

## Controllable synthesis of 3D-BN hollow nanonets for thermal- conductive epoxy composites

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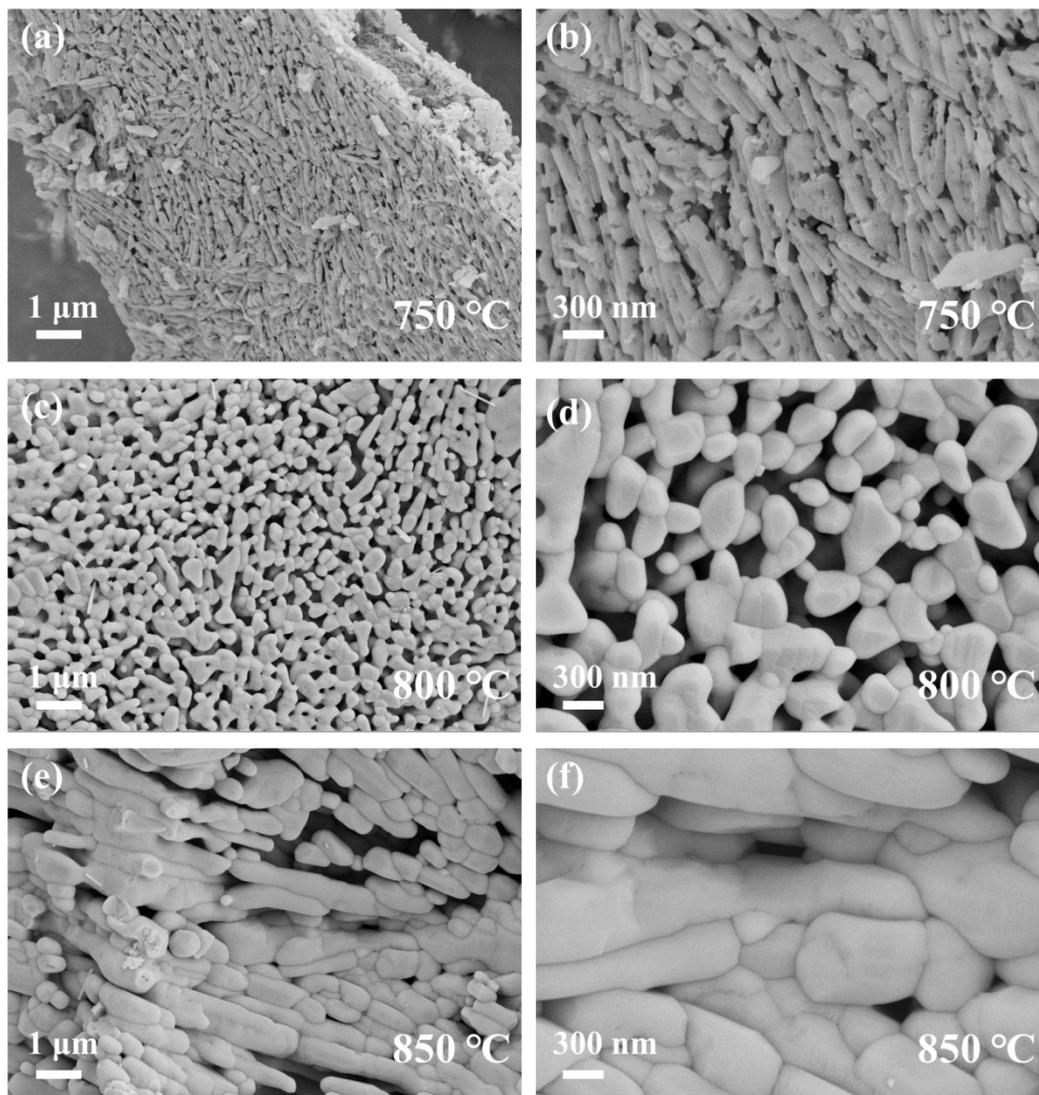


Fig. S1 SEM images of strontium borate precursors synthesized at different calcination temperatures: (a-b) 750 °C, (c-d) 800 °C, and (e-f) 850 °C.

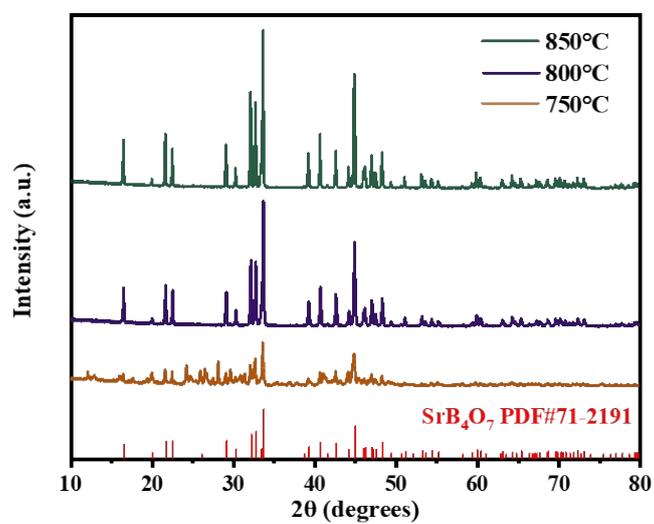


Fig. S2 XRD patterns of the strontium borate precursors calcined at different temperatures.

