

Supporting information

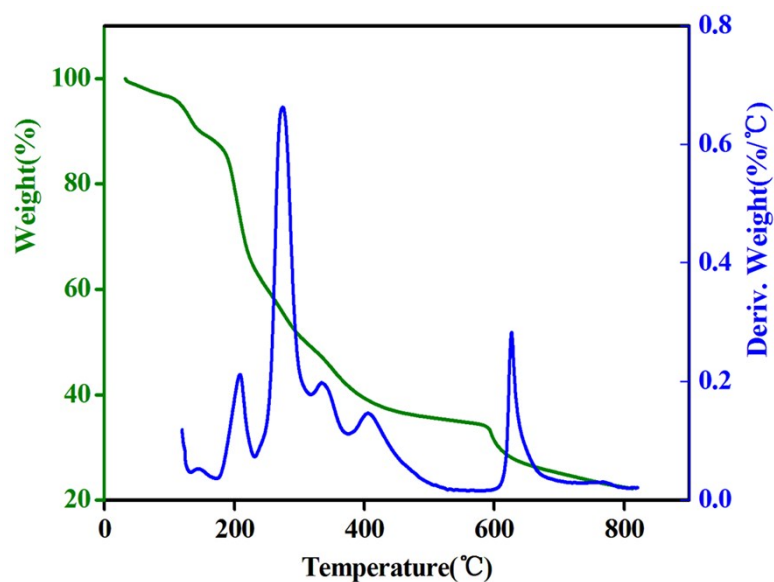


Fig. S1 TG and DSC curves of ferrous gluconate.

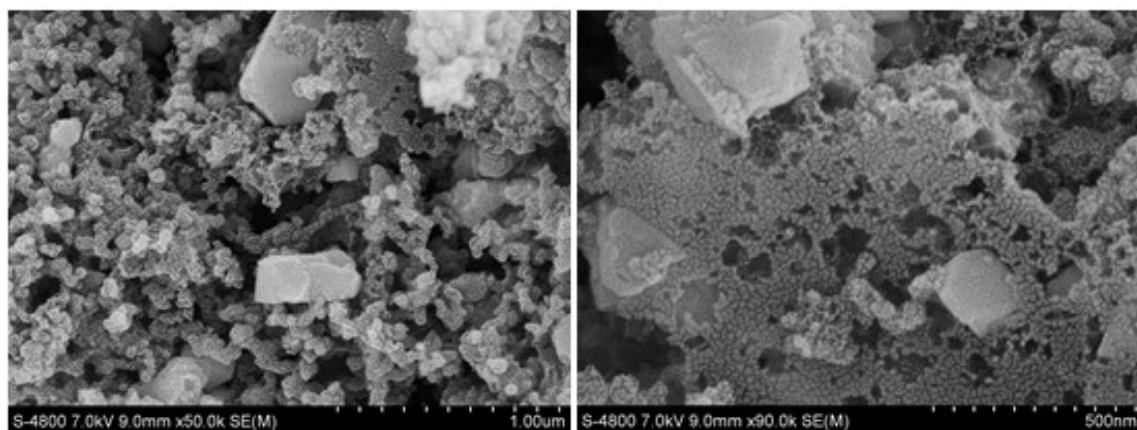


Fig.S2 SEM image of the prepared electrode film on the copper foil

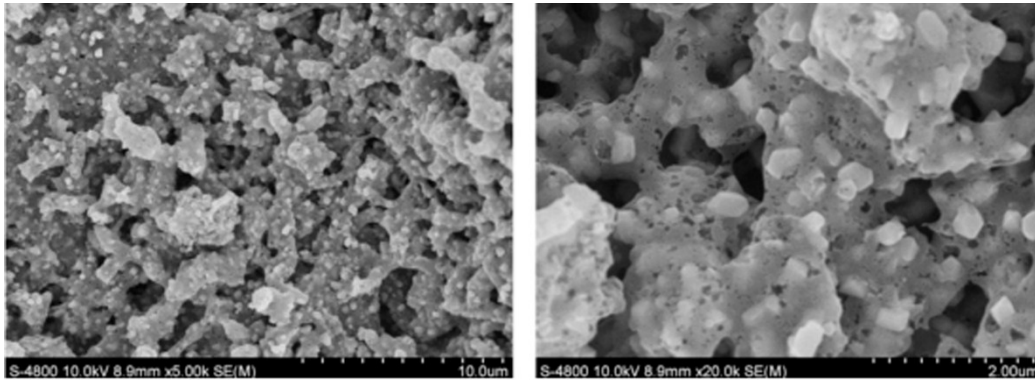


Fig.S3 SEM images of the Fe_3O_4 arrangement in hierarchical porous carbon.

