

Facile fabrication of 1D/2D nanohybrids composed of NiCo-hydroxide nanowires and reduced graphene oxide for high-performance asymmetric supercapacitors

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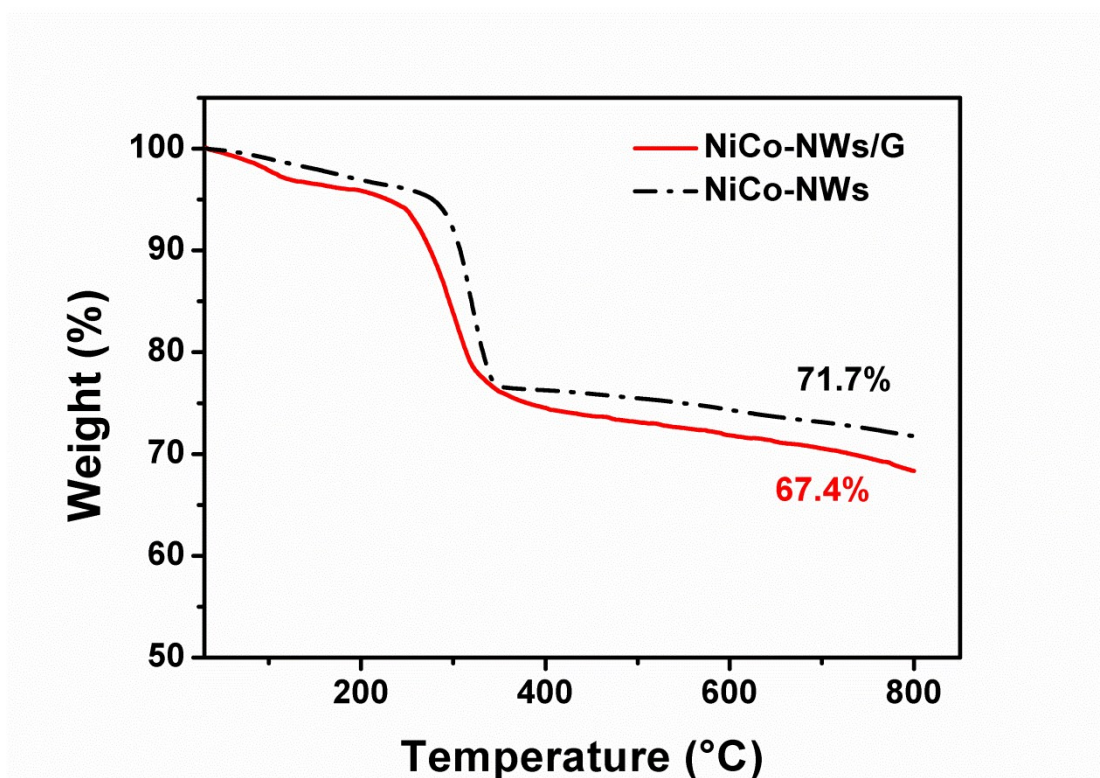


