

Supplementary Information

Green, robust and versatile BN nanosheets unidirectional aerogel encapsulated phase change material for effective thermal management of electronics and solar-thermoelectric conversion

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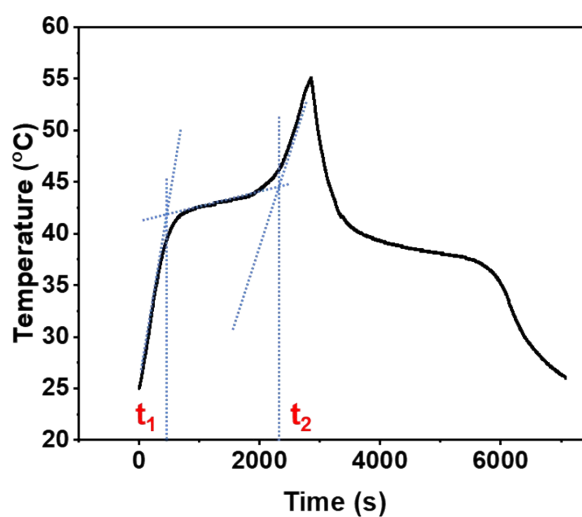
1 **Table S1.** Thermophysical properties of samples after different thermal cycles.

Samples	Heating process		Cooling process		LA ratio (%)
	T_m (°C)	ΔH_m (J/g)	T_c (°C)	ΔH_c (J/g)	
LA	43.18	194.1	39.87	197.1	100
0 cycles	41.71	190.4	40.99	189.2	98.1
100 cycles	41.02	185.1	40.15	184.3	95.4
500 cycles	42.41	188.5	41.06	188.9	97.1
1000 cycles	42.79	188.2	41.54	187.4	96.9
2000 cycles	43.17	187.1	41.46	186.8	96.4

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6 **Figure S1.** The method for determining the starting and terminating time points of samples.

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9 **Table S2.** Solar-thermal energy conversion details of CPCM-10 at different intensities of
 10 700, 1000 and 1700 W/m².

Samples	CPCM-10	CPCM-10	CPCM-10
m (g)	3.5205	3.5205	3.5205
S (cm ²)	3.4636	3.4636	3.4636
ΔH (J/g)	185.1	185.1	185.1
P (W/m ²)	700	1000	1700
t_1 (s)	967	611	495
t_2 (s)	3194	2198	1740
$t_2 - t_1$ (s)	2227	1587	1245
η (%)	49.69	69.74	88.89

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