Electronic Supplementary Information (ESI)

Electrochemical immunoassay based on polythionine as signal source for the sensitive detection of carcinoma embryonic antigen

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Fig. S1. AFM images of bare GCE (A), PTh/GCE (B), nafion/PTh/GCE (C) and antibody/nafion/PTh/GCE (D).
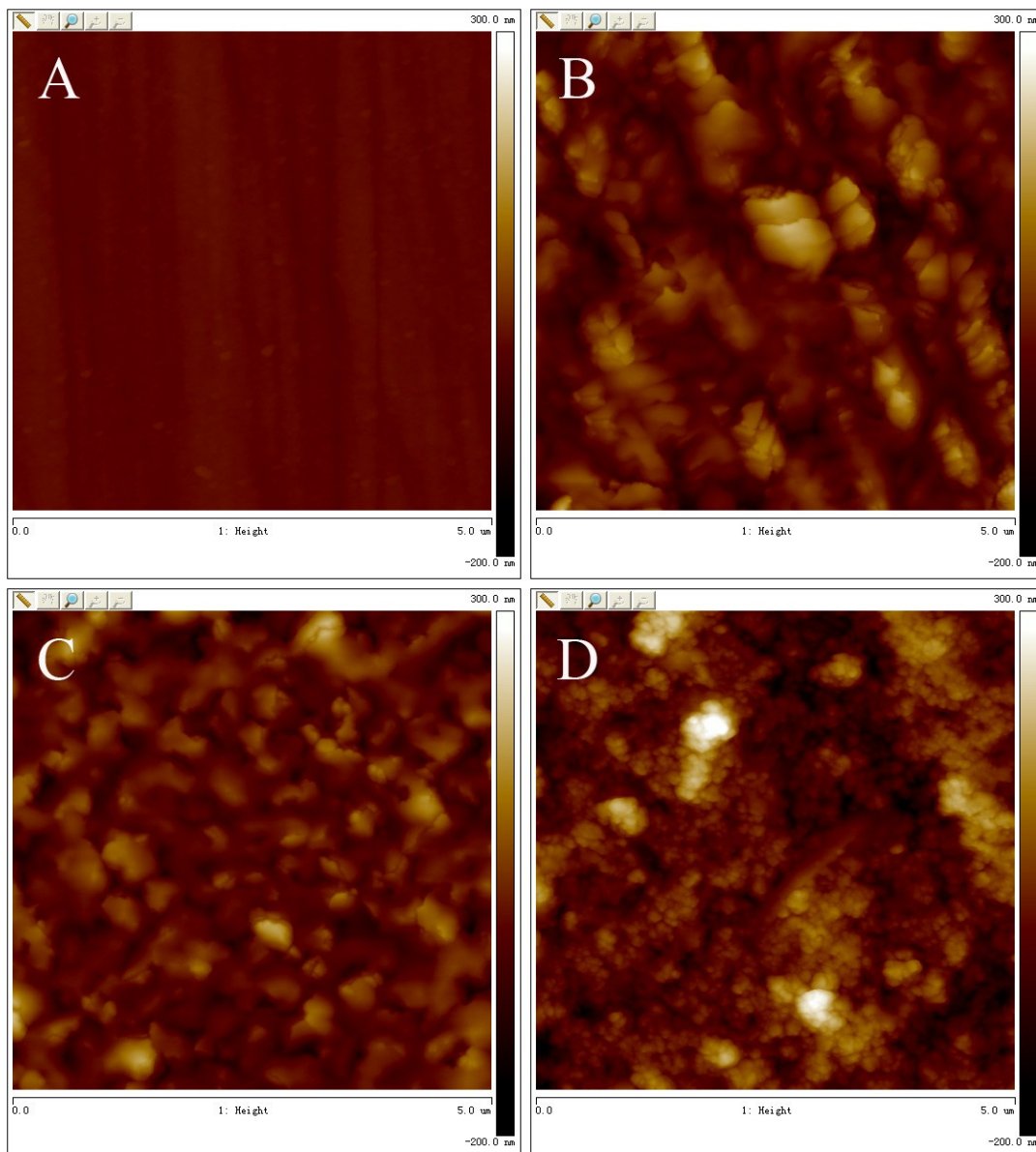
Table S1. The detection of CEA in the fetal calf serum samples through the standard addition method using the prepared immunosensor.

Samples	1	2	3
Add a scalar (ng•ml^{-1})	1.0	5	10.0
Found^a (ng•ml^{-1}) ± RSD (%)	0.966±4.4	4.79±5.6	9.74±2.5
Recovery	96.6%	95.8%	97.4%

a The data stood for the average value of three independent detection.

Table S2. The results of CEA levels in the human serum samples using the chemiluminescent immunoassay and prepared immunosensor.

Samples	Chemiluminescent Immunoassay	This work	
		Found^a(ng•ml^{-1}) ± RSD (%)	Relative Error
1	11.60	10.96±6.8	-5.5%
2	6.80	6.55±4.7	-3.7%
3	1.60	1.67±5.3	4.4%
4	5.90	5.62±6.3	-4.8%
5	0.85	0.81±7.5	-4.7%

a The data stood for the average value of three independent detection.