

## Ag-SnO<sub>2</sub> Nano-Heterojunction/ Reduced Graphene Oxide by A Stepwise Photocatalyzed Approach and Its Application in Ractopamine Determination

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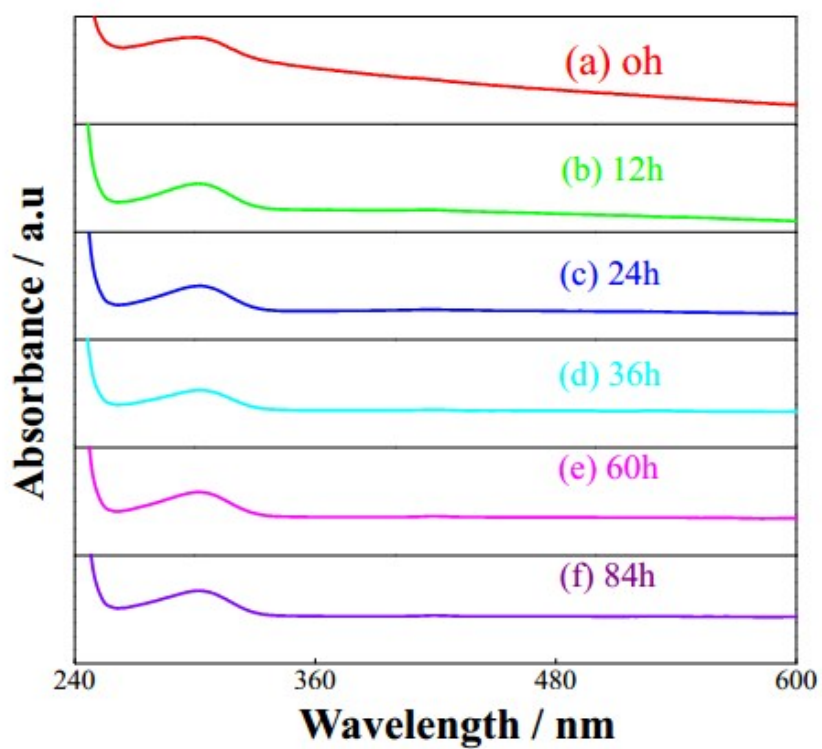


Fig. S1 UV-vis absorption spectra of SnO<sub>2</sub>-AgNPs suspension after standing for 0, 12, 24, 36, 60 and 84h, respectively.

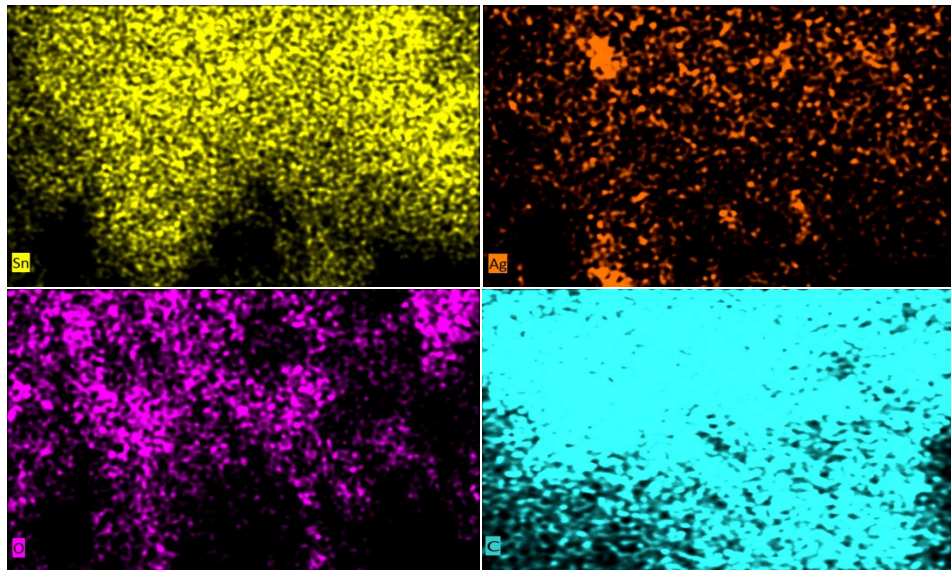
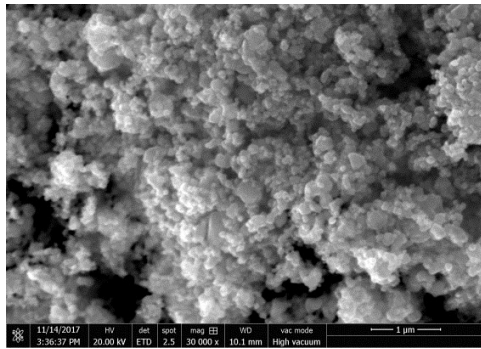


Fig. S2 SEM image and corresponding EDS mapping of SnO<sub>2</sub>-AgNPs /RGO composites.

