Electronic Supplementary Material (ESI) for Materials Chemistry Frontiers.

Supporting Information

A sequential process to synthesize Fe_3O_4@MnO_2 hollow nanospheres for high performance supercapacitors

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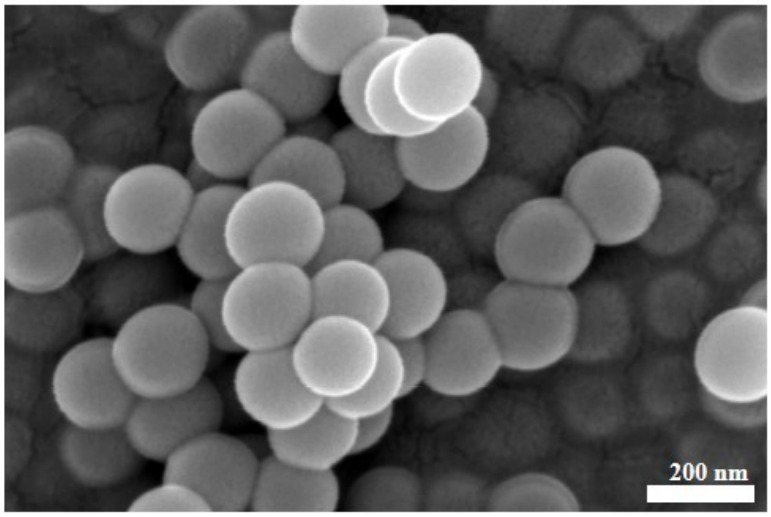

Figure S1. SEM image of SiO_2.

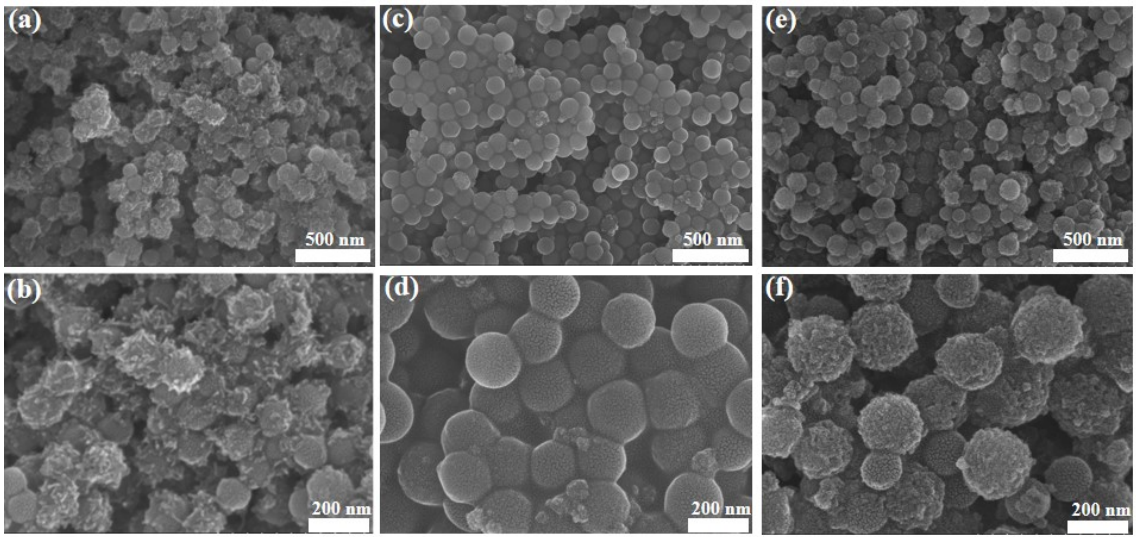

Figure S2. SEM image of SiO_2@MnO_2 (a and b), SiO_2@Fe_3O_4@C (c and d), and SiO_2@Fe_3O_4@MnO_2 (e and f).

