

## ***Supporting Information***

### **Design and synthesis of N-doped carbon skeleton assembled by carbon nanotubes and graphene as a high-performance electrode material for supercapacitors**

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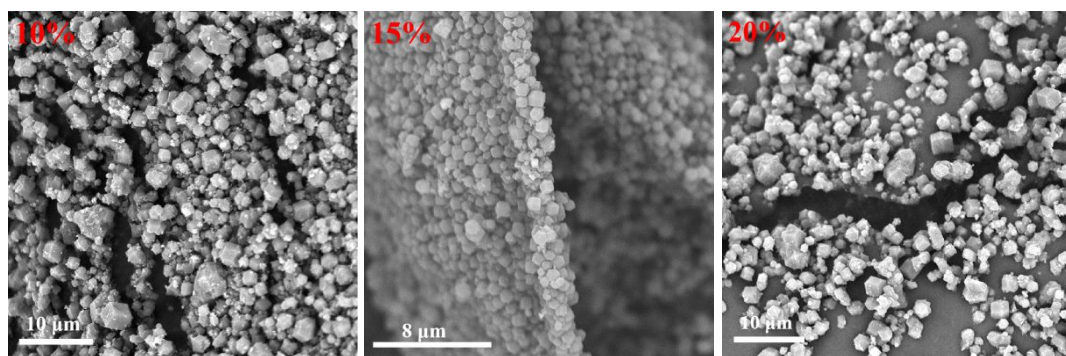


Figure S1 SEM images of the HA-CoFe-ZIF particles prepared with different  $\text{Fe}^{2+}/\text{Co}^{2+}$  molar ratios.

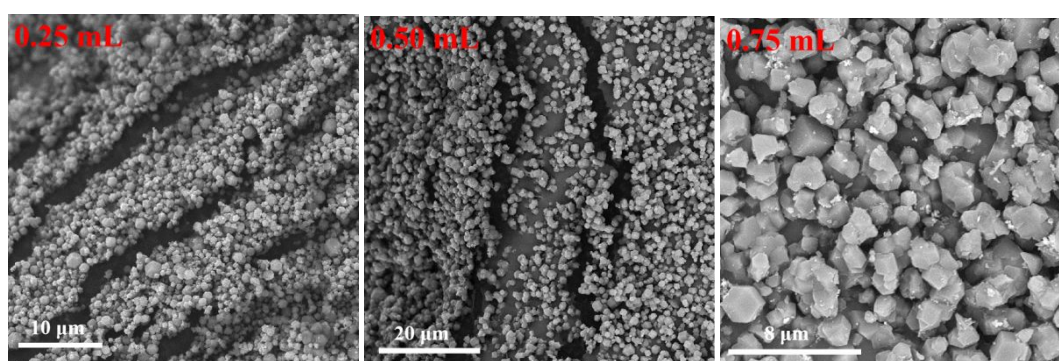


Figure S2 SEM images of the HA-CoFe-ZIF particles prepared with different volumes of the refined HA-Na aqueous solution.

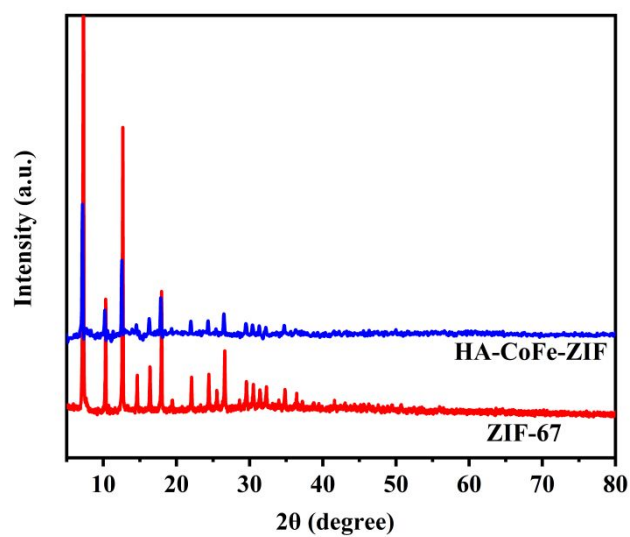


Figure S3 XRD patterns of the HA-CoFe-ZIF and ZIF-67 particles.

