Supporting Information for

Bi Nanoparticles Anchored in N-Doped Porous Carbon as Anode of High Energy Density Lithium Ion Battery

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Supplementary Figures and Table

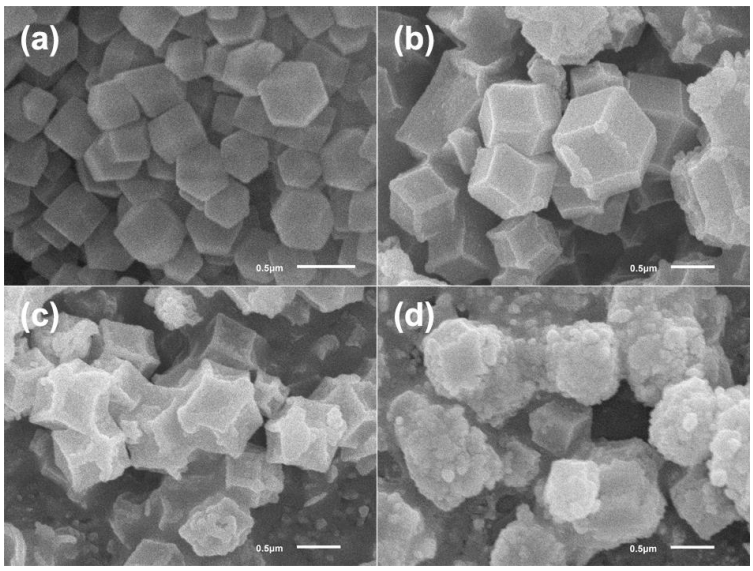

Fig. S1 SEM images of Zn@NC after ZIF-8 calcination at **a** 500 °C, **b** 600 °C, **c** 700 °C and **d** 800 °C

