Supporting Information

Synthesis and Properties of Shape-Stabilized Phase Change Materials Based on Poly(Triallyl Isocyanurate-Silicone)/*n*-Octadecane Composites

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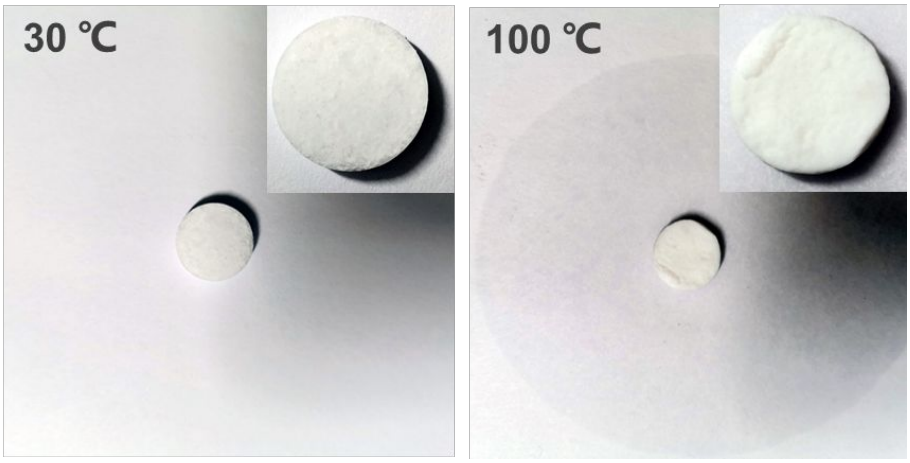

Figure S1. Macrographs of the TO composite during the thermal shape stability test.

Note: **Preparation of the TAIC/*n*-octadecane (TO) composite**

16 g TAIC and 16 g *n*-octadecane were mixed uniformly with stirring in a three-neck round bottomed flask. Then, BPO (2 % of the mixture weight) was added into the flask and the mixture was stirred at 110 °C for 30 min to obtain TAIC/*n*-octadecane composite.

