Electronic Supplementary Information

Graphene-like nanocomposites anchored by Ni3S2 Slices for Li-ion storage

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Table S1. The names and the corresponding experimental parameters of the synthetic samples.

samples	The initial dosage of $Ni(NO_3)_3 \cdot 9H_2O$	The initial dosage of GO	The initial dosage of glucose
Ni_3S_2	0.001 mol	-	-
Ni_3S_2-RGO	0.001 mol	0.02 g	-
Ni_3S_2@C-RGO	0.002 mol	0.02 g	0.001mol
Ni_3S_2@C-RGO-1	0.001 mol	0.02 g	0.001mol
Ni_3S_2@C-RGO-2	0.003mol	0.02 g	0.001mol

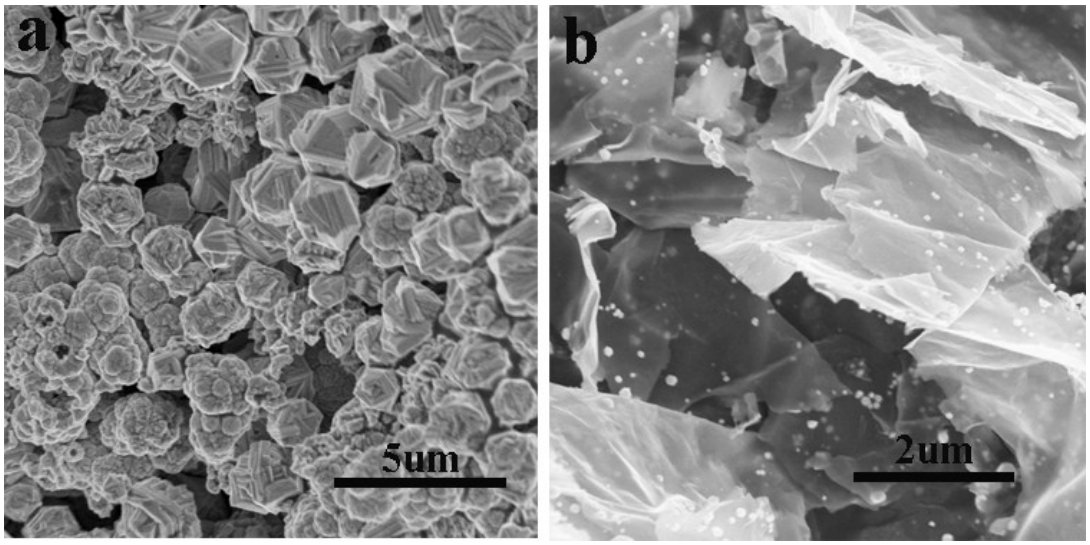

Fig. S1. SEM images of (a) Ni_3S_2 and (b) Ni_3S_2-RGO samples, respectively.

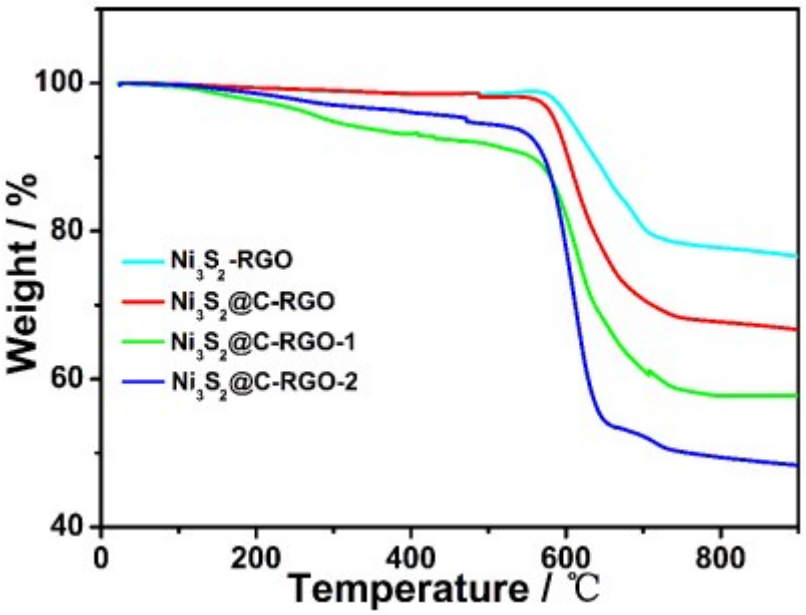

Fig. S2 TG curves for pure Ni_3S_2-RGO, Ni_3S_2@C-RGO, Ni_3S_2@C-RGO-1 and Ni_3S_2@C-RGO-2 composite.

