Supplementary Information

Fluorescence-enhanced light-blue bilayer radiative cooling coatings

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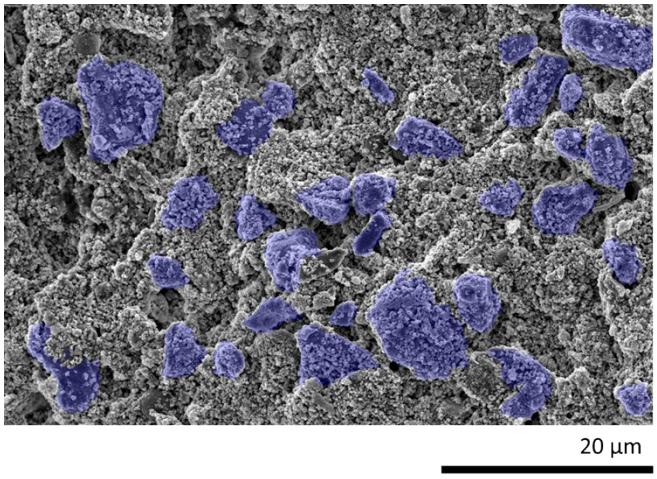

Figure S1 SEM image of the top layer in the light-blue coating.

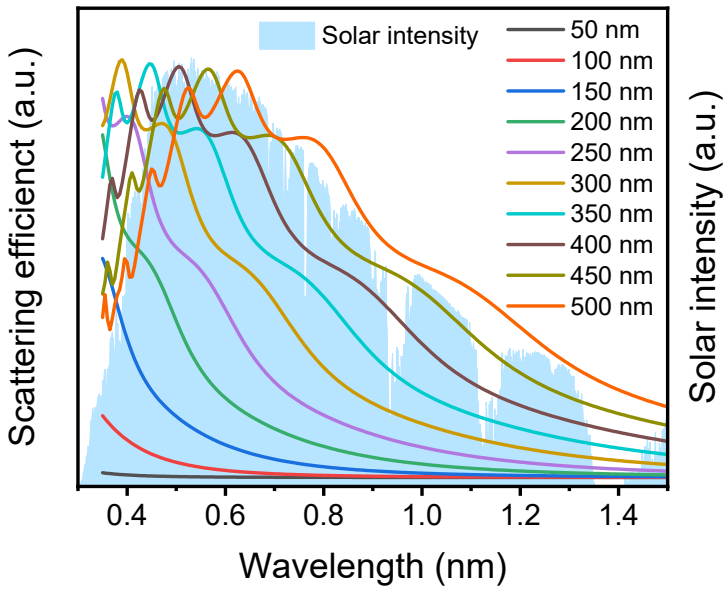

Figure S2 Stimulated scattering spectra of ZrO_2 nanoparticles with varied diameters and solar intensity spectrum.

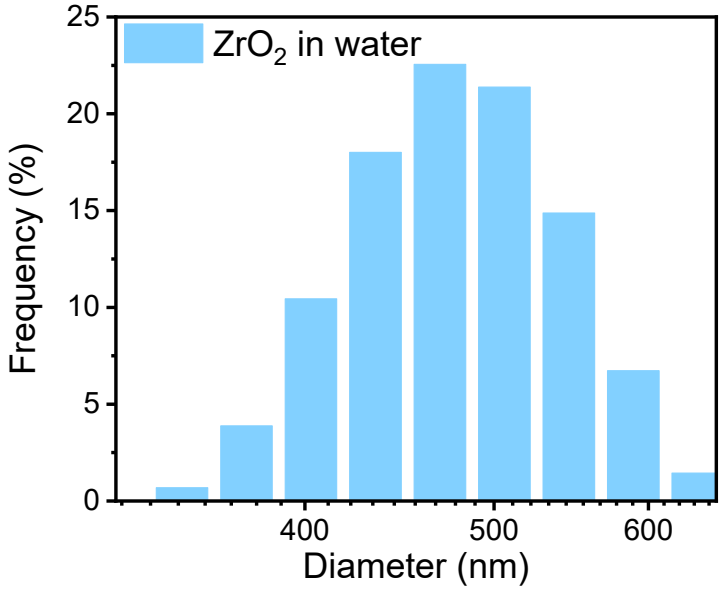

Figure S3 Size distribution of ZrO_2 nanoparticles monodispersed in water.

