

Electronic Supplementary Material

**A Visual electrochemiluminescence resonance energy transfer/Surface Plasmon
Coupled Electrochemiluminescence nanosensor for Shiga toxin-producing
Escherichia coli Detection**

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Table S1 Sequences of the used oligonucleotides in present work

Name	Sequences (5' to 3')
Hairpin DNA	COOH- TTTTTTTTTTATCCAGTAGTCAACGAATGGCGATTTA TTGGATA-SH
Target DNA	ATAAATCGCCATTCGTTGACTAC
One-base-mismatched DNA	ATAAATCGCGATTCGTTGACTAC

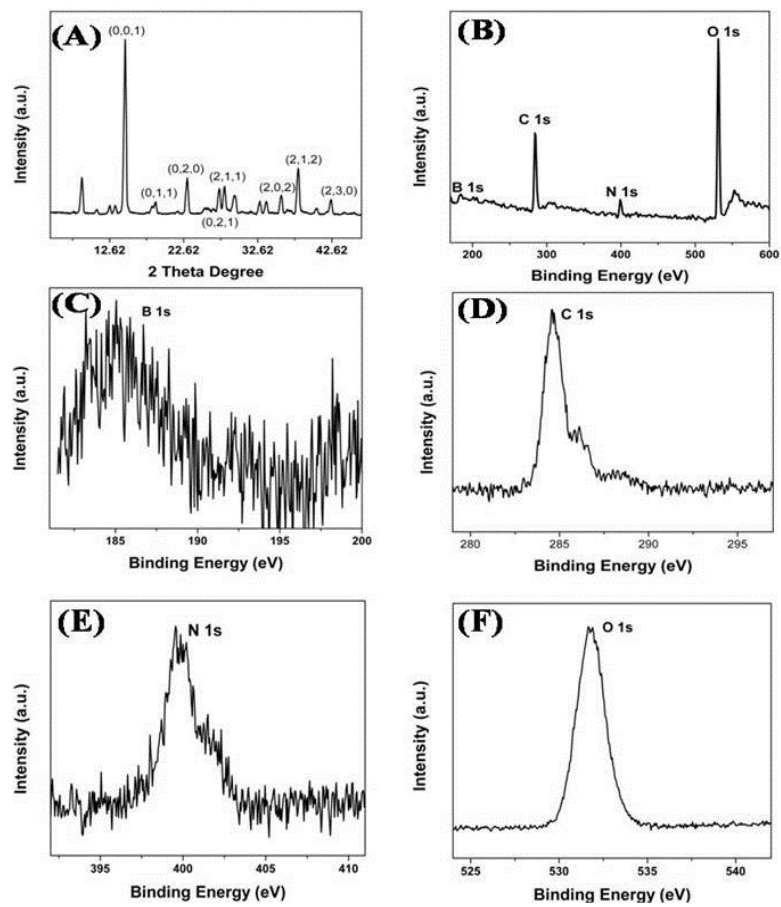


Figure S1. (A) The XRD pattern of BN QDs (B) the survey XPS of BN QDs (C)-(F) narrow scan spectrum of B 1s, C 1s, N 1s, O 1s.

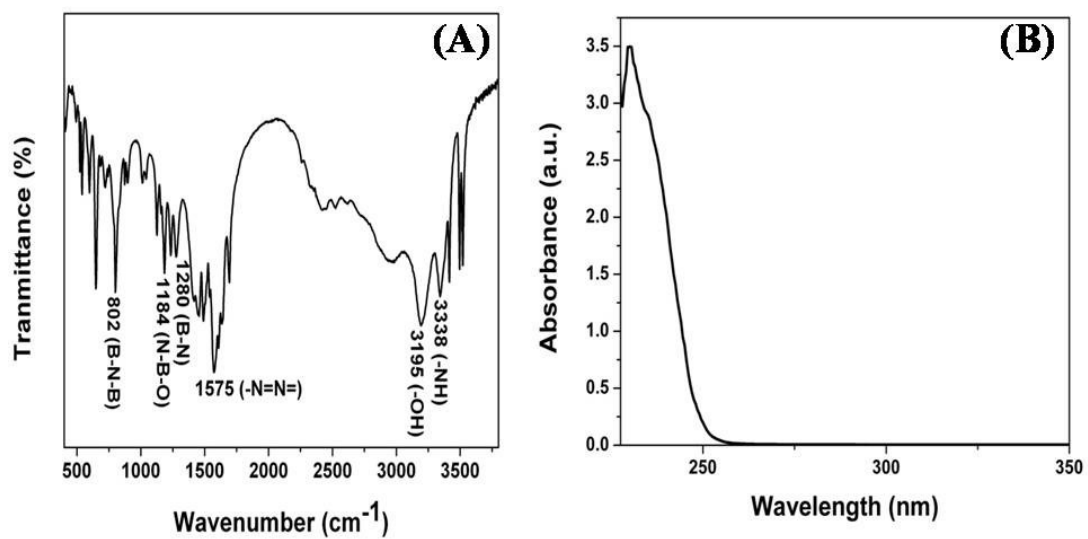


Figure S2.(A) FTIR spectra of BN QDs. (B) The UV-vis absorption spectrum of BN QDs.

