

New Journal of Chemistry

Electronic Supplementary Information (ESI) for

**Hierarchical hollow microspheres $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3@C@rGO$
as high-performance cathode materials for sodium ion
batteries**

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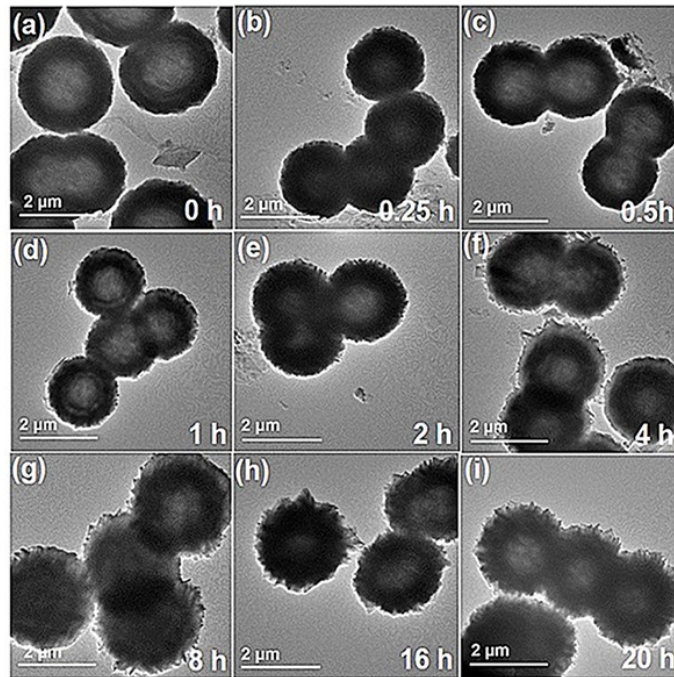


Fig. S1 TEM images of samples with different hydrothermal reaction times.

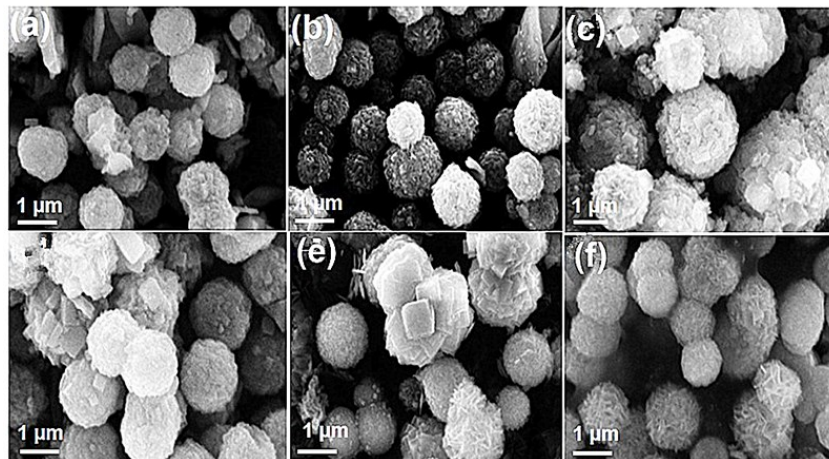


Fig. S2. (a-c) SEM images of samples at different times without glucose (2h, 8h and 20h); (d-f) SEM images of NVPF@C with different amounts of glucose (0g, 0.1g and 0.2g).

