Electronic Supplementary Material

Simultaneous fluoroimmunoassay of two tumor markers based on CdTe quantum dots and gold nanoclusters coated-silica nanospheres as labels

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1 Preparation of CdTe QDs

40 μL Thioglycolic acid (TGA) was added to 100 mL nitrogen-saturated ultrapure water containing 0.0917 g $Cd(AC)_2 \cdot 2H_2O$. After adjusting to pH 10 with 0.01 M NaOH, 0.2209 g trisodium citrate and 0.0185 g Na_2TeO_3 were added. Then 0.01 g $NaBH_4$ was injected and bubbled by N_2 for 10 min. The finished CdTe precursor solution was transfered to a reaction kettle and kept at 120 ℃ for 5 min to form yellow CdTe QDs. The CdTe QDs were precipitated in acetone and centrifuged at 10,000 rpm for 5 min, then re-dissolved in ultrapure water. They were extremely stable at 4 ℃ for more than six months.

2 Preparation of Au NCs

Briefly, 5.0 mL of aqueous BSA solution (50.0 mg mL^{-1}, 37 ℃) was added to an equal volume of 10.0 mM $HAuCl_4$ under vigorous stirring. After 2 min, 0.5 mL of NaOH solution (1.0 M) was introduced, and the mixture was incubated at 37 ℃ for 12 h. The color of the solution changed from light yellow to light brown, and then to deep brown. Finally, Au NCs solution was obtained and stored at 4 ℃ for use.

References

1 Y. F. Wu, J. H. Huang, T. Y. Zhou, M. C. Rong, Y. Q. Jiang and X. Chen, *Analyst*, 2013,**138**, 5563.
2 X. Wang, P. T. Sheng, L. P. Zhou, X. Tong, L. Shi and Q. Y. Cai, *Biosens.Bioelectron*., 2014, **60**, 52.

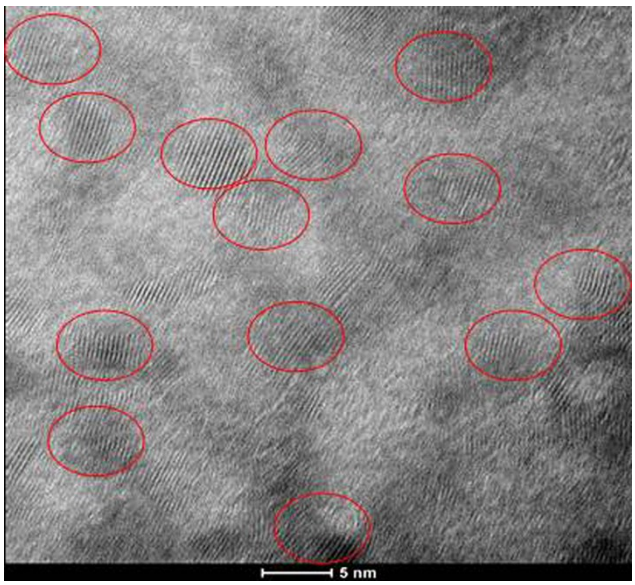

Fig.S1 HRTEM images of CdTe QDs.

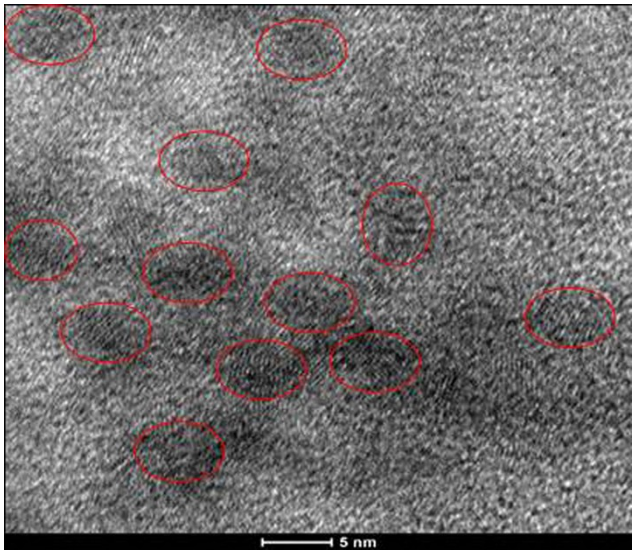

Fig.S2 HRTEM images of Au NCs.