

The hierarchical carbon modified nano-NiS₂ cathode with high thermal stability for a high energy
thermal battery

Chuanyu Jin¹, Licai Fu^{1,2*}, Jiajun Zhu¹, Wulin Yang¹, Deyi Li¹, Lingping Zhou^{1,2*}

¹ College of Material Science and Engineering, Hunan University, Changsha 410082, China

² Hunan Province Key Laboratory for Spray Deposition Technology and Application, Hunan
University, Changsha 410082, China

* Corresponding e-mail address: lfu@hnu.edu.cn (L. Fu), tft@hnu.edu.cn (L. Zhou), Tel./fax: +86 731

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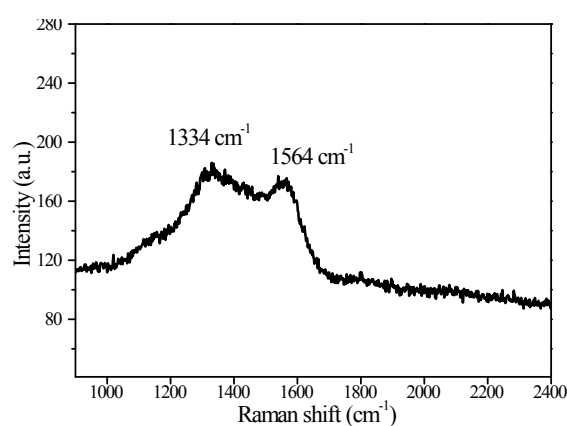


Fig. S1 Raman spectra of carbon upon pyrolysis of stearic acid (550 °C-4 h)

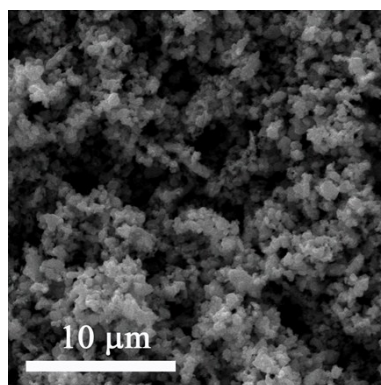


Fig. S2 SEM image of pure nano-NiS₂

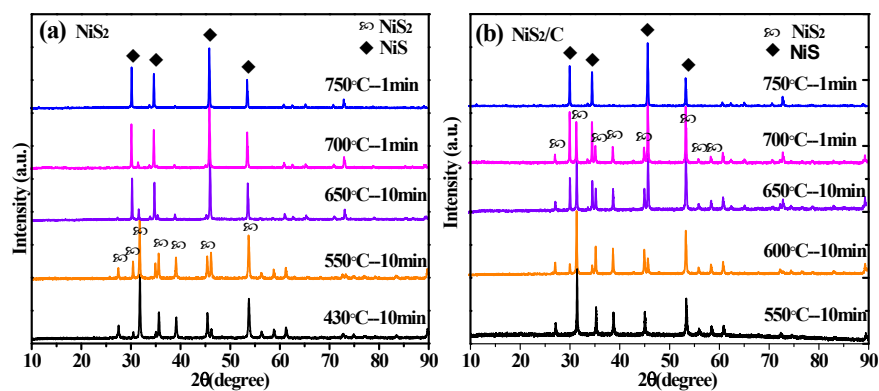


Fig. S3 XRD patterns of Ni (NiS₂/C) in different temperatures

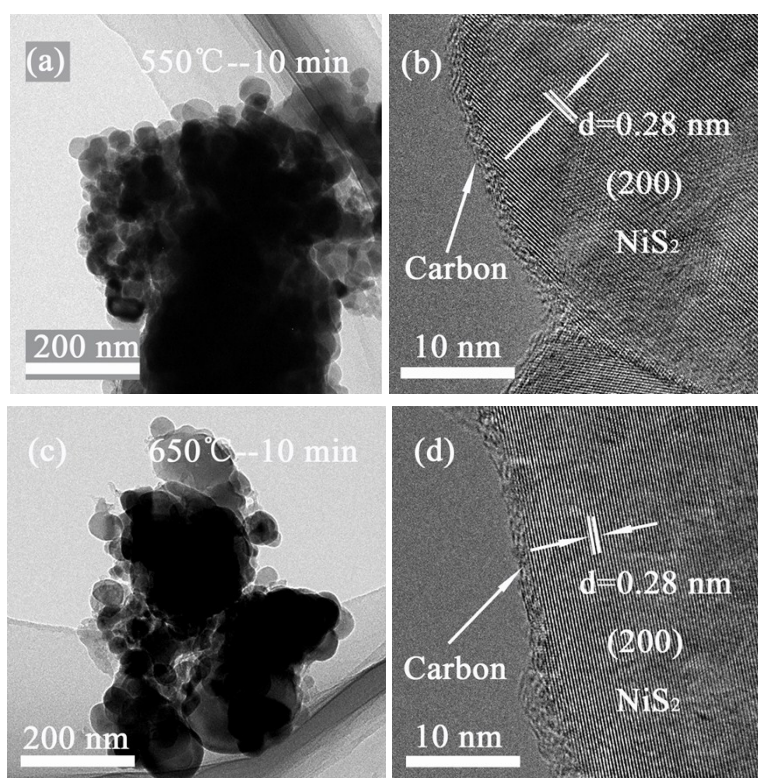


Fig. S4 TEM images of NiS₂/C in different annealing temperatures.

