

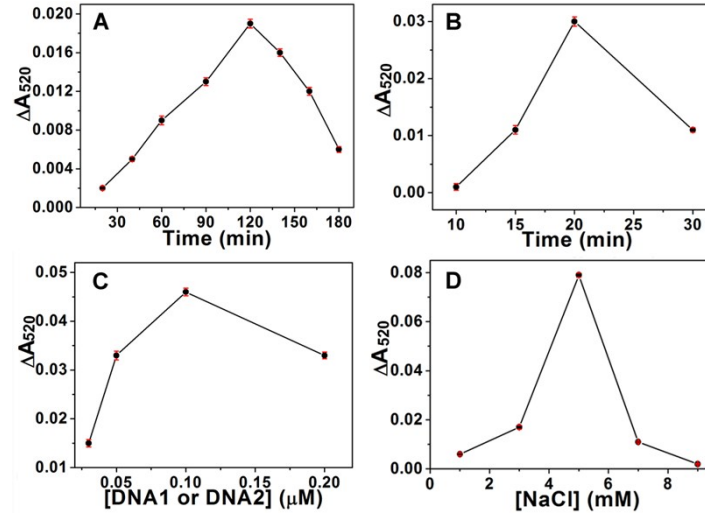
## **Colorimetric ultrasensitive detection of DNA based on intensity of gold nanoparticles with dark-field microscopy**

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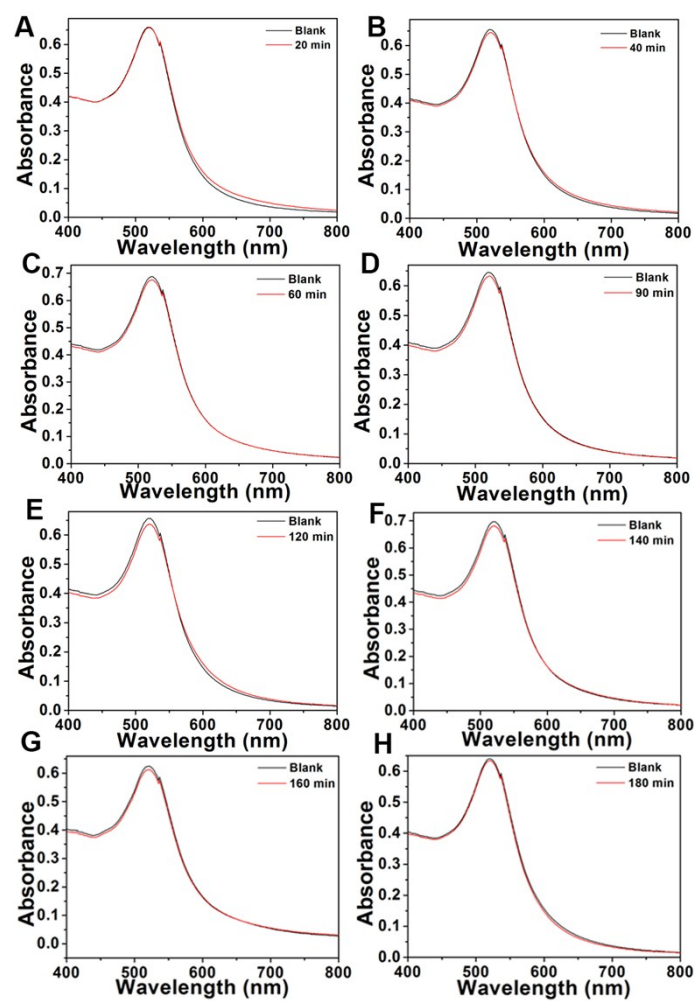
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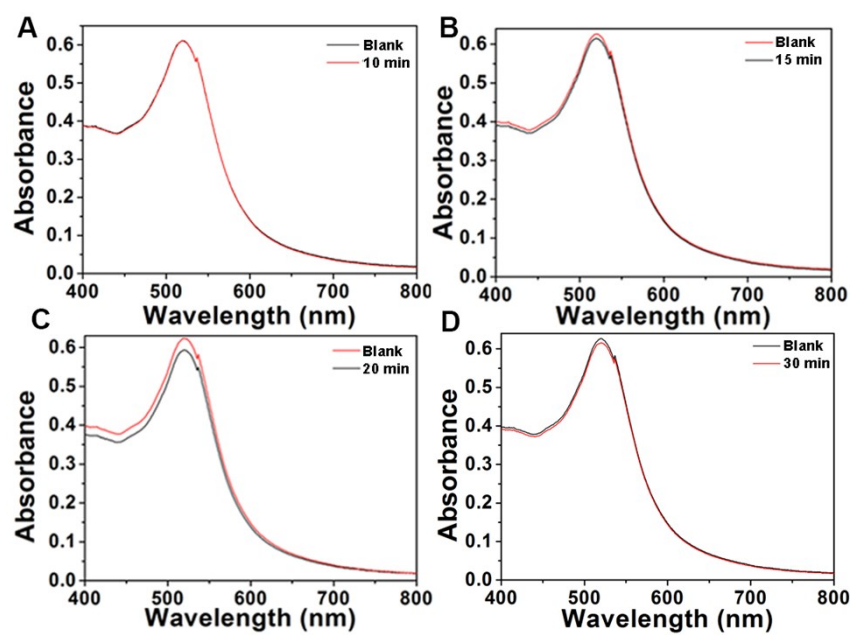
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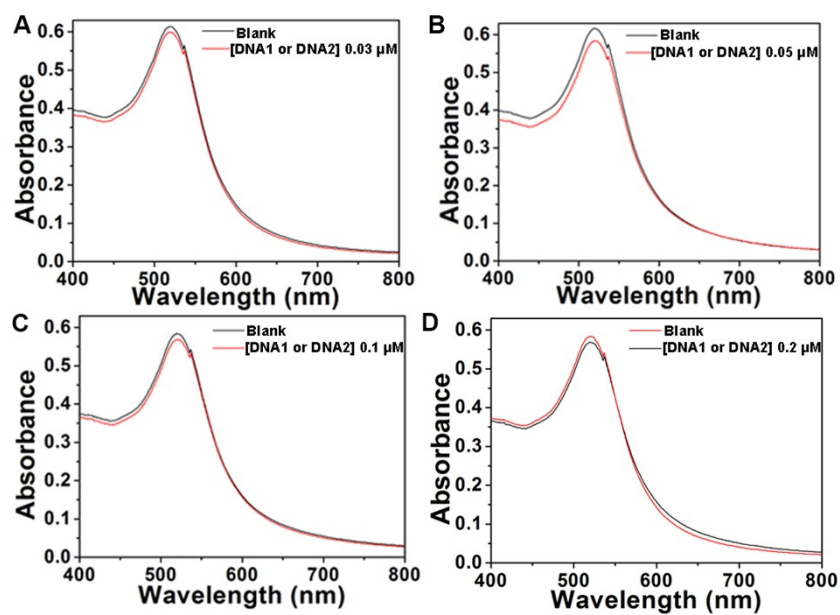
**Fig. S1** The effect of (A) the reaction time between hairpin DNA and target DNA, (B) incubation time of AuNPs, (C) DNA1/DNA2 concentration, and (D) NaCl concentration on the absorbance.