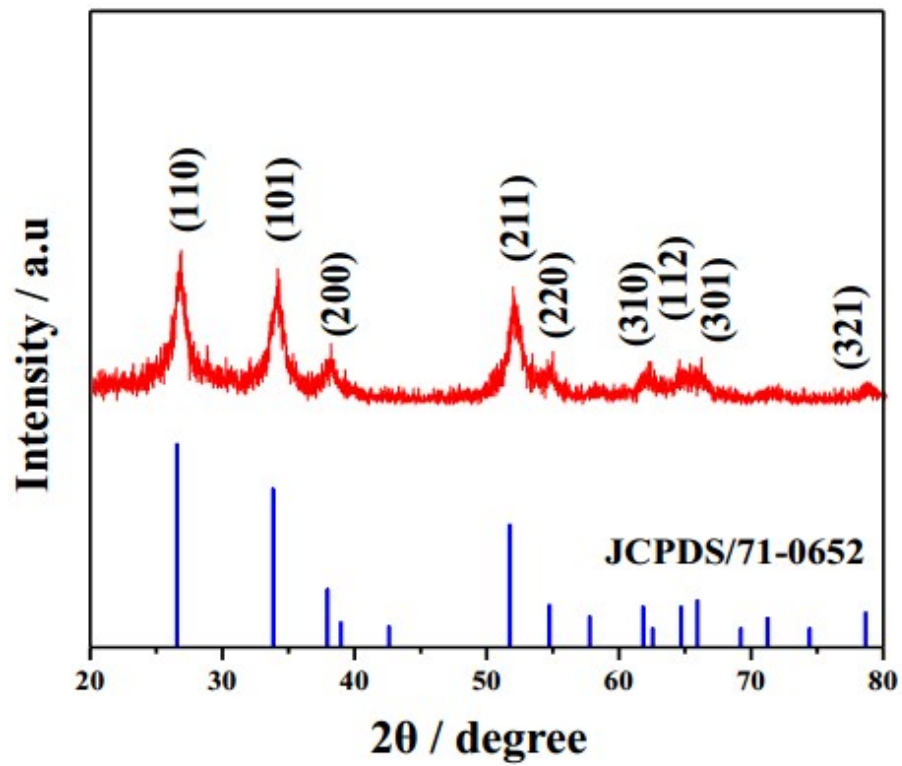


Fig. S3 XRD pattern of SnO<sub>2</sub>.

