Electronic Supplementary Material (ESI) for RSC Advances

A sensitive colorimetric detection of melamine in milk with aptamer-modified nanogold probe

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Supplementary information

Supplementary figures:

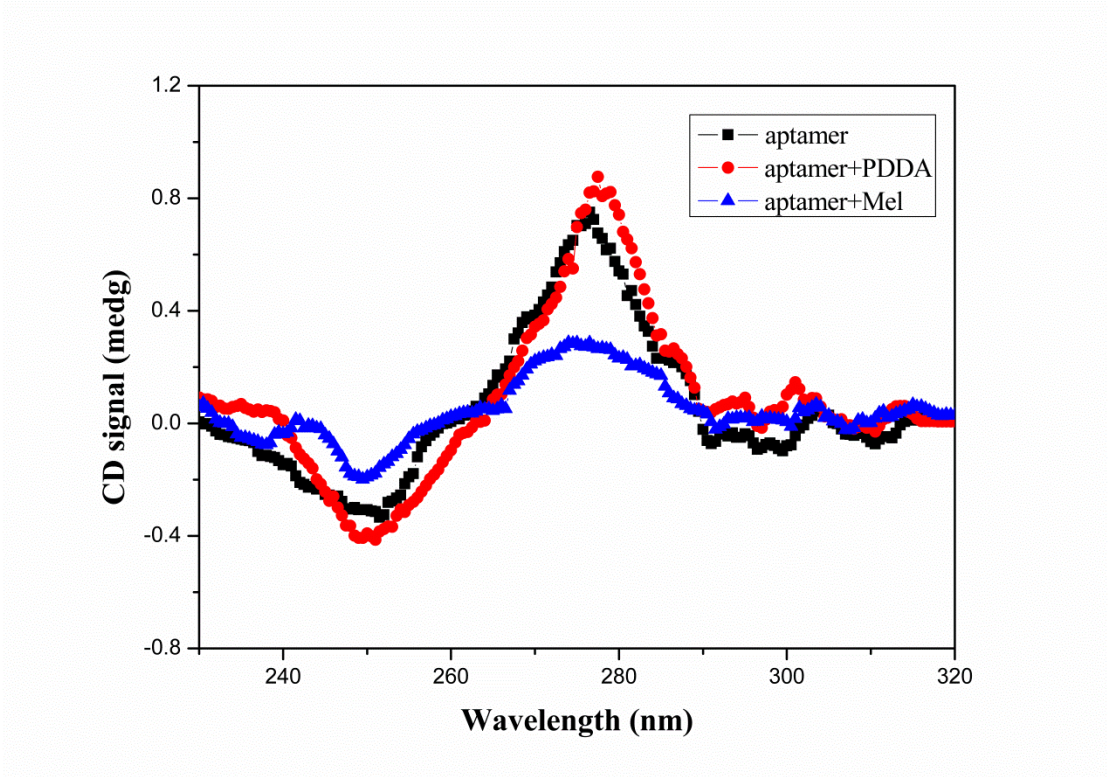

Fig.S1 CD spectra of 80 nM aptamer solutions treated with PDDA and melamine. The concentrations of PDDA and melamine were 2.0 nM and 4.0 μM.

