

## Supplementary information for Surface plasmon resonance based competitive immunoassay for Cd<sup>2+</sup>

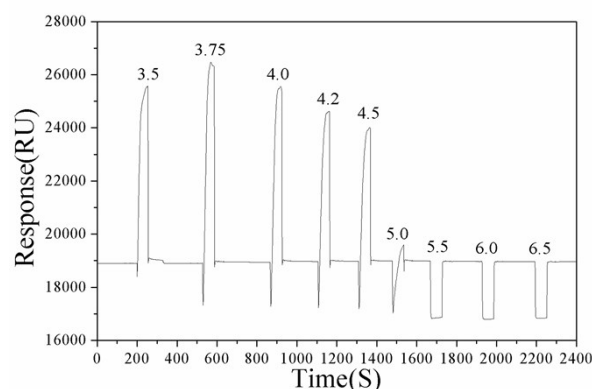
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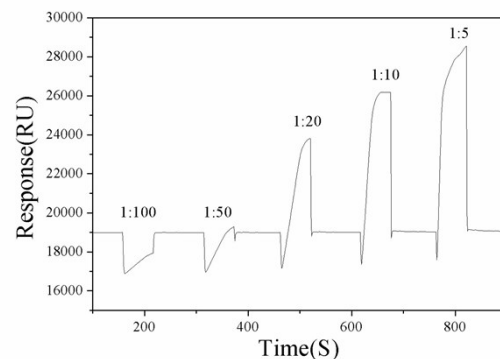
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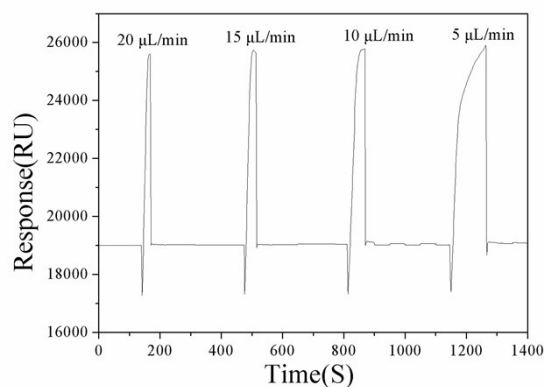
### Supplementary Figures



**Fig. s1** The corresponding signals were produced by the antigens diluted with the acetate buffer solution of different pH values (pH 3.5, 3.75, 4.0, 4.2, 4.5, 5.0, 5.5, 6.0, 6.5 from left to right).



**Fig. s2** The corresponding signals were produced by the antigens of different dilution rates (1:100, 1:50, 1:20, 1:10, 1:5 from left to right) with pH 3.75 acetate buffer solution.



**Fig. s3** The corresponding signals were produced by antigen at different flow rates (5  $\mu\text{L}/\text{min}$ , 10  $\mu\text{L}/\text{min}$ , 15  $\mu\text{L}/\text{min}$ , 20  $\mu\text{L}/\text{min}$  flow rates from left to right).

**Table s1** Performance comparison of this work with other methods for  $\text{Cd}^{2+}$  detection

Analytical method	Operation	Linear range ( $\mu\text{g L}^{-1}$ )	Detection limit ( $\mu\text{g L}^{-1}$ )	Real sample	Ref.
SPR Biosensor	Simple	3.57~758.37	1.25	Water samples	This work
Carbon Paste Electrode	Complex	67.4~3372	9.0	Water samples and people hair sample	1
Electrochemical Sensor	Complex	10~500	4.43	Water samples	2
ELISA	Complex	Not reported	1.95	Wheat sample	3
Fluorescence Biosensor	Simple	Not reported	56.2	Water samples	4
Naked-Eye Sensor	Simple	4.5~5001.8	4.4	Synthetic mixtures and water samples	5
Nonthermal Optical Emission Spectrometry	Complex	5~1000	1.5	Not reported	6
Potentiometric Sensor	Simple	22.5~1.12 $\times 10^6$	11.2	Water samples	7
Fluorescent Sensor	Simple	112.4~1124	31.0	Cosmetic and personal care samples	8

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