

Supporting Information

3D Ni₃S₂ nanosheet arrays supported on Ni foam for high-performance supercapacitor and non-enzymatic glucose detection

Huanhuan Huo, Yongqing Zhao, Cailing Xu*

State Key Laboratory of Applied Organic Chemistry, Key Laboratory of Nonferrous Metal

Chemistry and Resources Utilization of Gansu Province, College of Chemistry and Chemical

Engineering, Lanzhou University, Lanzhou, 730000, China

*Corresponding author:

Cailing Xu: Tel: +86-931-891-2589, FAX: +86-931-891-2582, Email: xucl@lzu.edu.cn

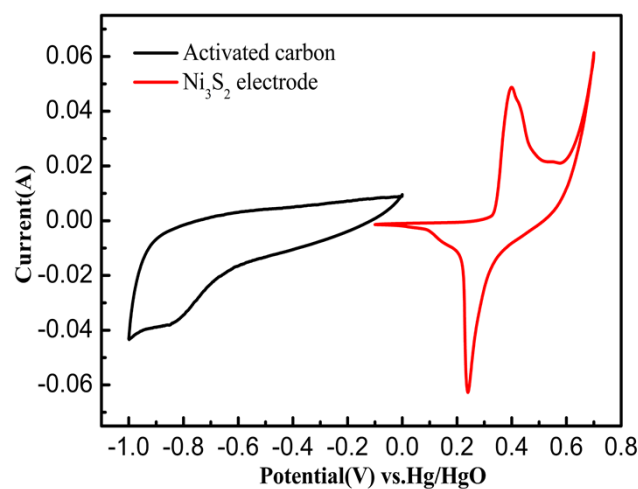


Fig. S1 CV curves of activated carbon electrode and the Ni₃S₂ electrode measured at a scan rate of 10 mV s⁻¹.

The specific capacitance of the electrode can be calculated from the CV curves according to the following equation:

$$C = \frac{\int IdV}{\nu m \Delta V}$$

Where C (F g⁻¹) is the specific capacitance of the electrode, I (A) is the voltammetric current, ν (mV s⁻¹) is the scan rate, ΔV (V) is the total potential window, and m (g) is the mass of active material within the electrode.

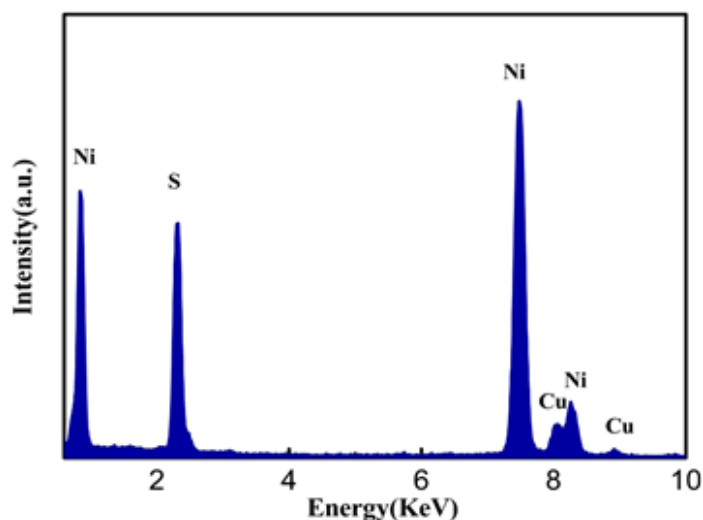


Fig. S2. The EDS spectra of the as-prepared Ni₃S₂.

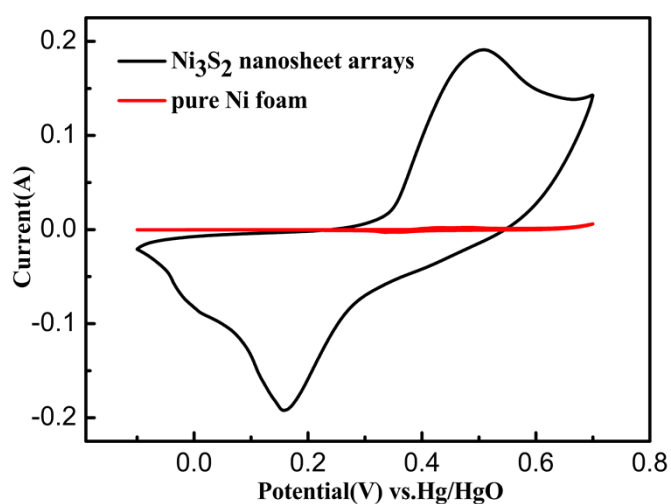


Fig.S3 CV curves of Ni₃S₂ nanosheet array electrode and pure Ni foam electrode at the scan rate of 50 mV s⁻¹.

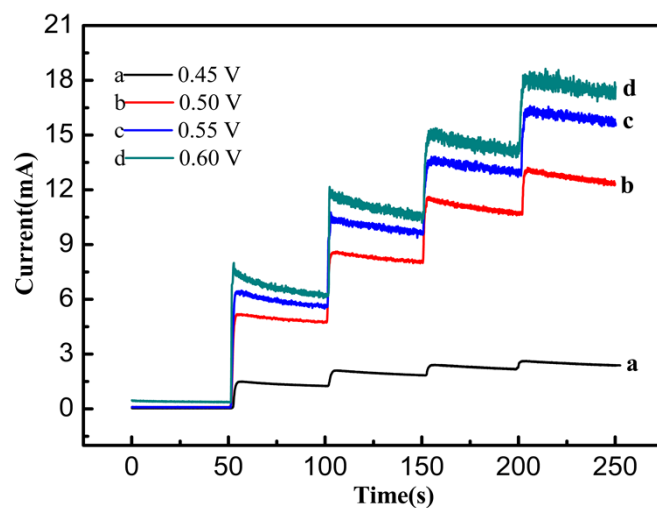


Fig. S4 Amperometric response of the Ni_3S_2 nanosheet array electrode at different potentials with successive additions of 1.0 mM glucose (a: 0.45 V, b: 0.50 V, c: 0.55 V and d: 0.60 V).