Electronic Supplementary Material (ESI) for Analytical Methods.
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# Supporting Information

*for*

# Highly selective fluorescent probe for sensitive detection of HAV in the water

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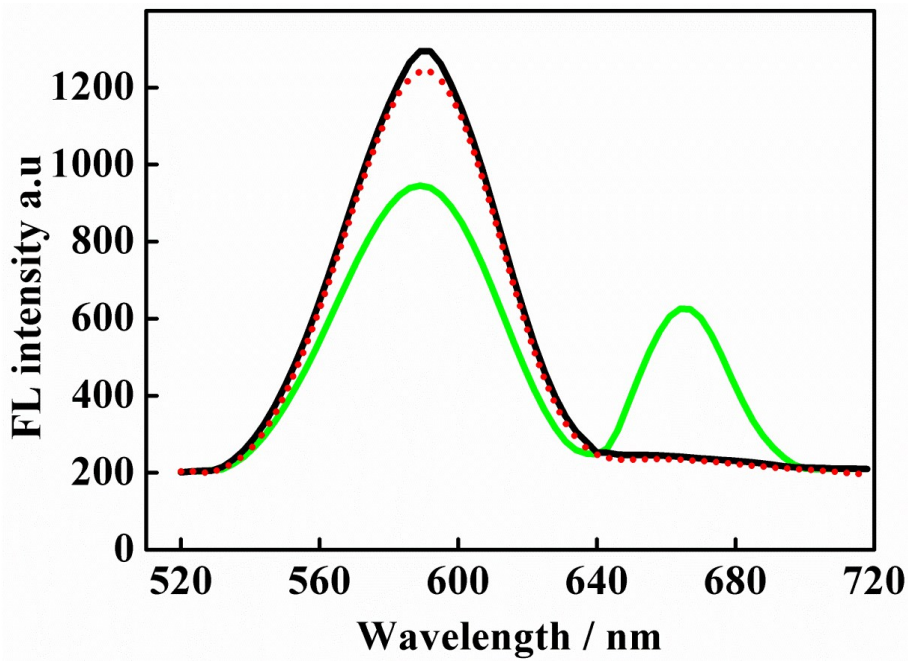
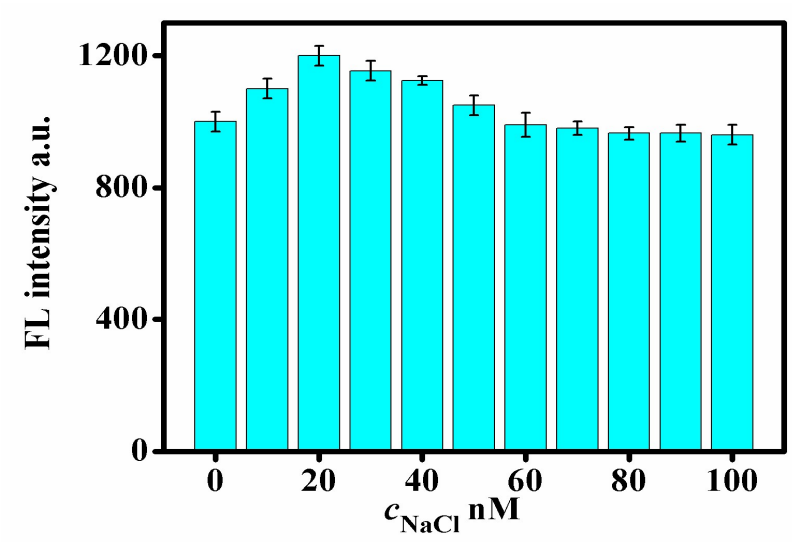
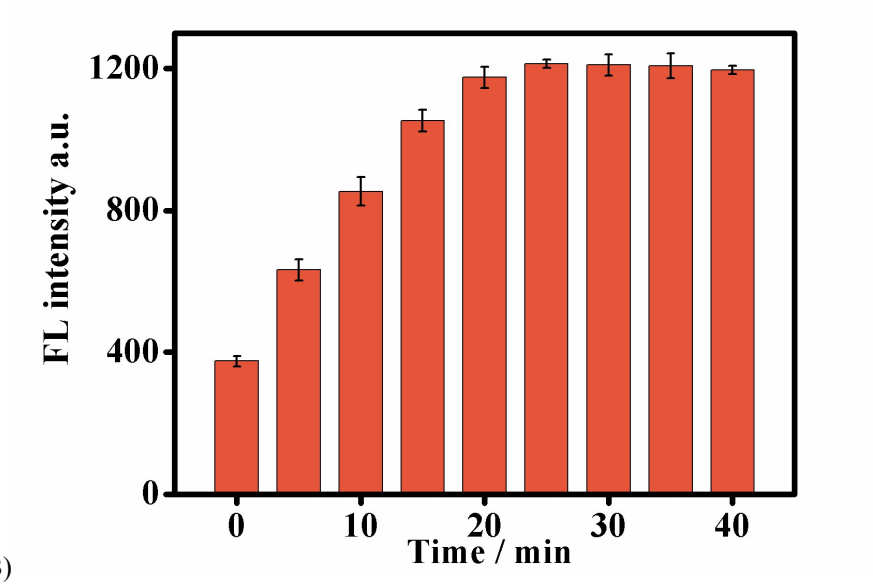


