

Electronic Supporting Information (ESI)

Synthesis of coral-like gold nanocrystal with glutamic acid-cysteine-glycine-glutamic acid-cysteine-glycine hexapeptide for electrochemical detection of α -amanitin in urine

Li Ruiyi, Zhu Qiyue, Sun Xiulan, Xu Pengwu and Li Zaijun*

School of Chemical and Material Engineering, School of Life Sciences and Health Engineering, and School of Food Science and Technology, Jiangnan University, Wuxi 214122, China



Fig. s1 Optical photographs of the HAuCl_4 solution before (a) and after added a mixed CTAC with KBr and KI (b)



Fig. s2 Optical photograph of a mixed solution composing of HAuCl_4 , CTAC, KBr and KI after added ascorbic acid solution for 2 min



Fig. s3 Optical photograph of gold seed solution

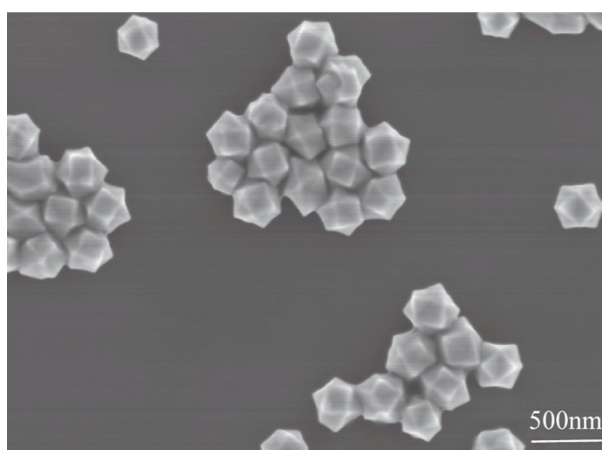


Fig. s4 SEM image of gold seeds