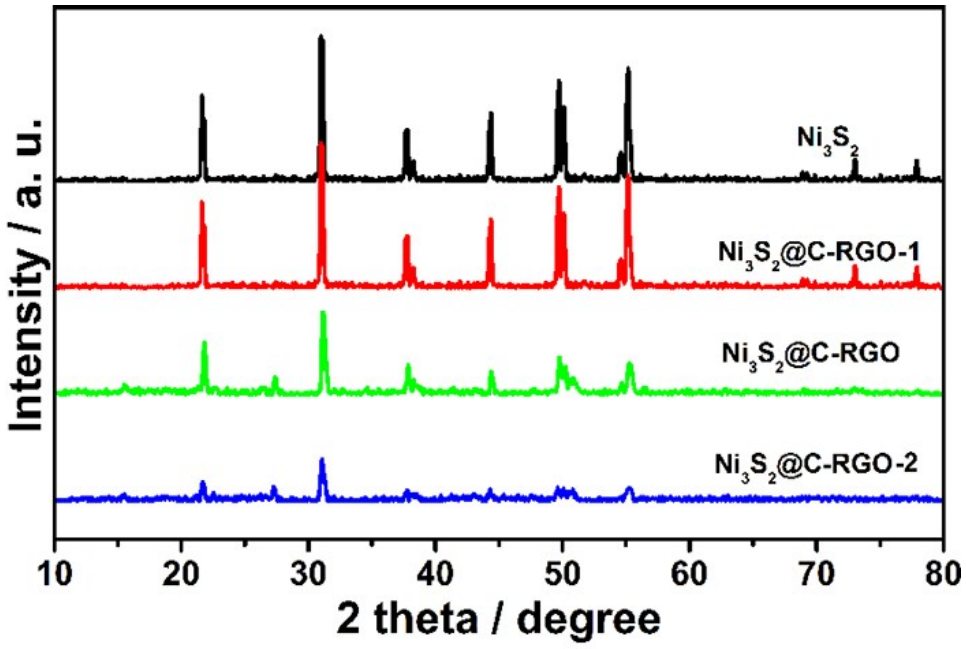

Fig.S3 XRD patterns for Ni_3S_2, Ni_3S_2@C-RGO, Ni_3S_2@C-RGO-1 and Ni_3S_2@C-RGO-2 composite.

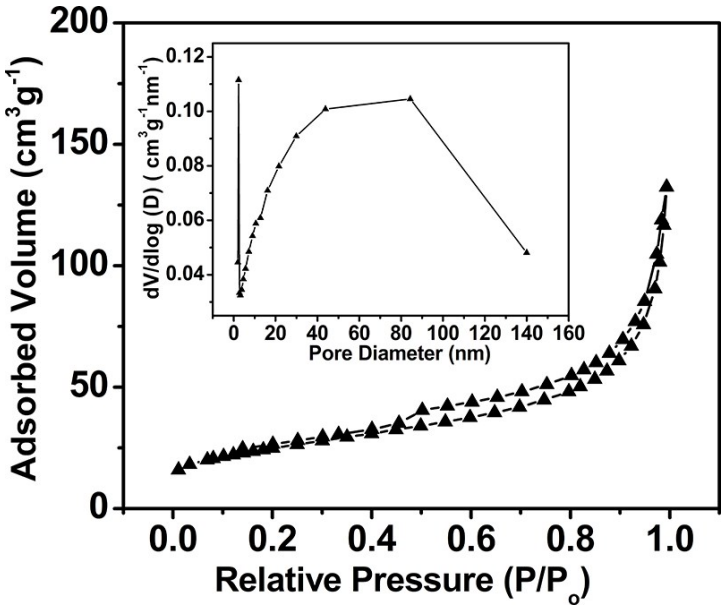

Fig. S4 N_2 adsorption/desorption isotherms at 77 K and the corresponding NLDFT PSD curves of the Ni_3S_2@C-RGO.

