

Smart construction of 3D N-doped graphene honeycombs with $(\text{NH}_4)_2\text{SO}_4$ as a multifunctional template for Li-ion battery anode: “A choice serves three purposes” †

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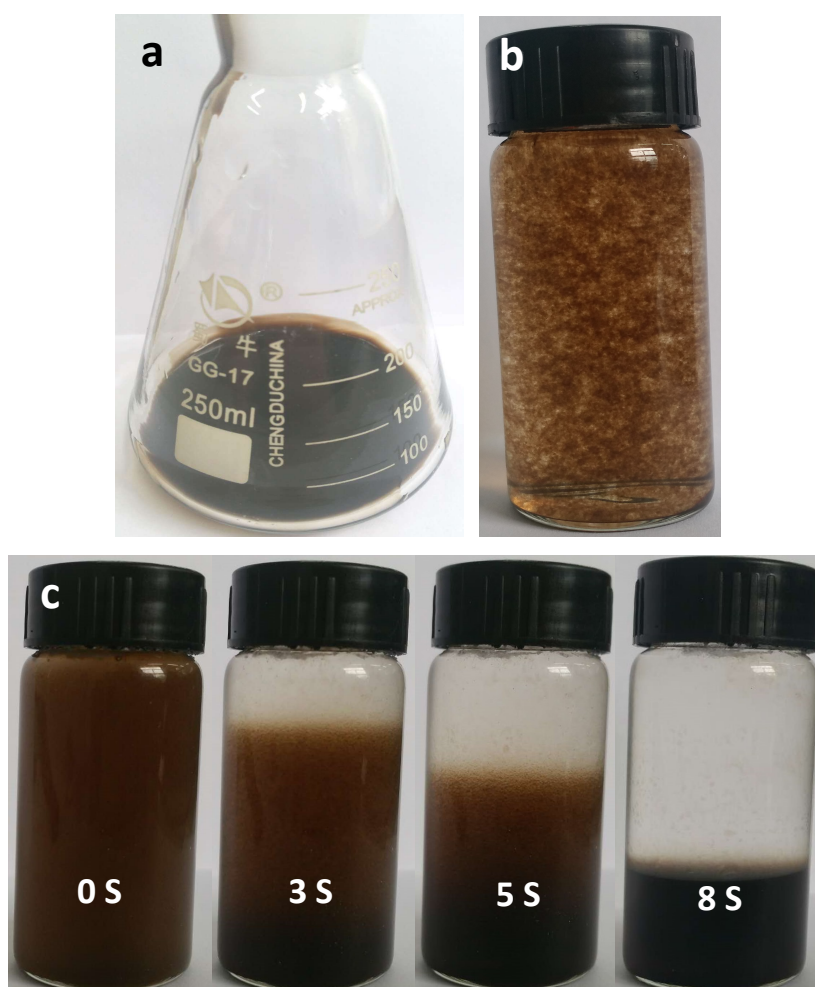


Figure S1. Photographs of the GO slurry (a); the flocculent precipitate (b) when mixing GO with

ammonia; (c) the settlement process of the $\text{GO} @ (\text{NH}_4)_2\text{SO}_4$.

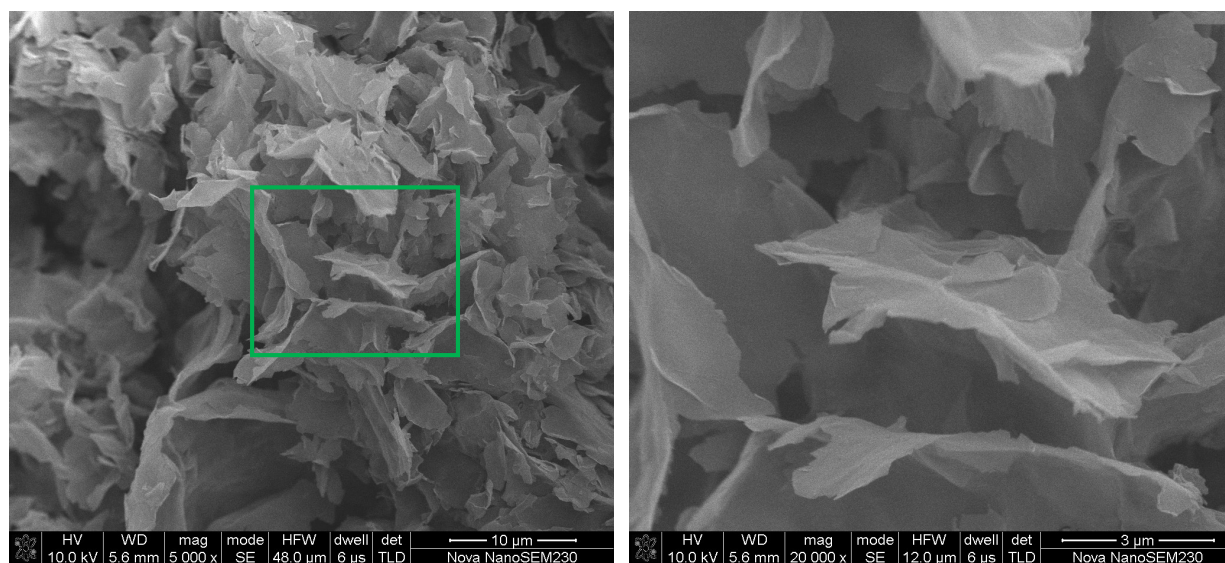


Figure S2 SEM images of the bare-rGO sample synthesized without adding the ammonia solution.