Fig. S1. TGA curves of the NiCo-NWs and NiCo-NWs/G

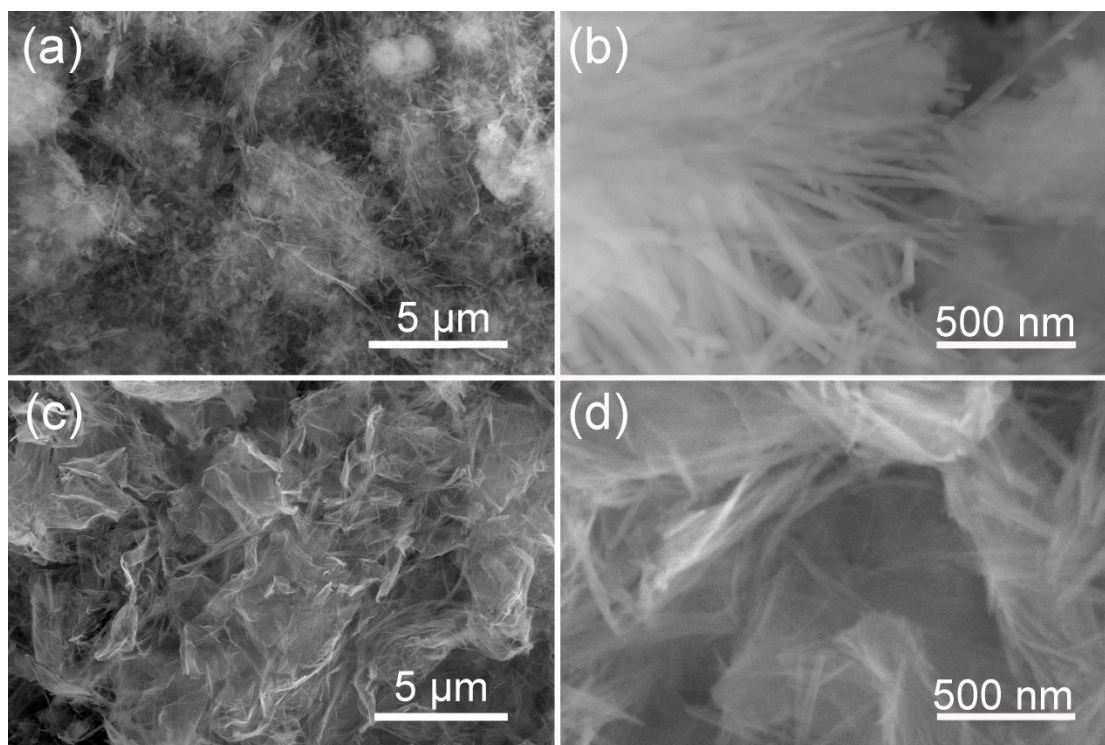


Fig. S2. SEM images of (a, b) NiCo-NWs; (c, d) NiCo-NWs/G

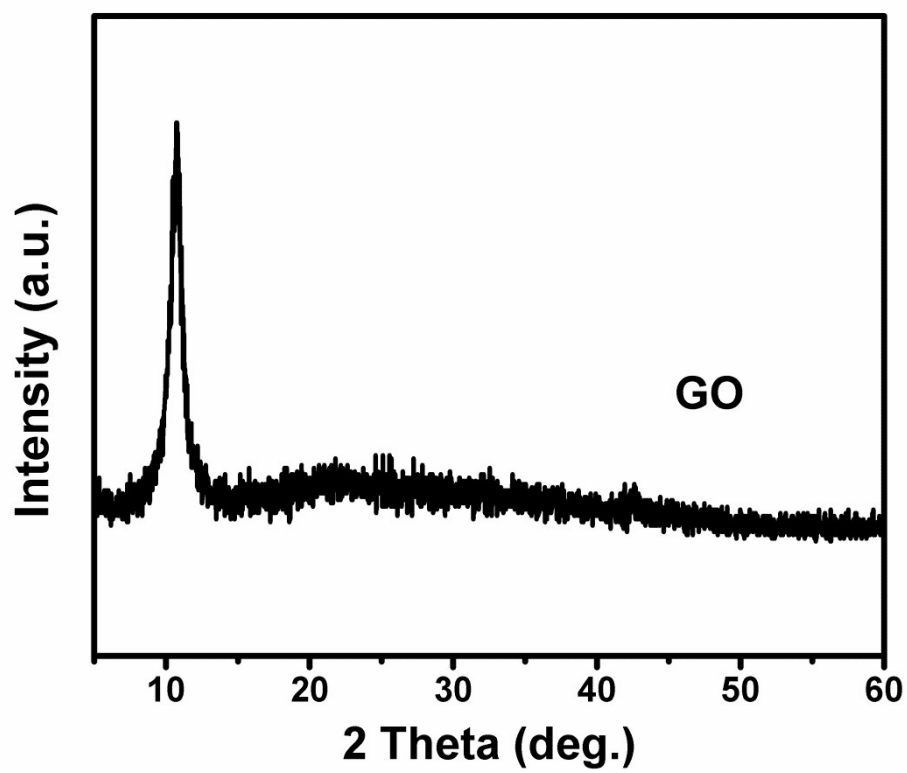


Fig. S3. XRD patterns of GO

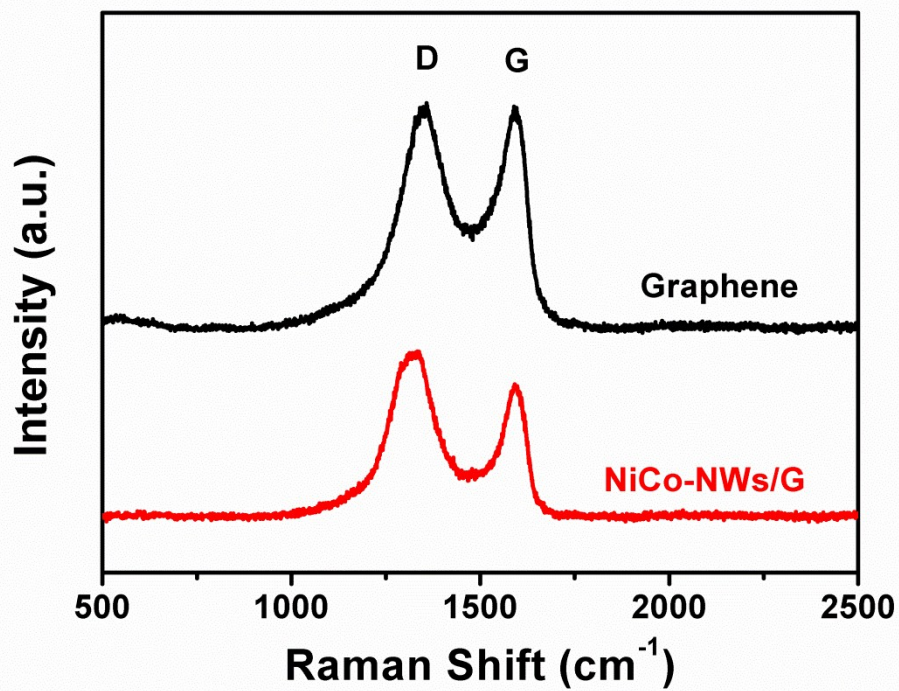


Fig. S4. Raman spectra of the graphene and NiCo-NWs/G

