

Solar-driven thermochromic fabric based on the photothermal conversion for light intensity monitoring

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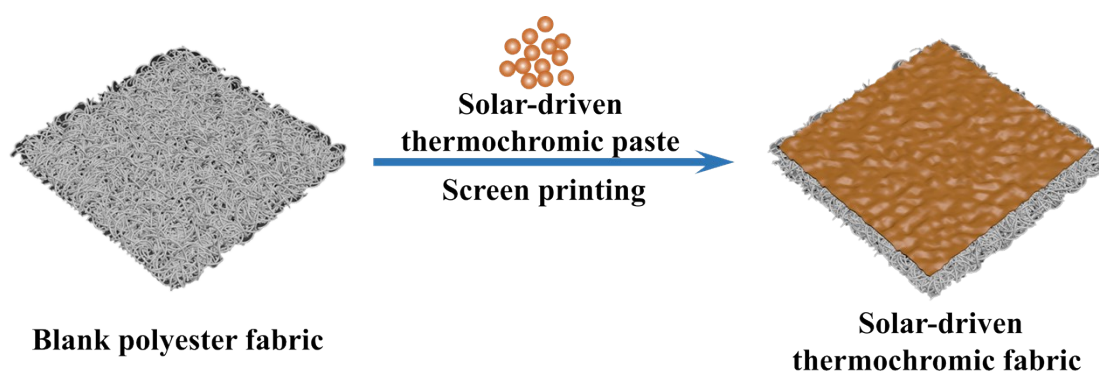


Fig. S1 Illustration of the preparation process of the SDTCF.

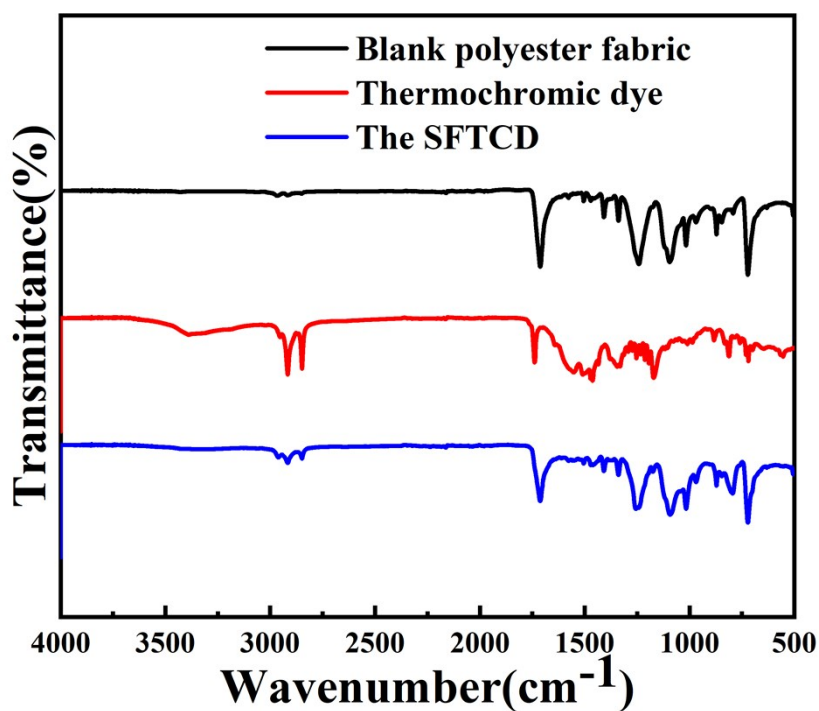


Fig. S2 Functional groups of the blank polyester fabric, thermochromic dye, the SDTCF by FTIR.

