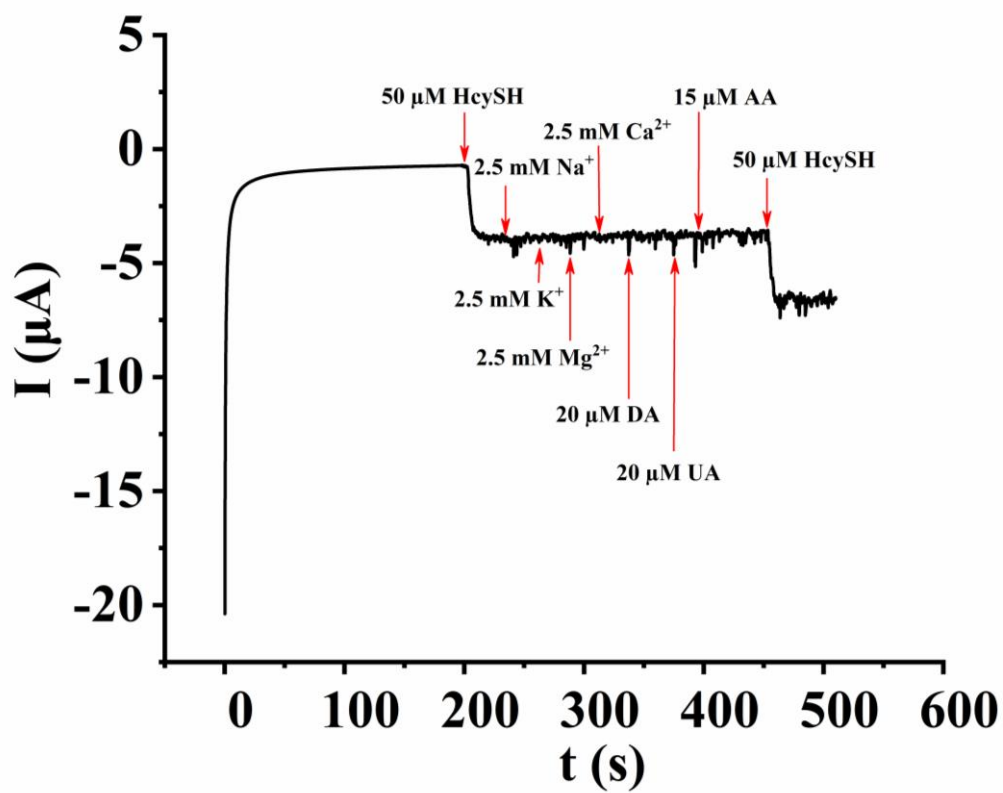
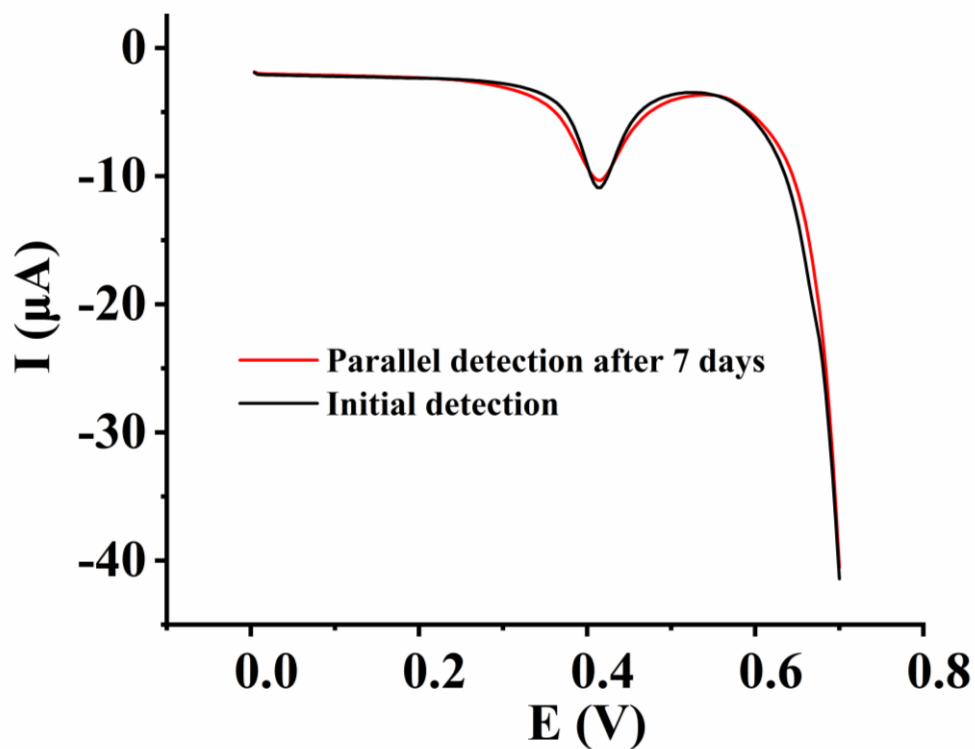


