magnifications.

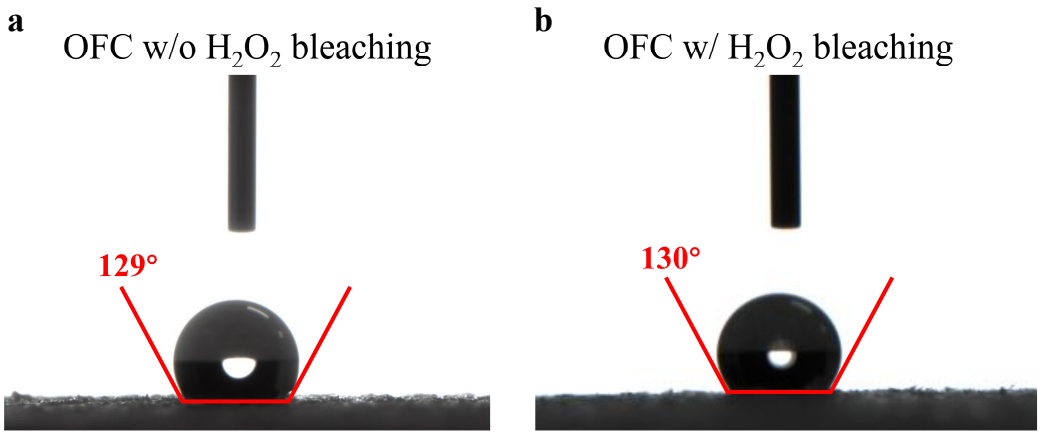

Fig. S5. Water contact angle images of OFC samples with and without H_2O_2 bleaching, respectively.

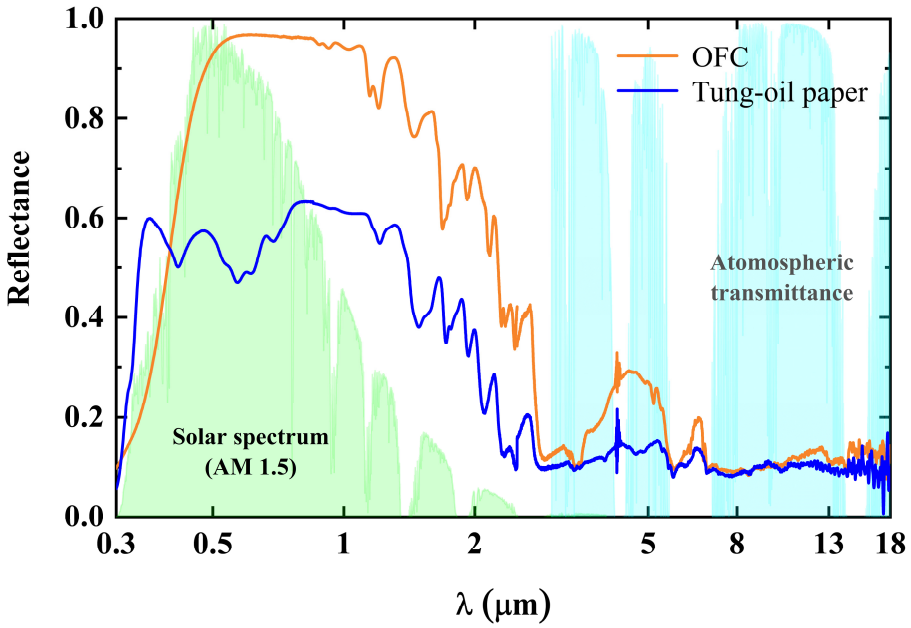

Fig. S6. Hemispherical spectral reflectance of OFC sample and tung-oil paper plotted against the normalized AM 1.5 spectrum (ASTM G173) and the atmospheric window, respectively.

Fig. S7. Photograph of the experimental apparatus for real-time measurement of passive radiative cooling performance (Boston, MA, USA, 42.36◦ N, 71.06◦ W, September 24, 2022).

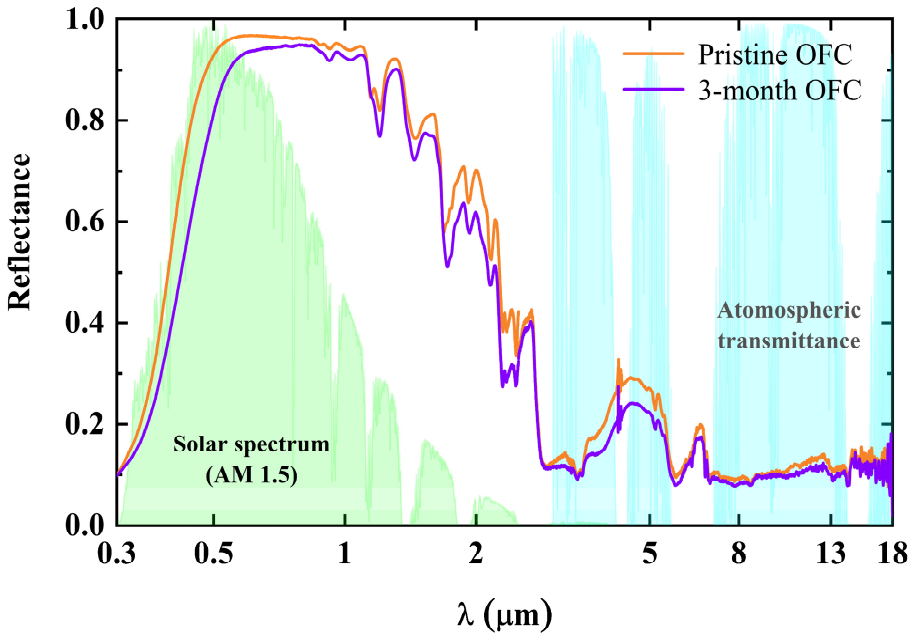

Fig. S8. Hemispherical spectral reflectance measurements of OFC sample before and after outdoor exposure for 3 months.