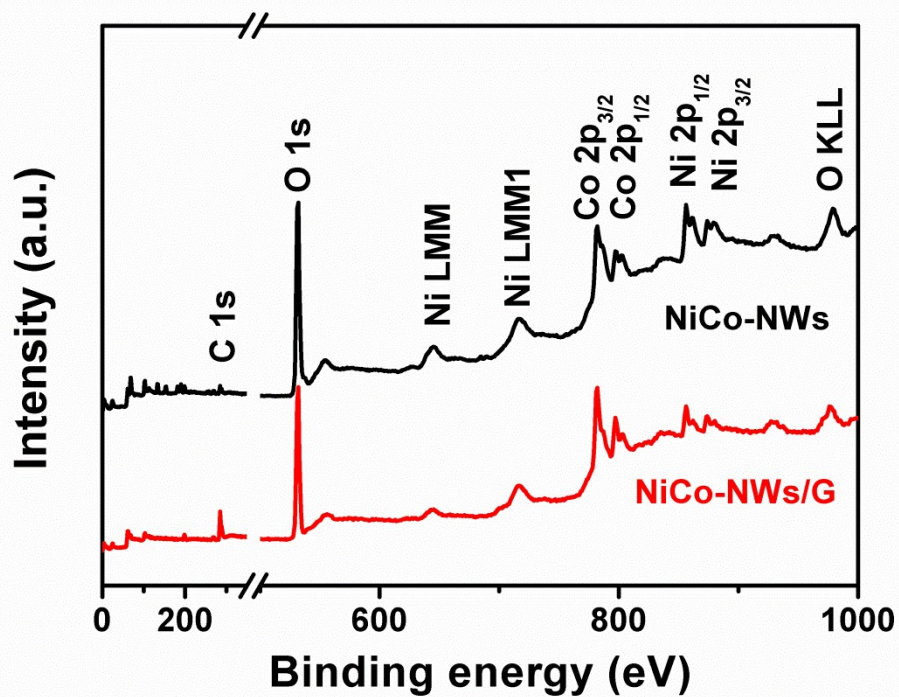


Fig. S5. XPS survey spectra of NiCo-NWs and NiCo-NWs/G

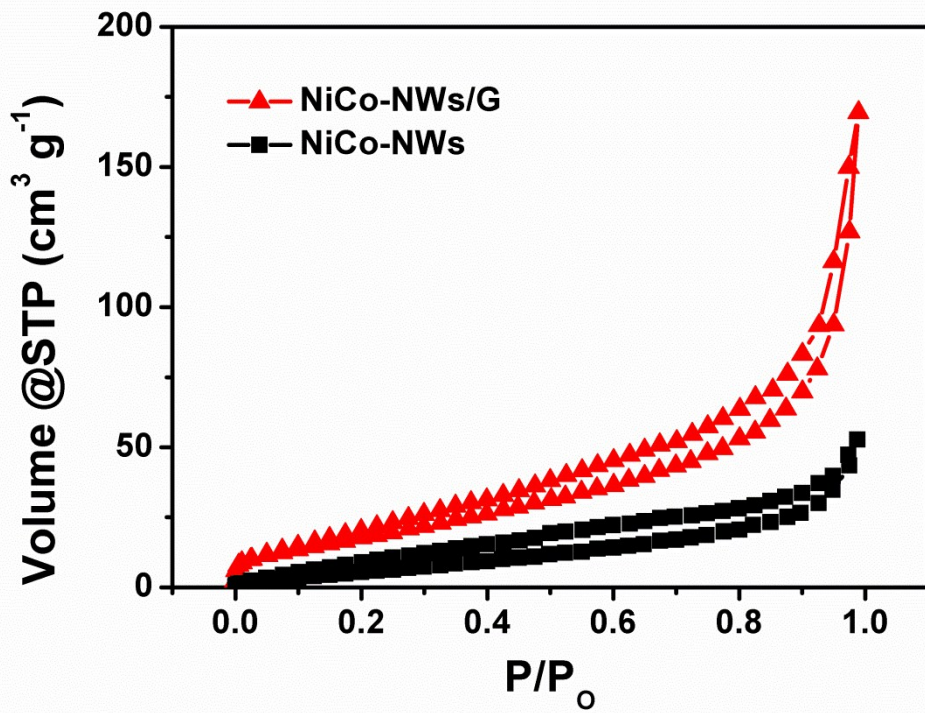


Fig. S6. Nitrogen adsorption-desorption isotherms of NiCo-NWs and NiCo-NWs/G

Table S1 Capacitances of the representative NiCo-hydroxide/graphene composites in aqueous electrolytes

NO.	Sample	Current density (A g ⁻¹)	Specific capacitance (F g ⁻¹)	References
1.	NiCo-NWs/G	1	1449	This work
2	G-CH	1	1398	1
3	NiCo-LDH-G	1	1489	2
4	rGO@NiCo	0.5	518	3
5	NiCo LDH@NG	2	1421	4
6	NF@RGO/Ni-Co LDH	1	1454	5
7	NiCo-LDH/RGO-1	2	1501	6
8	H-3DRG@NiCo-LDH	0.5	227 mA h g ⁻¹	7
9	Ni ₂ Co ₂ -OH/rGO	0.5	1691	8

