Self-assembled dandelion-like NiS nanowires on biomass-based carbon aerogels as electrode material for hybrid supercapacitors

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Supplementary material

Figures and Tables

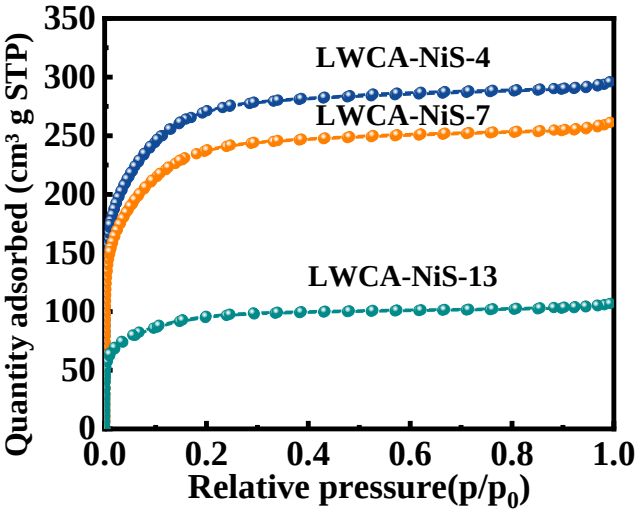

Fig. S1 Nitrogen adsorption–desorption isotherms of LWCA-NiS-4, LWCA-NiS-7, and LWCA-NiS-13.

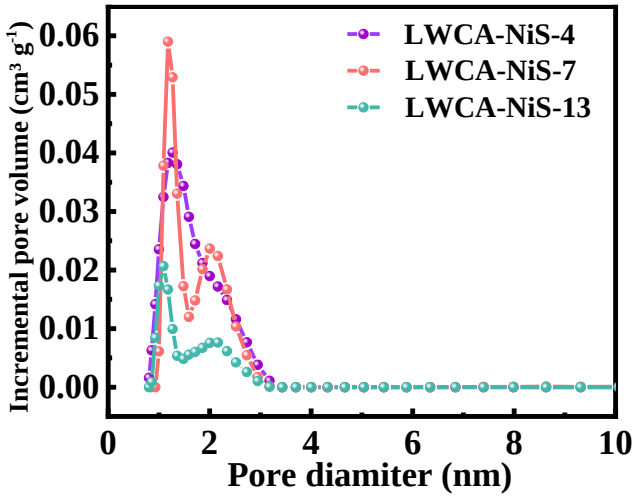

Fig. S2 Pore size distributions of LWCA-NiS-4, LWCA-NiS-7, and LWCA-NiS-13.

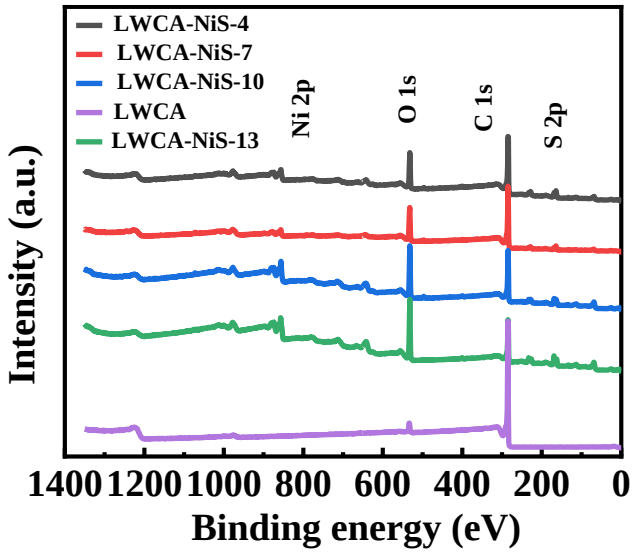

Fig. S3 XPS spectra of LWCA and LWCA-NiS-*x*.

Table S1 Pore structure parameters of LWCA-NiS-*x*

Sample	S/($m^2 \cdot g^{-1}$)			(S_{micro}/S_{BET})/%	Pore volume/($cm^3 \cdot g^{-1}$)			D_{ave}/nm
	BET	Micro	Meso		Total	Micro	Meso	
LWCA	1845.12	498.33	1346.79	27.01	1.06	0.28	0.78	2.25
LWCA-NiS-4	1012.59	355.12	657.47	35.07	0.45	0.06	0.39	1.78
LWCA-NiS-7	884.01	289.74	594,27	32.78	0.40	0.04	0.36	1.79
LWCA-NiS-10	389.10	154.22	234.88	39.64	0.18	0.03	0.15	1.84
LWCA-NiS-13	354.71	144.32	210.34	40.69	0.16	0.03	0.13	1.82

Notes: *S*, specific surface area; Micro, micropore; Meso, mesopore.

Table S2 Elemental compositions of LWCA and LWCA-NiS-*x*

Sample	Composition content/mol.%				
	Carbon	Oxygen	Nitrogen	Nickel	Sulfur
LWCA	94.19	4.97	O.66	–	–
LWCA-NiS-4	69.81	18.04	1.47	3.66	7.02
LWCA-NiS-7	73.88	18.95	1.11	2.36	3.69
LWCA-NiS-10	57.99	25.8	1.42	6.41	8.38
LWCA-NiS-13	49.69	29.57	1.59	7.74	11.42