Electronic Supplementary Material (ESI) for New Journal of Chemistry.

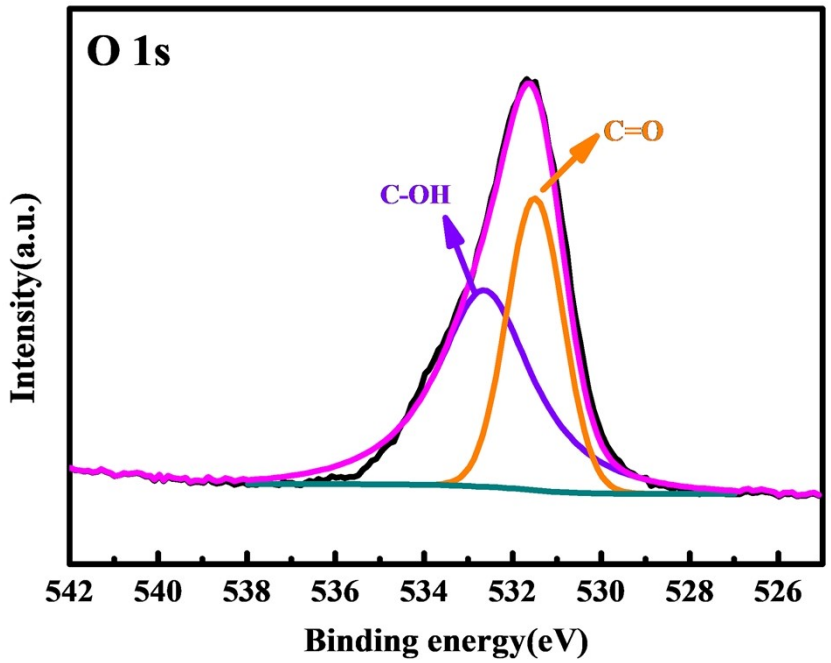
Fig. S1 The XPS spectra of Ni_3S_4/CNFs in the region of O 1s.

Fig. S2 (a) The discharge time of single electrode at 5 A g^{-1} and (b) cycle performance of Ni-Zn batteries with different contents of CNFs at current density of 5 A g^{-1}.

Fig. S3 (a) The discharge time of single electrode at 5 A g^{-1} and (b) the cycle performance of Ni_3S_4/CNFs//Zn, Ni_3S_4-CNFs//Zn and Ni_3S_4//Zn at the current density of 5 A g^{-1}.

Fig. S4 The cycle performace curves of Ni_3S_4/CNFs//Zn and Ni_3S_4/CNFs-without G//Zn at current density of 5 A g^{-1}

Fig. S5 The photo of disassembling from Ni_3S_4/CNFs//Zn and Ni_3S_4-CNFs//Zn SEM micrographs of (b) Zn electrode; (c) cathode electrode of Ni_3S_4/CNFs and (e) Zn electrode; (f) cathode electrode of Ni_3S_4-CNFs after 100 cycles.



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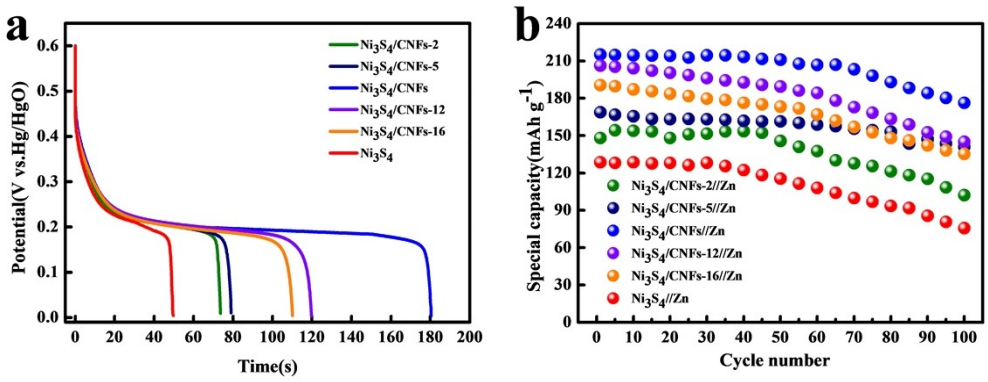