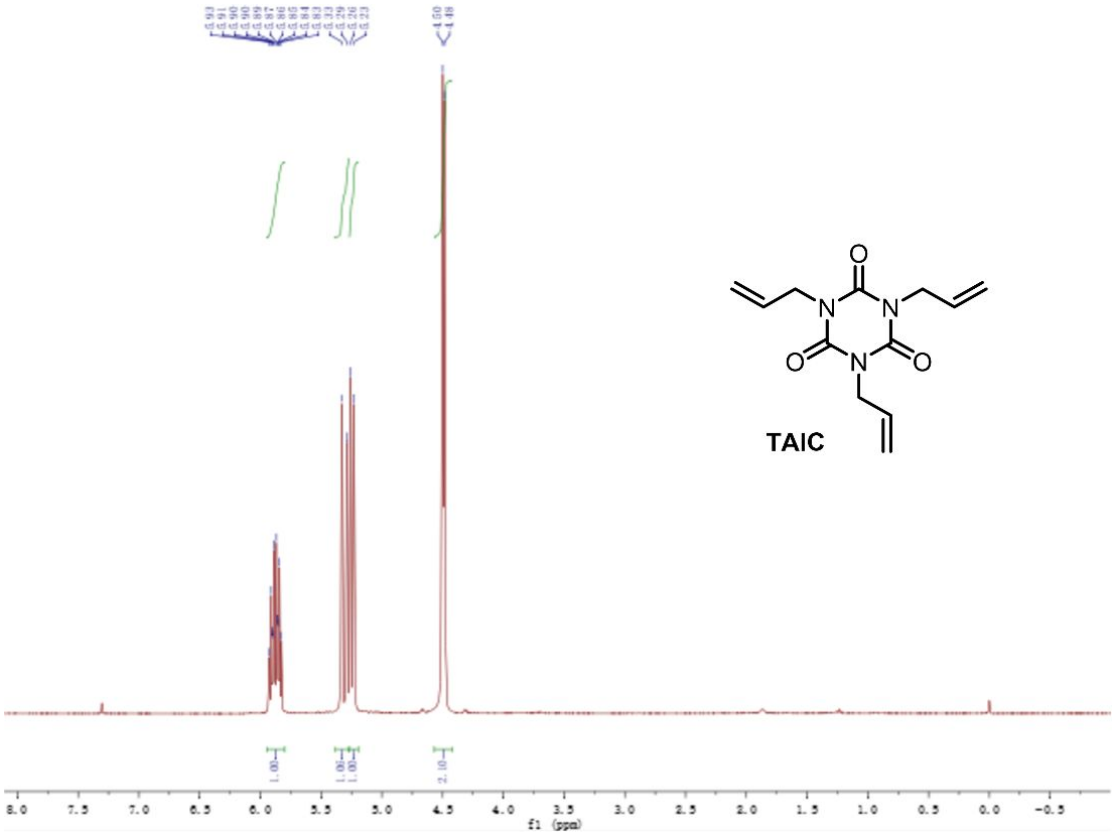

Figure S2. ^{1}H NMR spectrum of TAIC.

^{1}H NMR (400 MHz, $CDCl_3$) δ 5.88 (ddt, J = 17.0, 10.4, 6.0 Hz, 1H), 5.31 (d, J = 17.0 Hz, 1H), 5.24 (d, J = 10.4 Hz, 1H), 4.49 (d, J = 6.0 Hz, 2H).

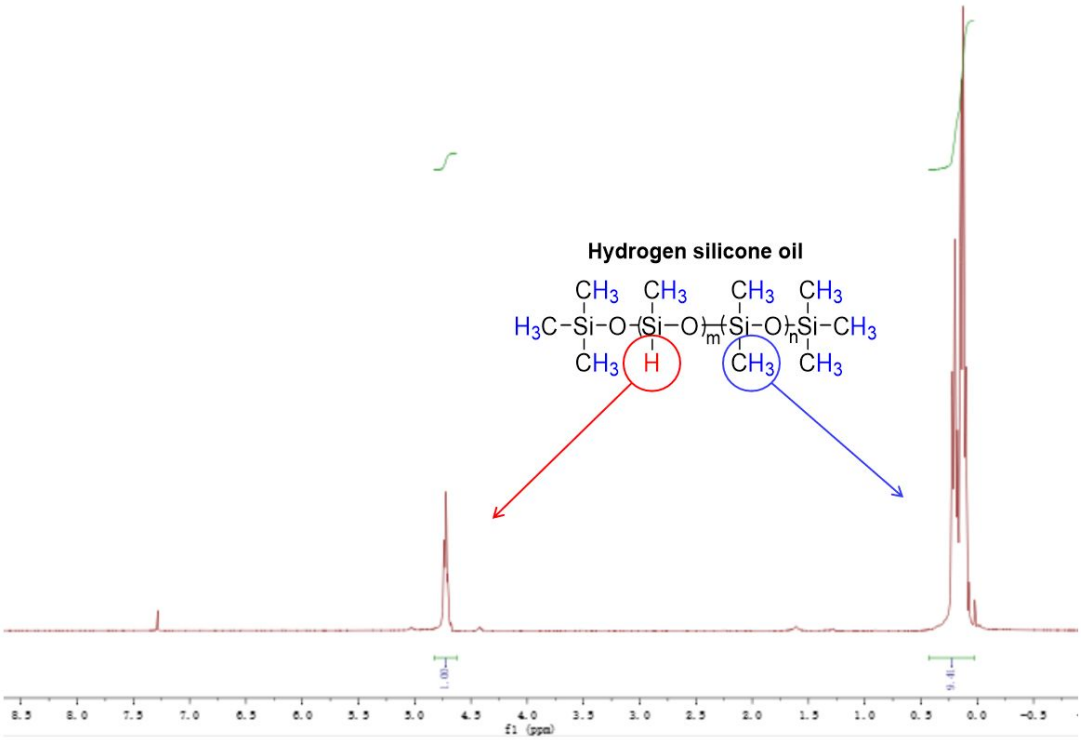

Figure S3. ^{1}H NMR spectrum of SO.