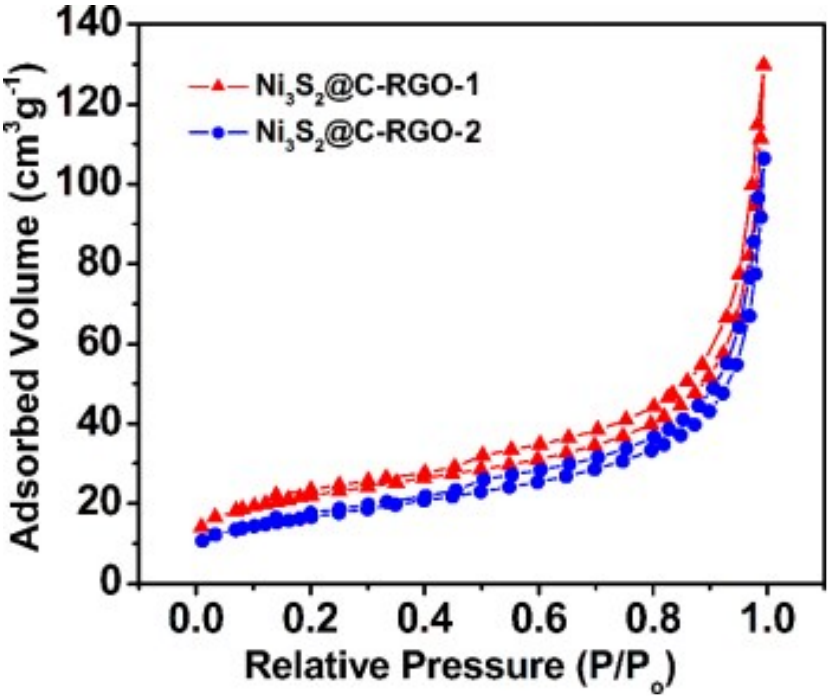

Fig. S5 N_2 adsorption/desorption isotherms at 77 K and the corresponding NLDFT PSD curves of the Ni_3S_2@C-RGO-1 and Ni_3S_2@C-RGO-2.

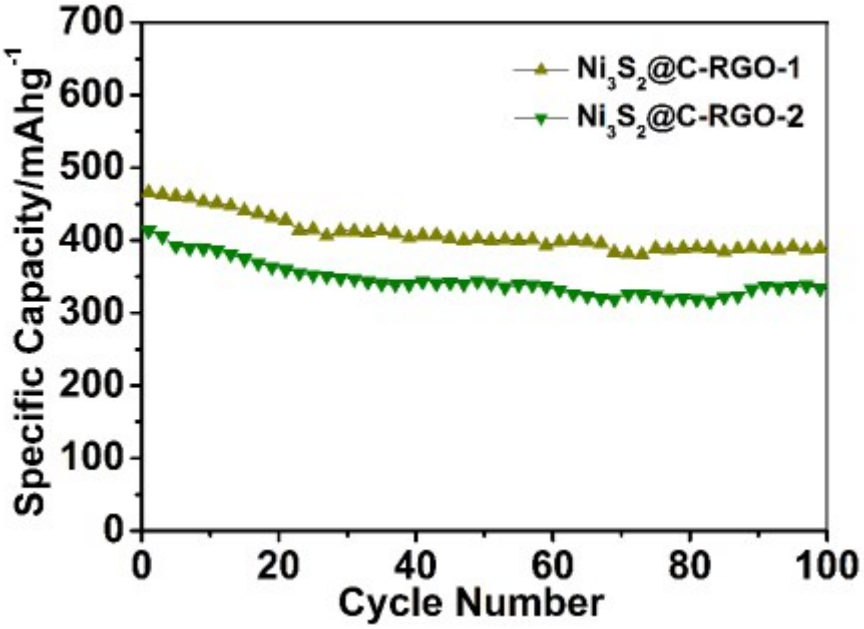

Fig. S6 Cyclic performance of the Ni_3S_2@C-RGO-1, and Ni_3S_2@C-RGO-2 electrodes for 100 cycles at rate of 100 mA g^{-1}.

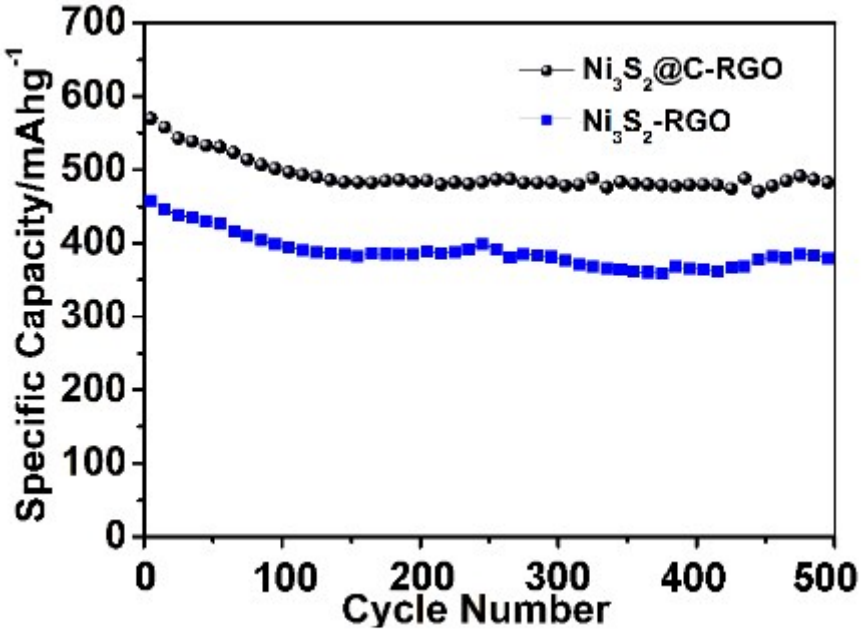

Fig. S7 Cyclic performance of the Ni_3S_2-RGO, and Ni_3S_2@C-RGO electrodes for 100 cycles at rate of 100 mA g^{-1}.