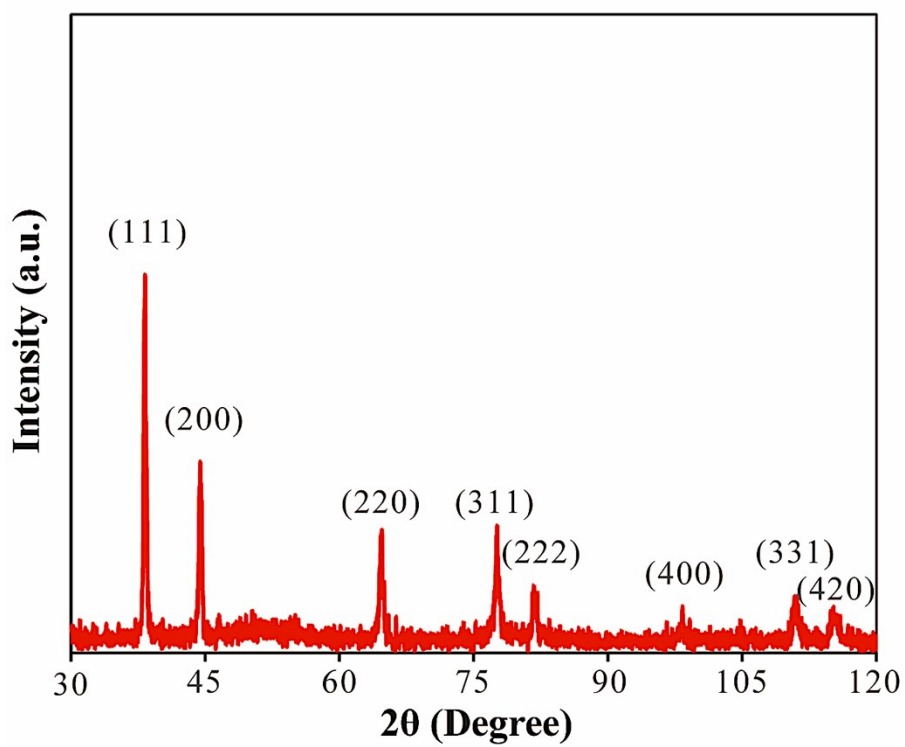


Fig. s5 XRD pattern of gold seeds

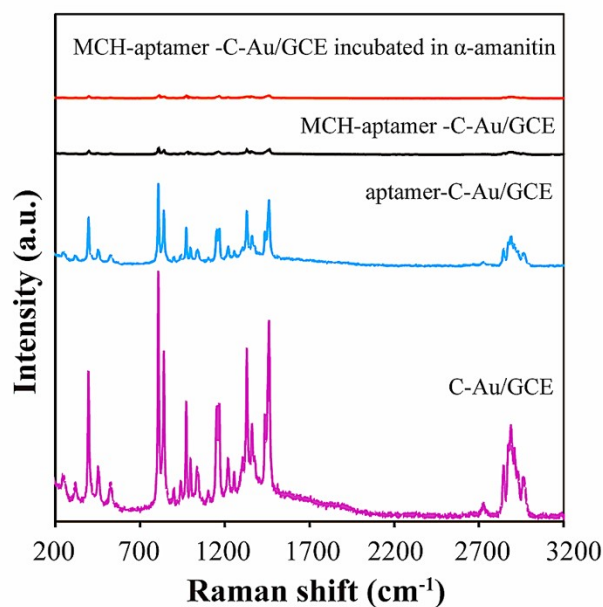


Fig. s6 Raman spectra of rhodamine 6G on different electrodes

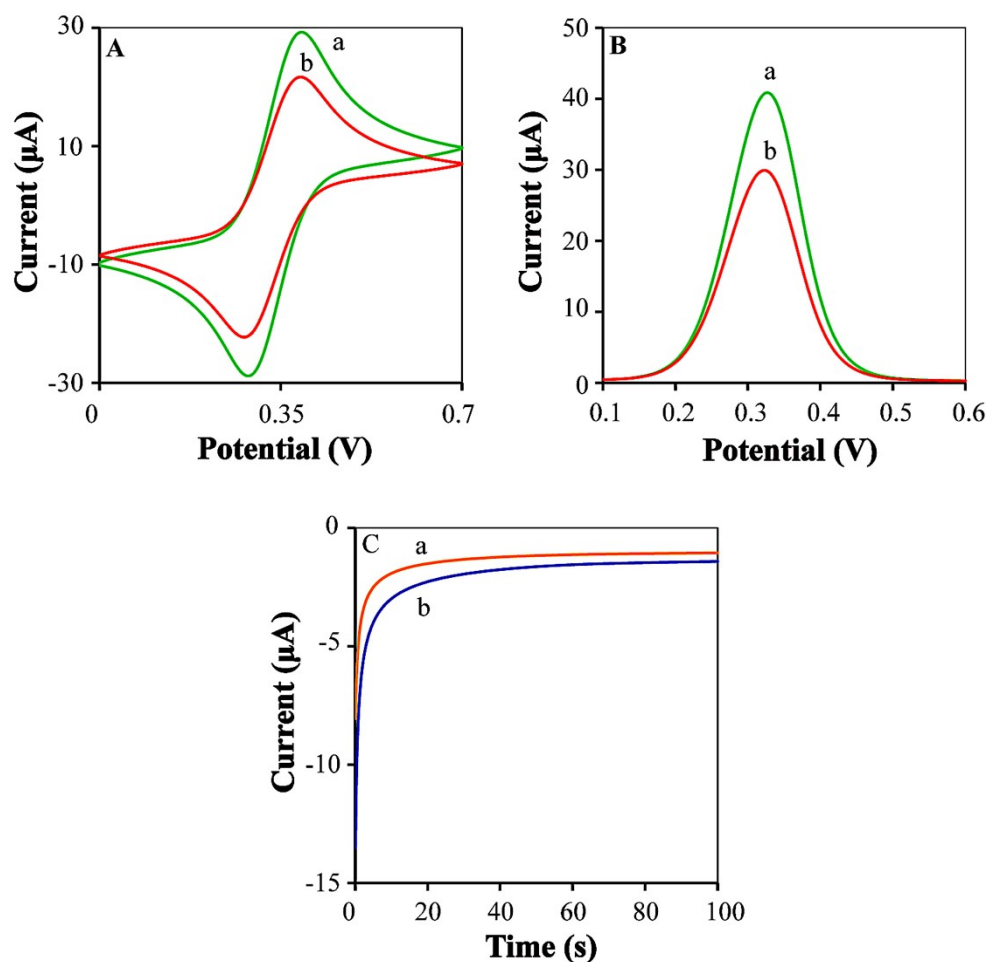


Fig. s7 CV (A), DPV (B) and i-t curves (C) in 1 mM $K_4Fe(CN)_6$ in the PBS of pH 7.0 of the proposed aptasensor incubated for 60 min in the sample solution (a) and the spiked sample solution by 40 fM α -amanitin (b)

Table s1 The ratios (I(f)) of XRD peak intensity to the strongest peak intensity for different tantalum oxides

	2-Theta	h k l	Au NP	TO-Au	C-Au
1	38.2°	111	1	1	1
2	44.4°	200	0.571	0.502	0.556
3	64.6°	220	0.200	0.301	0.559
4	77.5°	311	0.198	0.340	0.578
5	81.7°	222	0.08	0.102	0.400
6	98.1°	400	0.02	0.120	0.222
7	110.8°	311	0.003	0.160	0.267
8	115.3°	420	0.002	0.136	0.204