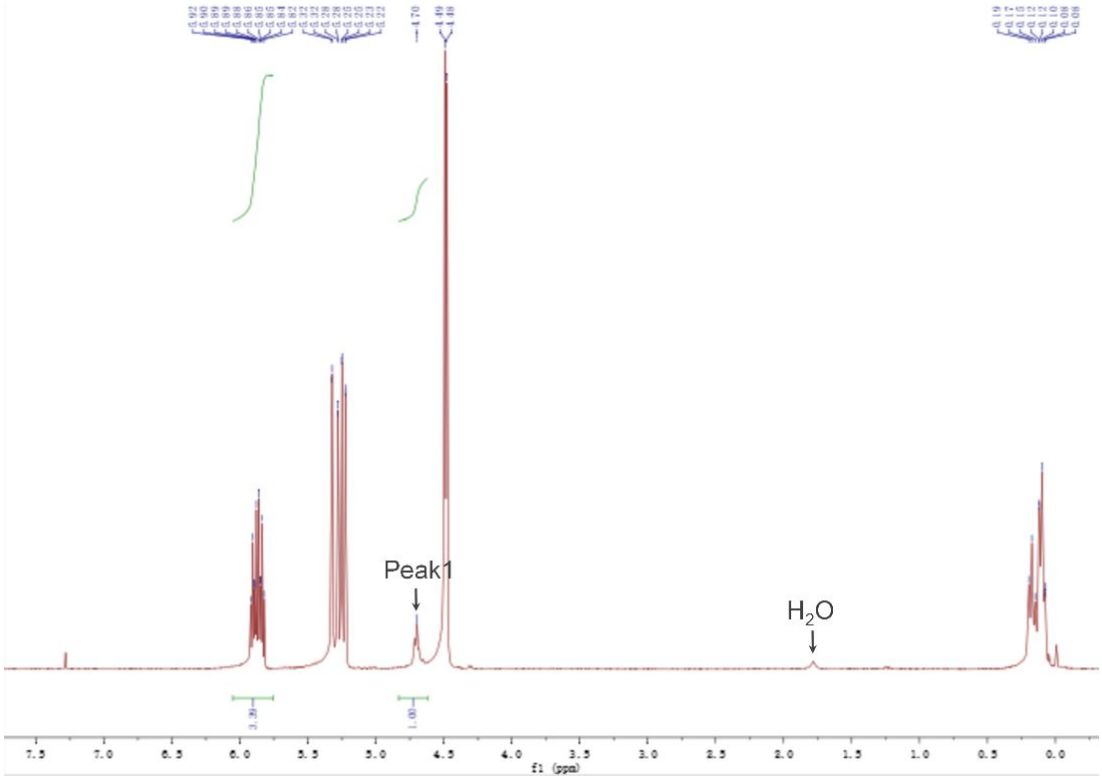

Figure S4. ^{1}H NMR spectrum of TS-1.

