Supporting Information

High-Quality Graphene Aerogels for Thermally Conductive Phase Change Composites with Excellent Shape Stability

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Table S1. Densities and porosities of HGAs.

Sample	Density (g cm⁻³)	Porosity (%)	BET Surface Area (m² g⁻¹)*	Pore Size* (nm)
HGA-22	0.022 ± 0.002	99.1	18.3	8.7
HGA-28	0.028 ± 0.003	98.7	13.6	9.8
HGA-42	0.042 ± 0.003	98.2	10.1	8.9

* The data measured by nitrogen adsorption and desorption experiments
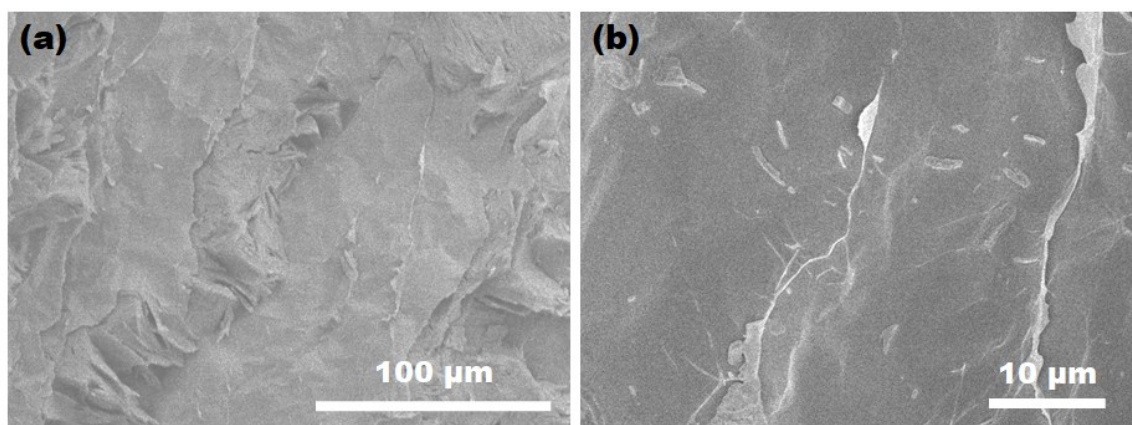
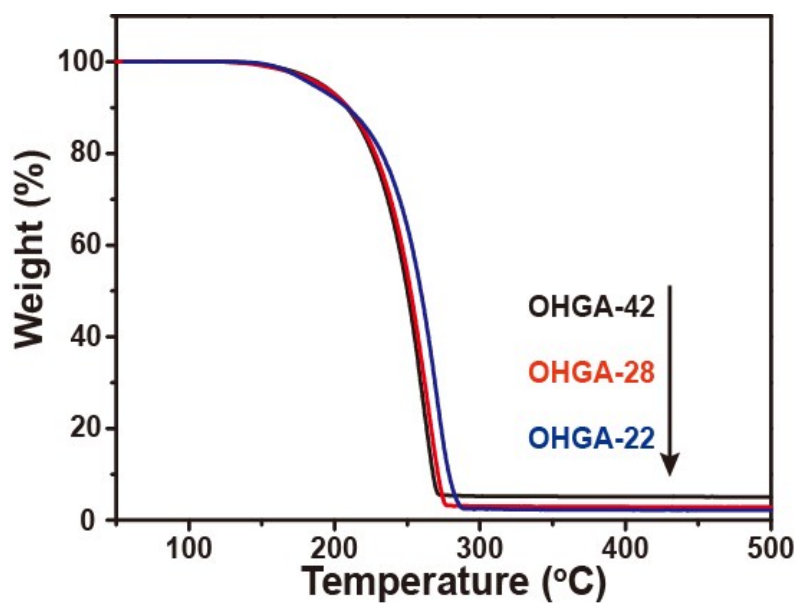**Figure S1.** SEM images of OHGA-42 composite with different magnifications.