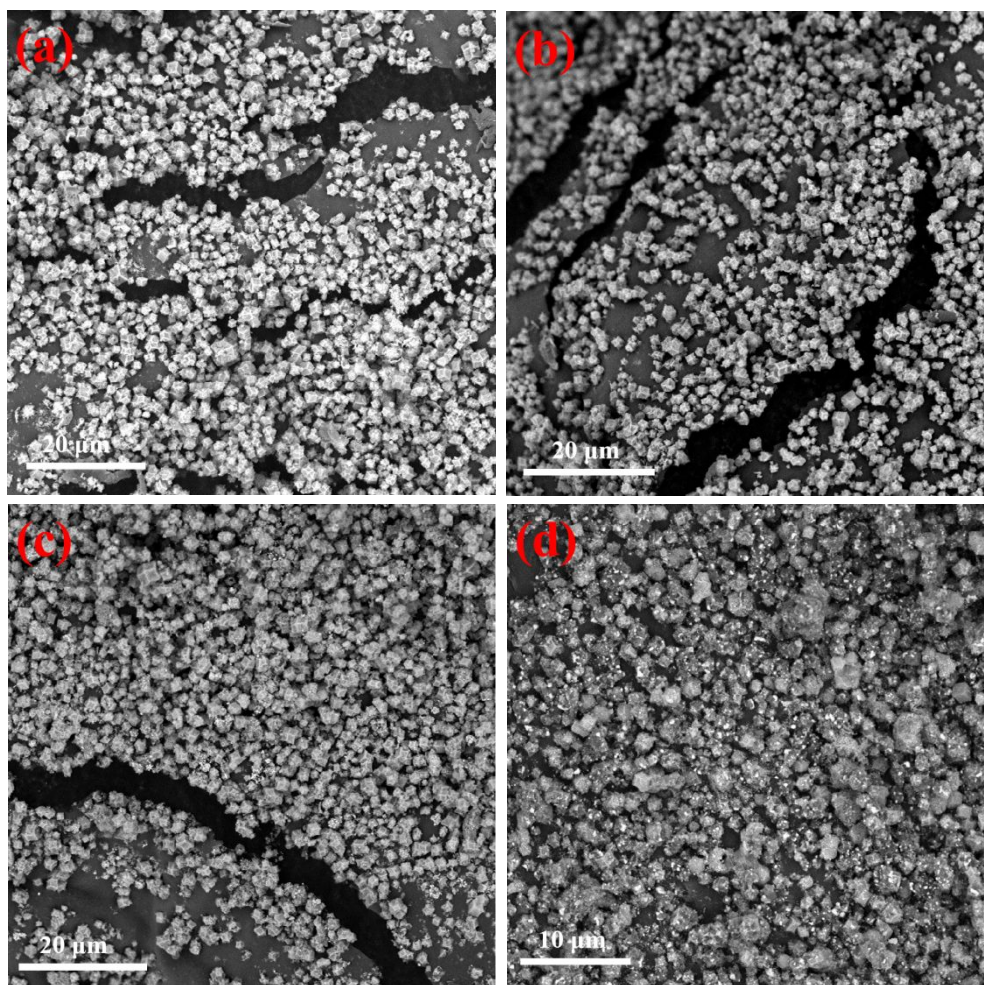


Figure S4 SEM images of the synthesized CoFe/NCS-550 (a), CoFe/NCS-650 (b), CoFe/NCS-750 (c) and CoFe/NCS-850 (d) particles.