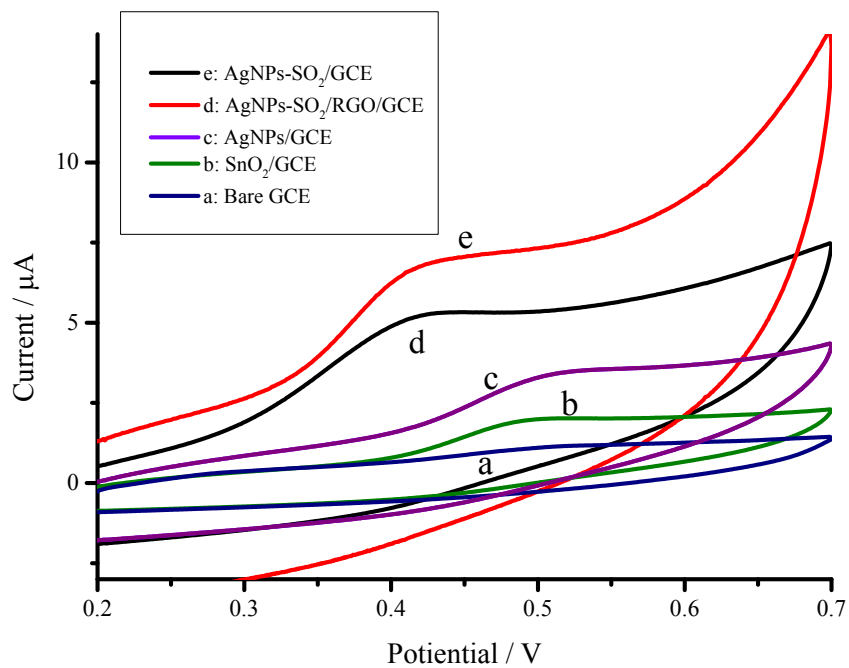


Fig. S4 CV of bare GCE(a), SnO<sub>2</sub>/GCE(b), AgNPs/GCE (c), SnO<sub>2</sub>-AgNPs/GCE (d) and SnO<sub>2</sub> AgNPs/RGO/GCE (e) containing RAC ( $5 \times 10^{-6}$  M) in PBS (0.1 M, pH 7.2).

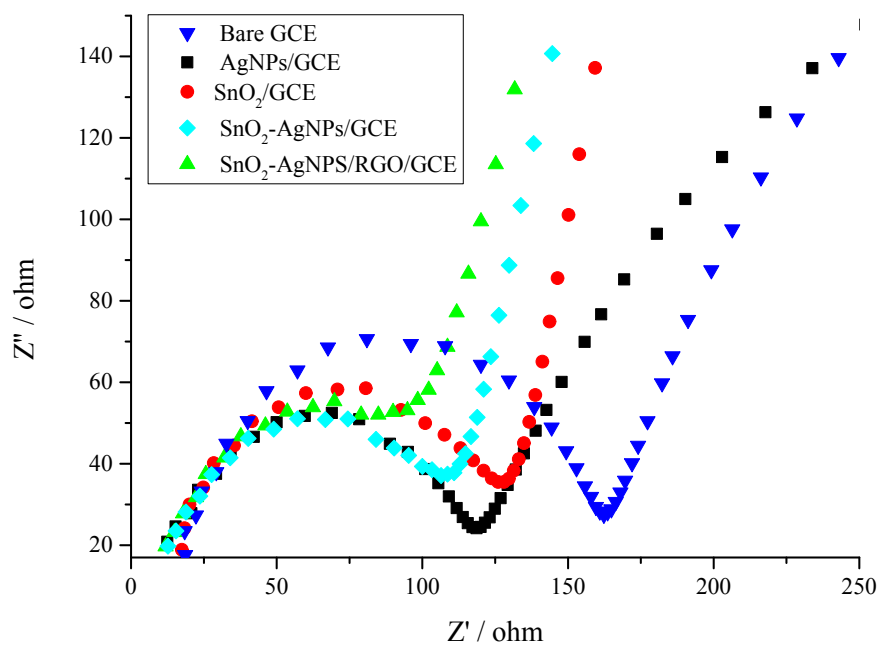


Fig. S5 Nyquist plot of bare GCE, SnO<sub>2</sub>/GCE, AgNPs/GCE, SnO<sub>2</sub>-AgNPs/GCE and SnO<sub>2</sub>-AgNPs/RGO/GCE in 5.0mM [Fe(CN)<sub>6</sub>]<sup>3-/4-</sup>.