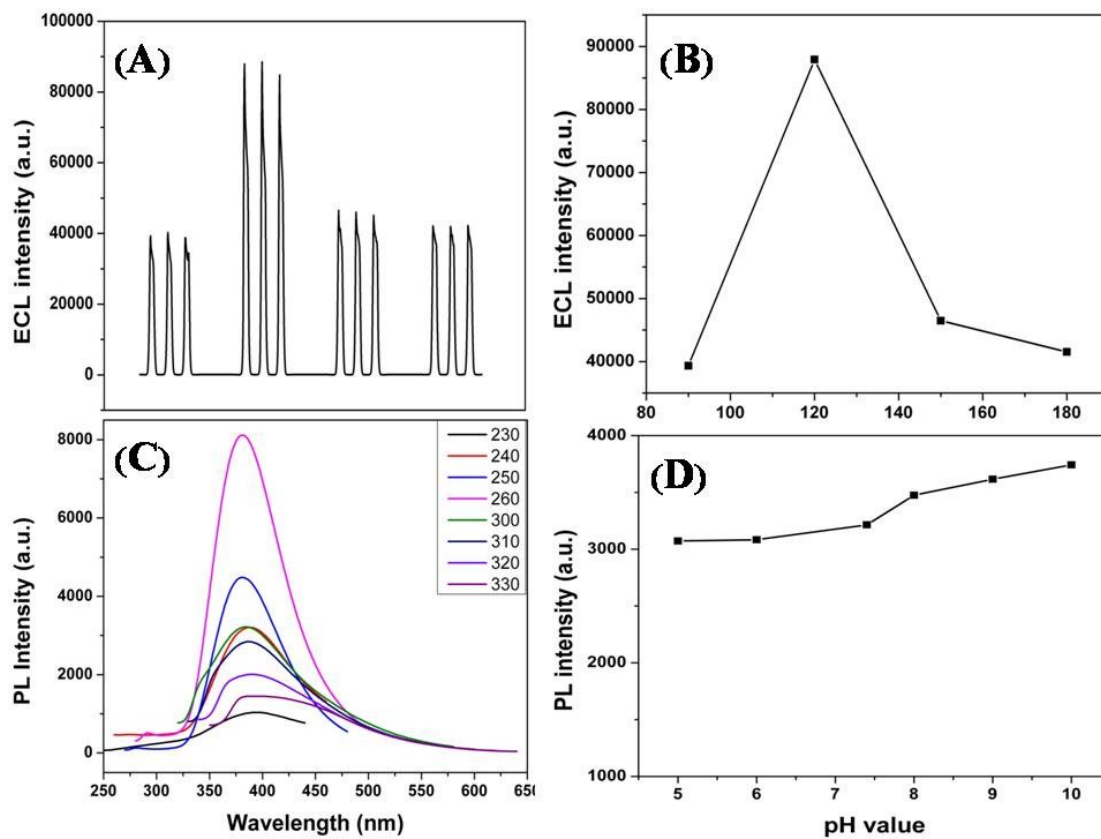


Figure S3. (A),(B) The ECL curve of different temperature of synthesizing BN QDs. (C) PL emission spectrum of BN QDs at different excitation wavelengths. (D) A linear relationship between PL intensity and pH (From 5-10 in 0.01 mol/L phosphate buffer solution)