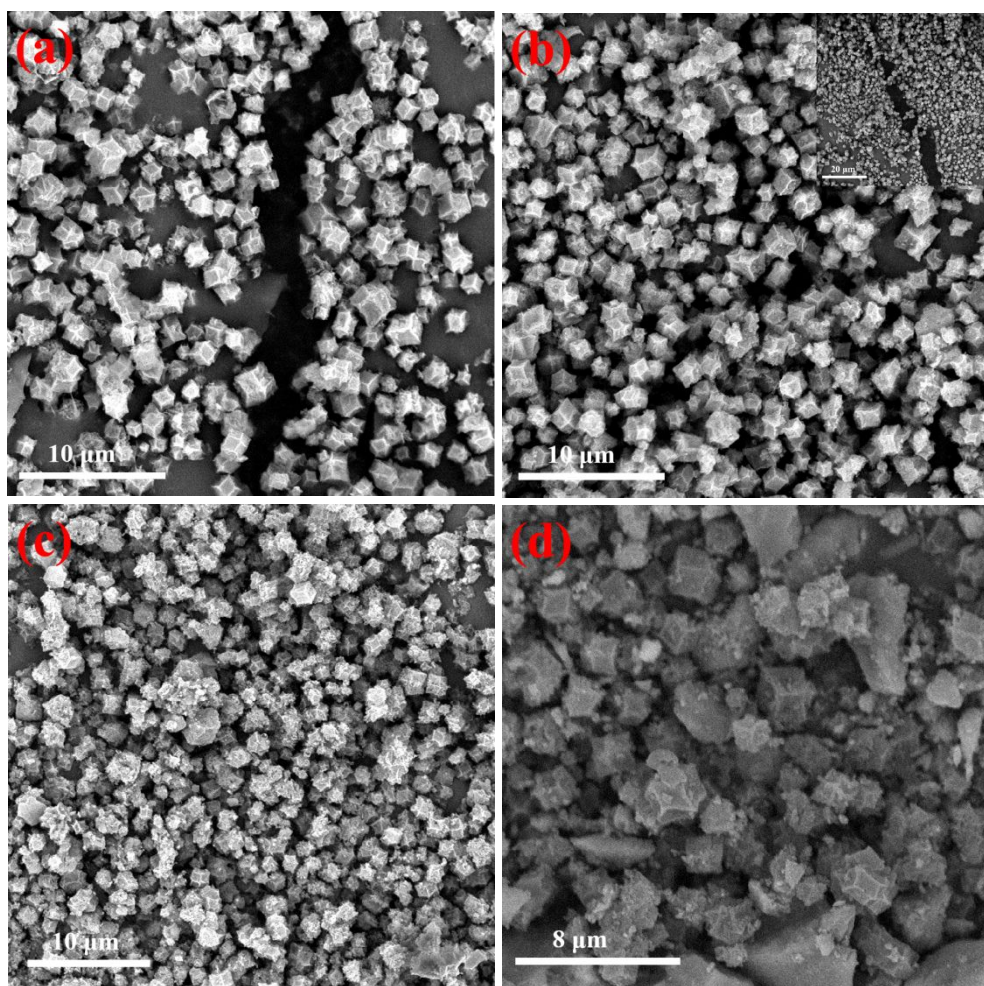


Figure S5 SEM images of the synthesized NCS-550 (a), NCS-650 (b), NCS-750 (c) and NCS-850 (d) particles.

