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

# Construction of NAND logic gate based on molecularly imprinted dual-emission quantum dots composites for detection of antibiotics

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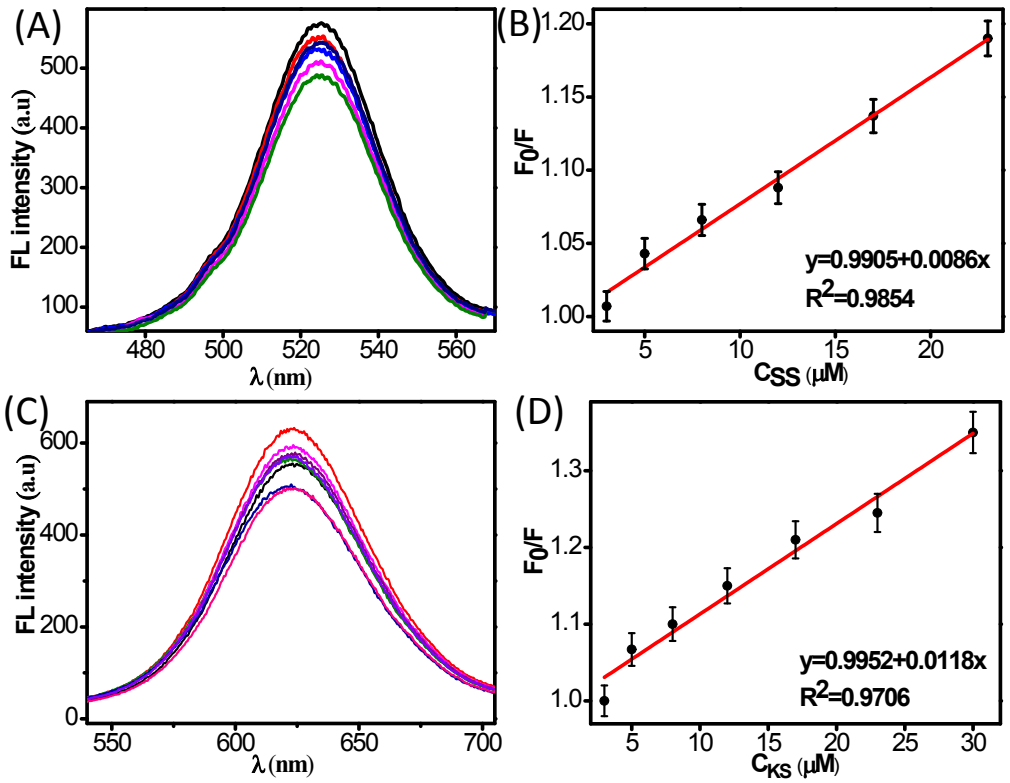


**Fig.S1.** (A) fluorescence spectra (λex=350 nm and λem=525 nm) of the $QD_G$@NIPs with the increasing concentrations of SS. (B) effect of SS concentration on the FL intensity of $QD_G$@NIPs. (C) Fluorescence spectra (λex=360 nm and λem=625 nm) of the $QD_R$@MIPs with the increasing concentrations of KS. (D) Effect of KS concentration on the FL intensity of $QD_R$@MIPs.