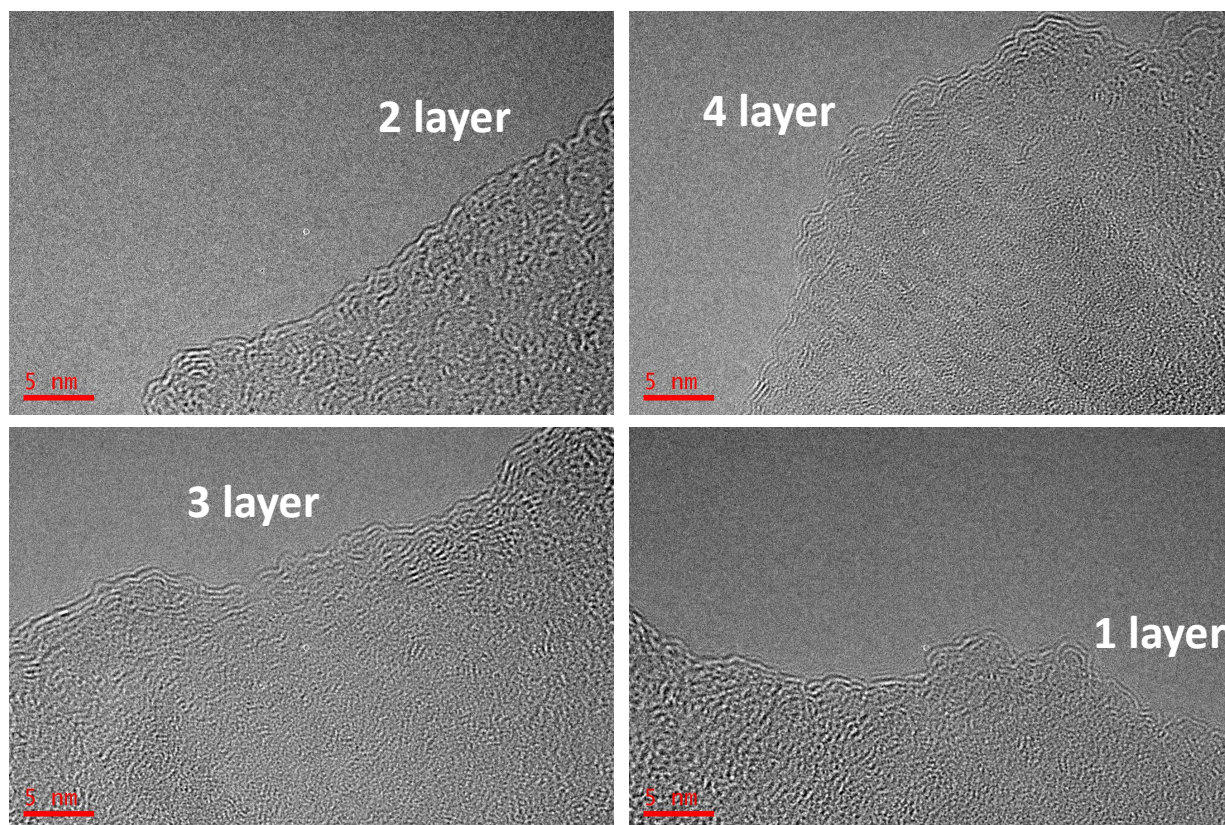


Figure S3. HRTEM images of 3D-NHrGO sheets.

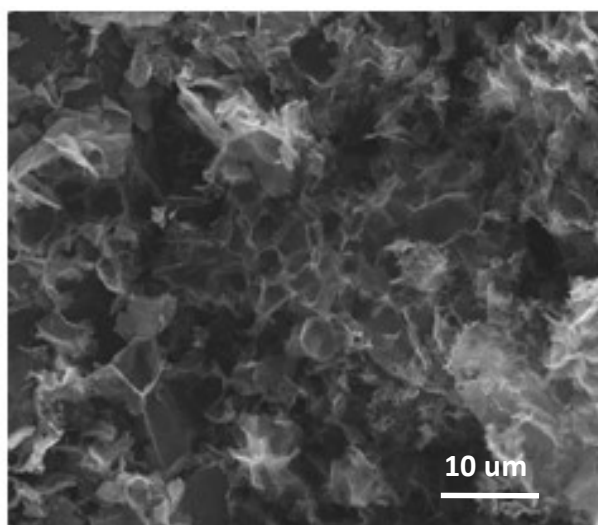


Figure S4. SEM image of 3D-NHrGO after 100 cycles at 200 mA g^{-1} .

