

## Supplementary Information

### **A novel reduction approach to fabricate quantum-sized SnO<sub>2</sub>- conjugated reduced graphene oxide nanocomposite as a non- enzymatic glucose sensor**

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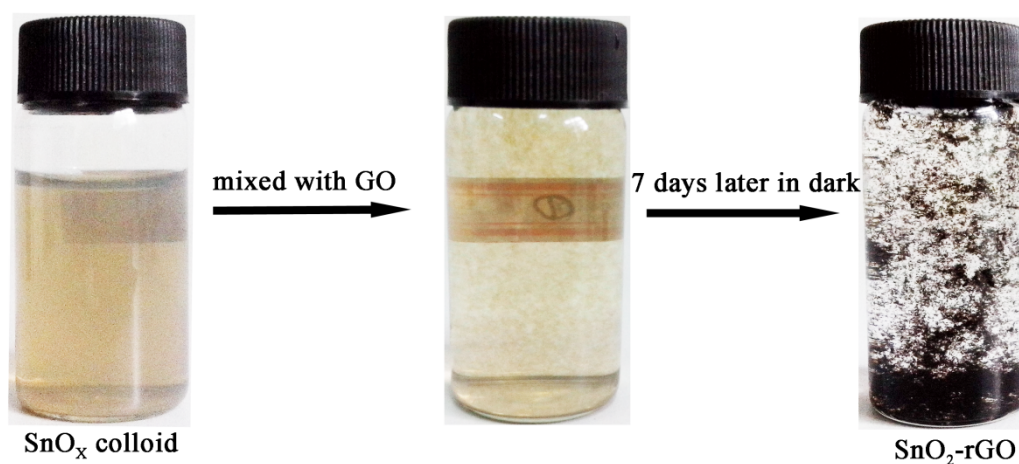
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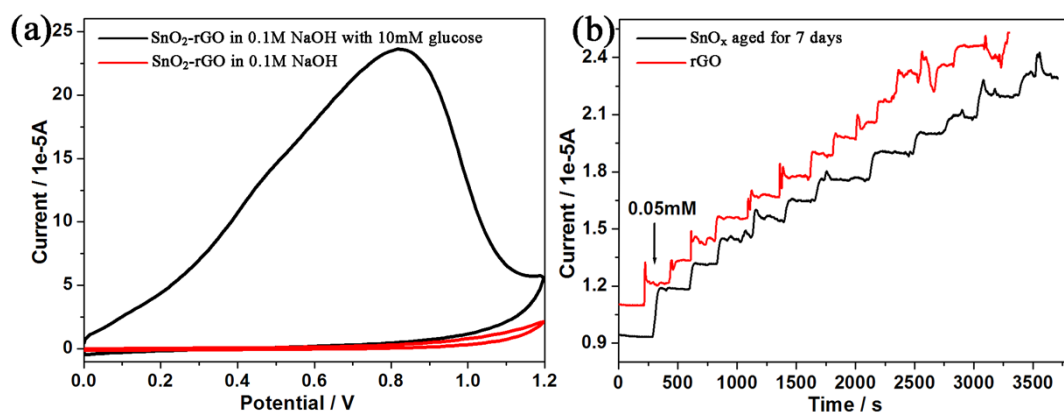
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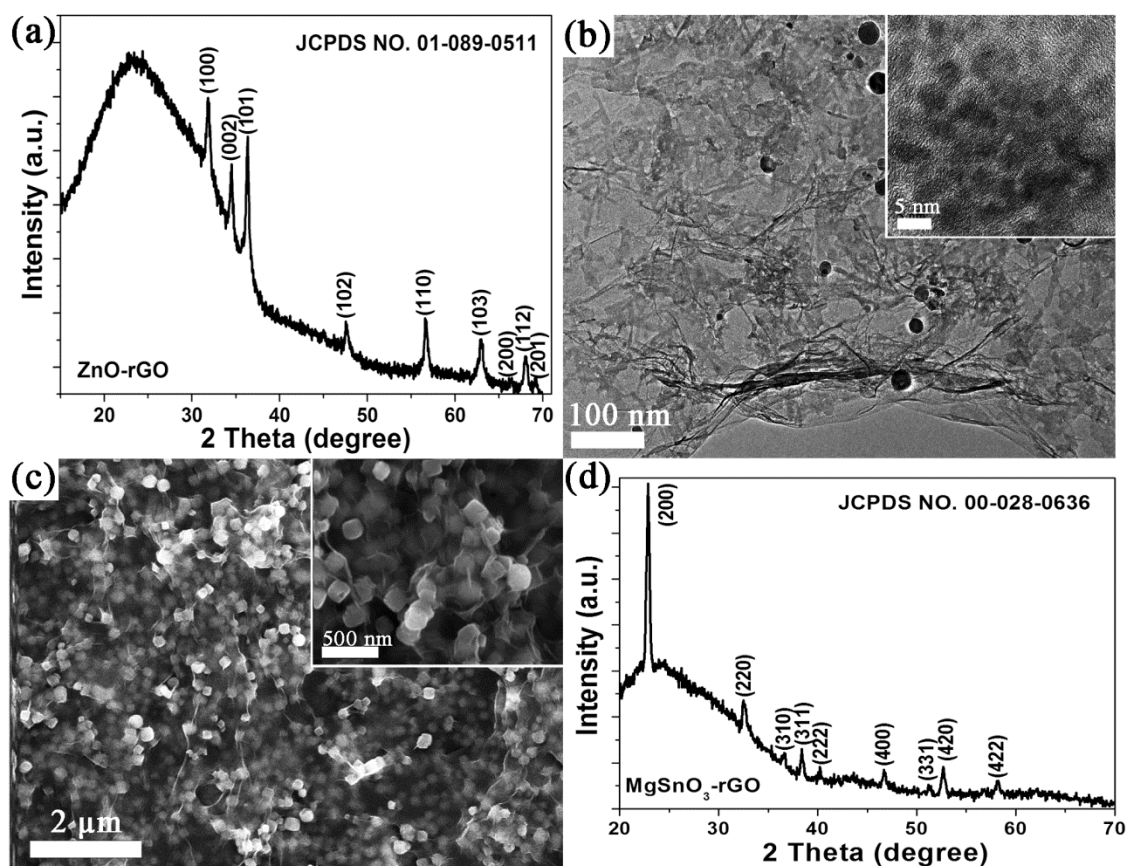
Figure S1 displayed the colour change of outcomes during the reaction process. With the ending of the reaction, the initial yellow colour-like suspension was changed to black. Figure S2 (a) exhibited the CV curves of  $\text{SnO}_2$ -rGO modified GCE in 0.1M NaOH with (black line) and without (red line) 10mM glucose at a scan rate of 50mV/s. With the adding of 10mM glucose, there is a significant response, which proved the feasibility of using  $\text{SnO}_2$ -rGO modified GCE in glucose detection. As a comparison, Figure S2 (b) showed i-t curves of aged  $\text{SnO}_x$  colloid and rGO, respectively, which have been done for as-prepared  $\text{SnO}_2$ -rGO modified GCE. We also can see the poor performance of aged  $\text{SnO}_x$  colloid and