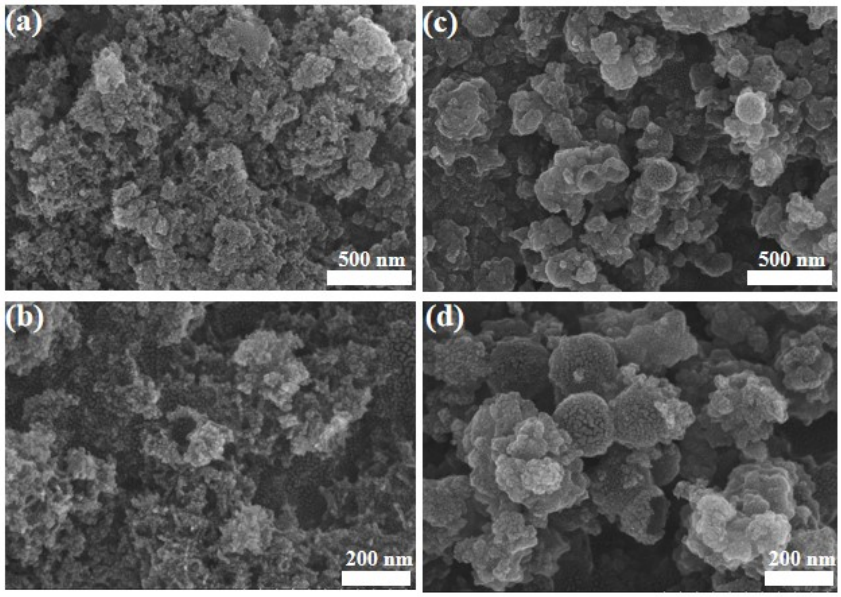

Figure S3. SEM image of MnO_2-HNS (a and b), and Fe_3O_4@C-HNS (c and d).

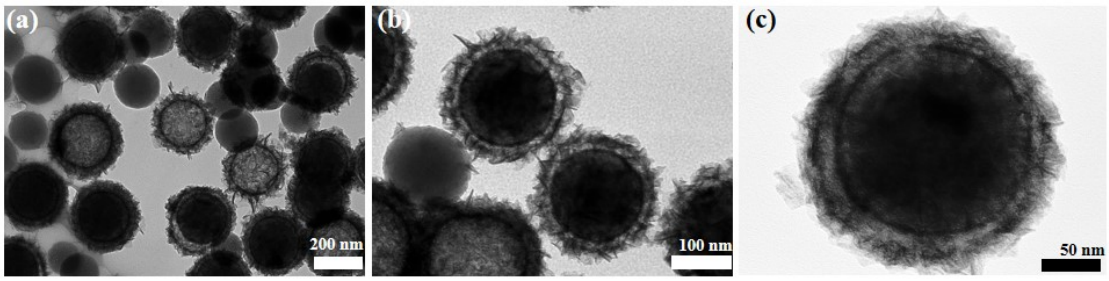

Figure S4. TEM image at different magnifications of SiO_2@Fe_3O_4@MnO_2(a-c).

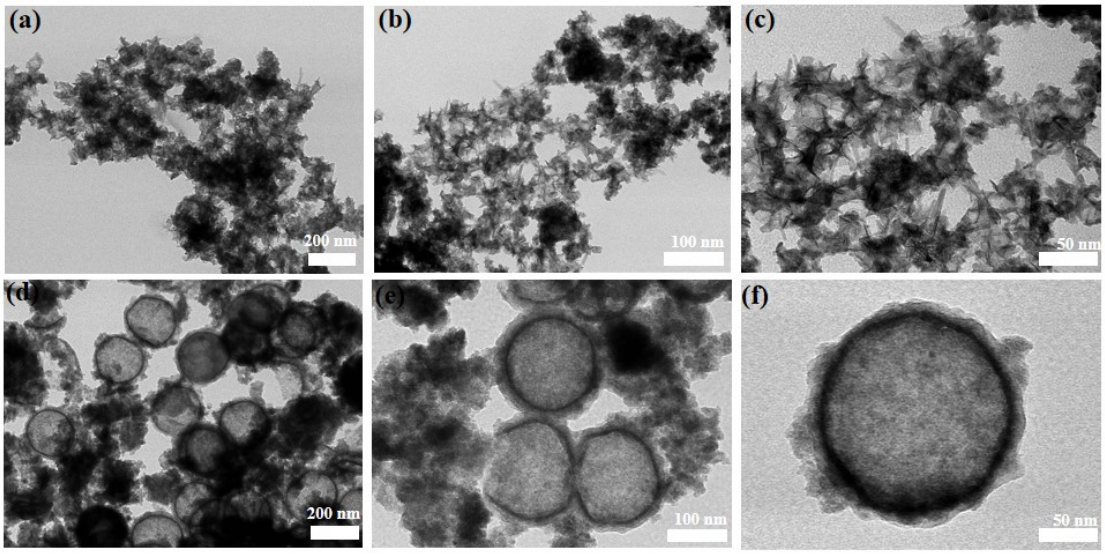

Figure S5. TEM image at different magnifications of (a-c)MnO_2-HNS, and (d-f) Fe_3O_4@C-HNS.

