

Fig.S1. (A) CV profiles of the Au/CeO₂@FGCM-PE for 5 mM [Fe(CN)₆]^{3-/4-} in 0.1 M KCl with different scan rates (1-7) (10, 20, 50, 100, 200, 300, 500 mVs⁻¹). (B) Plot of I_{pa} vs. $v^{1/2}$ (1) at FGCM-PE and (2) at Au/CeO₂@FGCM-PE.

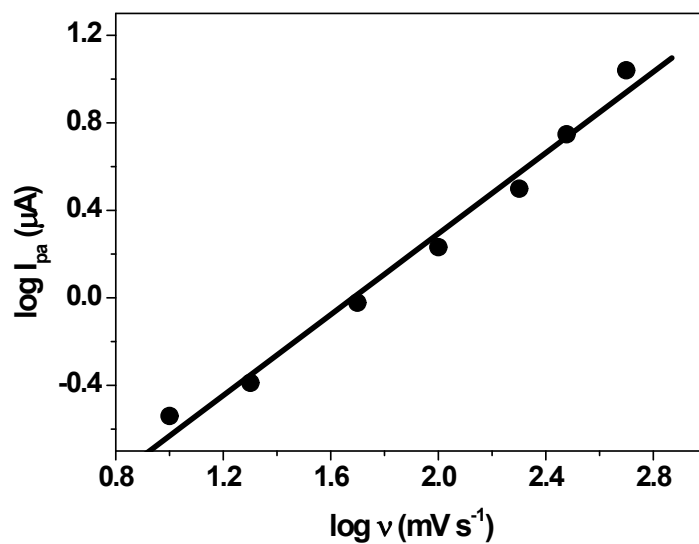


Fig. S2. Plot of $\log I_{pa}$ (μA) vs. $\log v$ (mV s^{-1}) at Au/CeO₂@FGCM-PE in presence of 10 μM QRT at PBS of pH 3.2.

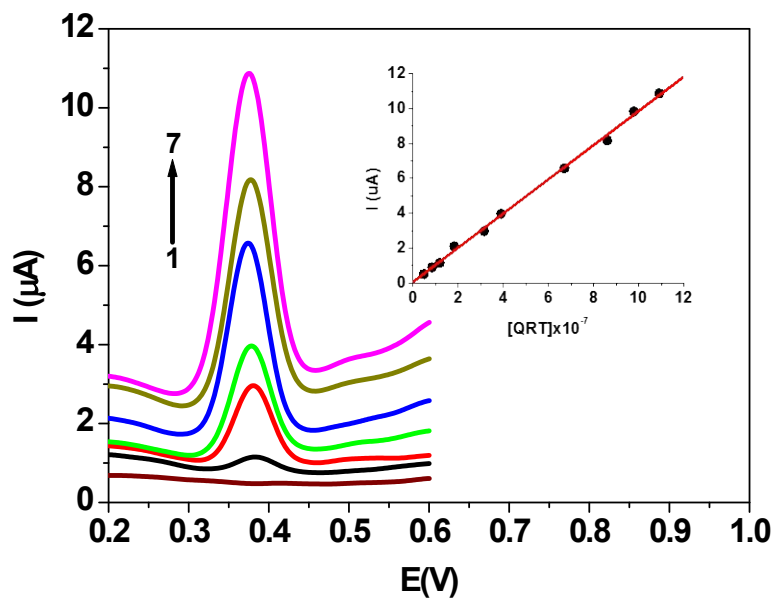


Fig.S3. SW voltammograms of QRT at Au/CeO₂@FGCM-PE in PBS at pH 3.2 [QRT]: 1) blank, 2) 1.18×10^{-7} , 3) 3.15×10^{-7} , 4) 3.90×10^{-7} , 5) 6.70×10^{-7} , 6) 8.59×10^{-7} , and 7) 1.09×10^{-6} M QRT. Inset: Calibration plot of I_p (μA) versus [QRT]. Starting potential, 0.0 V; equilibrium time, 30s; frequency, 50 Hz and pulse height, 15 mVpp.

