

# Effect of Time on a Hierarchical Corn Skeleton-Like Composite of CoO@ZnO as Capacitive Electrode Material for High Specific Performance Supercapacitors

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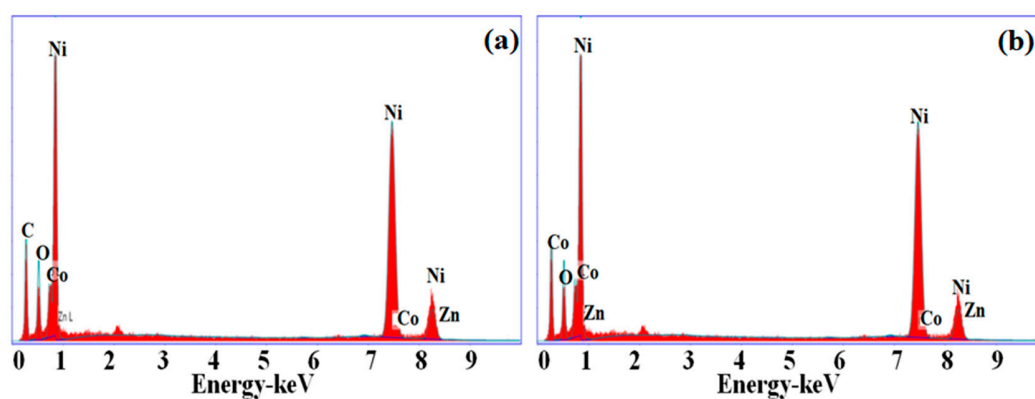


Figure S1. EDX patterns of CZ1h and CZ7h electrodes (a,b) nanostructures on Ni foam.