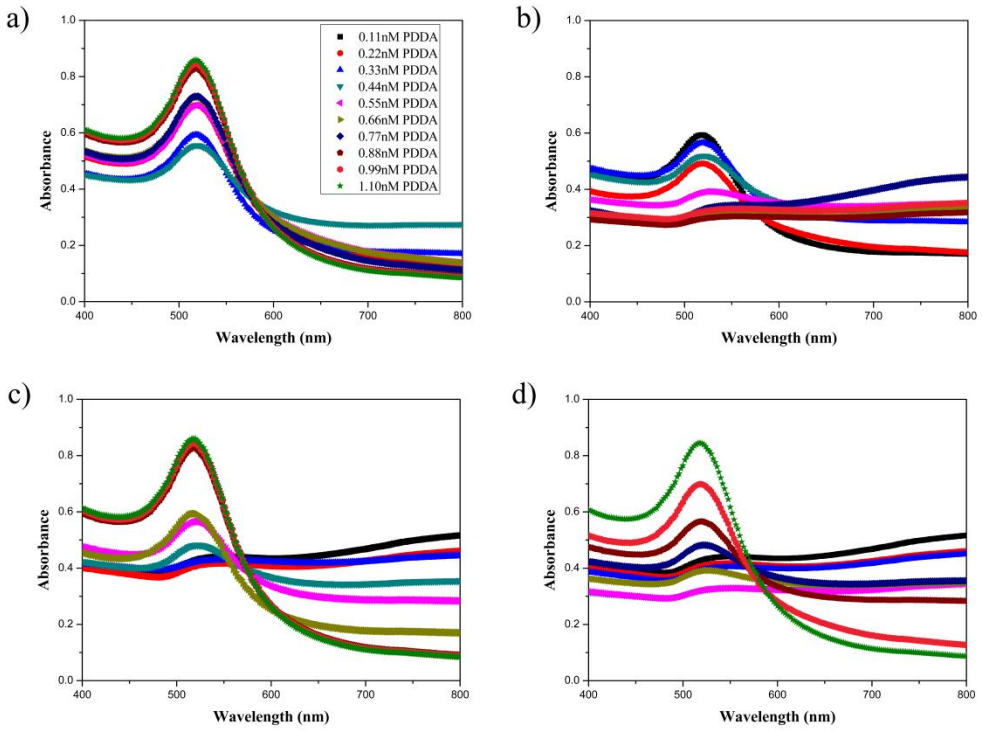

Fig.S2 Full-range (400 nm-800 nm) absorption spectra of biosensor with different concentrations of PDDA and aptamers. a) 0.4 μM melamine was treated with 0.11, 0.22, 0.33, 0.44, 0.55, 0.66, 0.77, 0.88, 0.99, 1.10 nM PDDA. b) 4.0 μM melamine was treated with 0.11, 0.22, 0.33, 0.44, 0.55, 0.66, 0.77, 0.88, 0.99, 1.10 nM PDDA. c) 0.4 μM melamine was treated with 0, 5, 10, 15, 20, 25, 30, 40, 60, 80 nM aptamers. d) 4.0 μM melamine was treated with 0, 5, 10, 15, 20, 25, 30, 40, 60, 80 nM aptamers.