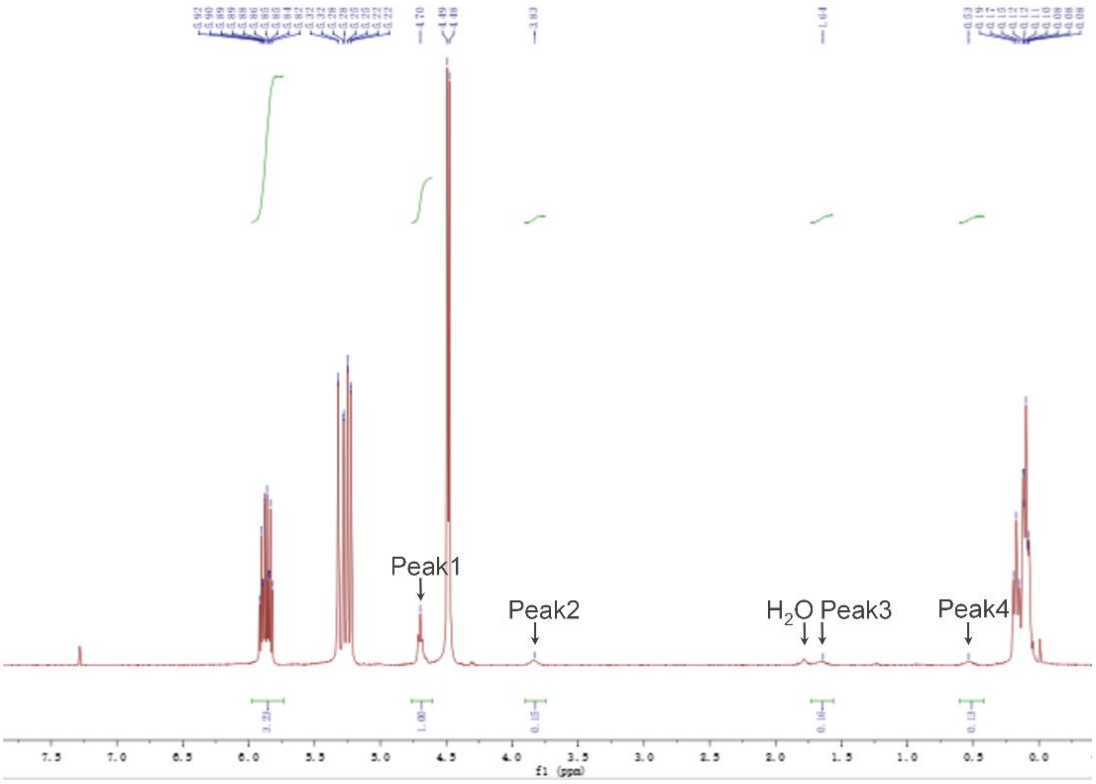

Figure S5. ^{1}H NMR spectrum of TS-2.

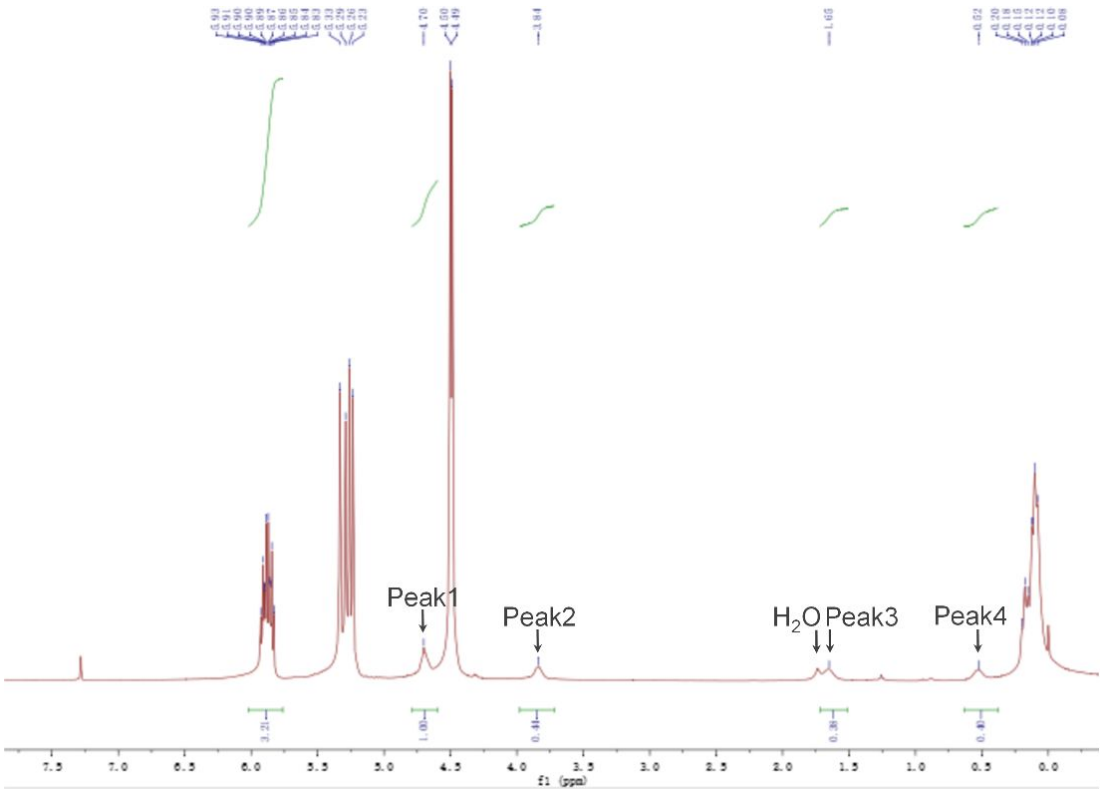

Figure S6. ^{1}H NMR spectrum of TS-3.