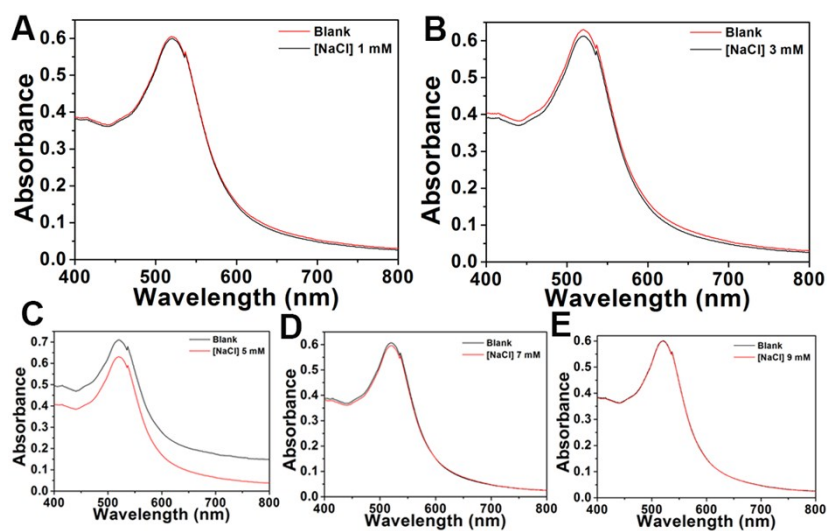
**Fig. S2** UV-vis absorption spectra of AuNPs after different reaction time between hairpin DNA and target DNA.



**Fig. S3** UV-vis absorption spectra of AuNPs after incubation of different time.



**Fig. S4** UV-vis absorption spectra of AuNPs in the presence of DNA1/DNA2 with different concentrations.



**Fig. S5** UV-vis absorption spectra of AuNPs in the presence of different concentrations of NaCl.