rGO at glucose detection experiment from the figure S2 (b). Figure S3 was the morphology and phase characterization of as-prepared other graphene composites in the same way ( $\text{ZnO}$ -rGO and  $\text{MgSnO}_3$ -rGO). Figure S3 (a) and (d) were the XRD patterns of  $\text{ZnO}$ -rGO and  $\text{MgSnO}_3$ -rGO, which proved the composition of the result products. Figure S3 (b) illustrate that  $\text{ZnO}$  loading on rGO showed a sheet morphology assembled with quantum-dots. And  $\text{MgSnO}_3$  exhibited a cube structure in Figure S3 (c). The detail information will be discussed in other works.



**Fig. S1** Digital images of colloidal product from  $\text{SnO}_x$  NPs to  $\text{SnO}_2$ -rGO nanocomposites.



**Fig. S2** (a) is the CV curves of SnO<sub>2</sub>-rGO modified GCE in 0.1M NaOH with (black line) and without (red line) 10mM glucose at a scan rate of 50mV/s. (b) is the i-t curves carried out in 0.1M NaOH with the successive addition of 0.05mM glucose for the aged SnO<sub>x</sub> colloid and rGO alone, respectively.



**Fig. S3** (a) and (d) are the XRD phase characterization of ZnO-rGO and MgSnO<sub>3</sub>-rGO. (b) and (c) are the morphology characterization of ZnO-rGO and MgSnO<sub>3</sub>-rGO.