

## Supporting information

Rational design of a cost-effective biomass carbon framework for high-performance Lithium sulfur batteries

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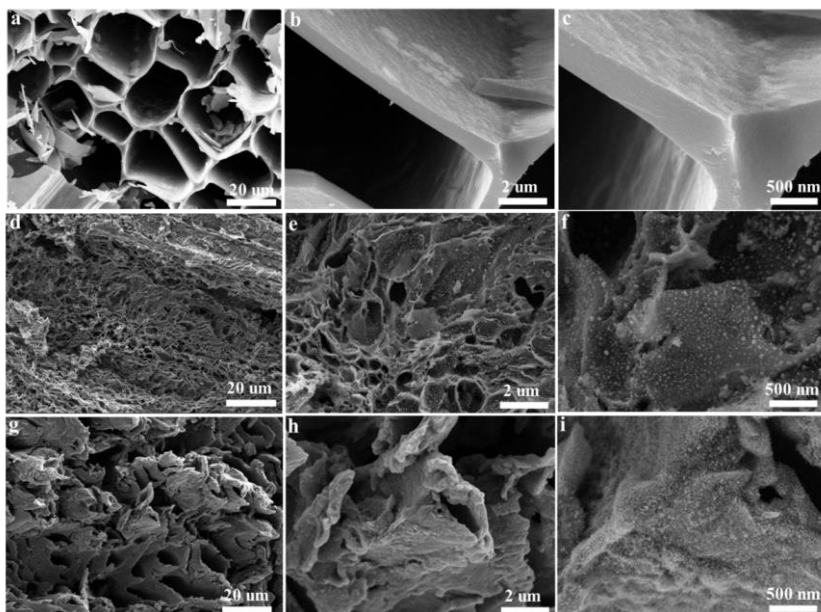


Figure S1. SEM images of (a)-(c) WF-600, (d-f) WF-CNT-700, and (g-i) WF-CNT-900.

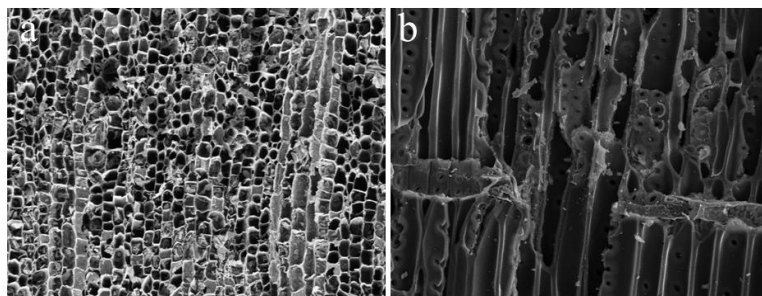


Figure S2. SEM images of the WF-CNT-800 host of (a) vertical section and (b) cross-section.

Table S1. Electrochemical performance comparison of CNT-related cathodes for Li-S batteries

Material	Sulfur loading (mg cm <sup>-2</sup> )	Cycling performance (format: current density/cycle number/discharge capacity after cycling)	Electrolyte/sulfur ratio (μL mg <sup>-1</sup> )	Ref.
S@PCNFs-CNT	0.8	50 mA g <sup>-1</sup> /100 cycles/637 mAh g <sup>-1</sup>		[1]
CPS-70	1.2	0.5 C/300 cycles/750 mAh g <sup>-1</sup>		[2]
S-CNT	2-3	1.5 A g <sup>-1</sup> /100 cycles/524 mAh g <sup>-1</sup>		[3]

S-a-PCNTs	4.6	0.2 C/100 cycles/976 mAh g <sup>-1</sup>	15	[4]
S/ePCNTM	6.5	0.1 C/50 cycles/3.2 mAh·cm <sup>-2</sup>		[5]
3DGCNT/S	2.95	0.5 C/500 cycles/958 mAh g <sup>-1</sup>		[6]
S/(CNT@HPC)	2	0.1 C/50 cycles/806 mAh g <sup>-1</sup>		[7]
S/NPC/CNTs	3.2	0.3 C/500 cycles/785 mAh g <sup>-1</sup>		[8]
This work	5	0.5 A g <sup>-1</sup> /500 cycles/404.5 mAh g <sup>-1</sup>	20	
This work	10	0.5 A g <sup>-1</sup> /100 cycles/348.5 mAh g <sup>-1</sup>	20	

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