Electronic Supplementary Information (ESI) for Analyst

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Enzymatic deposition of gold nanoparticles at vertically aligned carbon nanotubes for electrochemical stripping analysis and ultrasensitive immunosensing of carcinoembryonic antigen†

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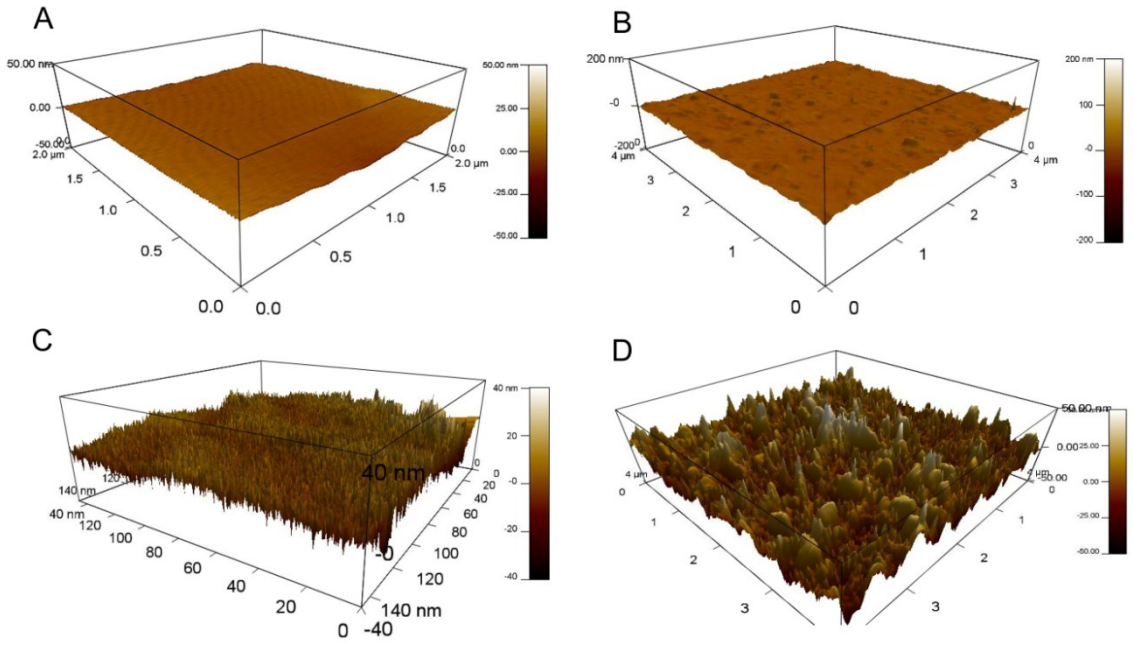

Fig. S1 AFM images of the bare (A), aryldiazonium salt (B) and vertically aligned SWCNTs (C) modified electrodes as well as the immunosensor upon quantitative capture of Au NP/GA nanoprobes and enzymatic deposition of Au NPs on its surface (D).

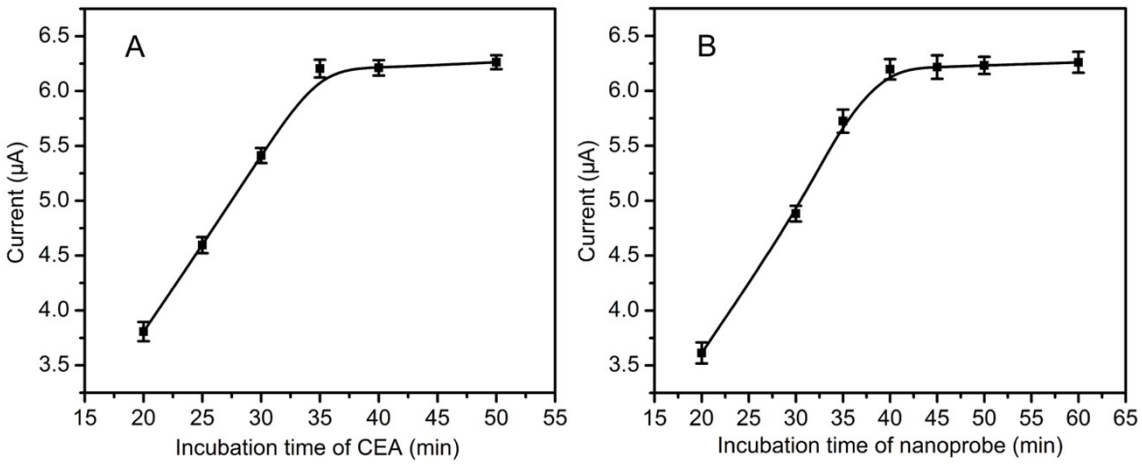

Fig. S2 Effects of the incubation time of CEA (A) and Au NP/GA nanoprobe (B) on the electrochemical response of 100 ng mL^{-1} CEA.

Table S1 Comparison of the CEA analyzed results in human serum samples obtained by the proposed and reference methods (ng mL^{-1}).

Sample no.	1	2	3
Reference method	5.20	0.60	0.033
Proposed method (RSD, %)	5.02 (3.8)	0.584 (3.1)	0.035 (3.9)
Relative error (%)	-3.5	-2.7	6.0