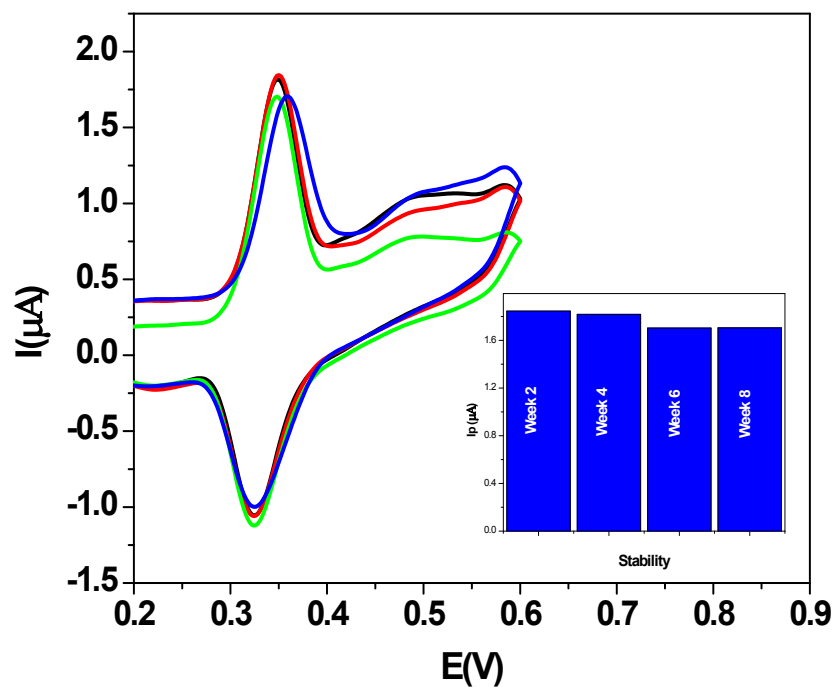


Fig. S4. The CV response of Au/CeO₂@FGCM-PE for the detection of 10 μM QRT in PBS solution (pH 3.2) for eight weeks. Inset shows the calibrated histogram of stability test.

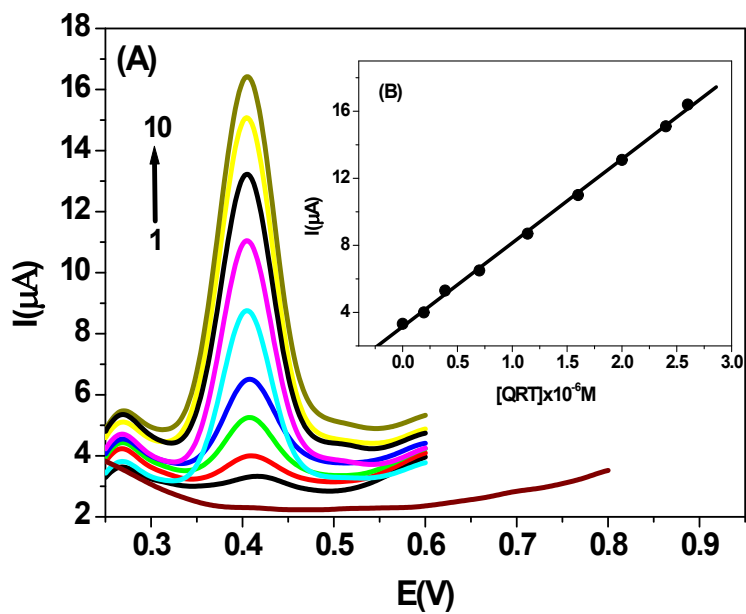


Fig.S5. (A) SWV of honeysuckle sample at Au/CeO₂@FGCM-PE in phosphate buffer solution (pH = 3.2) (1) background (2) honeysuckle sample; standard addition of (3) 0.194, (4) 0.387, (5) 0.700, (6) 1.14, (7) 1.60, (8) 2.00, (9) 2.40, and (10) 2.60 μM QRT. **(B)** Calibration plot of I_p (μA) versus $[\text{QRT}]$. Other condition as in Fig.S3.