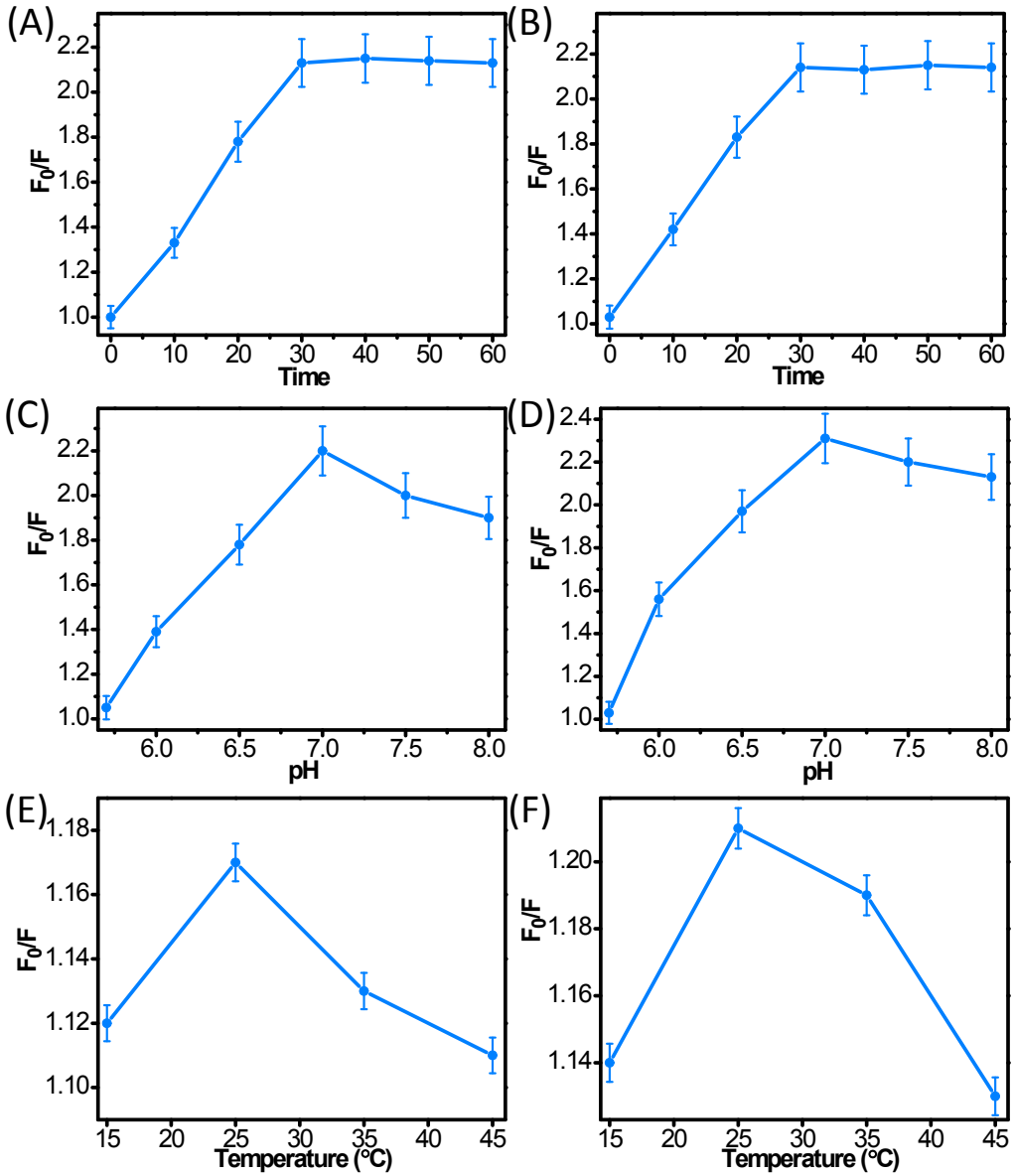


**Fig.S2.** Effect of time on the response of the (A) $QD_G$@MIPs to 5 μM SS, and $QD_R$@MIPs to 5μM SK at pH=7.0.Effect of pH on the response of the (C) $QD_G$@MIPs to 5 μM SS, and (D) $QD_R$@MIPs to 5μM KS. Effect of temperature on the response of the (E) $QD_G$@MIPs to 5 μM SS, and (F) $QD_R$@MIPs to 5μM KS.

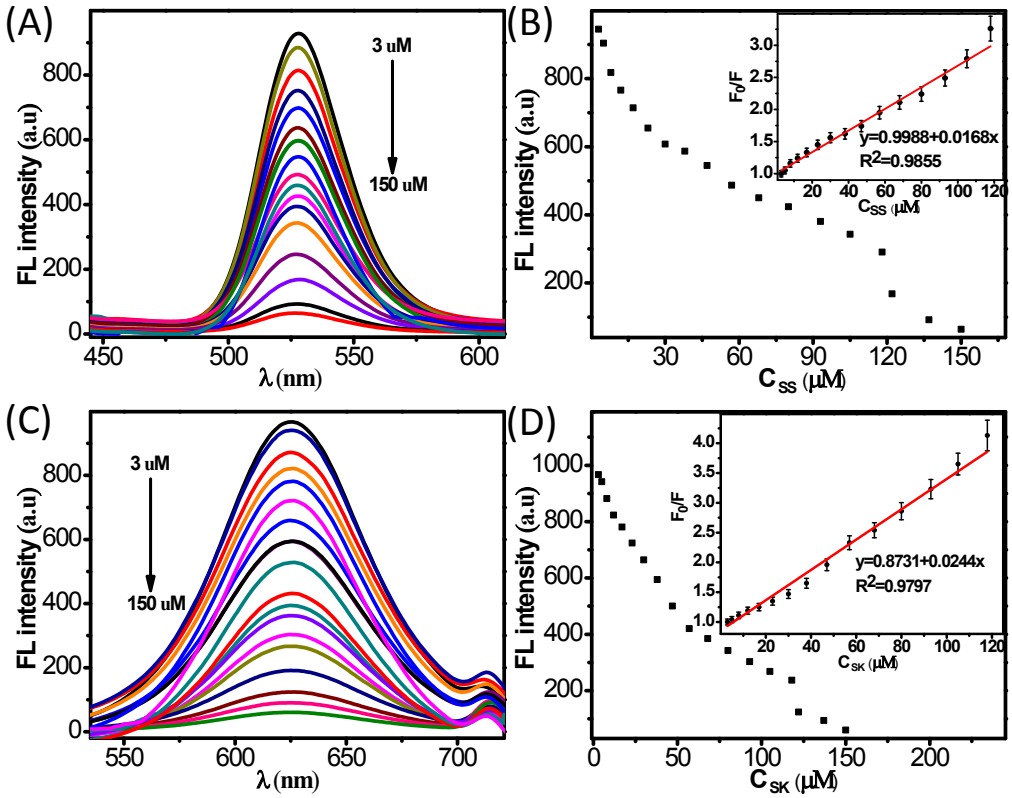


**Fig.S3.** (A) fluorescence spectra (λex=350 nm and λem=525 nm) of the $QD_G$@MIPs with the increasing concentrations of SS. (B) effect of SS concentration on the FL intensity of $QD_G$@MIPs, and the inset is the SS concentration calibration curves. (C) Fluorescence spectra (λex=360 nm and λem=620 nm) of the $QD_R$@MIPs with the increasing concentrations of KS. (D) Effect of KS concentration on the FL intensity of $QD_R$@MIPs, and the inset is the KS concentration calibration curves.

