## **Supporting Information:**

## A Facile One-step Route to Synthesize Three-layer Nanostructure of CuS/RGO/Ni<sub>3</sub>S<sub>2</sub> and its High Electrochemical Performance

Kun Wang, Chongjun Zhao\*, Zhuomin Zhang, Shudi Min, Xiuzhen Qian

Key Laboratory for Ultrafine Materials of Ministry of Education, Shanghai Key Laboratory of

Advanced Polymeric Materials, School of Materials Science and Engineering, East China

University of Science and Technology, Shanghai 200237, P.R. China Tel: +86-21-6425 0838; Fax:

+86-21-6425 0838; E-mail: chongjunzhao@ecust.edu.cn

Current density (mA cm <sup>-2</sup> )	40	60	80	100	150	200
Charging capacitance (mF cm <sup>-2</sup> )	10603.6	9501.8	8334.5	6581.8	6109.1	5236.4
Discharging capacitance (mF cm <sup>-2</sup> )	10494.5	9016.4	7979.6	6356.4	5694.5	4930.9
Coulombic efficiency	98.97%	94.89%	95.74%	96.58%	93.21%	94.17%

Table S1. Charging, discharging capacitances and the corresponding coulombic efficiencies for CRNS-180-24 at various current densities.



Fig. S1 EDS mapping of CRNS composite with big sphere blocks: (a) Cu elements (red); (b) Ni elements (green) and (b inset) corresponding overlay of C, O, Cu, Ni and S elements.



Fig. S2 Cyclic voltammetry curves expressed as specific capacitance vs. cell potential for CRNS-180-24 at various scan rates.