## **Supporting Information**

One-pot solvothermal synthesis and properties of 1D NiSe and NiSe-Ni<sub>3</sub>S<sub>2</sub> alloyed

compound nanorod arrays

Xia Yu, Wendong Sun,\* Ying Chu\*

Faculty of Chemistry, Northeast Normal University, Changchun, 130024, PR China

Tel: (+86) 431-8509-9320

E-mail : chuying@nenu.edu.cn; sunwd843@nenu.edu.cn

The supporting information is published in New Journal of Chemistry



**Figure S1.** The XRD patterns of the NiSe-Ni<sub>3</sub>S<sub>2</sub> products (S/Se=5:1) at different reaction time: (a) 1h, (b) 2h, (c) 4h, (d) 8h. The stars ( $\bigstar$ ) show the characteristic peak of the Ni substrate.



**Figure S2.** SEM images of the as-prepared NiSe-Ni<sub>3</sub>S<sub>2</sub> composite (S/Se=5:1) with different reaction time: (a) 1h, (c) 2h, (e) 4h, (g) 8h. The right side (b, d, f, h) denote the corresponding EDS spectra of the left products (a, c, e, g).