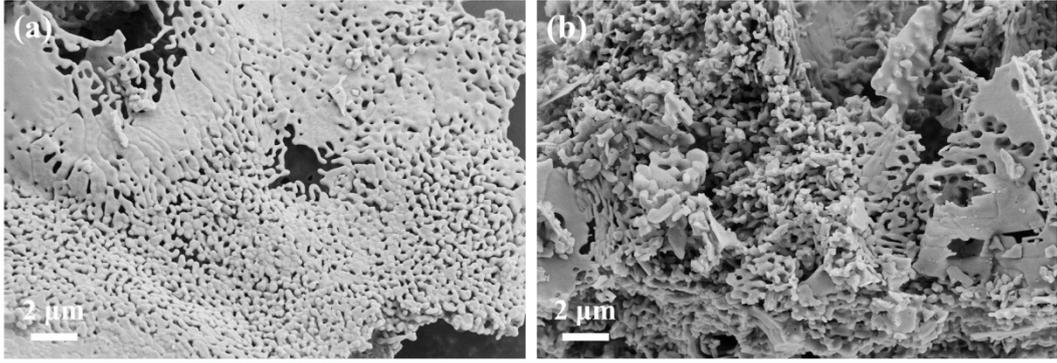


Fig. S3 SEM images of strontium borate precursors synthesized with (a) insufficient and (b) excessive amounts of citric acid.

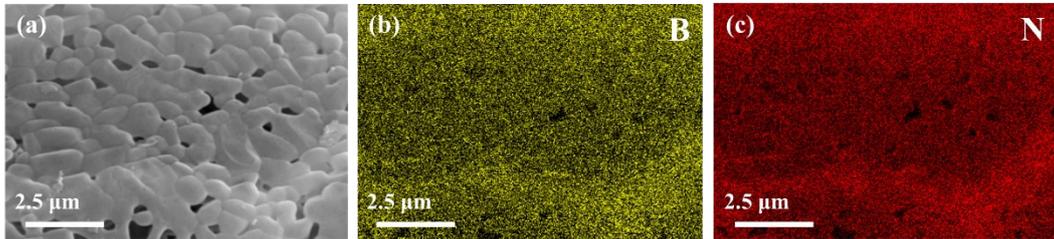


Fig.S4 (a-c) EDS patterns of the 3D-BNHNs.