Figure S2. TGA curves of OHGA composites at a heating rate of 10 °C min⁻¹ in a nitrogen
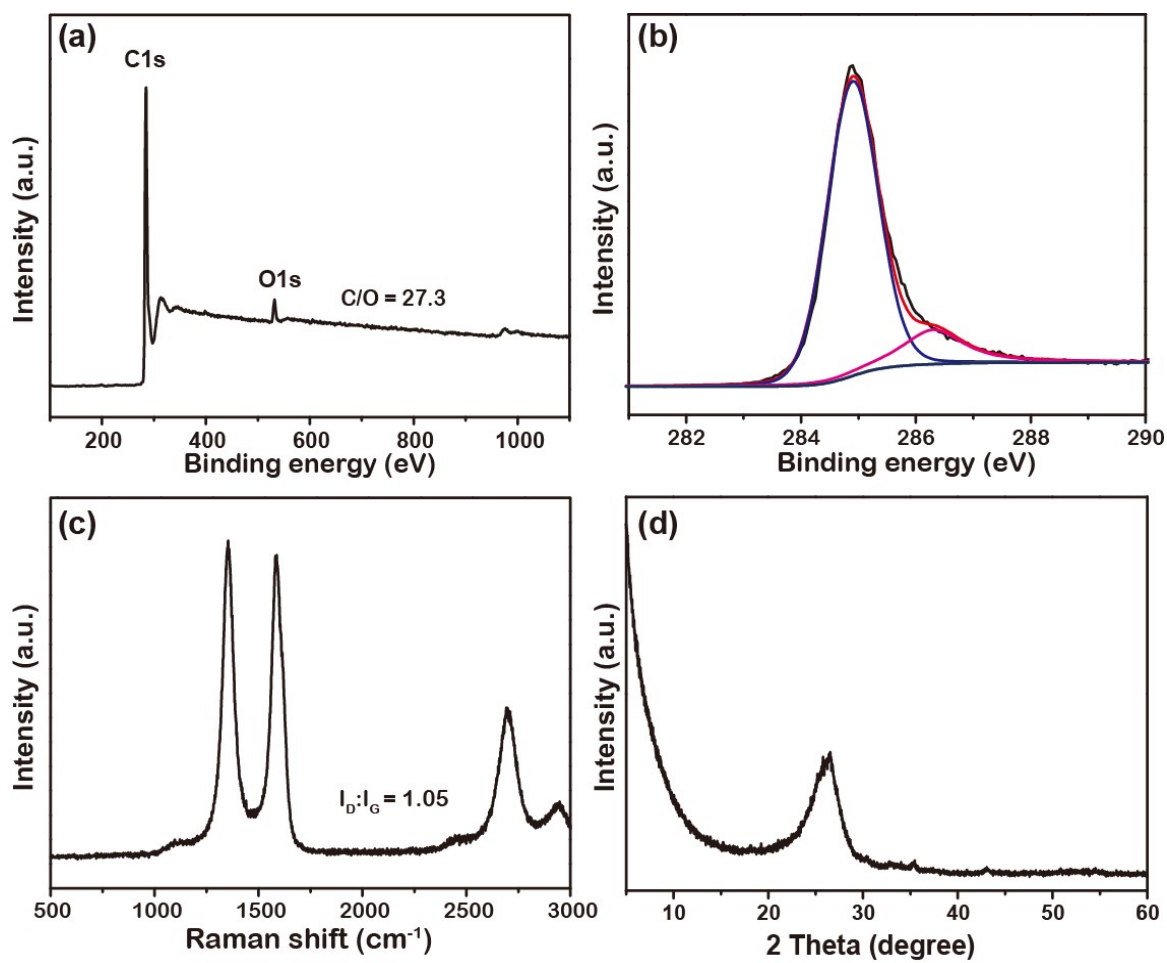
atmosphere.