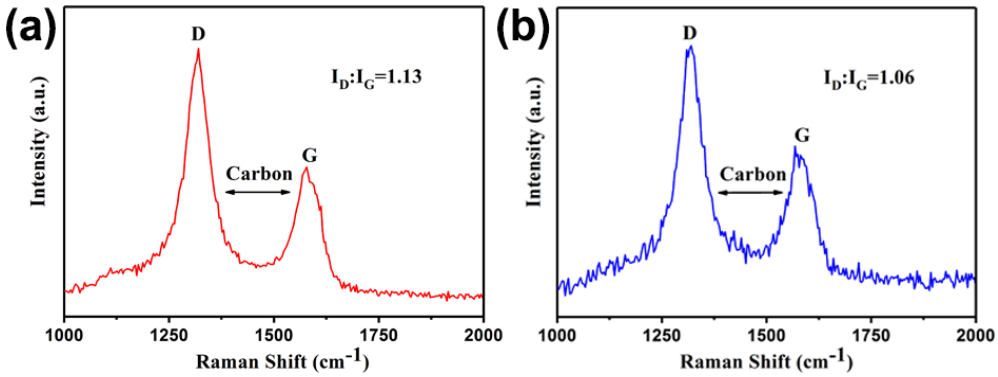

Fig. S2 Raman spectra of **a** Zn@NC and **b** Bi@NC

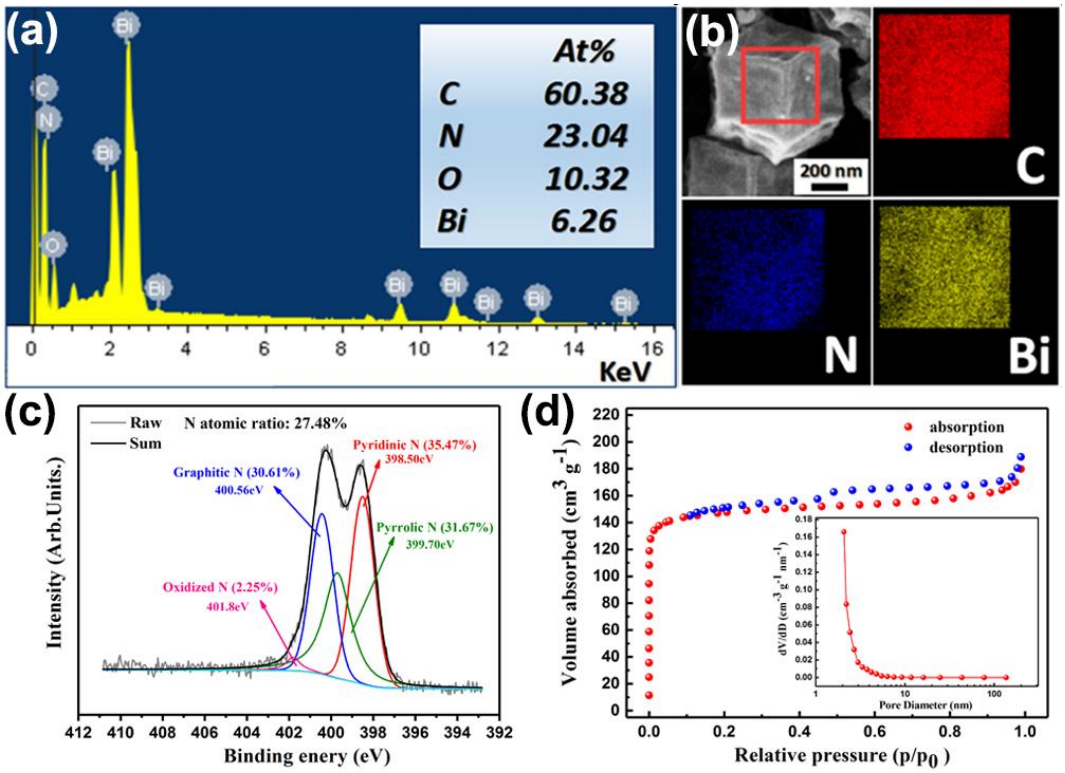

Fig. S3 a EDS pattern and **b** mappings; **c** N 1s XPS spectra, **d** N_2 adsorption-desorption and corresponding pore size distribution curves of Bi@NC

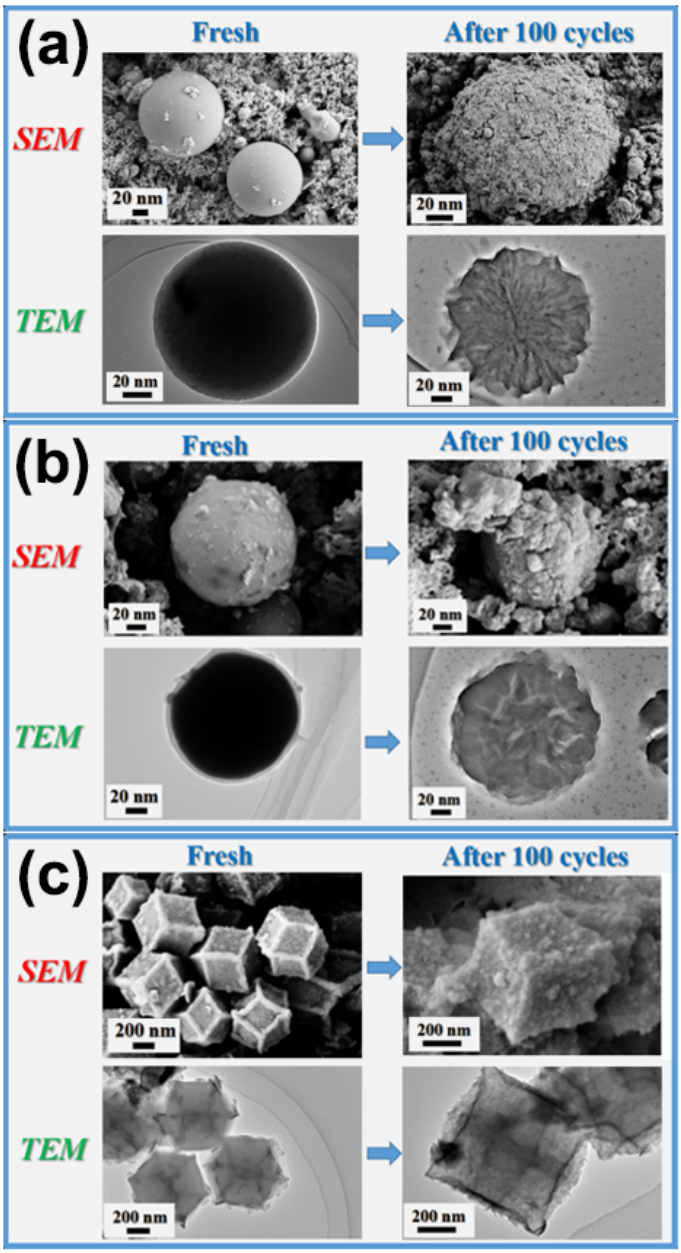

Fig. S4 SEM and TEM images of **a** bare Bi, **b** Bi@C and **c** Bi@NC before and after cycling