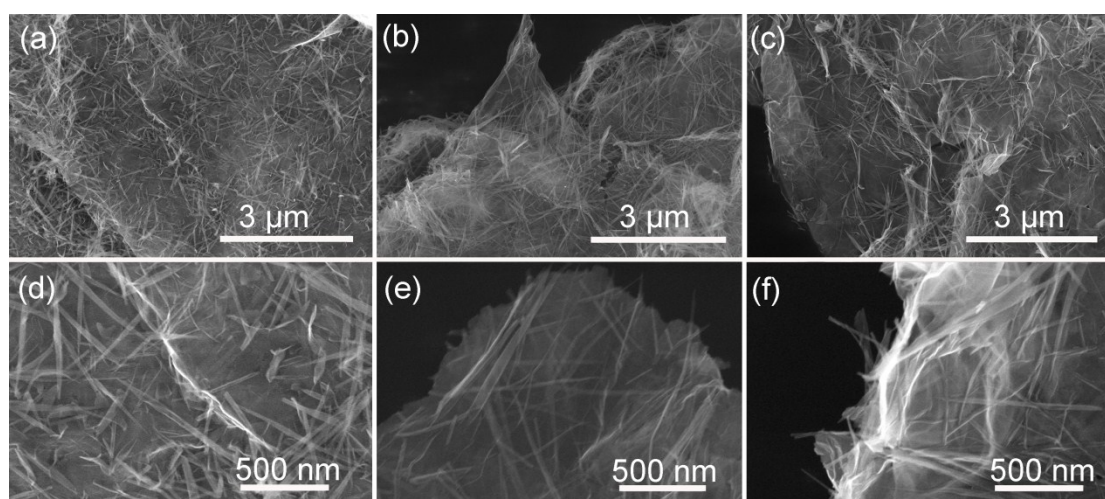


Fig. S7. SEM images of (a, d) NiCo-NWs/G-4; (b, e) NiCo-NWs/G-8; (c, f) NiCo-NWs/G-24

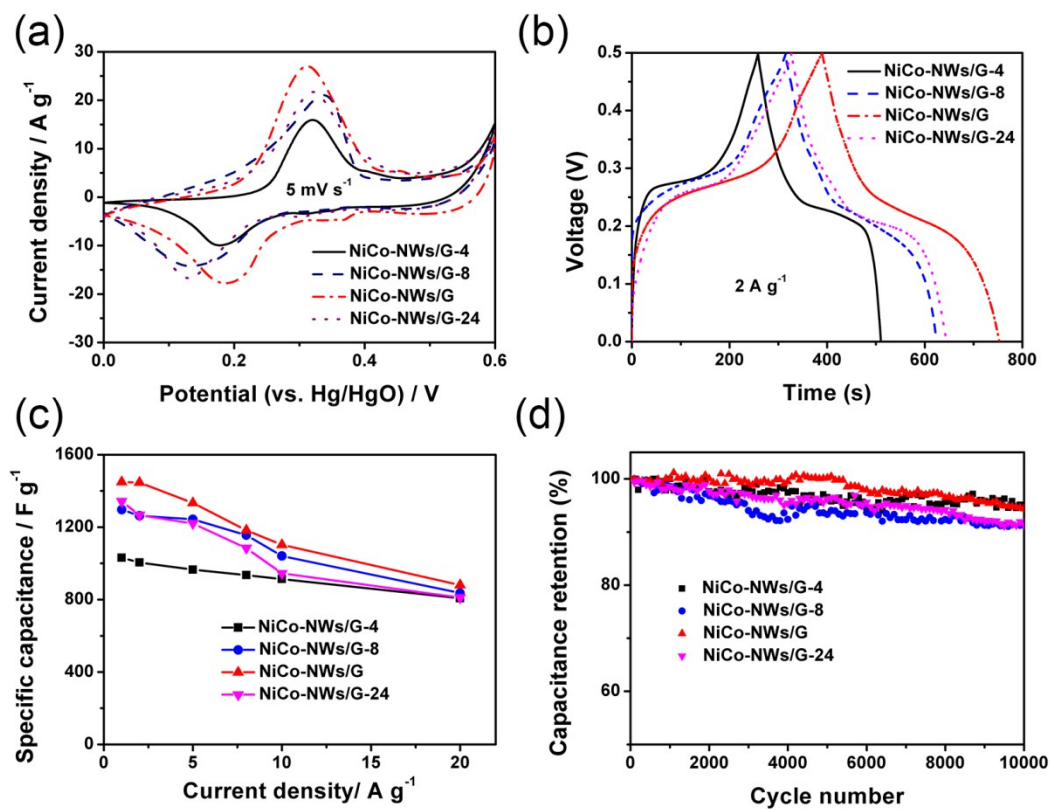


Fig S8. Electrochemical performance of NiCo-NWs/Gs for supercapacitors: a) CV curves at scan rates of 5 mV s⁻¹; b) galvanostatic charge-discharge curves at a current density of 2 A g⁻¹; c) specific capacitances at different current densities; and d) cycling performance of different samples at a current density of 10 A g⁻¹.