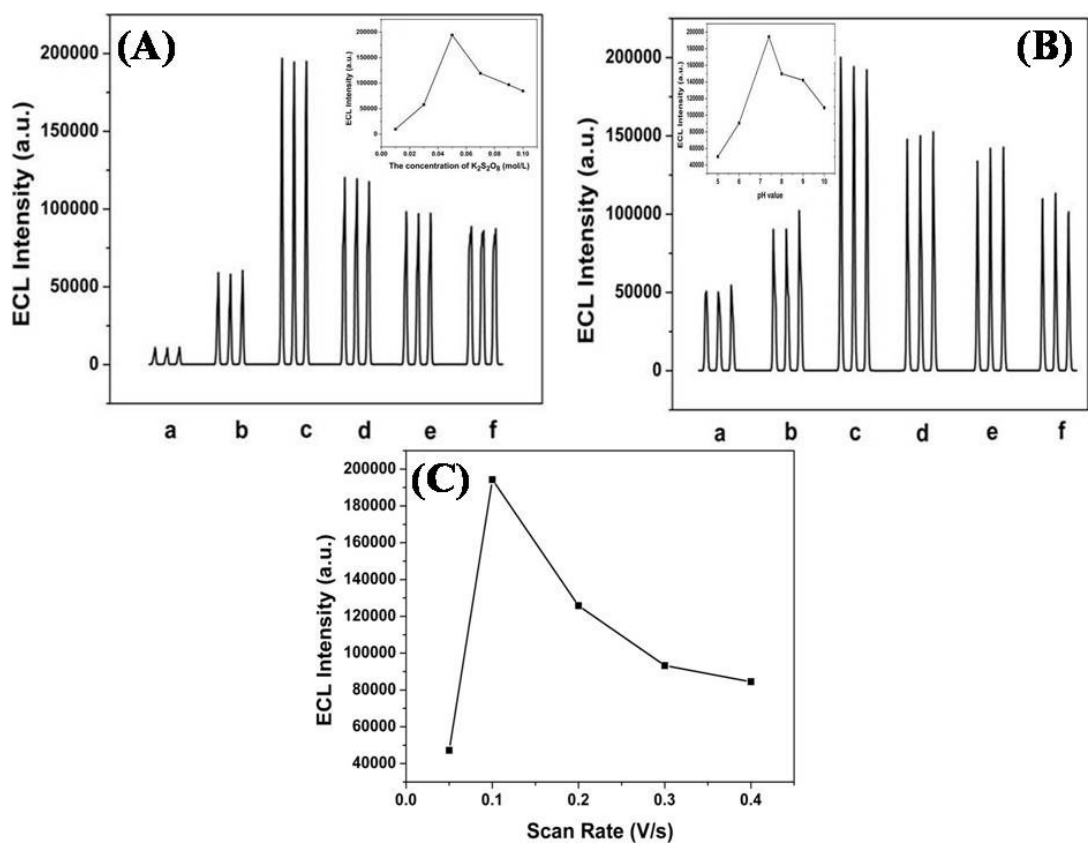


Figure S4. (A) The optimization of the concentration of $K_2S_2O_8$. (B) The optimization of the pH value of the solution. (C) The optimization of the scan rate.

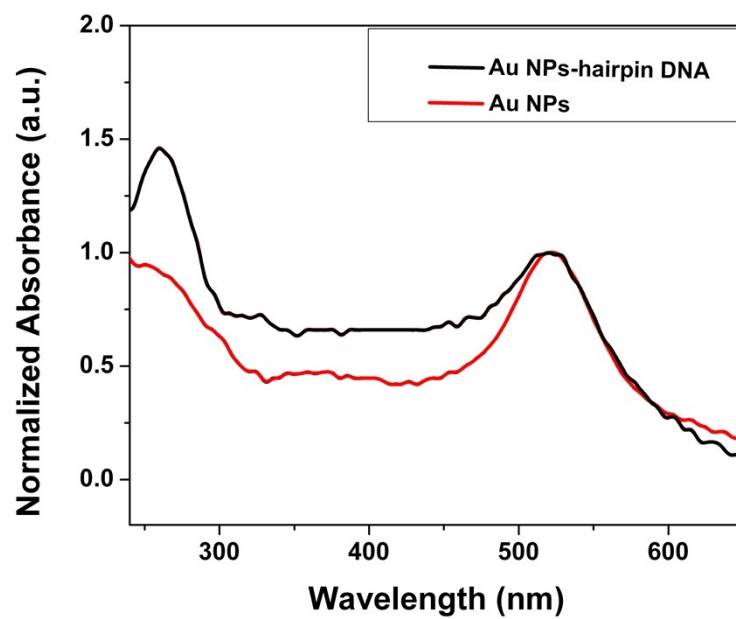


Figure S5. The normalized UV-vis absorption spectrum of Au NPs and Au NPs-hairpin DNA.

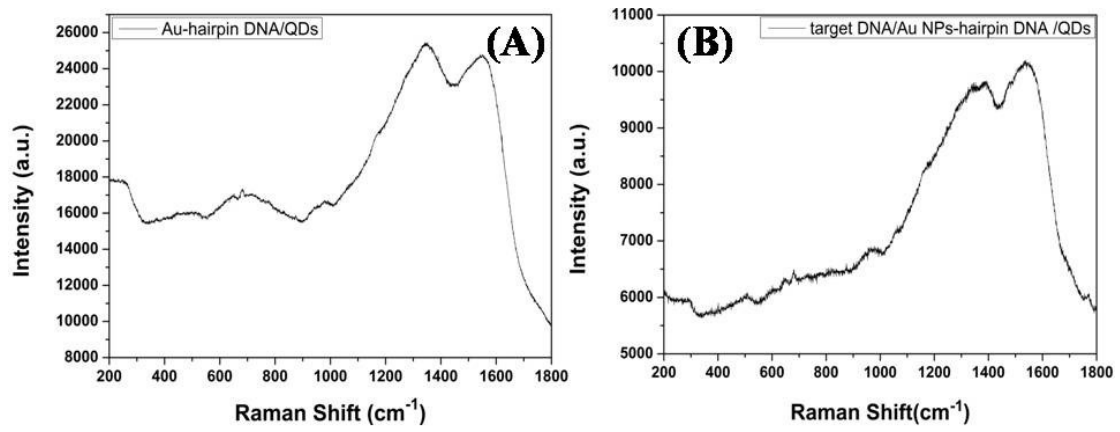


Figure S6. Raman spectrum of (A) Au-hairpin DNA/QDs and (B) target DNA/Au NPs-hairpin DNA /QDs.