

## Supplementary Information

### **Hexadecyl trimethyl ammonium bromide assisted growth of NiCo<sub>2</sub>O<sub>4</sub>@reduced graphene oxide/ nickel foam nanoneedle arrays with enhanced performance for supercapacitor electrodes**

**Tingting Liu<sup>1,\*</sup>, Shuai Zhou<sup>2</sup>, Xuehan Yu<sup>2</sup>, Chao Mao<sup>2</sup>, Yujie Wei<sup>2</sup>, Xinyong Yu<sup>2</sup>,  
Lei Chen<sup>1</sup>, Xin Zhao<sup>2</sup>, Guoxing Tian<sup>2</sup>, Ling Chen<sup>2,3,\*</sup>**

<sup>1</sup> Northeast Petroleum University Qinhuangdao, Qinhuangdao, Hebei 066004, China

<sup>2</sup> Hebei Key Laboratory of Applied Chemistry, College of Environmental and Chemical Engineering, Yanshan University, Qinhuangdao, Hebei 066004, China

<sup>3</sup> Hebei Key Laboratory of heavy metal deep-remediation in water and resource reuse, College of Environmental and Chemical Engineering, Yanshan University, Qinhuangdao, Hebei 066004, China

\*Corresponding authors:

\*E-mail: hhchen@ysu.edu.cn. Tel. /fax: +86 335 8061569 (L. Chen)

\*E-mail: 2008little@163.com. Tel. /fax: +86 335 8065113 (T.T. Liu)

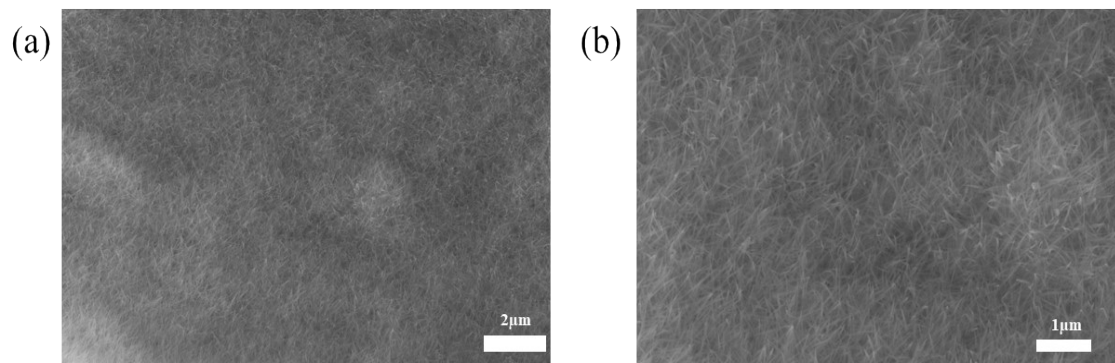


Fig. S1. SEM images of precursor of NiCo<sub>2</sub>O<sub>4</sub>