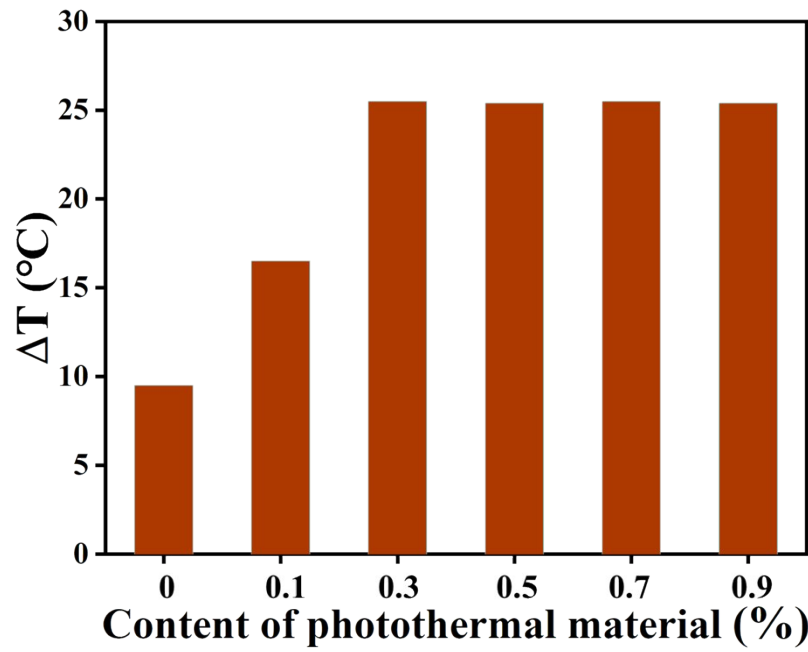


Fig. S3 Effect of the content of photothermal conversion materials on the photothermal properties of the SDTCF.

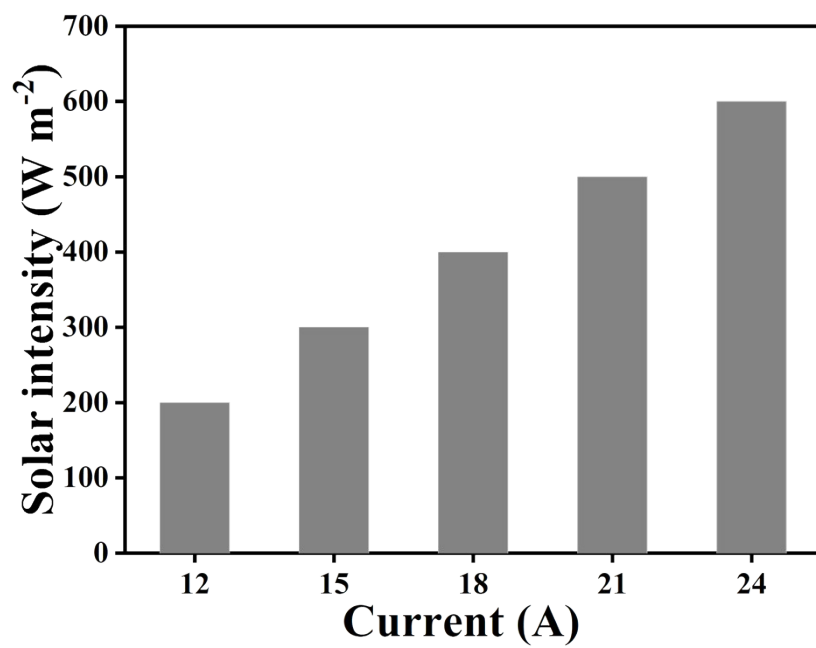


Fig. S4 Linear fitting of the applied current versus the irradiation intensity.

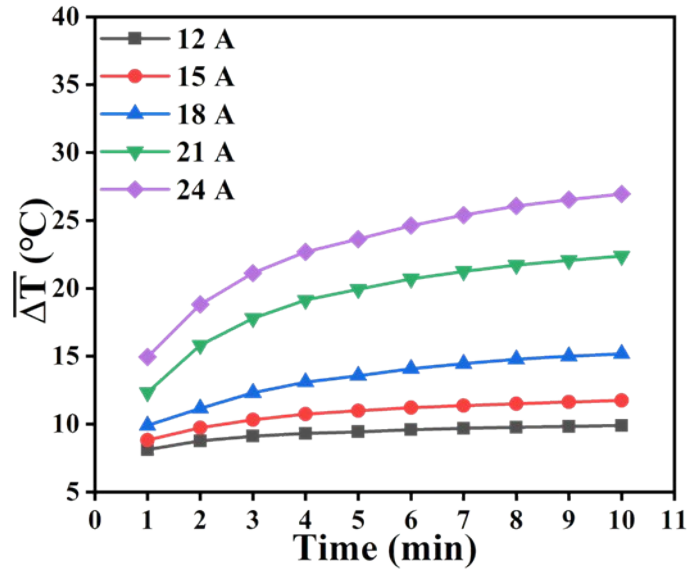


Fig. S5 The mean temperature rise of the SDTCF.