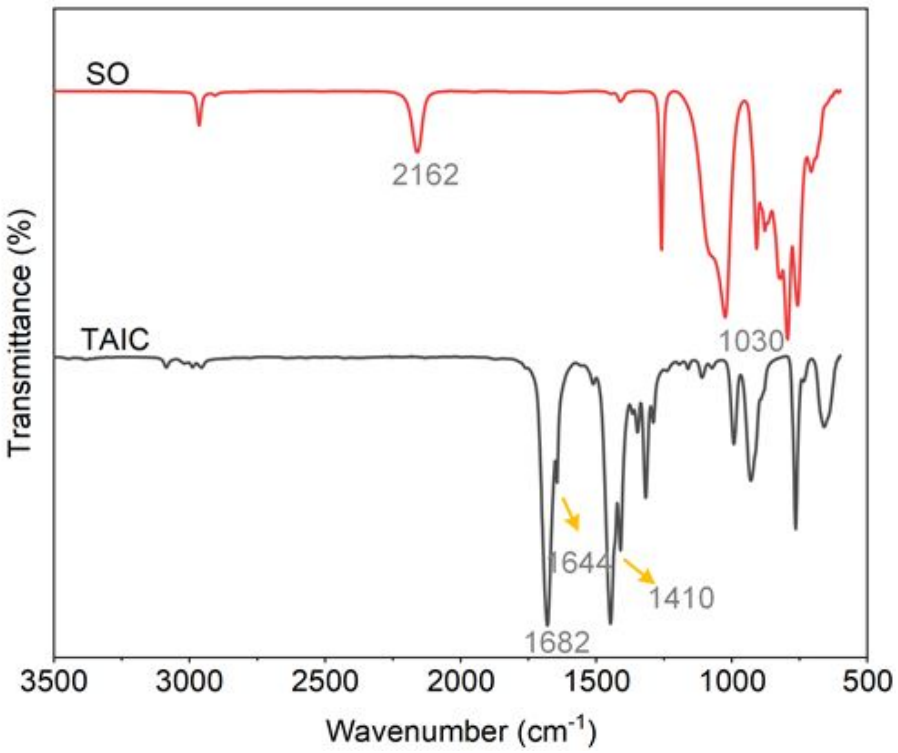

Figure S7. FT-IR spectra of SO and TAIC.

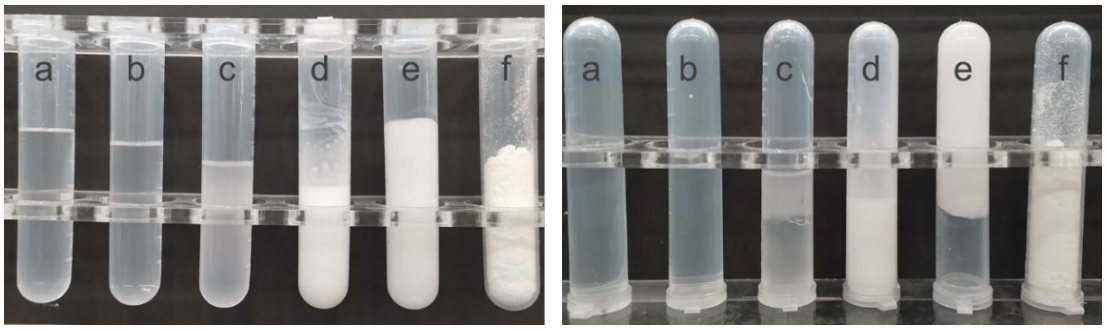

Figure S8. Macrographs of (a) TAIC, (b) SO, (c) TS-1, (d) TS-2, (e) TS-3 and (f) PTS at room temperature.