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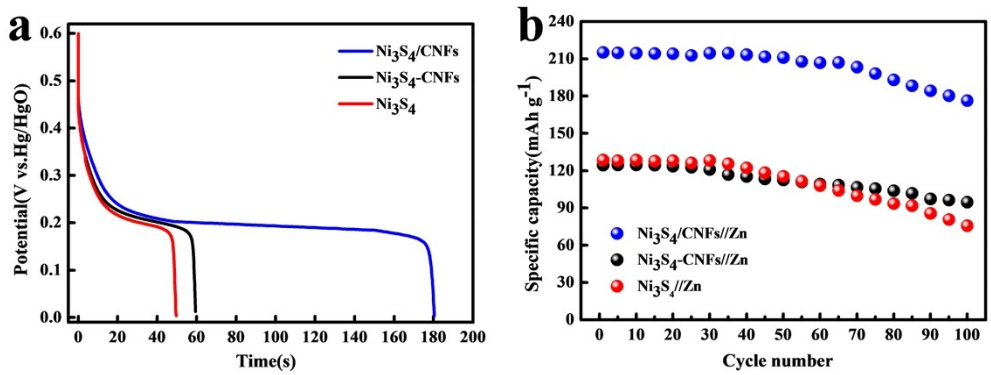

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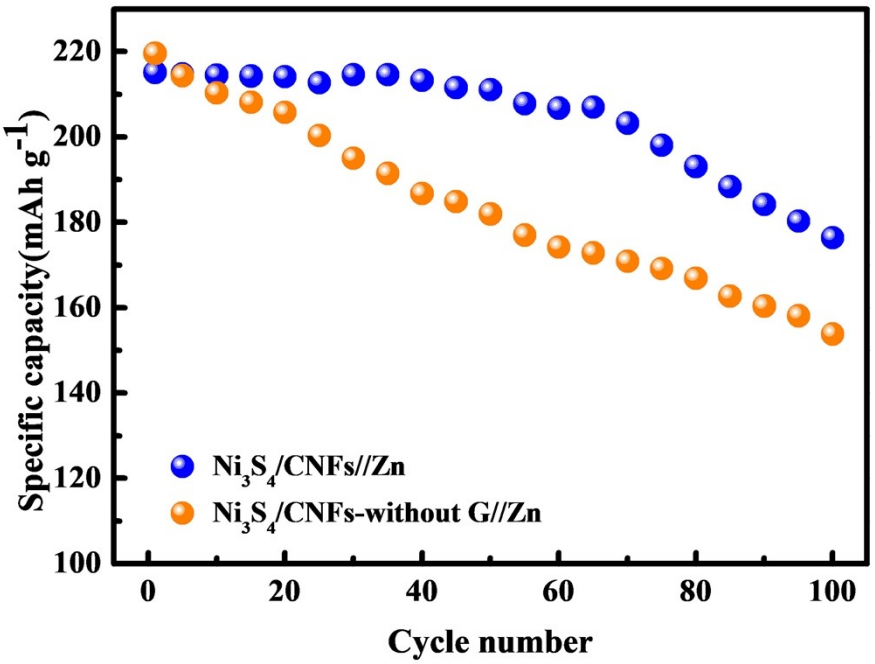

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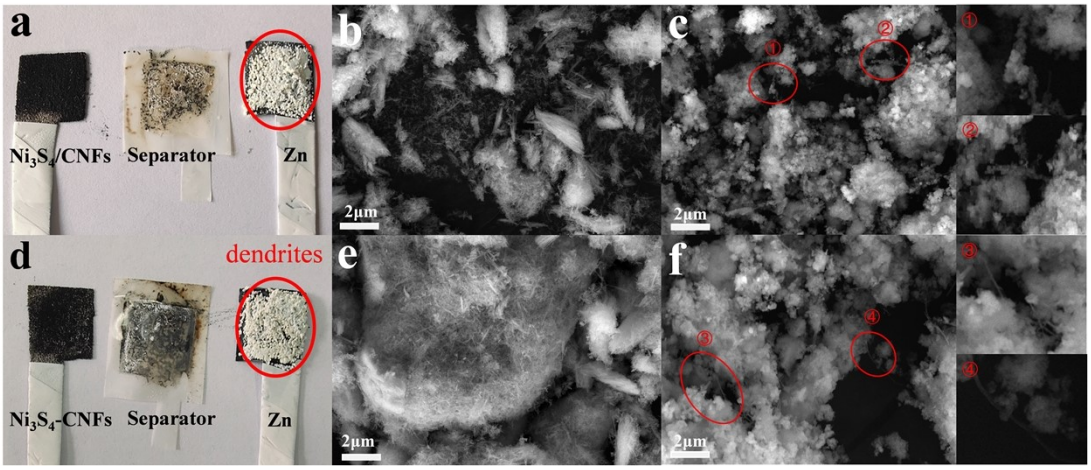

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