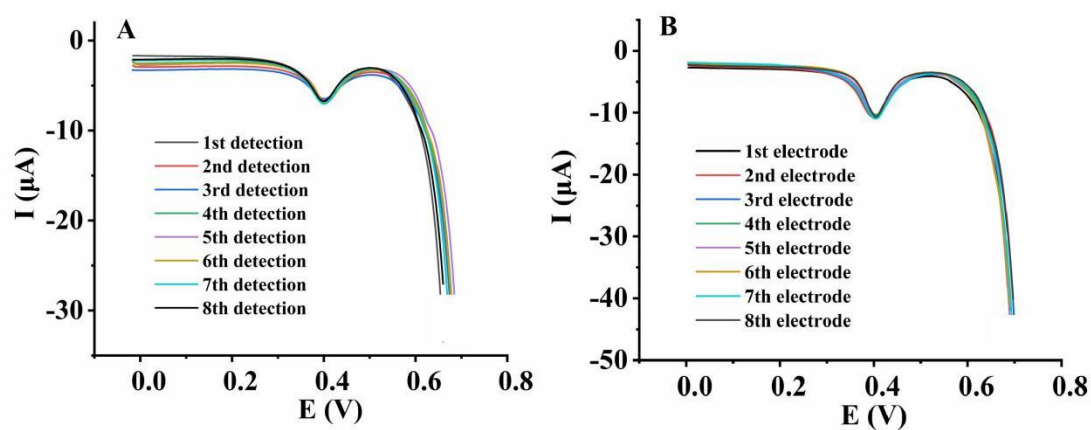
## Supporting Information



**Figure S1.** Amperometric response of 50  $\mu\text{M}$  HcySH and other possible coexisting interferents on AuNPs/AB-DHP/GCE in 0.15 M PBS (pH = 6.0) with the operation potential of 0.6 V.



**Figure S2.** Differential pulse voltammograms of 200  $\mu\text{M}$  HcySH on AuNPs/AB-DHP/GCE in 0.15 M PBS (pH = 6.0) at different time.



**Figure S3.** Differential pulse voltammograms of 200  $\mu\text{M}$  HcySH on AuNPs/AB-DHP/GCE in 0.15 M PBS (pH = 6.0). (A) Parallel detection with one AuNPs/AB-DHP/GCE for eight times. (B) Parallel detection with eight different AuNPs/AB-DHP/GCEs.

**Table S1.** Results of the recovery experiment.

Human blood serum	Added ( $\mu\text{M}$ )	Found ( $\mu\text{M}$ )	Recovery (%)
Sample 1	50	47.3	94.5
Sample 2	50	51.9	103.9
Sample 3	50	46.7	93.4
Sample 4	100	92.9	92.9
Sample 5	100	107.6	107.6
Sample 6	100	97.3	97.3