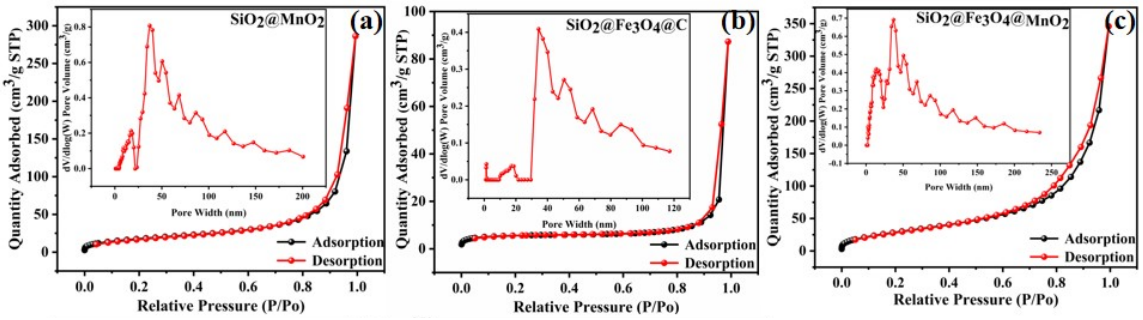

Figure S6. The nitrogen adsorption-desorption isotherms and the corresponding pore size distribution (inset) of (a) SiO_2@MnO_2, (b) SiO_2@Fe_3O_4@C, and (c) SiO_2@Fe_3O_4@MnO_2.

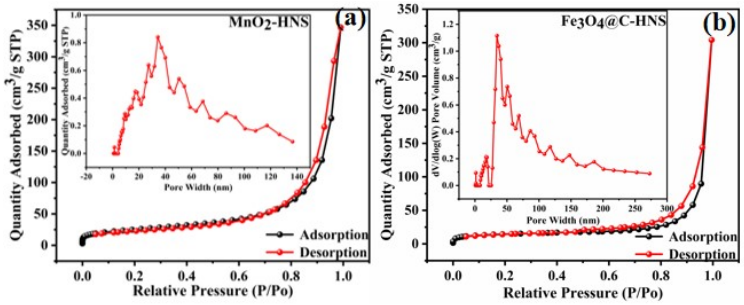

Figure S7. The nitrogen adsorption-desorption isotherms and the corresponding pore size distribution (inset) of (a) MnO_2-HNS, and (b) Fe_3O_4@C-HNS.