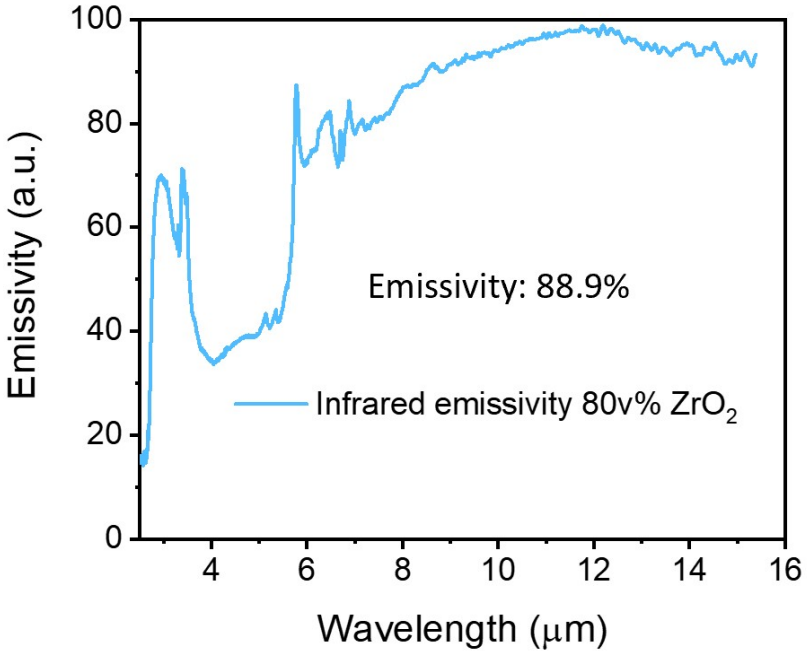

Figure S4 Infrared emissivity of the white coating with ZrO_2 volume fraction of 80v%.

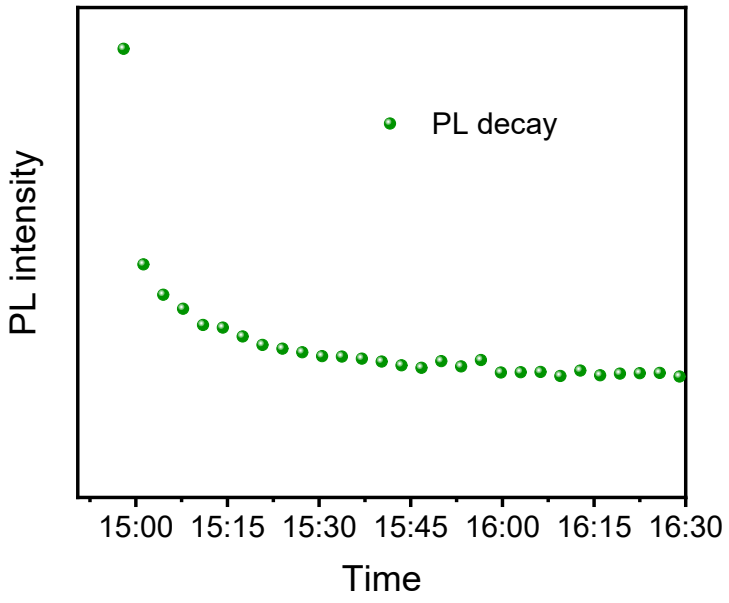

Figure S5 The photoluminescent lifetime of the $SrO \cdot Al_2O_3$: Eu phosphor.

Figure S6 Photographs of the apparatus for outdoor tests of radiative cooling performance.

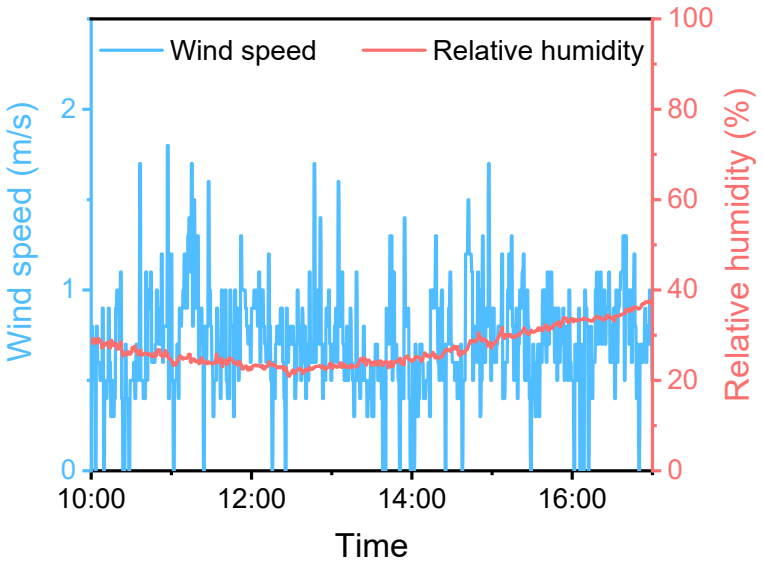

Figure S7 Solar intensity and humidity for the field tests in Figure 4a.

Table S1 Reflectance of white bottom and unexcited bilayer blue coatings.

Sample	UV	Vis	NIR	Total
White ZrO_2 bottom	96.0%	98.8%	98.6%	98.7%
5v% phosphor and 75v% ZrO_2	92.5%	91.7%	97.5%	94.1%
10v% phosphor and 70v% ZrO_2	85.7%	86.5%	96.9%	91.5%
15v% phosphor and 65v% ZrO_2	77.8%	80.4%	96.2%	88.0%