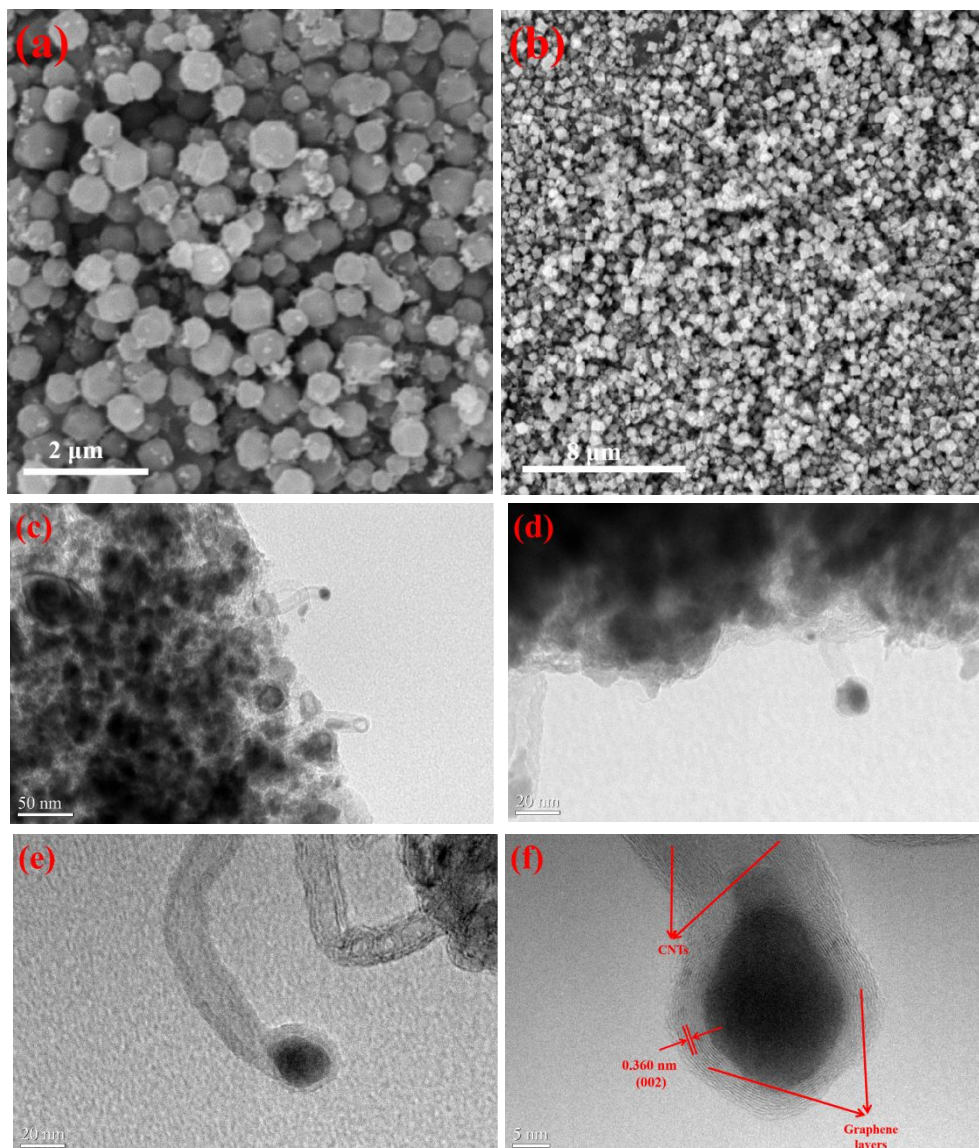


Figure S6 SEM images of the CoFe-ZIF (a), CoFe/NCS-P-650 (b); TEM images (c), (d), (e) and HRTEM image (f) of the NCS-P-650 particles.

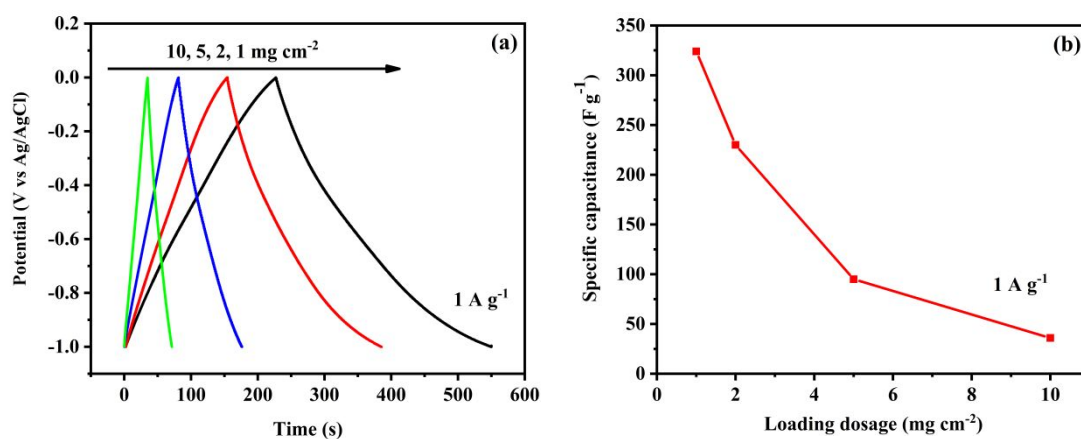


Figure S7 GCD curves (a) and specific capacitances (b) of the NCS-650 electrode at different loading dosages in a three-electrode system.