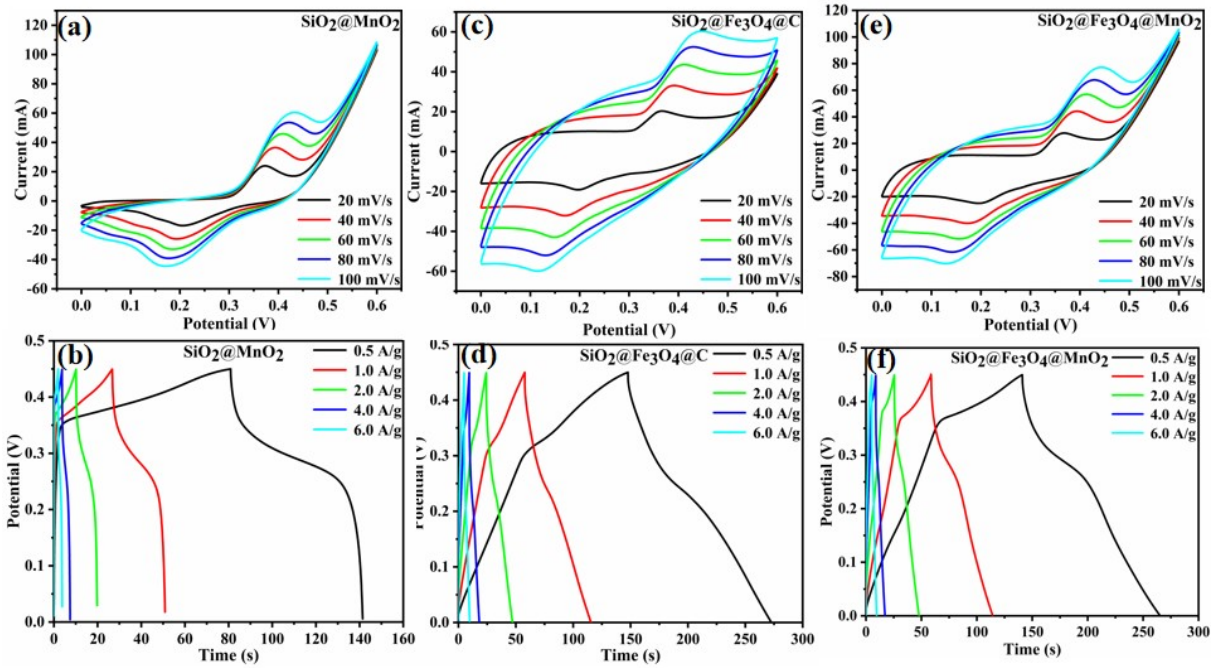

Figure S8. CV curves (a, c and e) and GCD (b, d and f) curves of (a and b) SiO_2@MnO_2, (c and d) SiO_2@Fe_3O_4@C, and (e and f) SiO_2@Fe_3O_4@MnO_2.

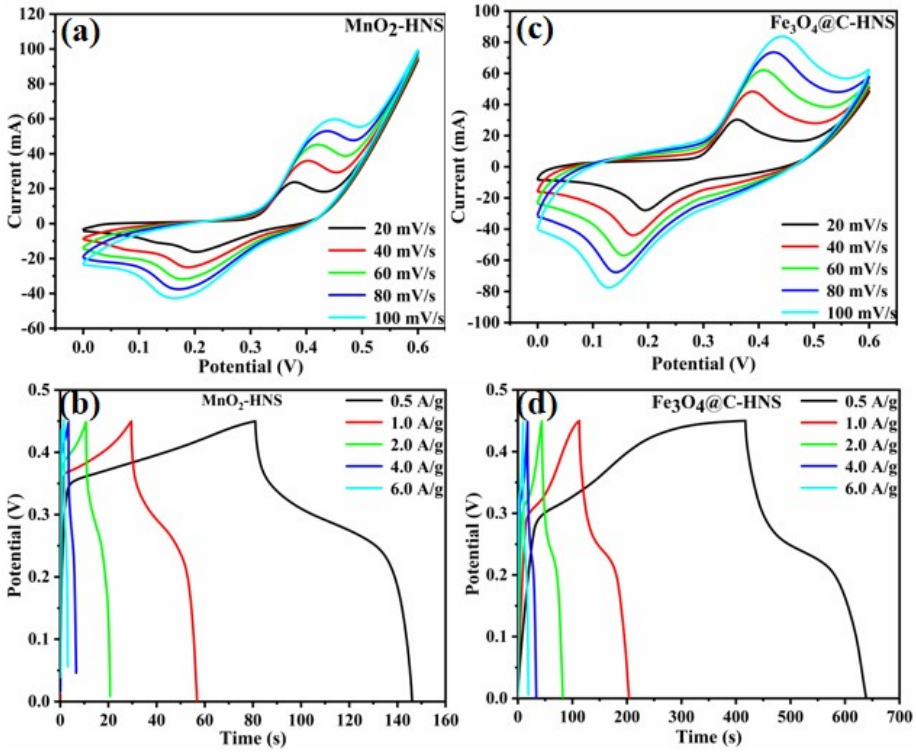

Figure S9. CV curves (a and c) and GCD (b and d) curves of (a and b) MnO_2-HNS, and (c and d) Fe_3O_4@C-HNS.

