## Supporting Information

## Facile synthesis of nitrogen-doped, hierarchical porous carbon with high surface area: activation effect of nano-ZnO template

Shukai Yu,<sup>a</sup> Haoran Wang,<sup>a</sup> Chen Hu,<sup>b</sup> Qizhen Zhu,<sup>a</sup> Ning Qiao<sup>a</sup> and Bin Xu<sup>a,\*</sup>

<sup>a</sup> State Key Laboratory of Organic-Inorganic Composites, Beijing Key Laboratory of Electrochemical Process and Technology for Materials, Beijing University of Chemical Technology, Beijing 100029, China

<sup>b</sup> China Electric Power Research Institute, Beijing 100192, China

\*Corresponding author. E-mail: binxumail@163.com.



Figure S1 TEM image of the ZnO particles.



Figure S2 The photograph and XRD patterns of volatile in the carbonization process of 700  $^{\circ}\mathrm{C}$ 



**Figure S3** The changes of specific surface area (a), total pore volume (b), micropores volume (c) and mesopores volume (d) at different activation temperature.



**Figure S4** (a) charge-discharge curves at a current load of 0.1 A  $g^{-1}$ ; (b) CV curves of the sample GZnC-750 at increased scan rates; (c) CV curves of the sample GZnC-750 at a scan rate of 2 mV s<sup>-1</sup> before and after 10000 galvanostatic charge-discharge cycles; (d) rate performance of the GZnC-750 samples before and after 10000 galvanostatic charge-discharge cycles.

Sample	S <sub>BET</sub>	Pore volume (cm <sup>3</sup> g <sup>-1</sup> )		
	$(m^2g^{-1})$	Total	Micro	Meso
GC-700	749	0.855	0.317	0.538
GC-750	723	0.864	0.304	0.560
GC-800	698	0.868	0.295	0.573
GC-900	651	0.915	0.269	0.646
GC-950	650	0.925	0.270	0.655

 Table S1 Porosity parameters of the GC samples prepared at different pyrolysis temperatures.