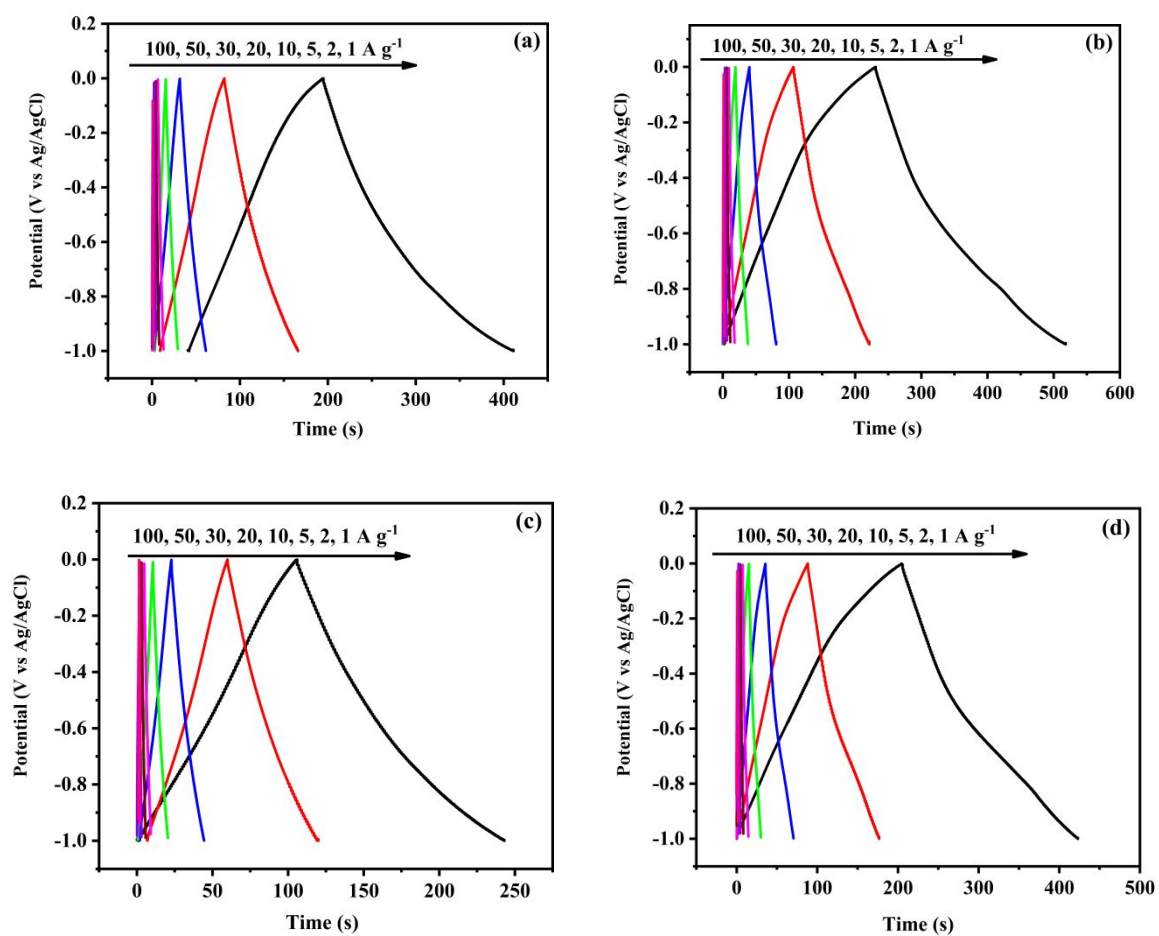


Figure S8 GCD curves of the NCS-550 (a), NCS-750 (b), NCS-850 (c) and NCS-P-650 (d) at different current densities in a three-electrode system.