Figure S3. (a) XPS broad scan, (b) C 1s spectrum, (c) Raman spectrum, and (d) XRD pattern of graphene aerogel annealed at 1300 °C.
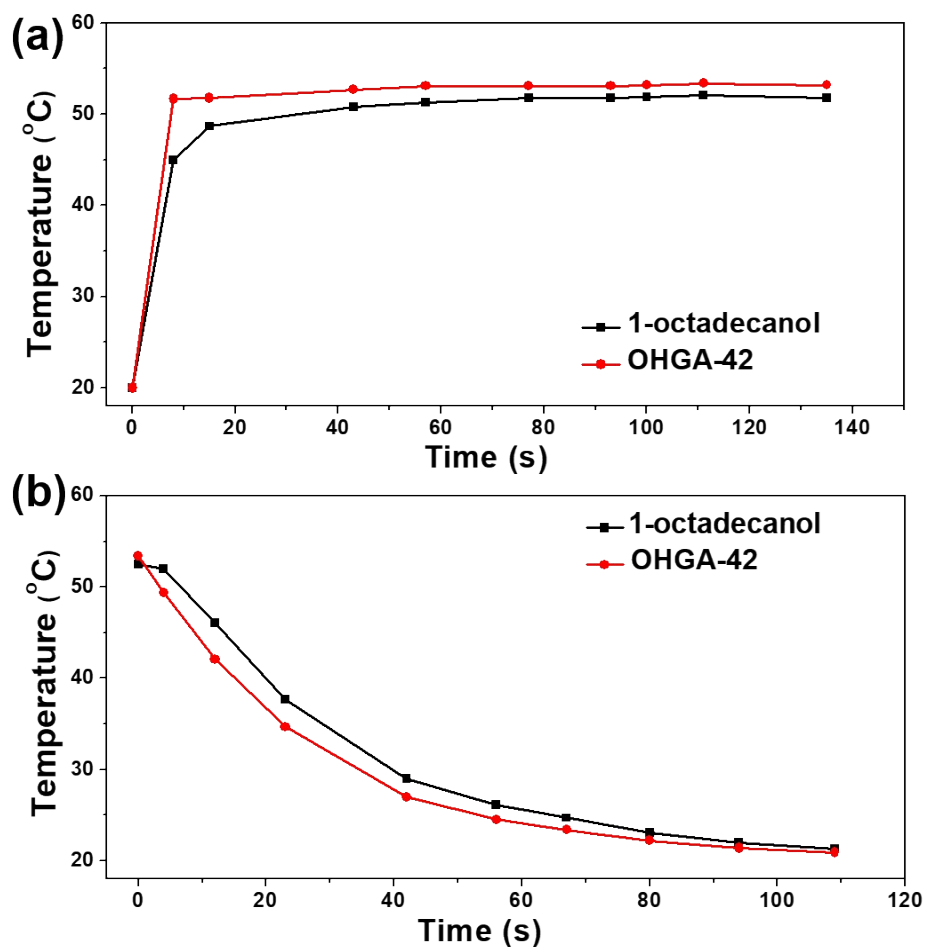
Figure S4. Temperature responses of octadecanol and OHGA-42 composite during heating/cooling process at different heating/cooling times.
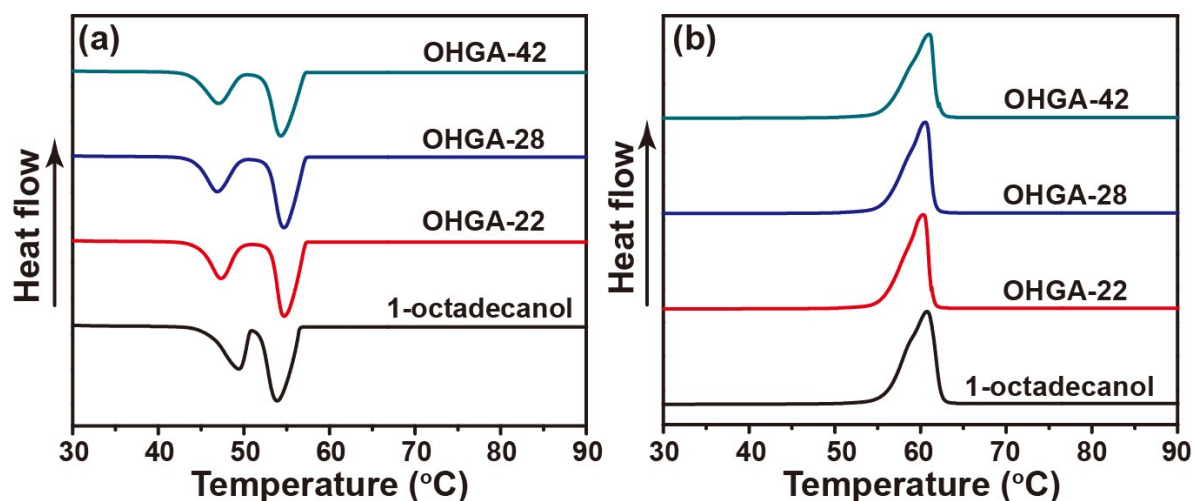

