Supporting Information

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

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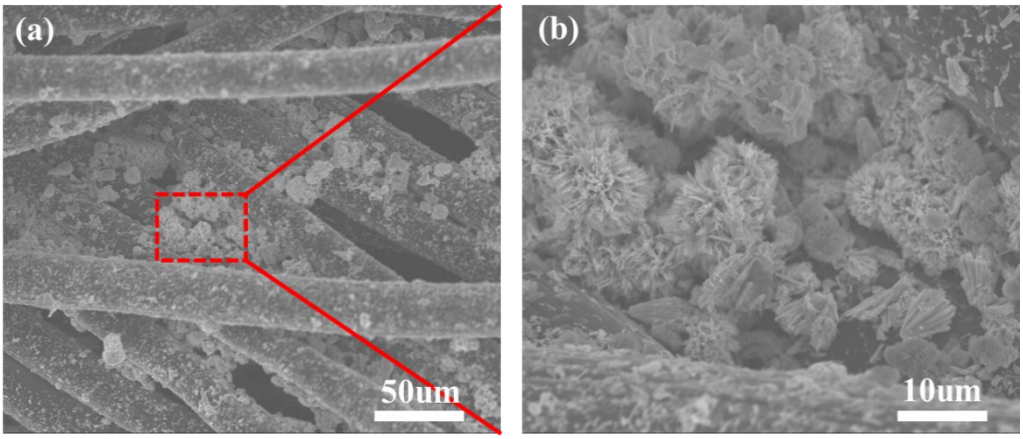

Figure S1. SEM images: (a-b) $NiCo_2O_4$@$Ni_xCo_yMoO_4$ nanostructures coated by conventional slurry-pasted with polymer binders and conductive additives.

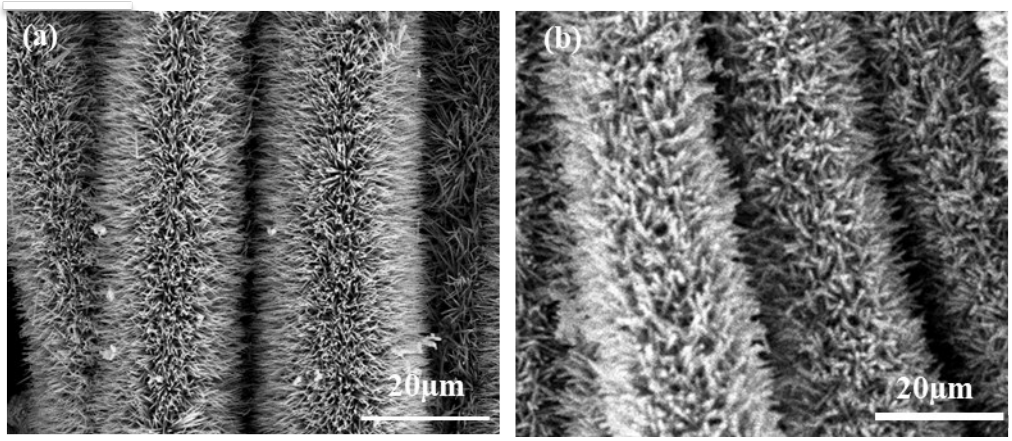

Figure S2. SEM images: (a) $NiCo_2O_4$ nanoneedle-clusters, (b) $NiCo_2O_4$@$Ni_xCo_yMoO_4$ nanostructures.