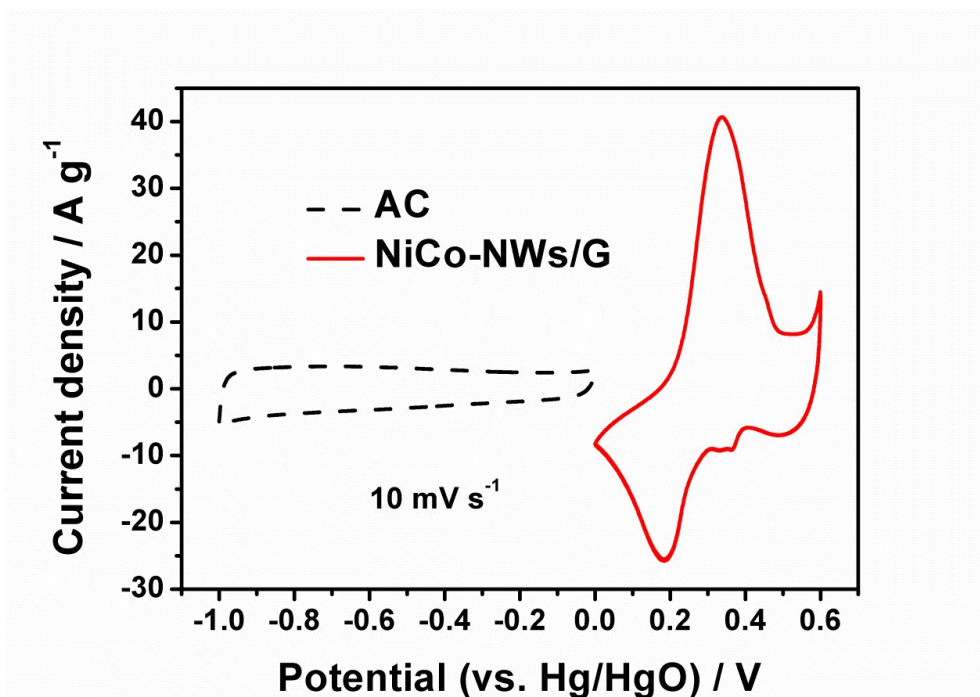


Fig. S9. CV curves of NiCo-NWs/G and active carbon electrodes tested at a scan rate of 10 mV s^{-1}

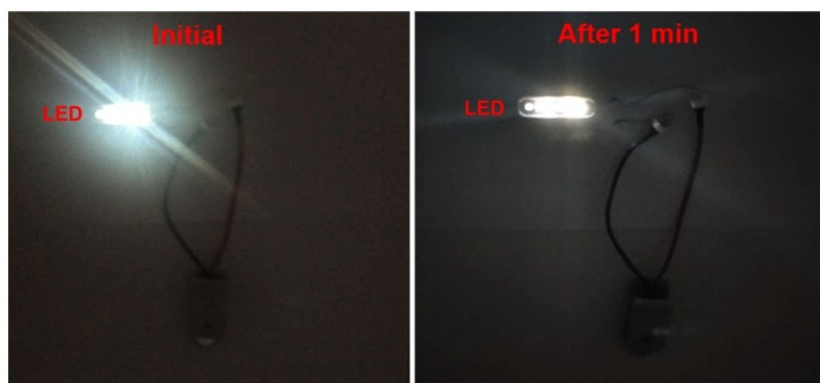


Fig. S10. Images showing that as-assembled asymmetric supercapacitors powered by the 10 s charged can lighten up six LED indicators.

References

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