Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting information

Validating DNA-Induced Silver Nanocluster Reconstruction via HPLC and Exploring Their Optical Properties for DNA Sequence Labeling

Tzu-Pei Chou, Po-Wei Chang, Abizard Sarno Faraz Raufa and Chih-Wei Chang *

Department of Chemistry, National Changhua University of Education, Taiwan

*Corresponding author: cwchang@cc.ncue.edu.tw

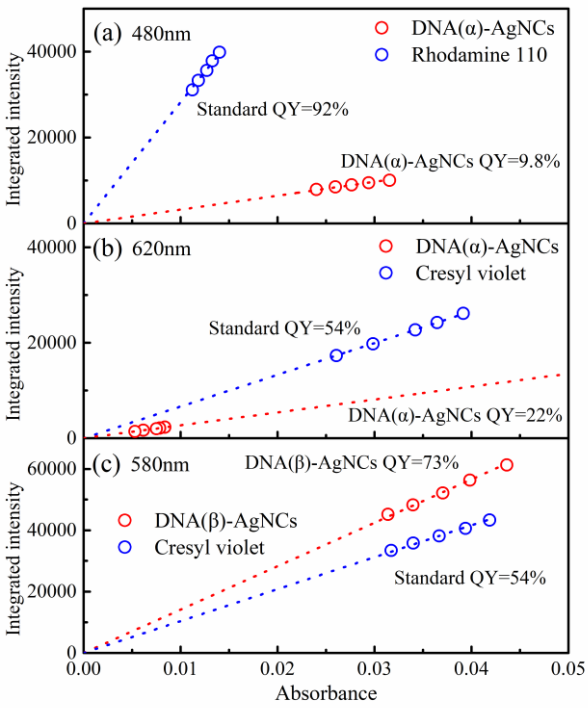

Fig. S1: The fluorescence quantum yield of the DNA (α) AgNCs excited at (a) 480 nm and (b) 620 nm; (c) the fluorescence quantum yield of the DNA (β) AgNCs excited at 580 nm.

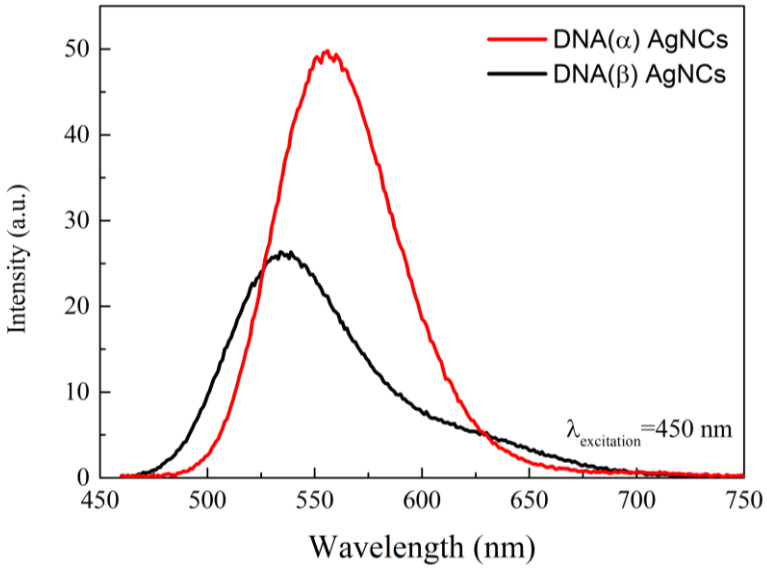

Fig. S_2:The emission spectra of DNA(α) AgNCs and DNA(β) AgNCs upon 450 nm excitation.

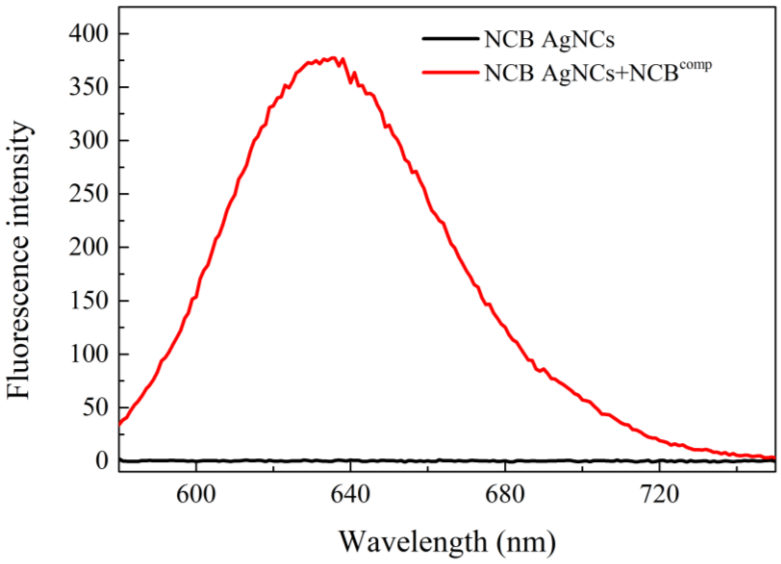

Fig. S_3:The steady state emission spectra of NCB AgNCs and NCB AgNCs+NCB^{comp}

Table S_1: The abbreviations and sequences of the DNA used in this study

DNA	Sequence (5′→3′)
DNA(α)	CGCCCCCCTTGGCGT
DNA(β)	TTCCCACCCACCCCGGCCC
Hum 22	AGGGTTAGGGTTAGGGTTAGGG
NCB	CCCTTAATCCCCTATAATAAATTTTAAATATTATTTATTAAT
NCB^{comp}	ATTAATAAATAATATTTAAAATTTATTATAGGGTGGGGTGGGG TGGGG

Table S_2: The reaction conditions for the synthesis of DNA AgNCs.

DNA sequences	DNA:$AgNO_3$:$NaBH_4$(μM)	Reaction temperature and time	Buffer
DNA(α)	50:500:120	25ºC (1 hour)	10 mM ammonium acetate, pH=7.0
DNA(β)	50:500:250	25ºC (1.5 hours)	10 mM ammonium acetate, pH=7.0
Hum 22	30:180:180	4ºC (12 hours)	water
NCB	15:90:90	25ºC (18 hours)	20 mM phosphate buffer, pH=6.6
NCB^{comp}	15:90:90	25ºC (18 hours)	20 mM phosphate buffer, pH=6.6