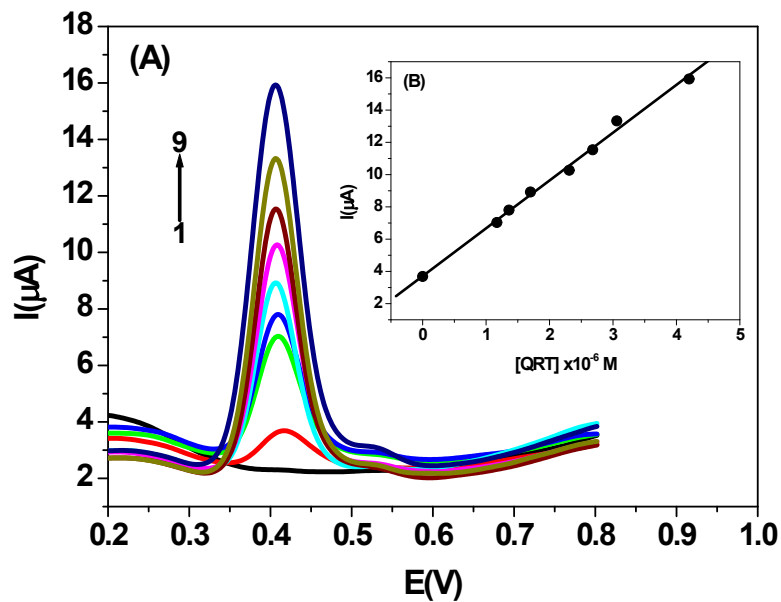


Fig.S6. (A) SWV of green tea sample at Au/CeO₂@FGCM-PE in phosphate buffer solution (pH = 3.2) (1) background (2) green tea sample; standard addition of (3) 1.17, (4) 1.36, (5) 1.7, (6) 2.31, (7) 2.68, (8) 3.06 and (9) 4.20 μM QRT. (B) Calibration plot of I_p (μA) versus [QRT]. Other condition as in Fig.S3.

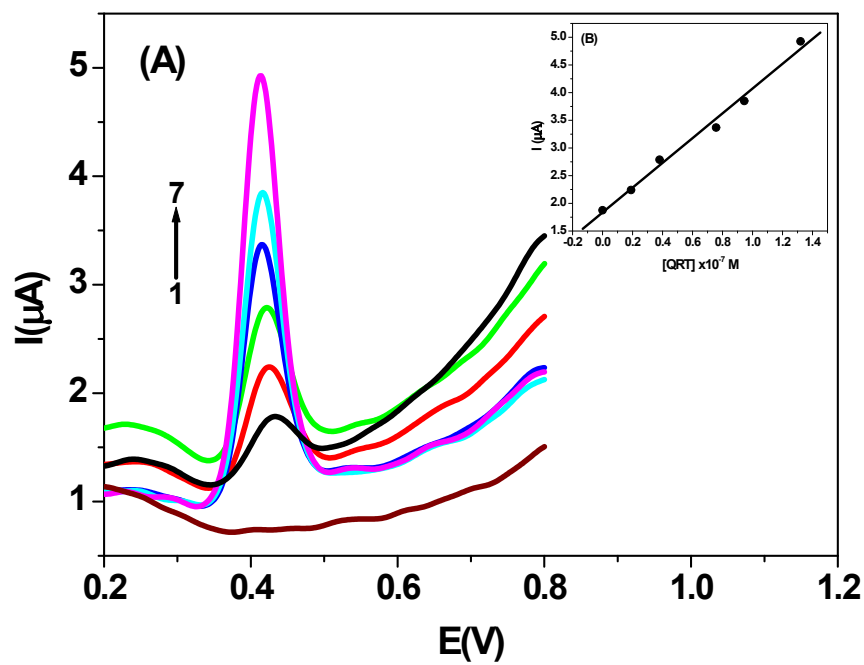


Fig.S7. (A) SWV of apple juice sample at Au/CeO₂@FGCM-PE in phosphate buffer solution (pH = 3.2) (1) background (2) apple juice sample; standard addition of (3) 0.190, (4) 0.380 (5) 0.757, (6) 0.949 and (7) 1.320 μM QRT. (B) Calibration plot of I_p (μA) versus $[\text{QRT}]$.

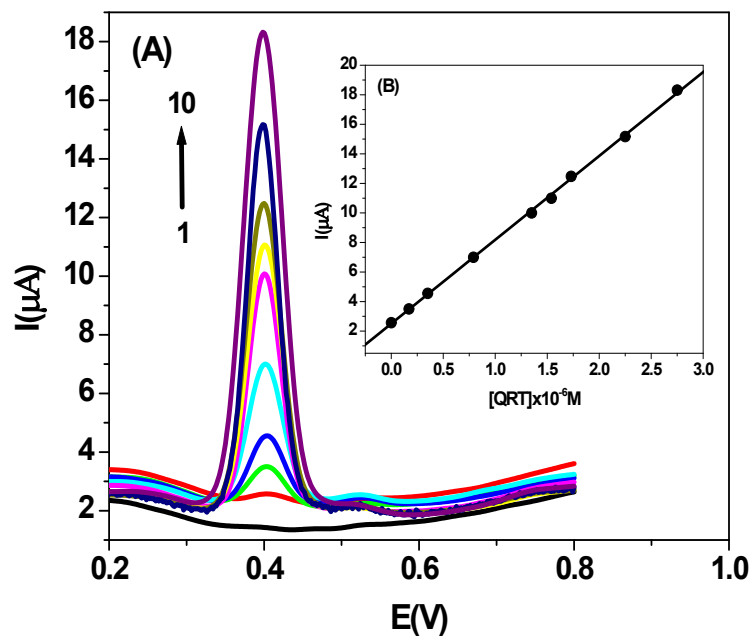


Fig.S8. (A) SWV of onion sample at Au/CeO₂@FGCM-PE in phosphate buffer solution (pH = 3.2) (1) background (2) onion sample; standard addition of (3) 0.17, (4) 0.35 (5) 0.79, (6) 1.35, (7)1.54, (8)1.73, (9) 2.25 and (7) 2.75 μM QRT. (B) Calibration plot of I_p (μA) versus [QRT].

