Supporting Information

Hedgehog-inspired nanostructures for hydrogel-based all-solid-state hybrid supercapacitors with excellent flexibility and electrochemical performances

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Figure S1. SEM images: (a-b) NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$ nanostructures coated by conventional slurry-pasted with polymer binders and conductive additives.

Figure S2. SEM images: (a) NiCo$_2$O$_4$ nanoneedle-clusters, (b) NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$ nanostructures.
Figure S3. The XRD patterns of NiCo$_2$O$_4$ and NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$.

Figure S4. (a) The EDX of NiCo$_2$O$_4$ nanoneedle-clusters, (b) The EDX of NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$ nanostructures.
Figure S5. XPS spectra of NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$ nanostructures.

Figure S6. CV curves of carbon fabrics and NiCo$_2$O$_4$@Ni$_x$Co$_y$MoO$_4$ nanostructures.
Figure S7. (a) CV curves of NiCo$_2$O$_4$ nanoneedle-clusters at 10 to 50 mV s$^{-1}$, (b) GCD curves of NiCo$_2$O$_4$ nanoneedle-clusters at 1 to 30 A g$^{-1}$.

Figure S8. (a) CV curves of AC at 1 to 30 mV s$^{-1}$; (b) GCD curves of AC at 1 to 30 A g$^{-1}$.
Figure S9. (a) Nyquist plots of the as-assembled hybrid supercapacitor, (b) Ragone plots.

Figure S10. the as-assembled hybrid supercapacitors charged by solar panels.