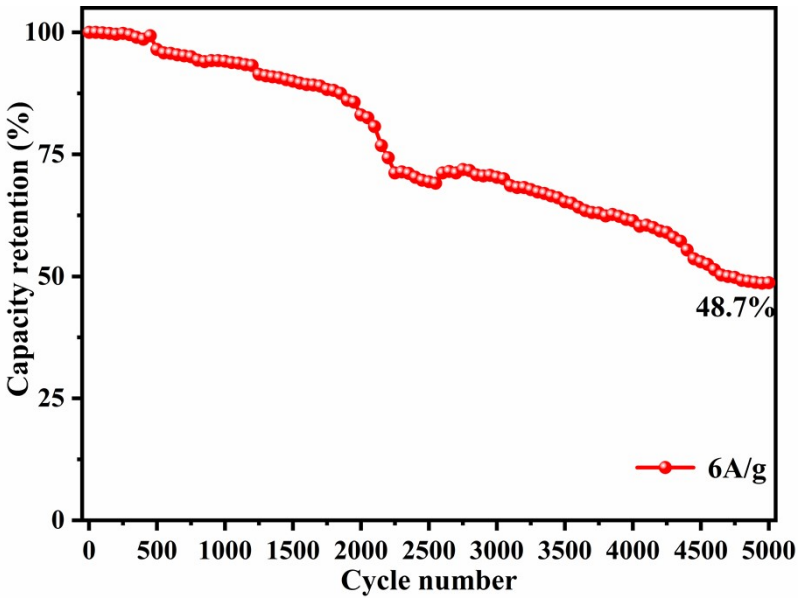

Figure S10. The cycling stability measured via the GCD experiments at 6 A g^{-1} of Fe_3O_4@MnO_2-HNS.

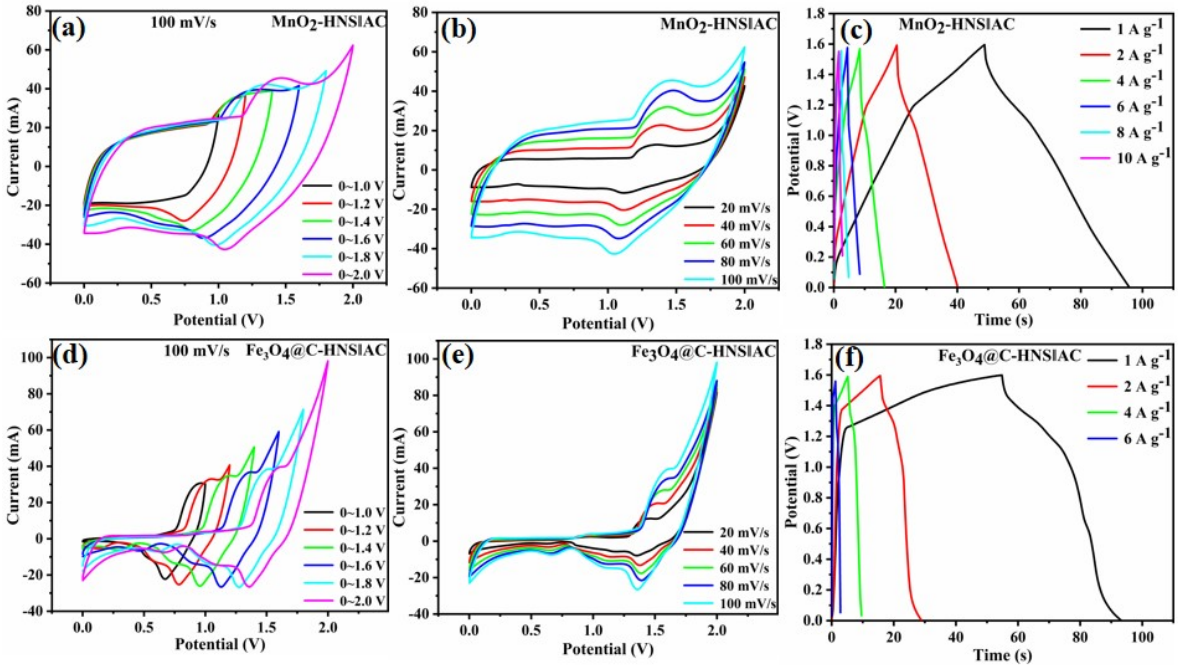

Figure S11. (a and d) CV curves at various potential windows at 100 mV s^{-1}, (b and e) CV curves at various scan rates, (c and f) GCD curves at various current densities of (a-c) MnO_2-HNS||AC, and (d-f) Fe_3O_4@C-HNS||AC.