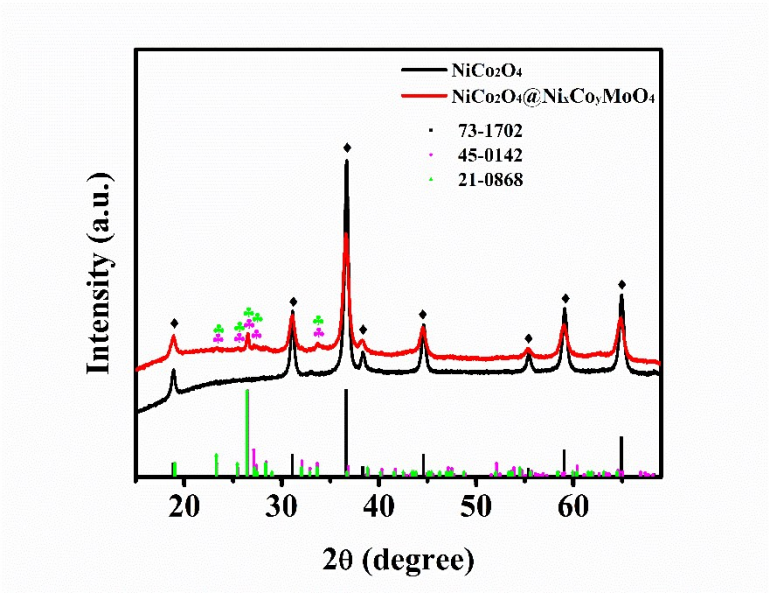

Figure S3. The XRD patterns of $NiCo_2O_4$ and $NiCo_2O_4@Ni_xCo_yMoO_4$.

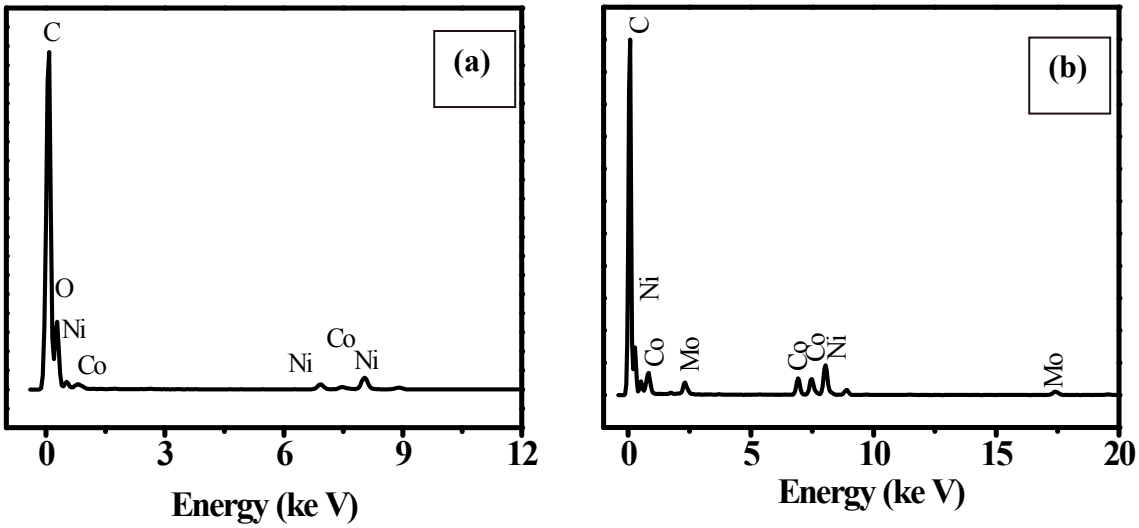

Figure S4. (a) The EDX of $NiCo_2O_4$ nanoneedle-clusters, (b) The EDX of $NiCo_2O_4@Ni_xCo_yMoO_4$ nanostructures.

