Supporting Information

Photoelectrochemical enzymatic sensor for glucose based on Au@C/TiO₂ nanorod arrays

Lianyuan Ge⁷, Rui Hou⁷, Yang Cao ⁷, Jinchun Tu ⁷,* and Qiang Wu ⁷,*

⁷ Key Laboratory of Advanced Materials of Tropical Island Resources, State Key Laboratory of Marine Resource Utilization in South China Sea, Hainan University, Haikou 570228, P. R. China.

⁷ School of Tropical Medicine and Laboratory Medicine, Key Laboratory of Emergency and Trauma of Ministry of Education, Hainan Medical University, Haikou 571199, China.

⁷ Key Laboratory Of Child Cognition & Behavior Development Of Hainan Province, Qiongtai Normal University, Haikou 571127, P. R. China.

* Corresponding author: tujinchun@hainu.edu.cn (Jinchun Tu)
* Corresponding author: wuqiang001001@aliyun.com (Qiang Wu)
**Fig. S1** XRD patterns of TiO$_2$, C/TiO$_2$, Au/TiO$_2$ and Au@C/TiO$_2$ between 15° and 30°.

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

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