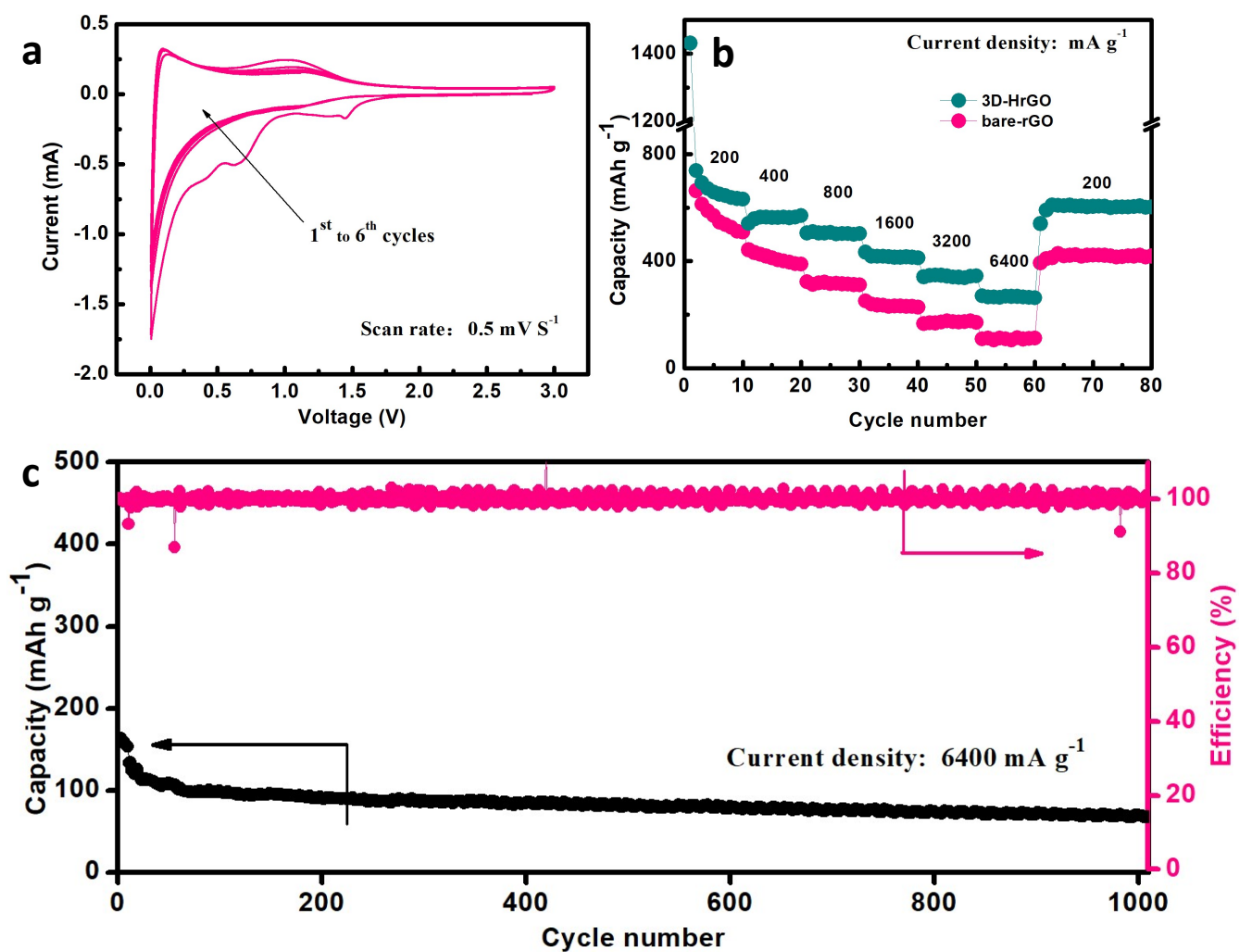


Figure S5. (a) CV curves of the bare-rGO sample; (b) Comparison of the rate performances of

3D-NHrGO and bare-rGO samples; (c) long-term cycle performance of bare-rGO.

Table S1 ICP-MS analysis result of the 3D-NHrGO.

Element	Content (ug/g)	Element	Content (ug/g)	Element	Content (ug/g)	Element	Content (ug/g)
Hg	----	Mn	52	Sc	----	Ba	4.2
Se	----	Bi	----	K	71.5	Al	2.9
Sn	1.8	Ni	6.1	Ag	----	Nb	----
Zn	3.2	Ta	----	Ti	4.3	W	0.5
Sb	----	Ga	----	Zr	1.6	S	61.5
Ce	----	Co	0.6	Y	----	As	----
Pb	8.9	Fe	7.4	Ca	8.4	Mo	3.0
Cd	0.1	Cr	6.7	Cu	4.3	P	2.2
In	----	Si	9.2	La	----	V	0.8
Au	----	Na	6.4	Pd	----	Pt	----
B	6.6	Nd	----	Mg	7.1	Be	----