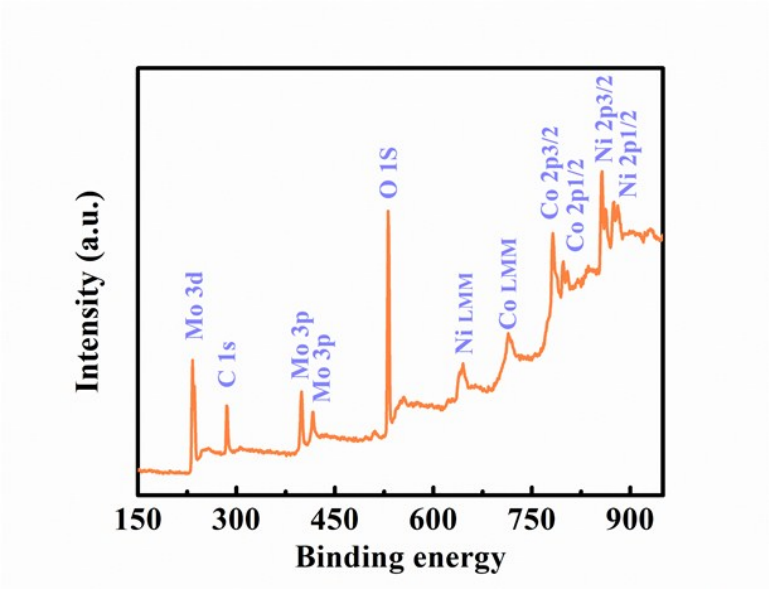

Figure S5. XPS spectra of $NiCo_2O_4@Ni_xCo_yMoO_4$ nanostructures.

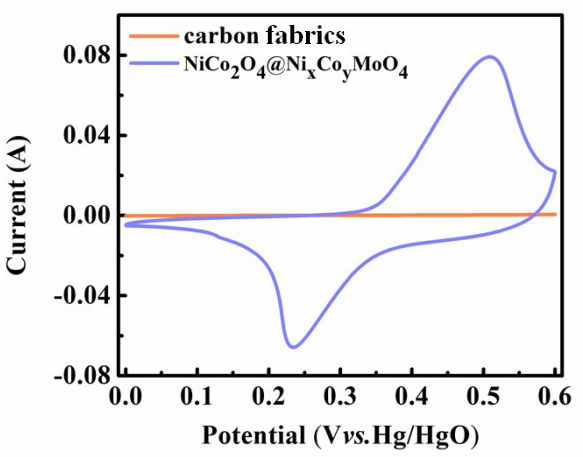

Figure S6. CV curves of carbon fabrics and $NiCo_2O_4@Ni_xCo_yMoO_4$ nanostructures