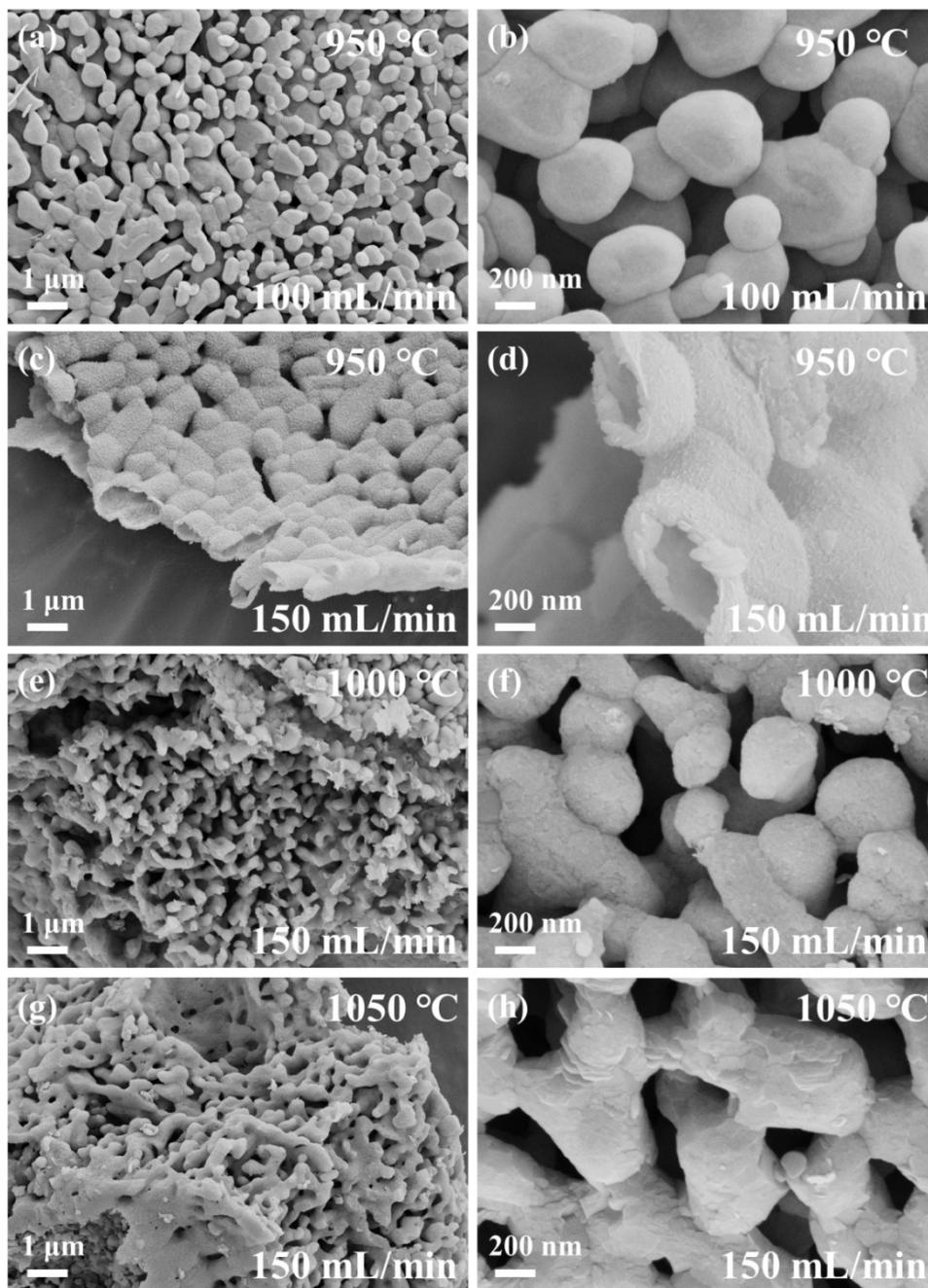


Fig. S5 SEM images of 3D-BNHs (a, b) at 950 °C and 100 mL/min ammonia flow, (c, d) at 950 °C and 150 mL/min ammonia flow, (e, f) at 1000 °C and 150 mL/min ammonia flow, and (g, h) at 1050 °C and 150 mL/min ammonia flow.

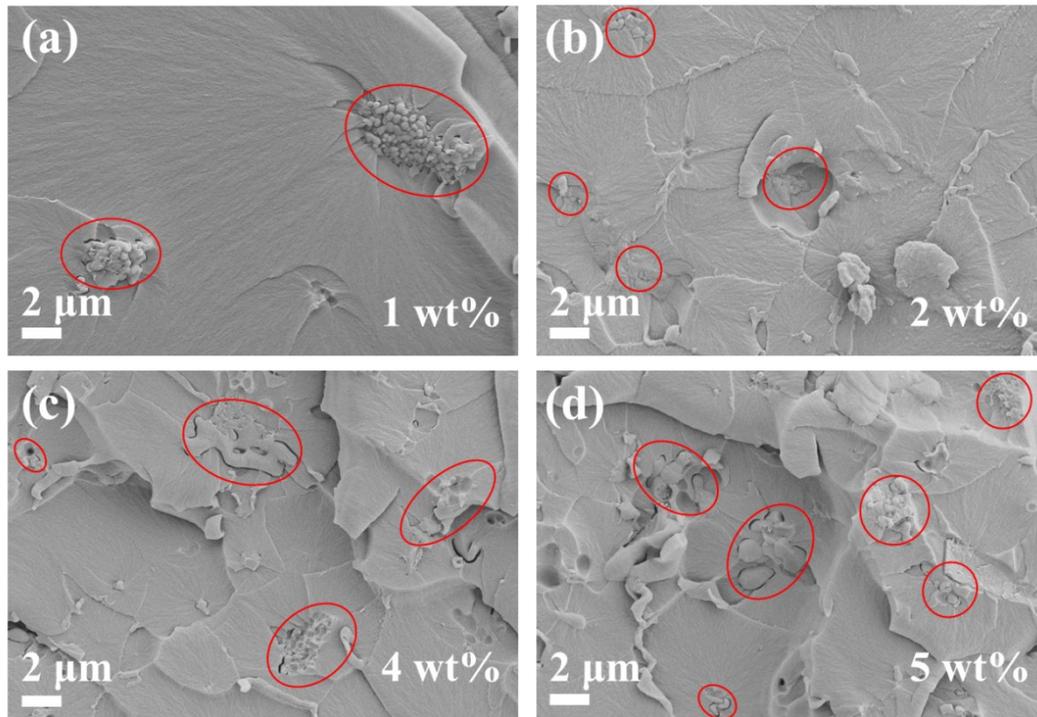


Fig.S6 shows the tensile section SEM of (a) 1wt% BNHNs/EP composite, (b) 2wt% BNHNs/EP composite, (c) 4wt% BNHNs/EP composite and (d) 5 wt% BNHNs/EP composite.

Table S1. Parameters of finite element models.

Model	Dimension (mm)	Thermal conductivity of the EP ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Thermal conductivity of the composites ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Step length (s)	Total time length (s)
EP	0.1*0.1*0.1	0.18		$0.8\times 10^{-5}$	$0.4\times 10^{-4}$
3wt% BNHNs/EP	0.1*0.1*0.1	0.18	300	$0.8\times 10^{-5}$	$0.4\times 10^{-4}$