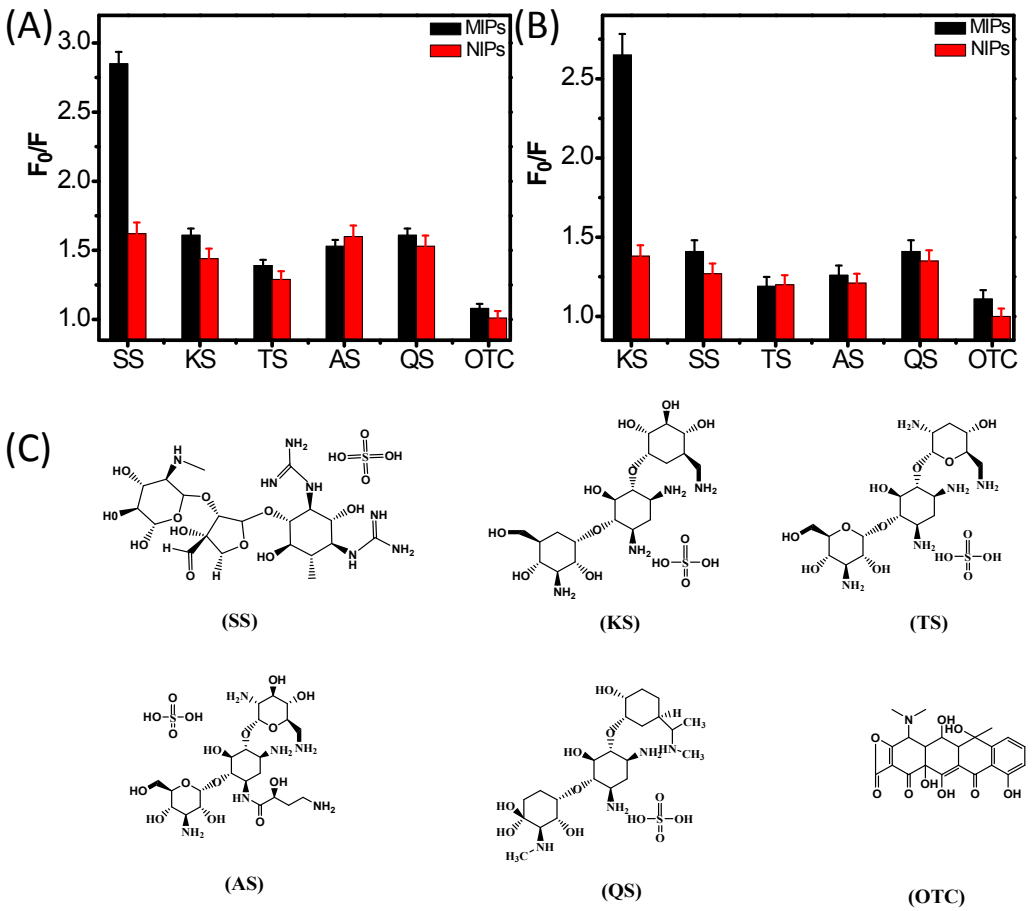


Fig.S4. selectivity of $QD_G$@MIPs and $QD_G$@NIPs for KS, SS, TS, AS, QS and OTC (A).selectivity of $QD_R$@MIPs and $QD_R$@NIPs for KS, SS, TS, AS, QS and OTC (B). And chemical Structures of KS, SS, TS, AS, QS and OTC (C).

Table S1 Analytical characteristics of some published methods for determination SS and SK

| Analytes | Detection methods | Element | Linear range | LOD | References |
|---|---|---|---|---|---|
| SS | Biochemistry | AuNPs | 500-22220 μM | 130.0 μM | 1 |
| | HPLC | CAD | 17.2-34.3 μM | - | 2 |
| | HPLC | - | 13.9-55.5 μM | - | 3 |
| | Colorimetric | AuNPs | 0.1 -0.5 μM | 0.086 μM | 4 |
| | CdTe@MIPs | MIP | 3-150 μM | 0.22 μM | This work |
| KS | Electrophoretic | UV | 12.0-1733.7μM | 0.5μM | 5 |
| | Cantilever array sensor | Aptamer | 100-10000μM | 50μM | 6 |
| | Spectrophotometric | AuNPs | 0.001- 0.5μM | 0.001μM | 7 |
| | FPIA | IgY | 0.007- 46.7μM | 0.0017μM | 8 |
| | CdTe@MIPs | MIP | 3-150 μM | 0.24μM | This work |

## References


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