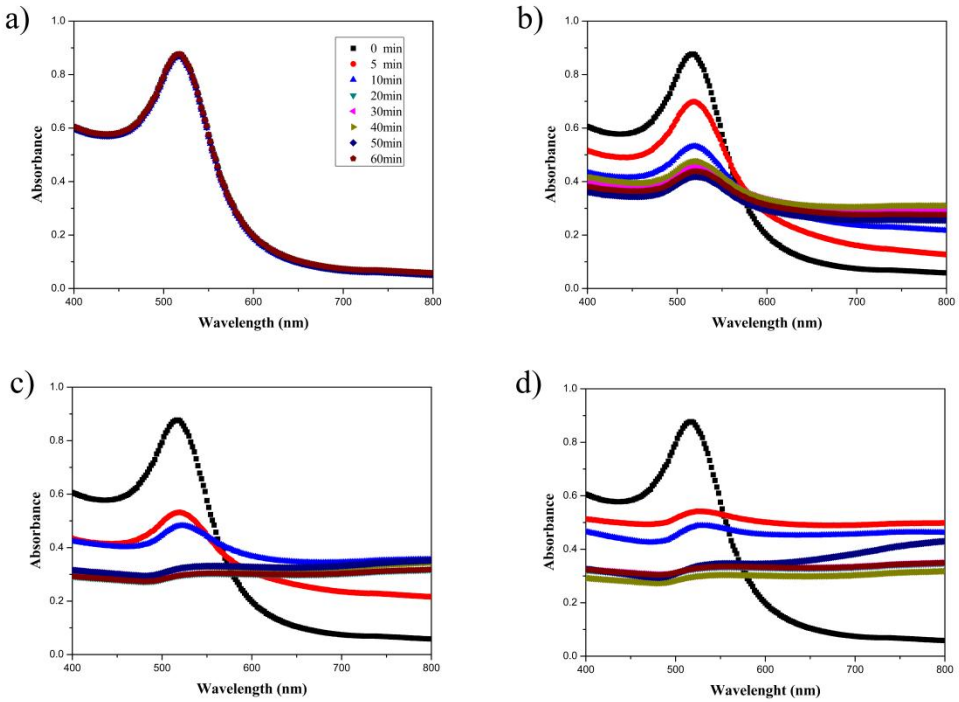

Fig.S3 Full-range (400 nm-800 nm) absorption spectra of biosensor with different reaction time: 0, 5, 10, 20, 30, 40, 50, 60 min. The concentrations of PDDA and aptamers were 0.44 nM and 25 nM. a) The concentration of melamine was 0 μM. b) The concentration of melamine was 0.4 μM. c) The concentration of melamine was 1.0 μM. d) The concentration of melamine was 2.0 μM.

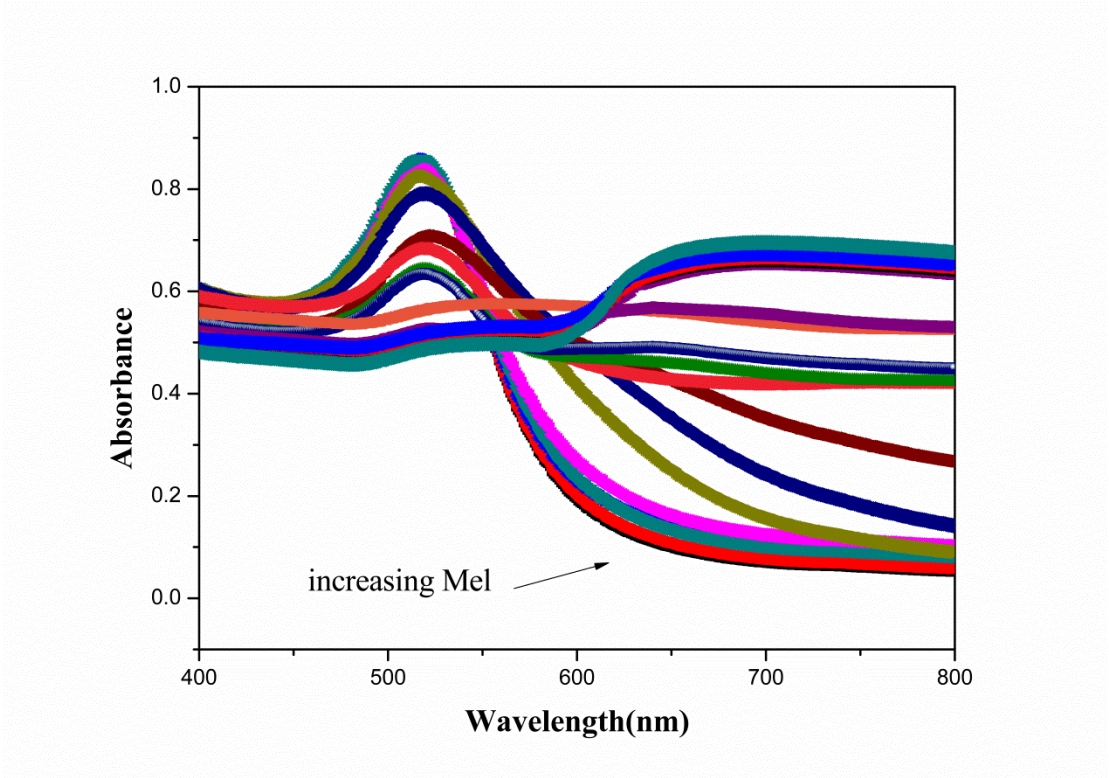

Fig.S4 The signals of absorbance value from 400 nm to 800 nm. 0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 μM melamine were treated with 0.44 nM PDDA and 25 nM aptamers.