Supporting Information

Electrochemiluminescence Immunosensor Based on Nanobody and Au/$CaCO_3$ Synthesized Using Waste Eggshells for Ultrasensitive Detection of Ochratoxin A

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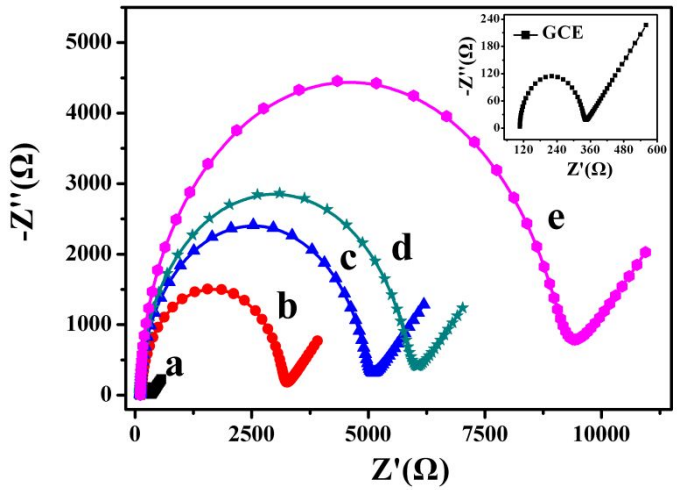

Figure S1. Nyquist plots of EIS of GCE(a), Au/$CaCO_3$/Nafion/GCE(b), $Ru(bpy)_3^{2+}$/Au/$CaCO_3$/Nafion/GCE(c), Nb28/$Ru(bpy)_3^{2+}$/Au/$CaCO_3$/Nafion/GCE(d), OTA/BSA/Nb28/$Ru(bpy)_3^{2+}$/Au/$CaCO_3$/ Nafion/GCE(e) in 10 mM $[Fe(CN)_6]^{3-/4-}$ (1:1) containing 0.1 M KCl in the frequency range of 10^{-1} to 10^5 Hz.

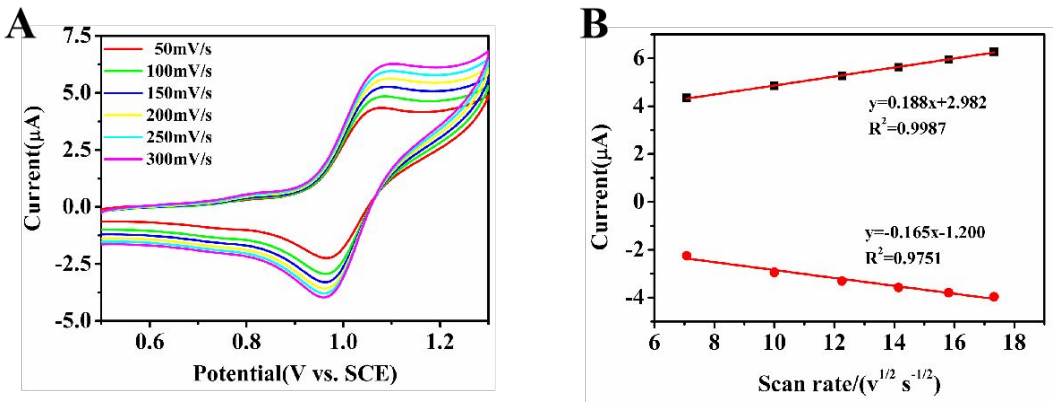

Figure S2. (A) CV curves of OTA/BSA/Nb28/$Ru(bpy)_3^{2+}$/Au/$CaCO_3$/ Nafion/GCE at different scan rates (50-300 mV s^{-1}) in 1×PBS solution; (B) A linear relationship between the square root of the scan rate and the current density.

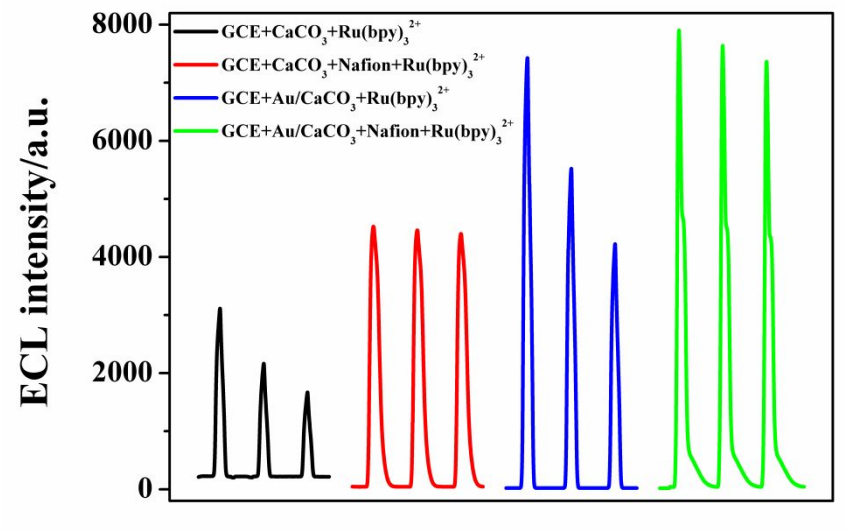

Figure S3. ECL responses of $Ru(bpy)_3^{2+}/CaCO_3/GCE$, $Ru(bpy)_3^{2+}/Nafion/CaCO_3/GCE$,$Ru(bpy)_3^{2+}/Au/CaCO_3/GCE$, $Ru(bpy)_3^{2+}/Nafion/Au/CaCO_3/$ GCE in 1×PBS containing 0.05 mM TPA solution.

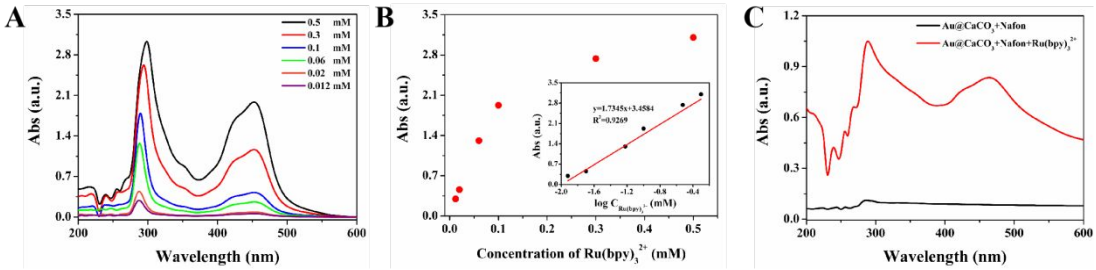

Figure S4. (A)UV-vis spectra of $Ru(bpy)_3^{2+}$ in different concentrations; (B)Calibration curve of the absorbance value and logarithm of $Ru(bpy)_3^{2+}$ concentration; (C)UV-vis spectra of $Au/CaCO_3$ and $Ru(bpy)_3^{2+}/Au/CaCO_3$.