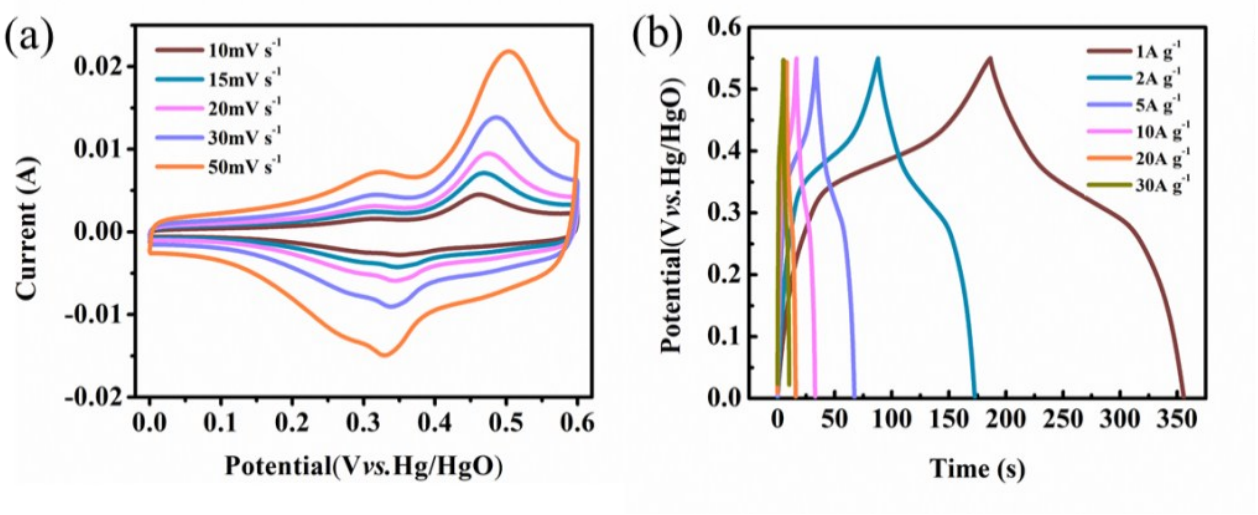

Figure S7. (a) CV curves of $NiCo_2O_4$ nanoneedle-clusters at 10 to 50 mV s^{-1}, (b) GCD curves of $NiCo_2O_4$ nanoneedle-clusters at 1 to 30 A g^{-1}.

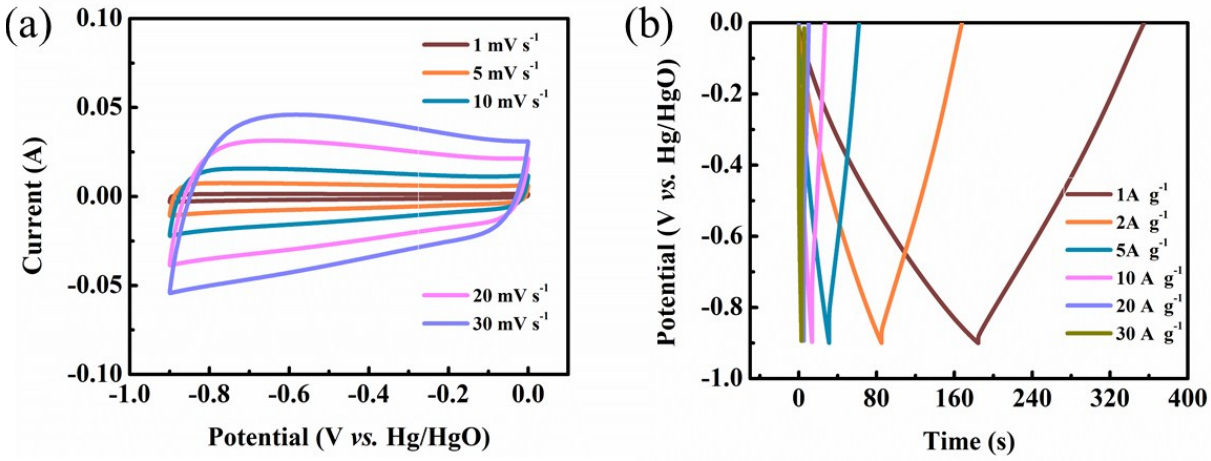

Figure S8. (a) CV curves of AC at 1 to 30 mV s^{-1}; (b) GCD curves of AC at 1 to 30 A g^{-1}