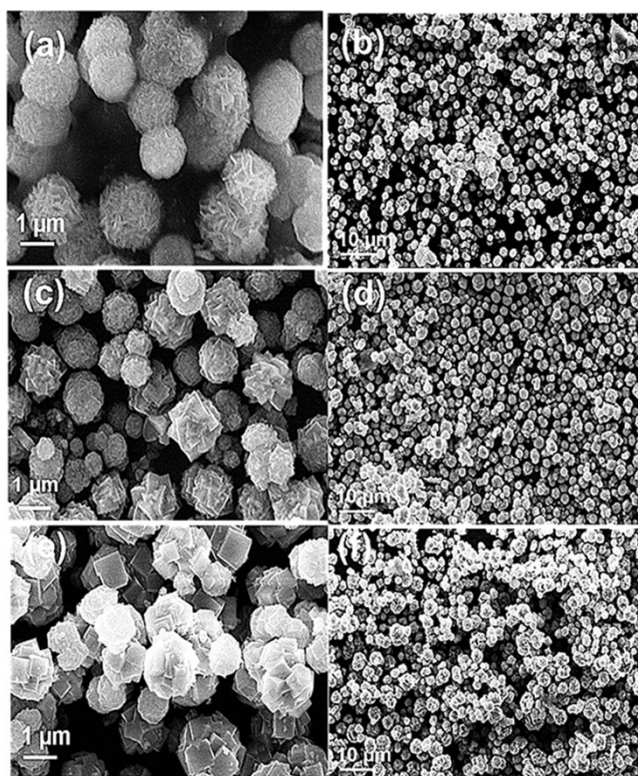


Fig. S3 (a-f) SEM images of the NVPF@C at different solvent ratios. (a, b) 1:7, (c, d) 1:3, (e, f) 3:5.

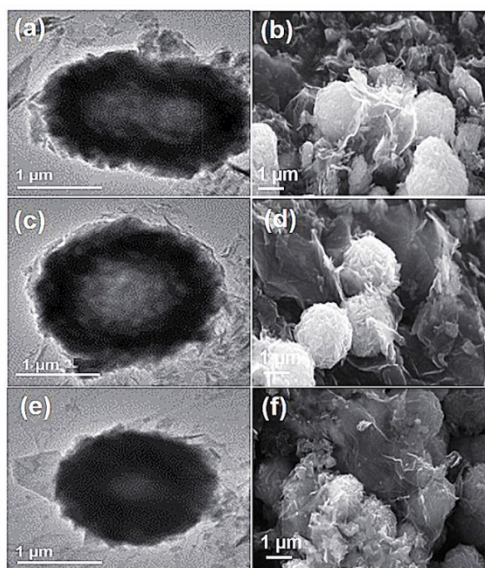


Fig. S4 TEM and SEM images of (a, b) NVPF@C@5% rGO; (c, d) NVPF@C@10% rGO and (e, f) NVPF@C@15% rGO.

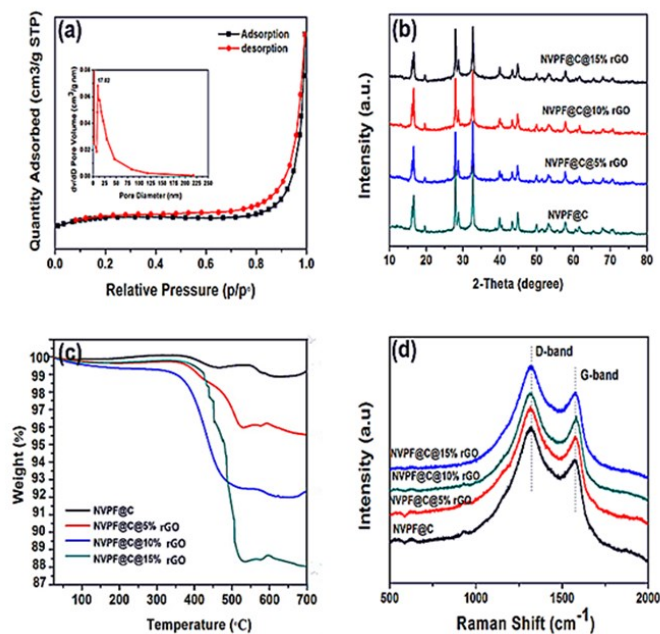


Fig. S5 (a) Nitrogen adsorption and desorption isotherm of NVPF@C(inset: pore-size distribution curves). (b) XRD patterns, (c) TGA and (d) Raman scattering spectrums of the NVPF@C, NVPF@C@5% rGO, NVPF@C@10% rGO and NVPF@C@15% rGO.