Figure S5. (a) Cooling and (b) heating DSC curves of OHGA composites and neat 1-octadecanol at a scanning rate of 10 ^oC min^{-1}.
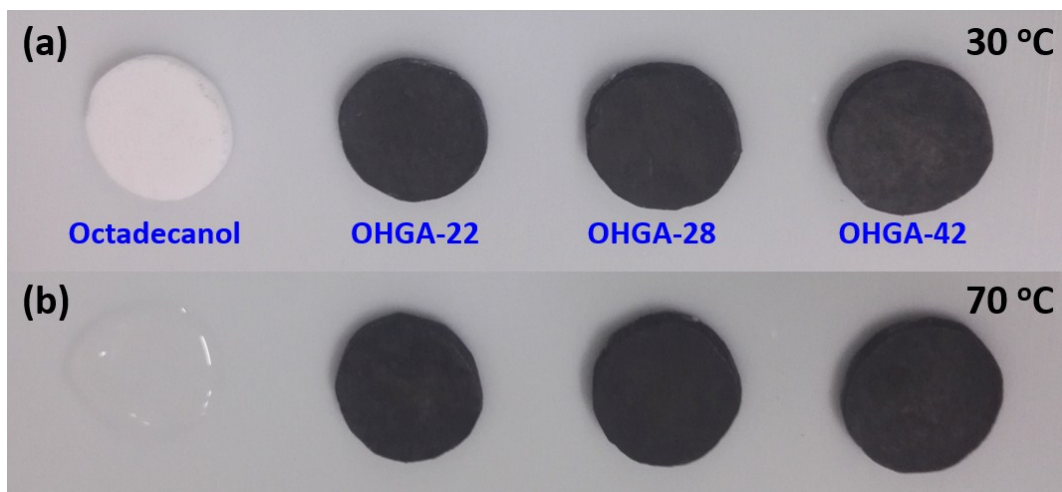
Figure S6. Digital photos of 1-octadecanol and OHGA composites at (a) 30 °C and (b) 70 °C.
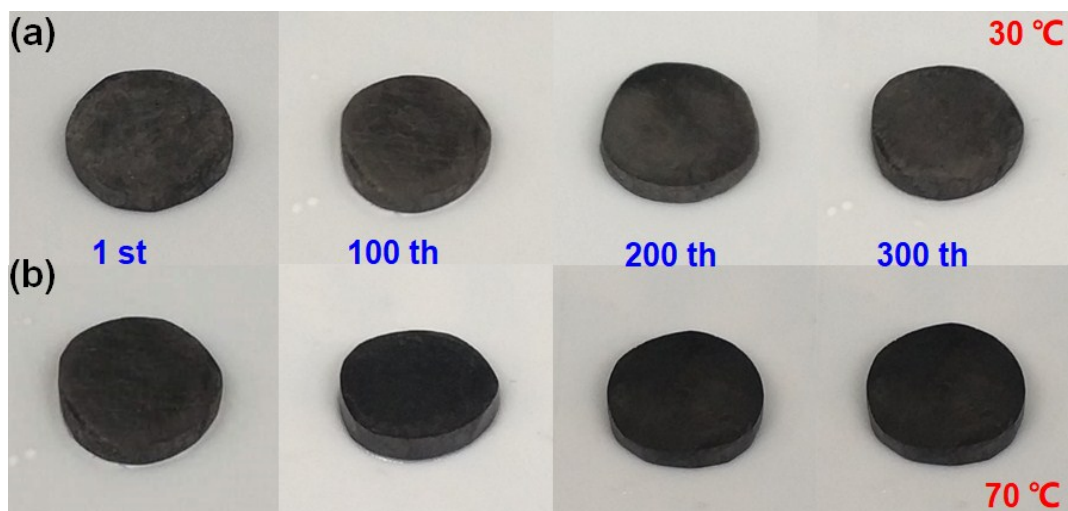

Figure S7. Digital photos of OHGA-42 composites after melting/solidification cycles.