

## Supporting Information

### UV irradiation synthesis of Au-graphene nanocomposite with enhanced electrochemical sensing properties

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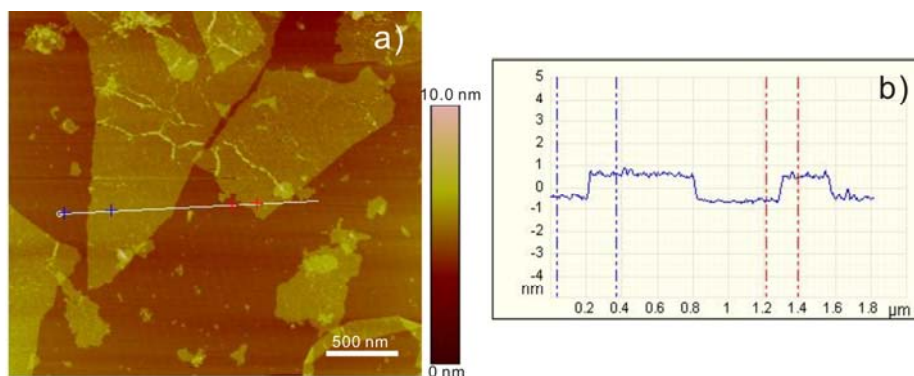
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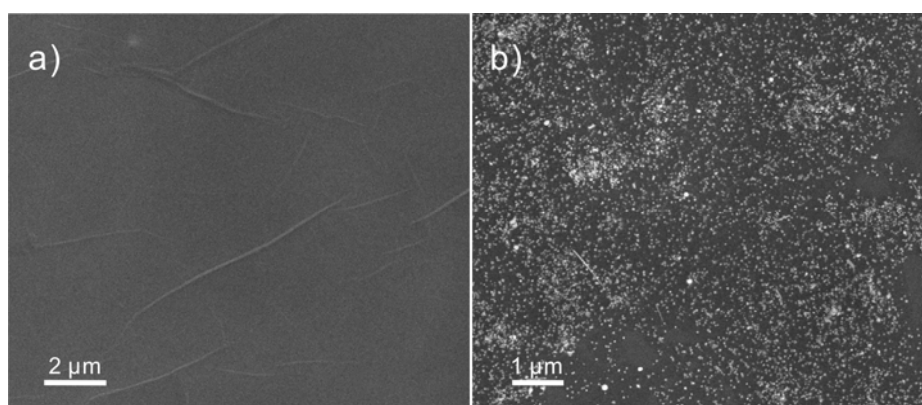
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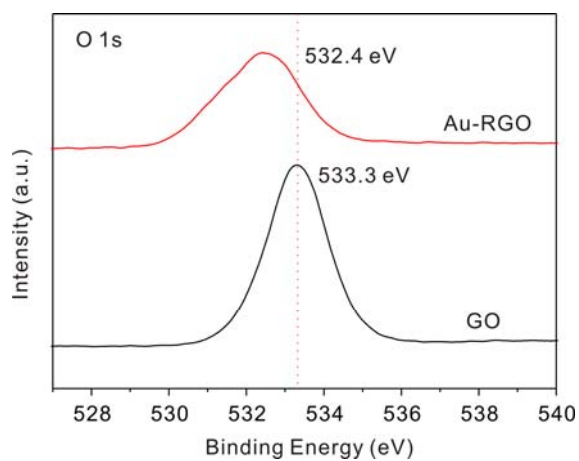
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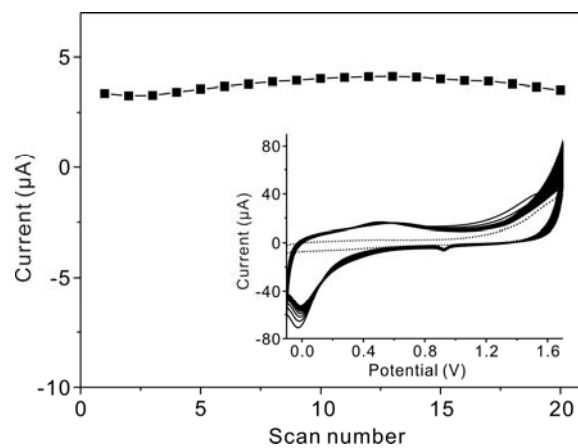
**Fig. S1.** (a) AFM image of exfoliated graphene oxide sheets. (b) the height profiles of AFM image.



**Fig. S2** SEM images of (a) graphene oxide sheets and (b) Au-reduced graphene oxide nanocomposite.



**Fig. S3** O 1s XPS spectra of GO and Au-RGO nanocomposite.



**Fig. S4** Measurements stability of Au-RGO modified GCE in 0.5 M H<sub>2</sub>SO<sub>4</sub> at a scan rate of 100 mV s<sup>-1</sup>. Data were collected from cyclic voltammograms responses at about 0.92 V shown in the inset. The dotted line refers to the response of bare GCE.