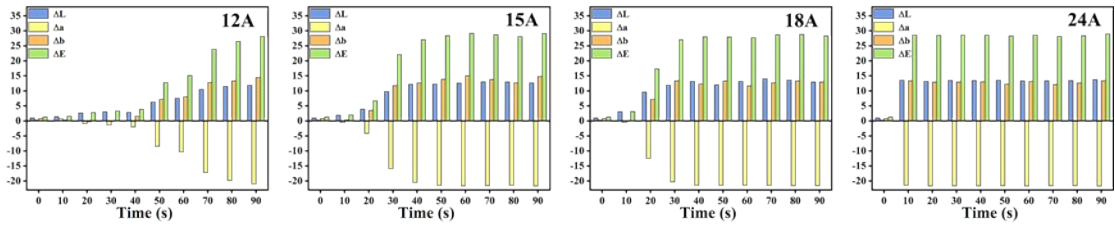


Fig. S6 The color difference of the SDTCF and the relationship between Lab value and time under the irradiation intensity of 200, 300, 400 and 600 W m⁻².

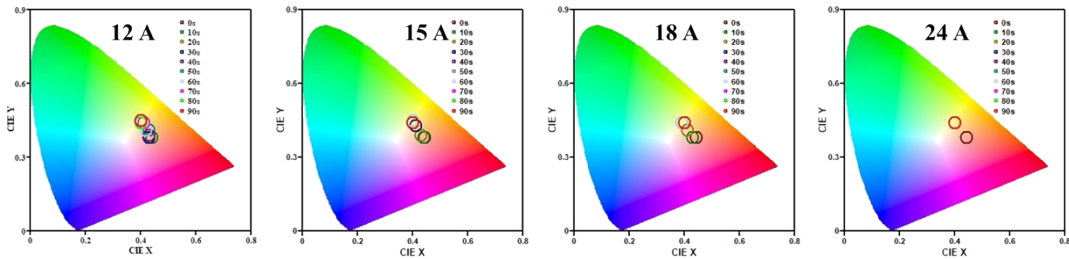


Fig. S7 CIE 1931 chromaticity diagram of the SDTCF exposed to the light intensity of 200, 300, 400 and 600 W m⁻² for 90 s.

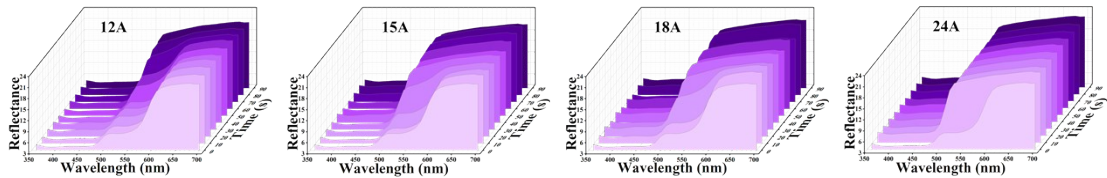


Fig. S8 The reflectance of the SDTCF under the irradiation intensity of 200, 300, 400 and 600 W m⁻².