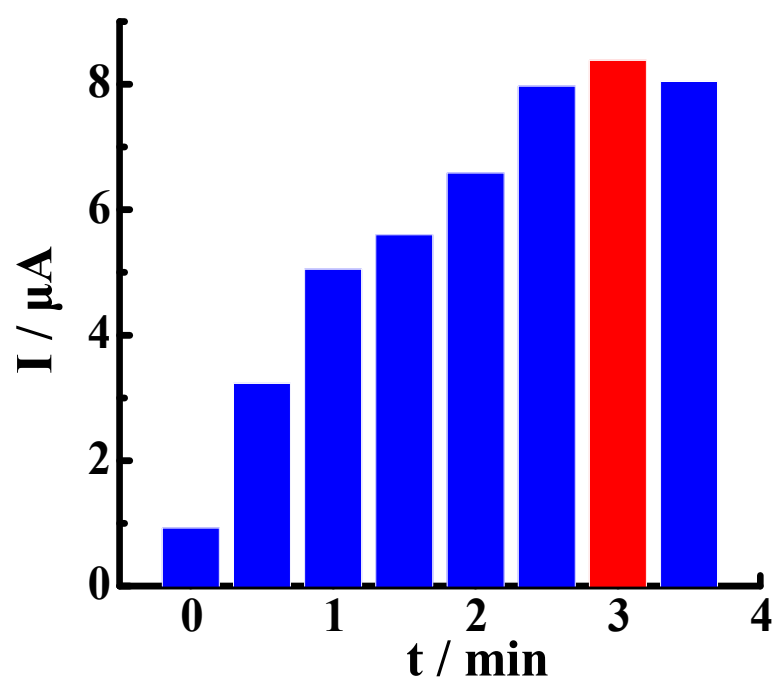


Figure. S6 Peak currents of  $5.0 \times 10^{-6}$  M RAC in PBS with accumulation time from 0 to 4 min.

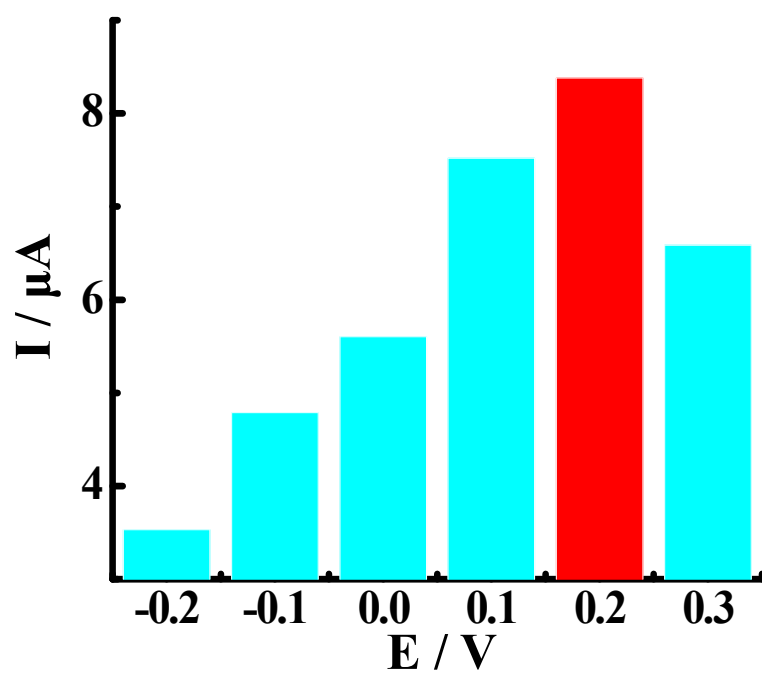


Figure. S7 Peak currents of  $1.0 \times 10^{-6}$  M RAC in PBS with the accumulation potentials in the range of  $-0.2$  to  $+0.3$  V.



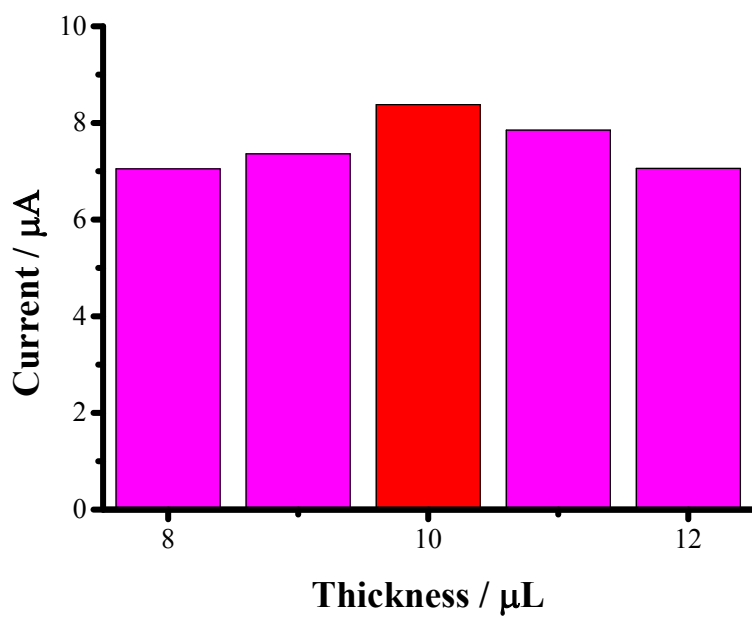


Figure. S8 Peak currents of  $1.0 \times 10^{-6}$  M RAC in PBS with the thickness of the film in the range of 8 to 12  $\mu\text{L}$ .