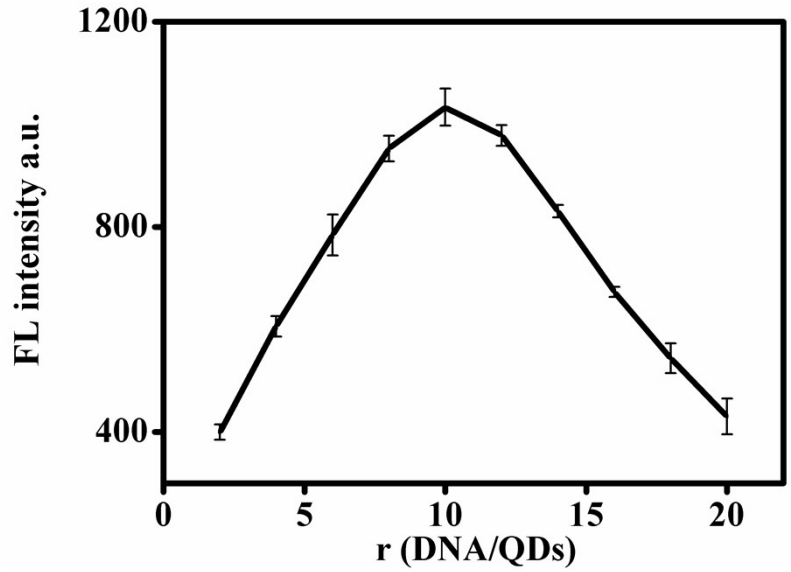

Fig.S1. Fluorescence intensity of designed biosensor with tDNA (green line), without report DNA (red dash line), without capture DNA (black line).


1200
800
400
0
FL intensity a.u.
0
20
40
60
80
100
$c_{NaCl}$ nM

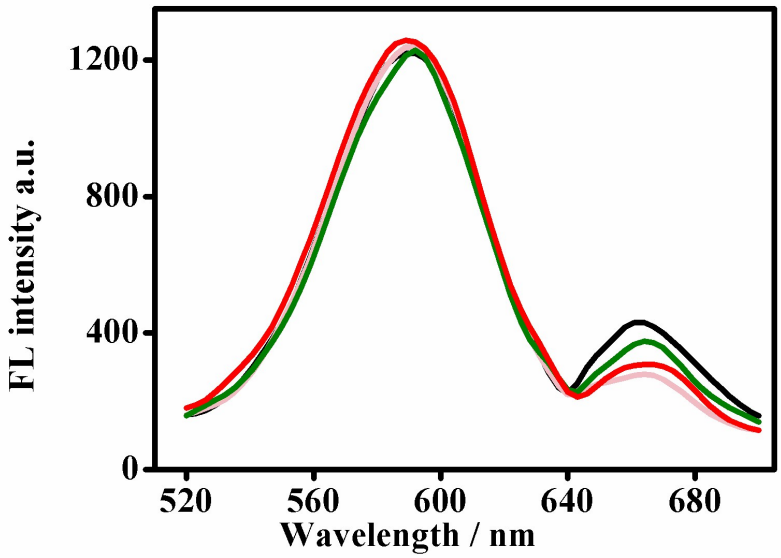
(A)


1200
800
400
0
FL intensity a.u.
0
10
20
30
40
Time / min

(B)


1200
800
400
FL intensity a.u.
0
5
10
15
20
r (DNA/QDs)

(C)




(D)

Fig.S2 Effects of (A) the concentration of the NaCl, (B) the hybridazation time, (C) the molar ratio of DNA and CdTe QDs,(D) fluorescence emission spectrum of different conformational systems of quantum dot-DNA with capture DNA (blue line), capture DNA1( gray line), capture DNA2(red line), capture DNA3( pink line) respectively.

**Table S1** Comparison of analytical performance of different methods for detection of HAV

| Method of detection | Liner Range | LOD | Ref. |
|---|---|---|---|
| Electrochemical DNA biosensor | 10 fg/μL-0.1 ng/μL | 0.15 fg/μL | 1 |
| Chemiluminescent DNA fibre optic genosensor | 5 pg/μL- 10 ng/μL | 5 pg/μL | 2 |
| Resonance light scattering sensor | 0.02-1.40 nmol/L | 6.2 pmol/L | 3 |
| mussel-inspired molecularly imprinted polymer | 0.04-6.0 nmol/L | 8.6 pmol/L | 4 |
| Molecularly imprinted polymer | 0.2-1.4 nmol/L | 88 pmol/L | 5 |
| Fluorescence probe using CdTe QDs | 0.20-50 nmol/L | 13 pmol/L | This work |

**References**

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