

## Supporting Information

# Photoelectrochemical enzymatic sensor for glucose based on Au@C/TiO<sub>2</sub> nanorod arrays

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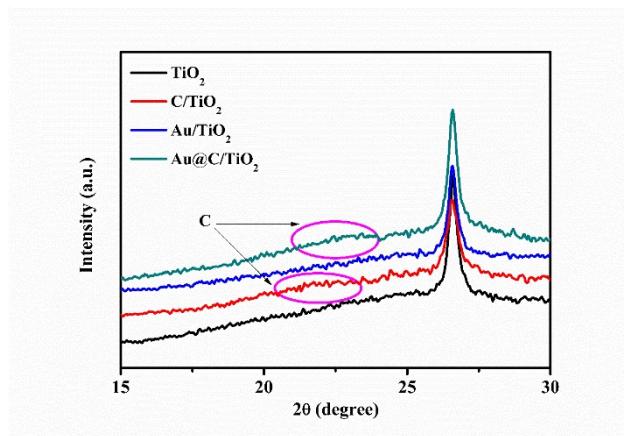
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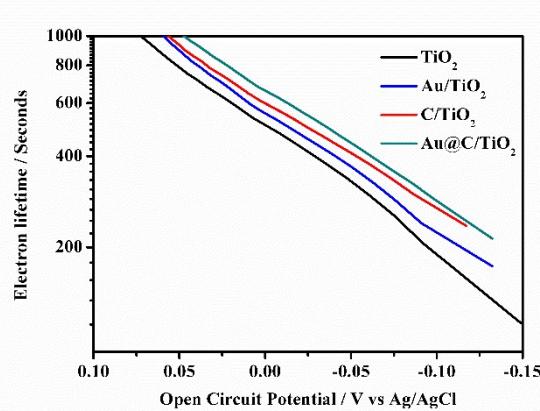
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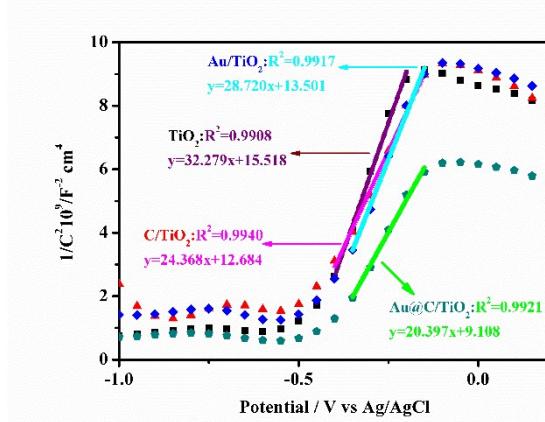
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**Fig. S1** XRD patterns of  $\text{TiO}_2$ ,  $\text{C}/\text{TiO}_2$ ,  $\text{Au}/\text{TiO}_2$  and  $\text{Au}@\text{C}/\text{TiO}_2$  between  $15^\circ$  and  $30^\circ$ .



**Fig. S2** Electron lifetime measurements of  $\text{TiO}_2$ ,  $\text{C}/\text{TiO}_2$ ,  $\text{Au}/\text{TiO}_2$ ,  $\text{Au}@\text{C}/\text{TiO}_2$  determined from the decay of open circuit potential in dark



**Fig. S3** Mott-Schottky plots of  $\text{TiO}_2$ ,  $\text{C}/\text{TiO}_2$ ,  $\text{Au}/\text{TiO}_2$ ,  $\text{Au}@\text{C}/\text{TiO}_2$  at a fixed frequency of 1 kHz in dark.