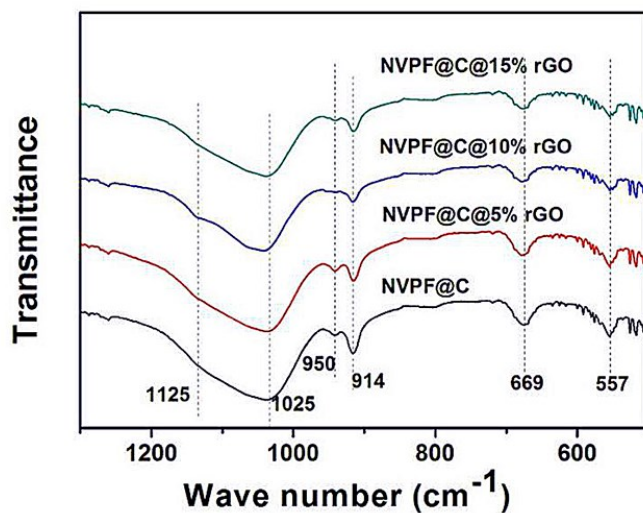


Fig. S6 FTIR spectras of the NVPF@C, NVPF@C@5% rGO, NVPF@C@10% rGO and NVPF@C@15% rGO.

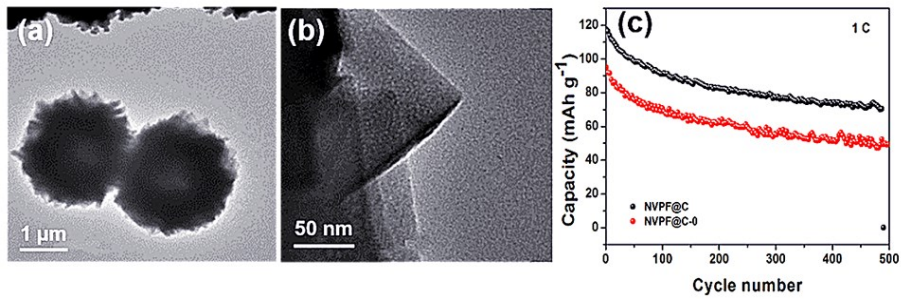


Fig. S7 (a, b) TEM images of the NVPF@C-0; (c) Cycling performances of NVPF@C and NVPF@C-0.

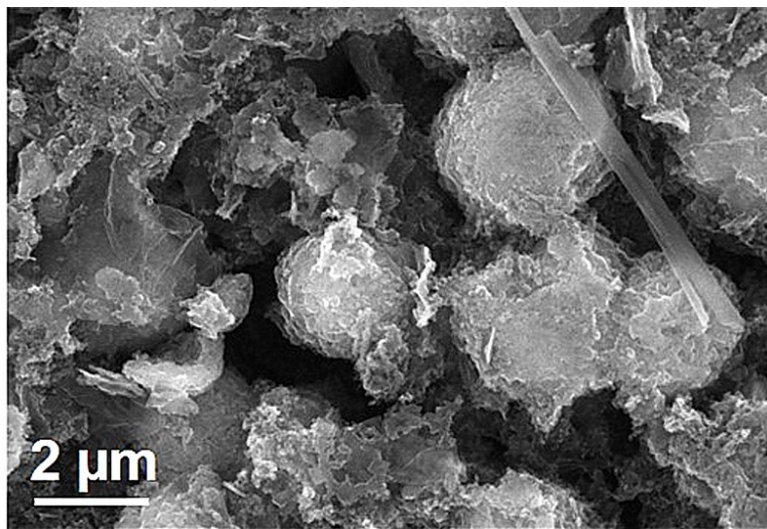


Fig. S8 The SEM image of NVPF@C@10% rGO after 1500 cycles at 5 C.