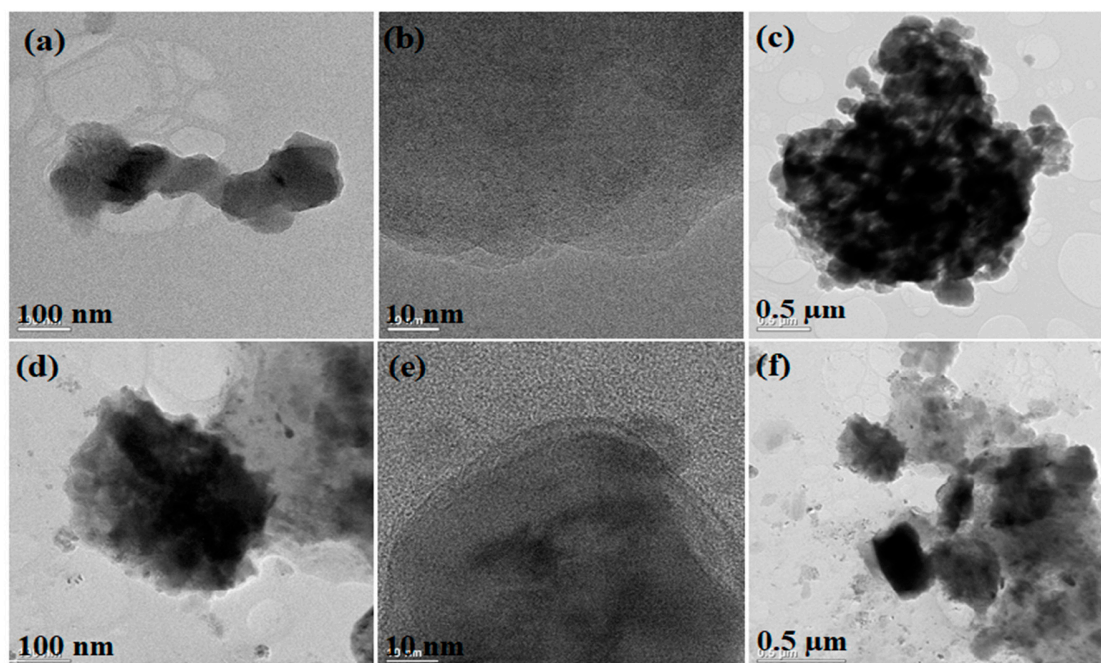
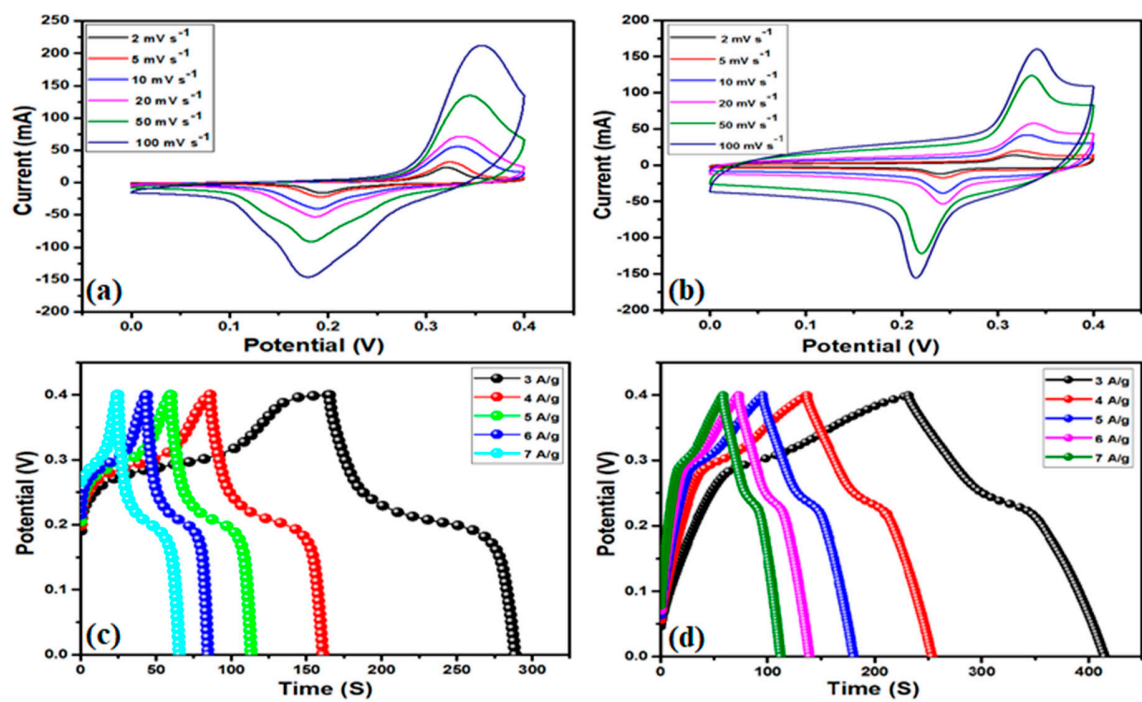
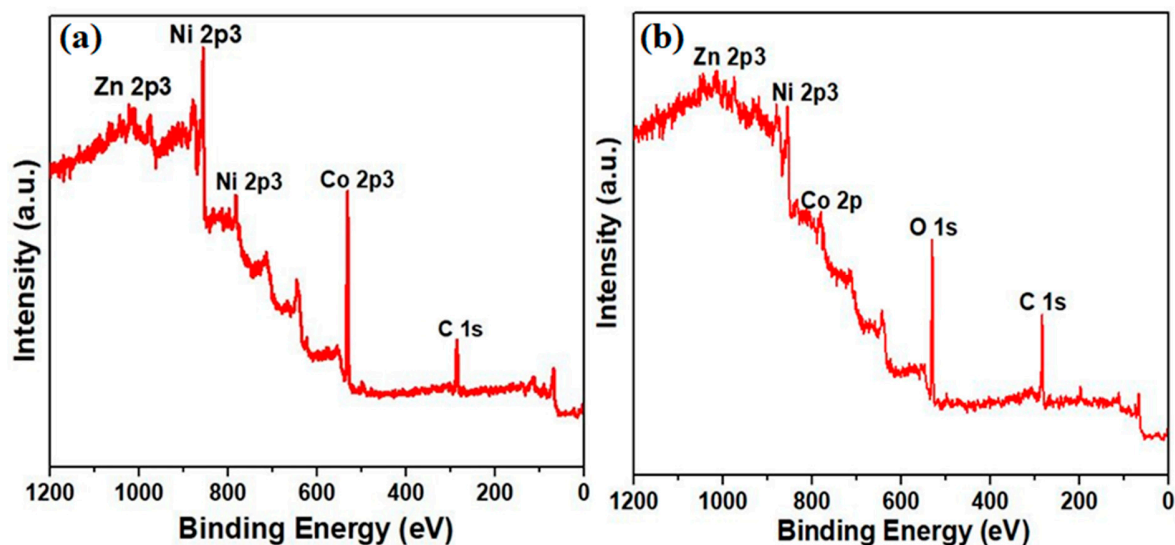


Figure S2. Shows the (a-c) TEM and HR-TEM images of CoO sample structures and (d-f) TEM and HR-TEM images of ZnO sample structures.



**Figure S3.** (a,b) CV curves of the CoO and ZnO electrodes at various scan rates, (c,d) GCD curves of the CoO and ZnO electrodes at different current densities from 3 A/g to 7 A/g.



**Figure S4.** Shows the X-ray photoelectron spectroscopy (XPS) of CZ1h and CZ7h electrodes of survey spectrums (a,b).

Figure S4a in the supporting information shows the strong peaks for Zn2p3, Co2p, Ni 2p and O 1s in the CZ1h survey spectrum. The high resolution Zn 2p3 spectrum shows the main peak at 1022, another strong peak for Co 2p spectrum main peak at 781.8. The strong resolution XP spectrum of Ni 2p3, which is strong peak at 856.3. In addition one more spectra of O 1s showed peak at 531.3. Figure S4b in the supporting information shows the strong peaks for Zn2p3, Co2p, Ni 2p and O 1s in the CZ7h survey spectrum. The high resolution Zn 2p3 spectrum shows the main peak at 1022.4, another strong peak for Co 2p spectrum main peak at 780.4. The strong resolution XP spectrum of Ni 2p3, which is strong peak at 856.0. In addition one more spectra of O 1s showed peak at 529.0.