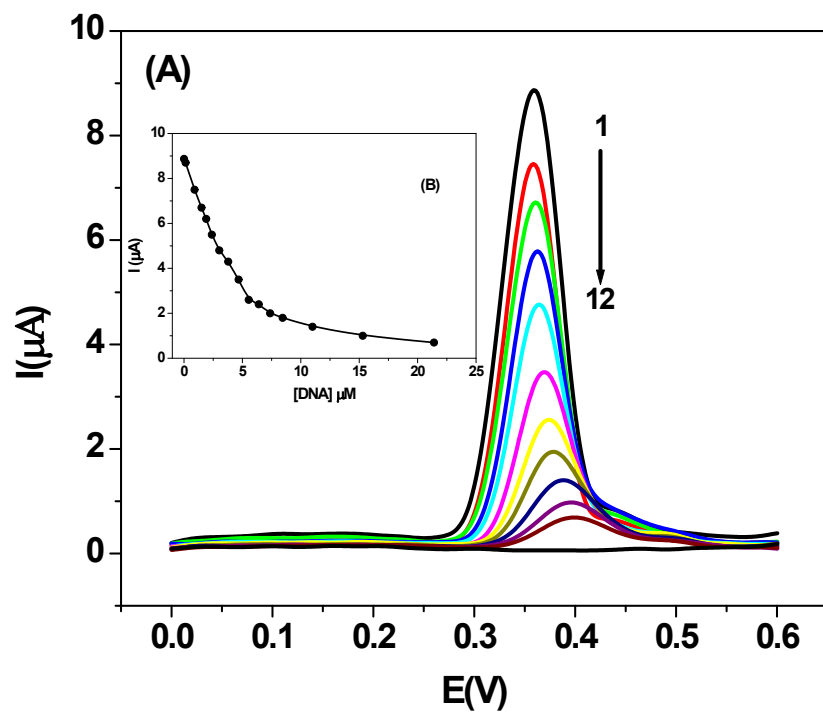


Fig.S9. (A) SWV of 9 μM QRT at Au/CeO₂@FGCM-PE in phosphate buffer solution (pH = 3.2) in absence (1) and presence of (2) 0.402, (3) 0.668 (4) 2.376, (5) 3.020, (6) 4.670, (7) 5.540, (8) 7.370, (9) 10.990, (10) 15.370 and (11) 21.390 μM st-DNA; (12) background. (B) Relationship between I (μA) and [st-DNA].

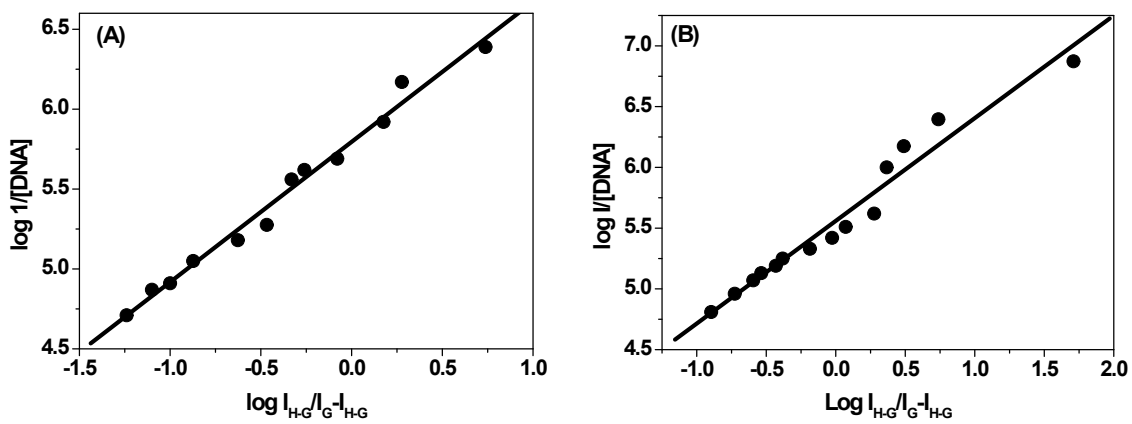


Fig.S10. Plot of $\log (1/[\text{DNA}])$ vs. $\log (I_{\text{H-G}}/I_{\text{G-I}_{\text{H-G}}})$ for (A) ct-DNA and (B) st-DNA.