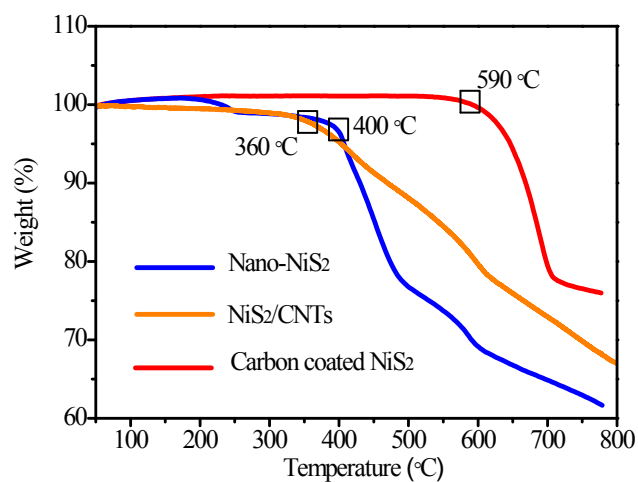


Fig. S5 TG of nano-NiS₂, NiS₂/CNTs and carbon coated NiS₂

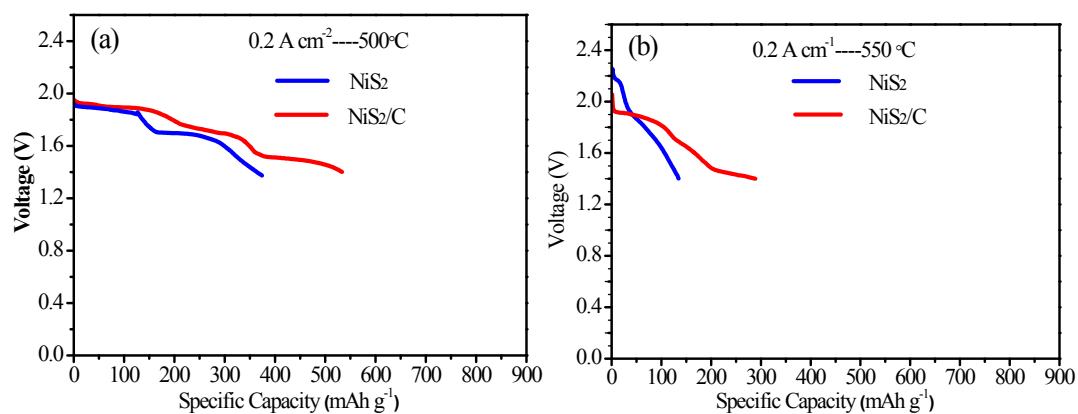
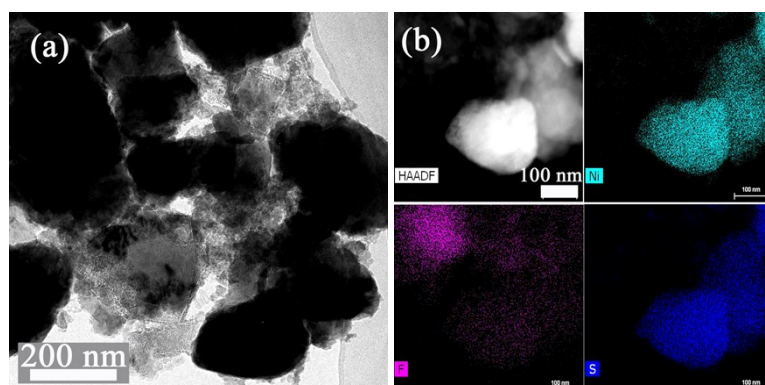


Fig. S6 Specific discharge capacities of NiS₂ and NiS₂/C in different current densities under discharge temperatures until minimum operating voltage of 1.4 V



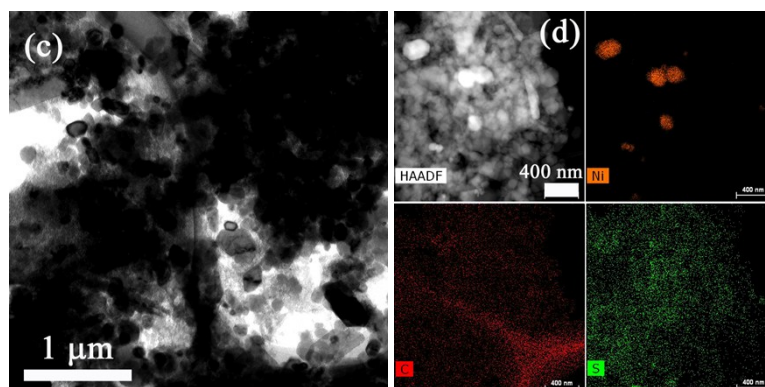


Fig. S7 TEM and dot-mapping images of discharge products from NiS_2 cathode (a-b) with 0.1 A cm^{-2} --
 500°C and NiS_2/C cathode (c-d) with 0.1 A cm^{-2} -- 650°C

Table. S1 Element content of carbon coated NiS_2 powders in TEM

Element	series	Net	[norm. wt.%]	[norm at.%]
Sulfur	K-series	117787	50.2	60.9
Nickel	K-series	78753	47.4	31.3
Carbon	K-series	4867	2.4	7.8
		Sum:	100	100