

Supplementary Information

Heterostructured CoS₂/NiS₂ nanoparticles encapsulated in bamboo-like carbon nanotubes as a high performance anode for sodium ion batteries

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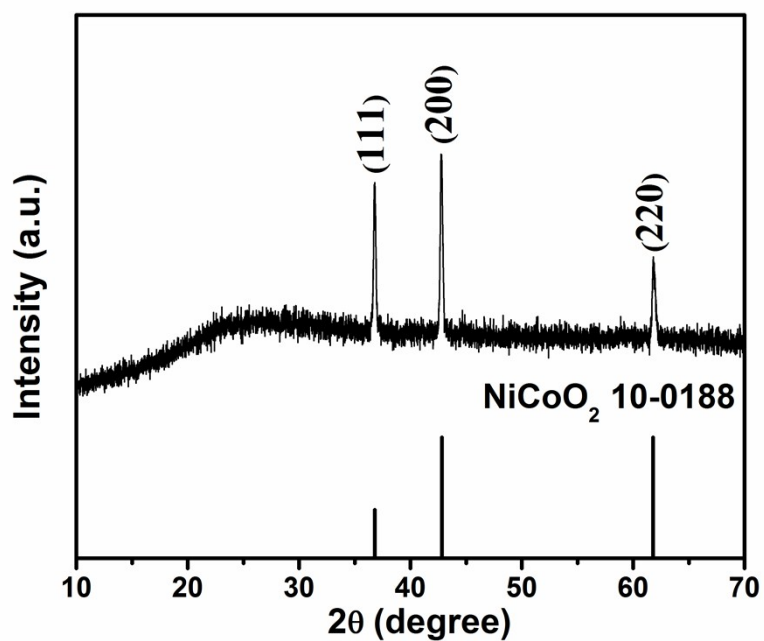


Fig.S1 XRD pattern of the combustion product of CoS₂/NiS₂@B-CNT.

$$\begin{aligned}
 \text{CoS}_2/\text{NiS}_2 \text{ (wt\%)} &= \frac{\text{final weight of NiCoO}_2}{\text{total atomic weight of Co/Ni}} \times \frac{\text{total atomic weight of Co/Ni}}{\text{molecular weight of NiCoO}_2} \div \\
 &\frac{\text{molecular weight of CoS}_2/\text{CoS}_2}{\text{molecular weight of NiCoO}_2} \times 100 \quad \% \\
 \text{(eq S1)}
 \end{aligned}$$

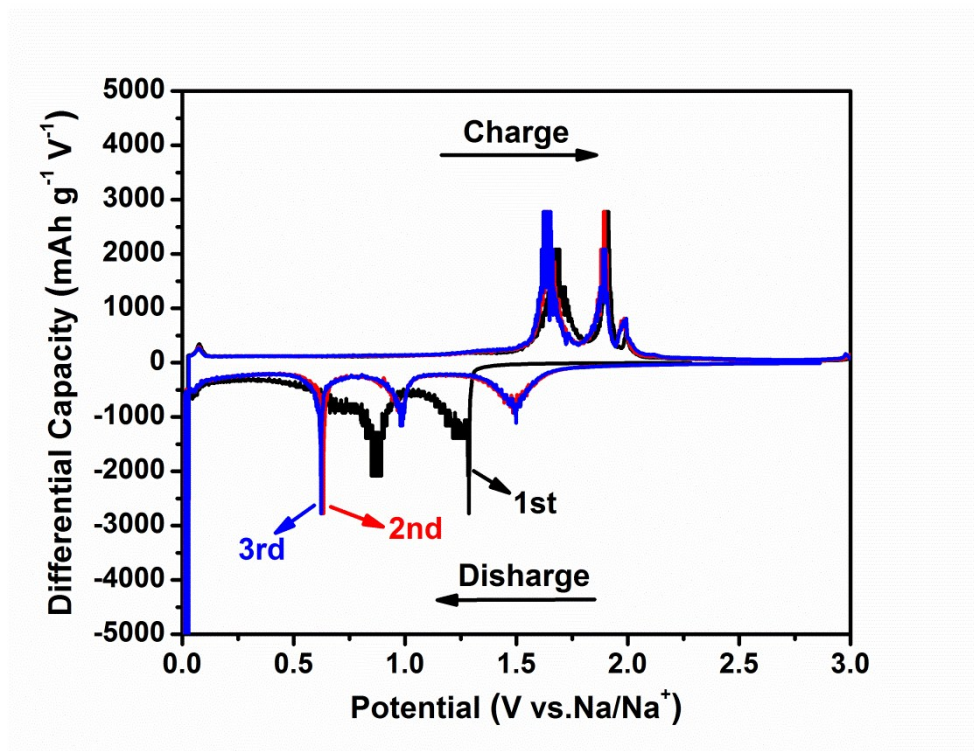


Fig.S2 DQ/DV curves of CoS₂/NiS₂@B-CNT

Table S1. Comparison of sodium storage performance of various CoS₂ and NiS₂ based anode materials.

Materials	Current density [A g ⁻¹]	Cycle number	Specific capacity [mAh g ⁻¹]	Current density [A g ⁻¹]	Specific capacity [mAh g ⁻¹]	Ref.
CoS ₂ /NiS ₂ @B-CNT	0.1 5	50 1000	604.7 497.6	1	548.8	This work
				2	534.8	
				5	513.0	
				10	491.6	
CoS ₂ triple-shelled nanoboxes	0.2	100	454	5	346	[S1]
CoS ₂ @N-doped carbon nanofibers	0.1	200	357	3.2	201	[S2]
SnS ₂ @CoS ₂ -rGO	1	100	309.8	4	330	[S3]
				4	321	
CoS ₂ /Co ₄ S ₃ @N-doped carbon microspheres	2 4	400 1500	323 256	4	321	[S4]
				6	217	
NiS ₂ spheres@graphene	1	300	530	2	527.8	[S5]
NiS ₂ @C@C	0.1	100	580.8	1.6	448	[S6]
NiS ₂ nanoparticles/carbon nanofibers	2	1000	140	2	300	[S7]
SnS ₂ /NiS ₂ @carbon cloth	2	100	343.2	5	360	[S8]

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