

Supplementary Information

Rational Construction of a DNA Nanomachine for HIV Nucleic Acids ultrasensitive Sensing

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Table S1 Sequences of oligonucleotides used in this strategy

Name	Sequence (5'→3')
H1	SH-GCT AGA GAT TTT CCA CAC TGA CTT CTC TAG CGG GTT TTG GGT TTT AGT CAG TGT GGA AAA-FAM
H2	CTG ACT AAA ACC CAA AAC CCG CTA GAG AAG TCA GTG TGG AAA ATC TCT AGC GGG TTT TGG G
Primer (HIV DNA)	AGT CAG TGT GGA AAA TCT CTA GC
Padlock-1 (P1)	P-CACACTGACTGTGACGTTTTTTTTTTTTTTTTTTTGTGACGGCTAGAGAT
Padlock-2 (P2)	P-CCACACTGACTGTGACGTTTTTTTTTTTTTTTTTTTGTGACGGCTAGAGATT
Padlock-3 (P3)	P-TCCACACTGACTGTGACGTTTTTTTTTTTTTTTTTTTGTGACGGCTAGAGATTT
MT1	GGT CAG TGT GGA AAA TCT CTA GT
MT2	TTT CAG TGT GGA AAA TCT CTA TT
MT-all	TTTAGCTTCTTAACCGGGCTATGGCTGGGG

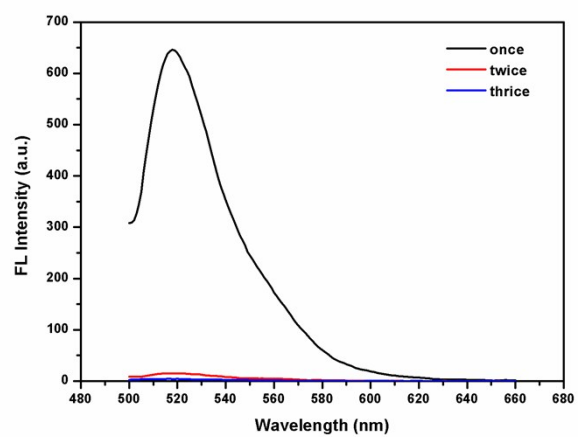


Fig. S1 The fluorescence intensity of dissociative oligonucleotides after different times washing of functional AuNPs.

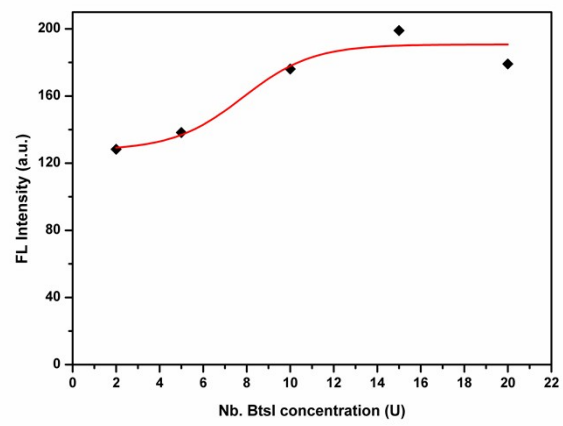


Fig. S2 The effects of the concentration of Nb. BtsI.