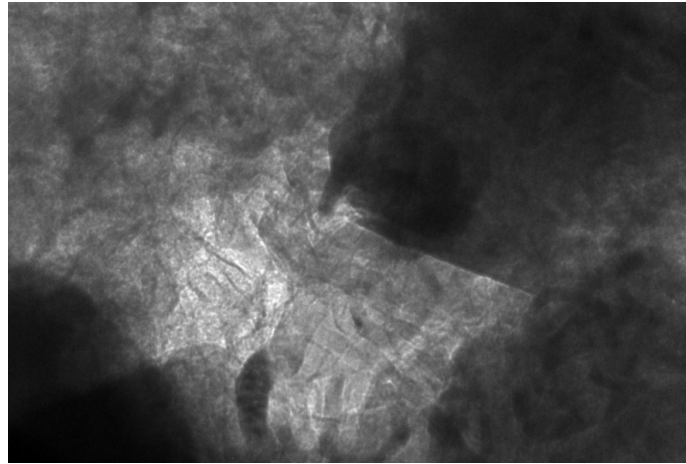


Fig.S4 TEM image of the as-obtained $\text{Fe}_3\text{O}_4@$ HPC composites, displaying the porous carbon among Fe_3O_4 nanoparticles.

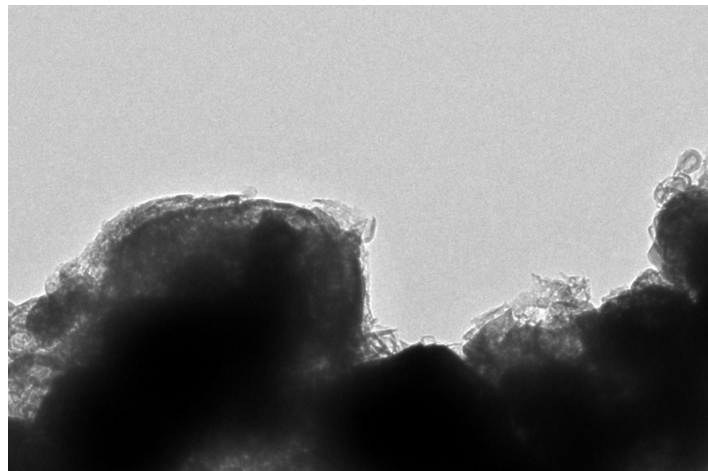


Fig.S5 The low-magnification TEM of the as-obtained $\text{Fe}_3\text{O}_4@$ HPC composites.

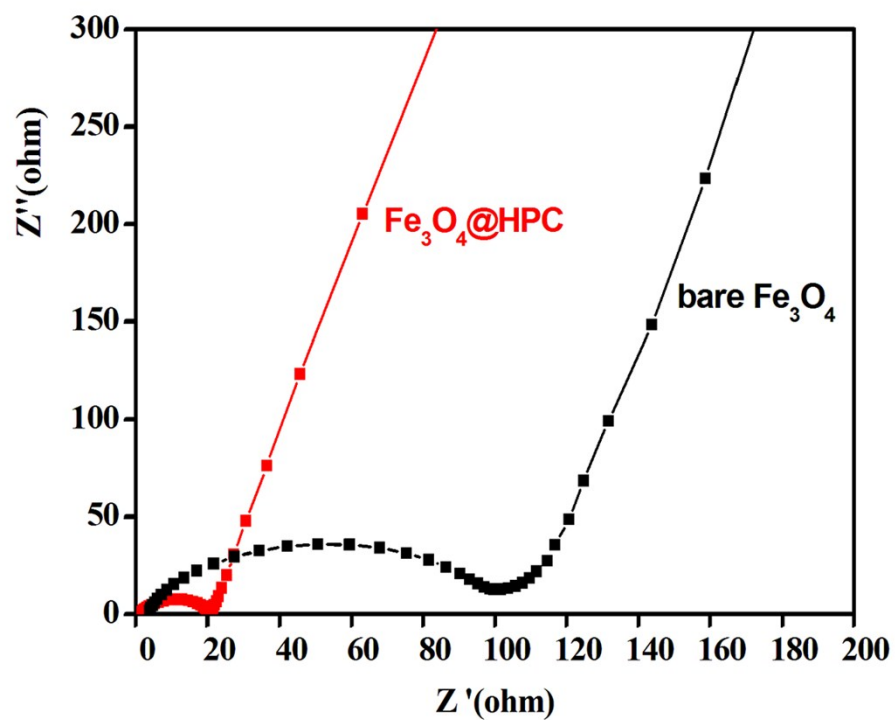


Fig.S6 The electrochemical impedance spectra (EIS) comparison between Fe₃O₄@HPC and bare Fe₃O₄ electrodes.