## **Supporting Information**

## N-rich Carbon Coated CoSnO<sub>3</sub> Derived from Insitu Construction of Co-MOF with Enhanced Sodium Storage Performance

Guoqiang Zou<sup>1</sup>, Hongshuai Hou\*<sup>1</sup>, Ganggang Zhao<sup>1</sup>, Peng Ge<sup>1</sup>, Dulin Yin<sup>2</sup>, and Xiaobo Ji<sup>1</sup>

<sup>1</sup> College of Chemistry and Chemical Engineering, Central South University, Changsha, 410083, China.

<sup>2</sup> National & Local United Engineering Laboratory for New Petrochemical Materials & Fine Utilization of Resources, Hunan Normal University, Changsha 410081, P. R. China



**Figure S1** The color of CoSnO<sub>3</sub>-MOF-60 (a), CoSnO<sub>3</sub>-MOF-120 (b), and CoSnO<sub>3</sub>-MOF-240 (c)



Figure S2  $N_2$  adsorption-desorption isotherms of the CoSnO<sub>3</sub>-ZIF-60 and CoSnO<sub>3</sub>-ZIF-240.



Figure S3 The elemental mapping under TEM of the CoSnO<sub>3</sub>-ZIF-120.



Figure S4 The XRD pattern of the CoSnO<sub>3</sub>-NC-120.



Figure S5  $N_2$  adsorption-desorption isotherms of the CoSnO<sub>3</sub>-NC-60 (a) and CoSnO<sub>3</sub>-NC-240 (c).



**Figure S6** (a) The XPS survey of the related samples. (b) C 1s resolution spectrum of  $CoSnO_3$ -NC-120.



Figure S7 (a) the charge capacities of the as-prepared specimens. (b) the discharge/charge profiles of the half-cells utilized  $CoSnO_3$  as electrodes.