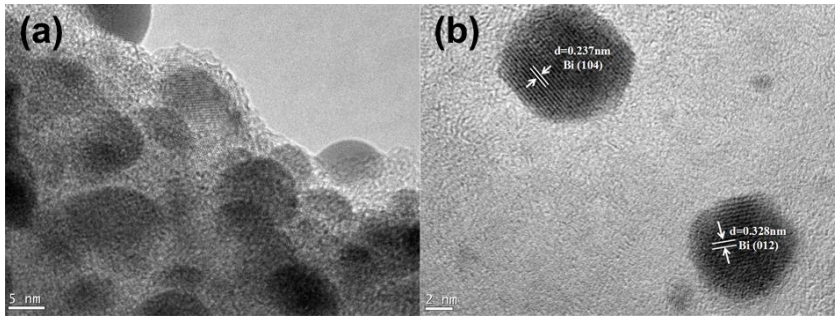

Fig. S5 TEM images of **a** Bi@NC surface and **b** interior after 100 cycles

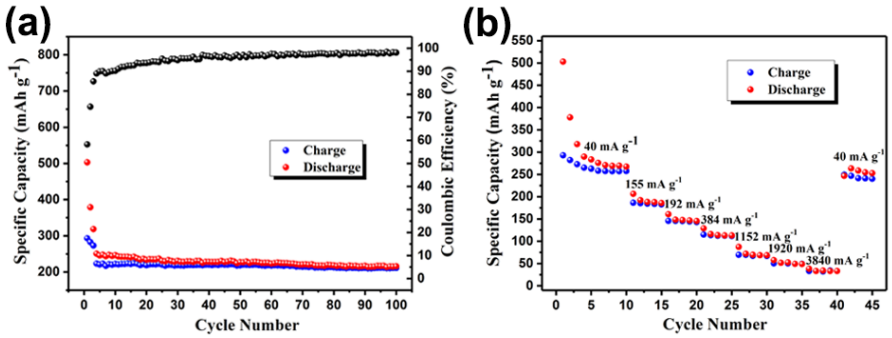

Fig. S6 a Cyclic stability and **b** rate capability of NC

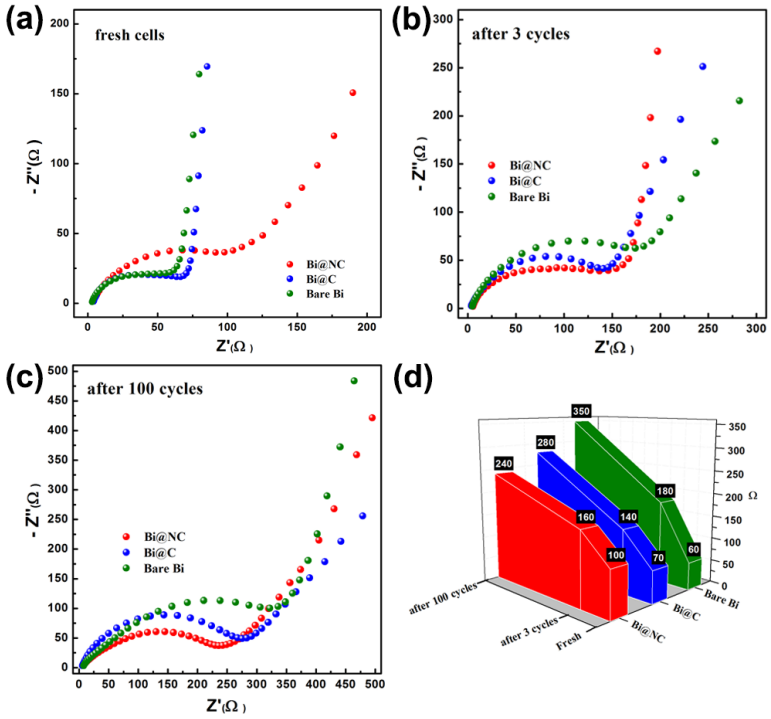

Fig. S7 a, b, c Evolution of electrochemical impedance spectra and **d** interfacial resistances of Bi@NC, Bi@C and bare Bi electrodes before and after cycling

Table S1 Comparisons of electrochemical performance of various electrodes

Electrode	Potential range (V)	Current density (mA g^{-1})	Capacity (mAh g^{-1})	First cycle coulombic efficiency (%)	Reference
Bi@C core-shell nanowires	0.00 ~ 2.5	100	408	63	[15]
Bi@C microspheres	0.01~2.0	100	280	37	[23]
Bi@C nanocomposite	0.00 ~ 2.0	100	300	71	[21]
Bi/Al_2O_3/C	0.00 ~ 2.0	100	310	71	[21]
Bi@NC	0.01~2.5	80	285	65	This work