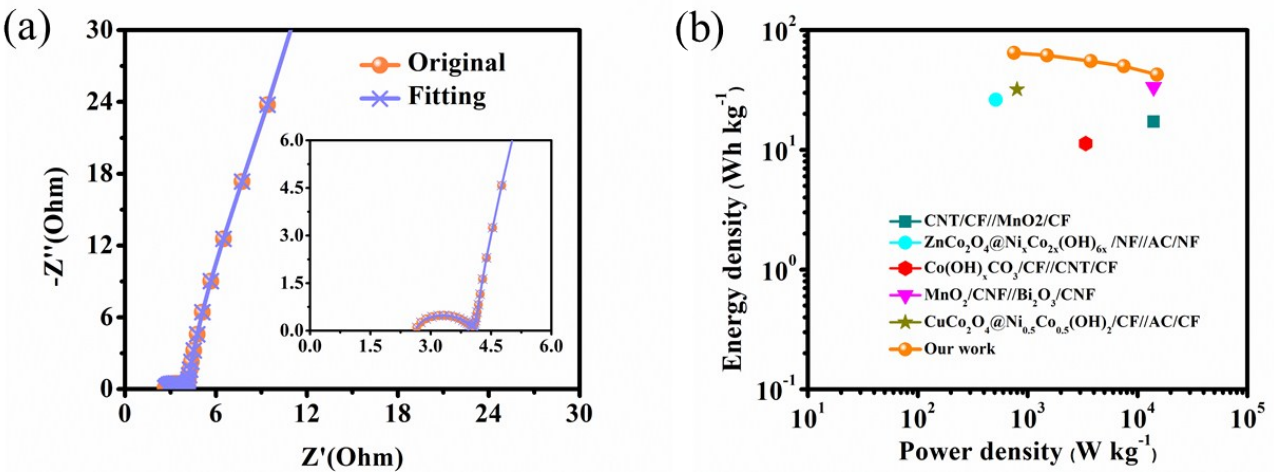

Figure S9. (a) Nyquist plots of the as-assembled hybrid supercapacitor, (b) Ragone plots.

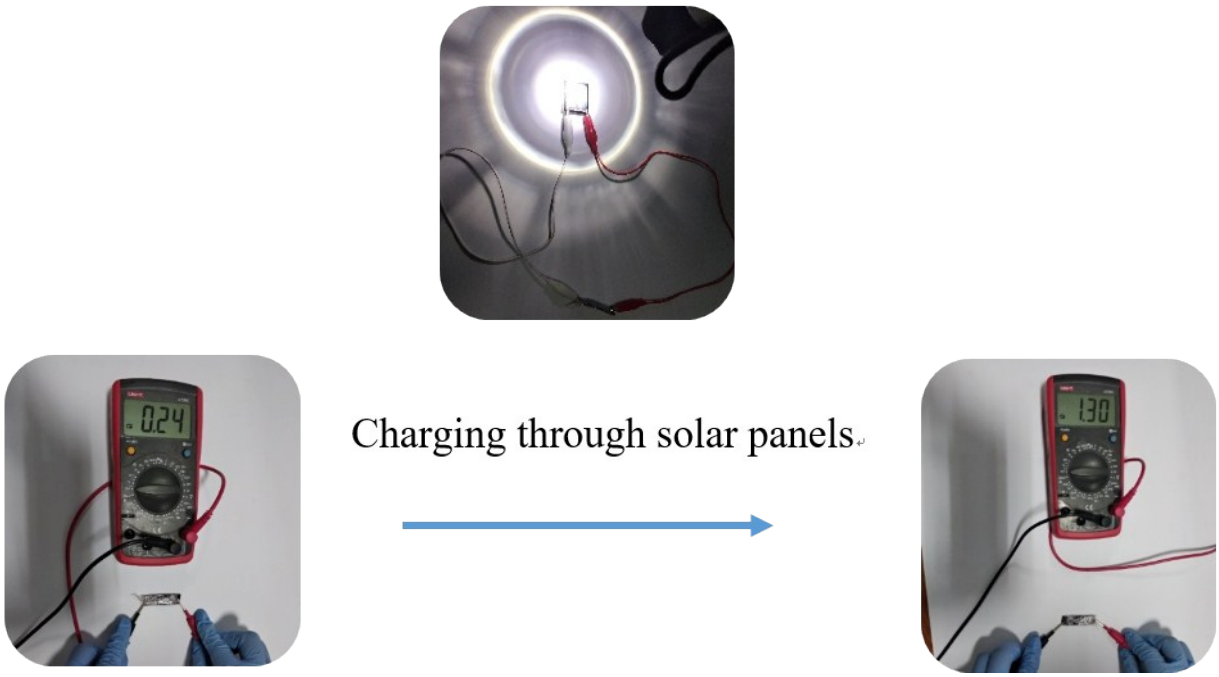

Figure S10. the as-assembled hybrid supercapacitors charged by solar panels.