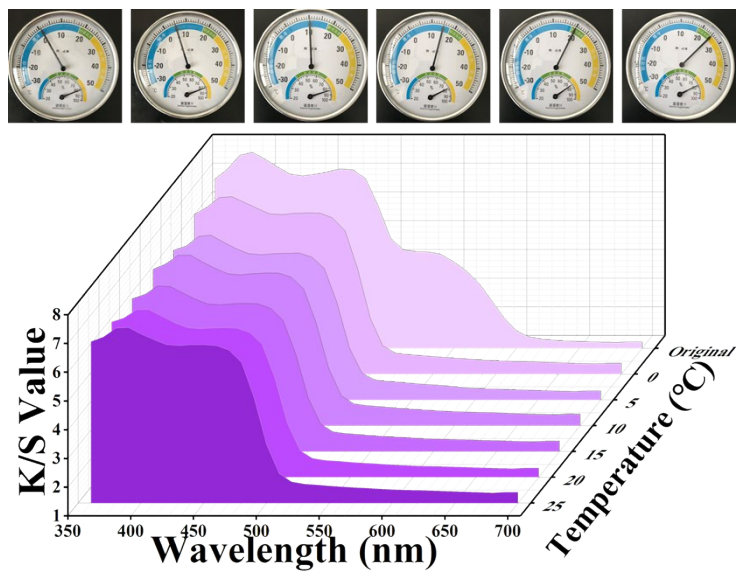


Fig. S9 Effect of the ambient temperature on the color-changing performance of the SDTCF at 5 °C, 10 °C, 15 °C, 20 °C and 25 °C

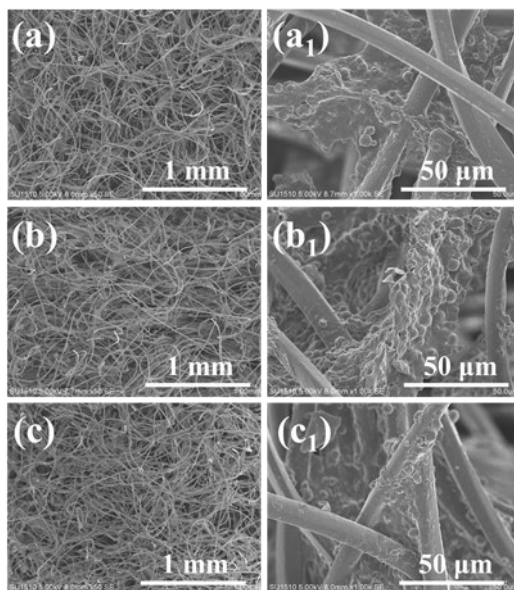


Fig. S10 SEM of the SDTCF under original state (a) (a₁), 40% stretching (b) (b₁) and bending with the angle of 180°(c) (c₁).

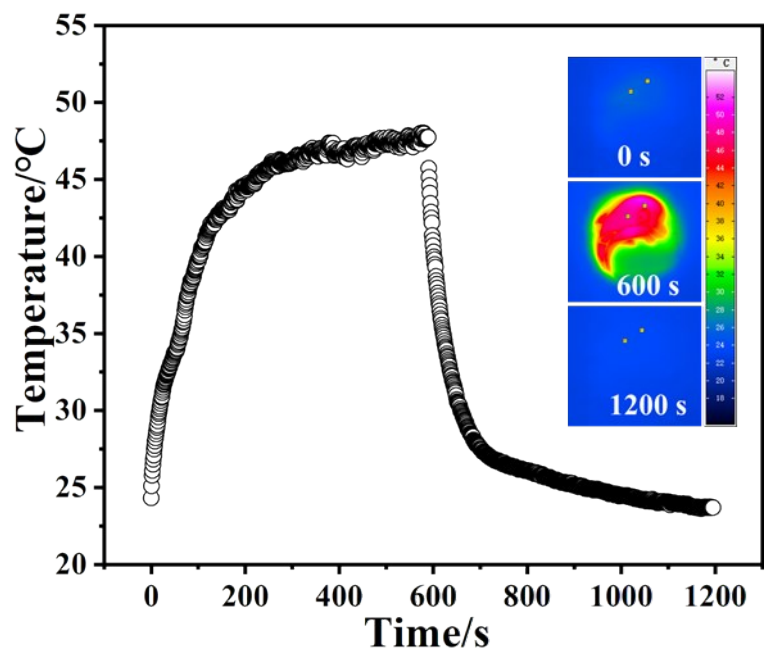


Fig. S11 The temperature evolution of the SDTCF under the irradiation of the solar after repeated heating-cooling cycles of 150 times.