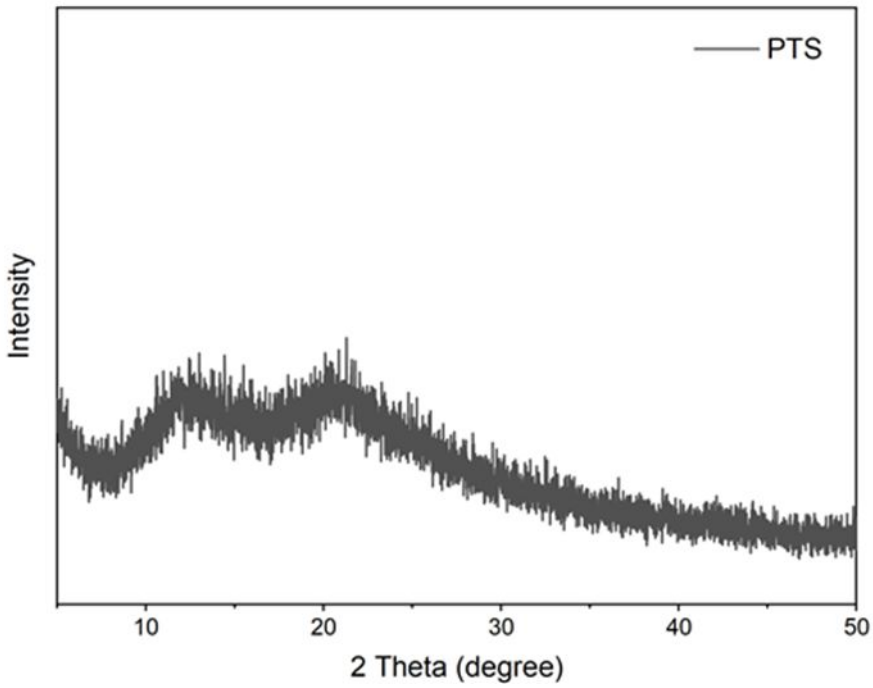

Figure S9. XRD pattern of PTS.

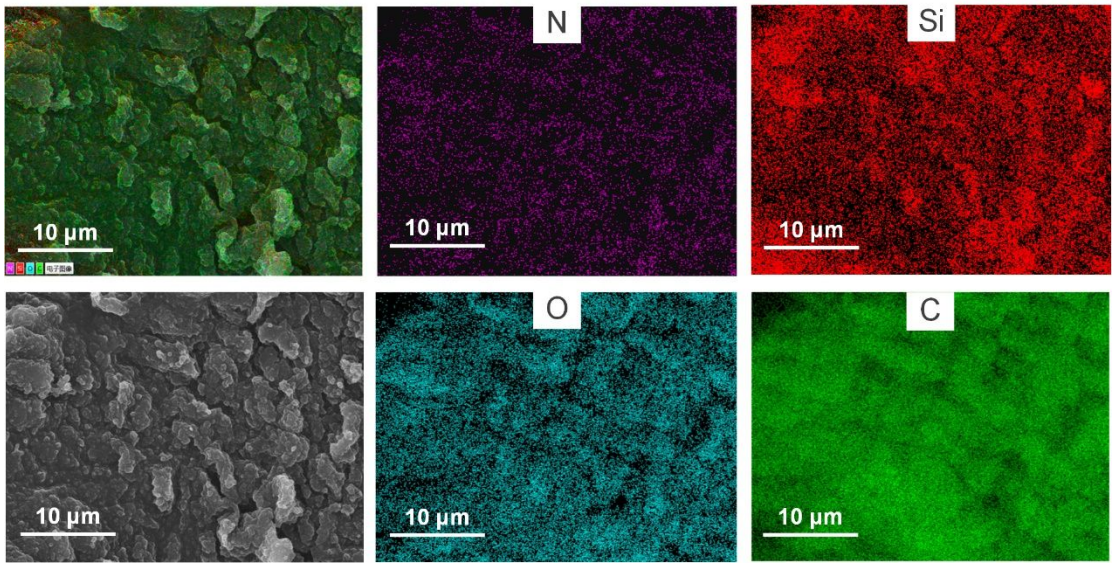

Figure S10. Element mappings of TSO-2.

Table S1. Thermal Conductivity of PTS Skeleton and *n*-Octadecane

Substance	Thermal Conductivity (W m^{-1} K^{-1})	Reference
n-Octadecane	0.153	(33)
PTS	0.166	--