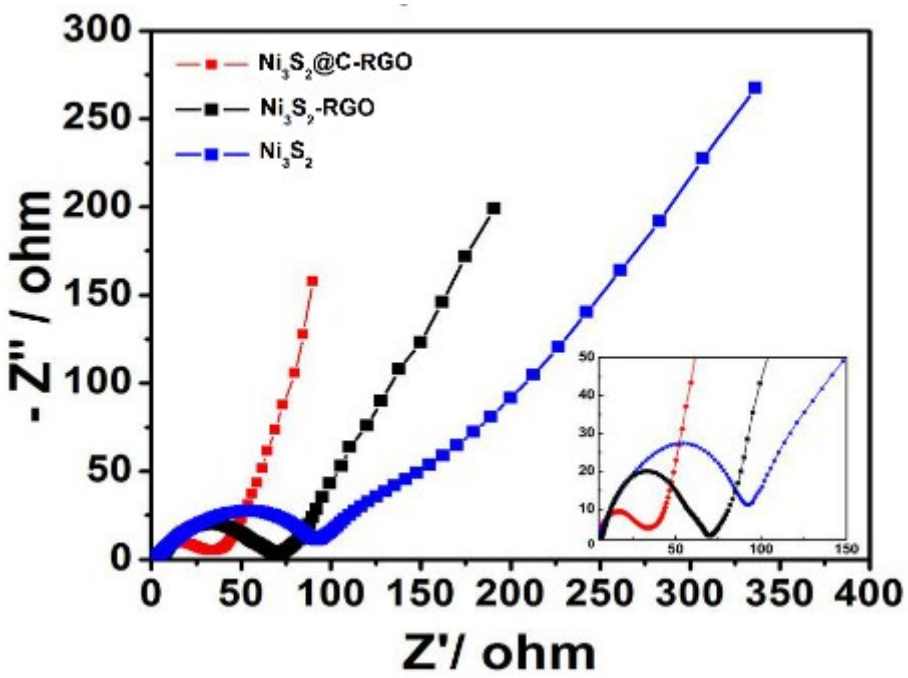

Fig. S8 Nyquist plots for Ni_3S_2, Ni_3S_2-RGO and Ni_3S_2@C-RGO electrodes in the frequency range from 100 kHz to 100 mHz.

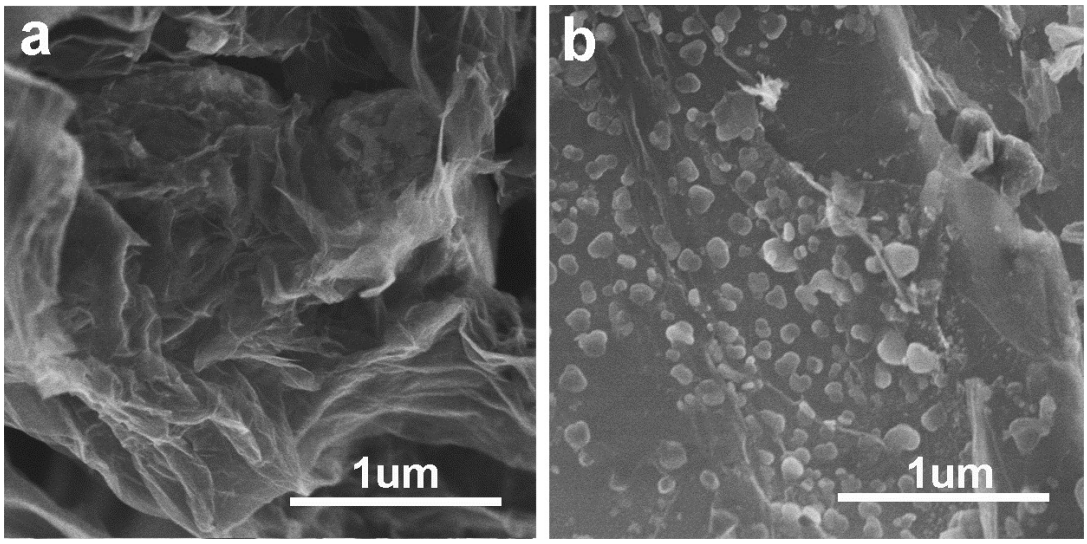

Fig. S9 SEM images of the Ni_3S_2-RGO, and Ni_3S_2@C-RGO electrodes after 500 cycles at at rate of 100 mA g^{-1}.