Supporting Information

Synthesis of fluorescent BCN hybrid nanosheets: A highly efficient fluorosensor for rapid, simple, sensitive Ag⁺ detection



Fig. S1 PL emission spectra of BCN dispersion in the tris-HCl with the absence and presence of Ag⁺.

Table S1 Lifetime intensity decays of BCN in the absence and presence of Ag^+ ([Ag^+] =25 μ M)

BCN	$\tau_1 = 0.7977$	Rel%1=79.70%	χ ² =1.290	τ=1.990 us
	$\tau_2 = 6.6721$	Rel%2=20.30%		
$BCN + Ag^+$	$\tau_1 = 0.8390$	Rel%1=85.94%	χ ² =2.006	τ=1.789 us
	$\tau_2 = 7.5954$	Rel%1=14.06%		

Table S2 Stern–Volmer quenching constants of BCN–Ag⁺ at different temperatures

T (K)	$10^5 \mathrm{K_{SV}}(\mathrm{LM^{-1}})$	R	SD
298	3.124 ± 0.03	0.9954	0.018
323	2.896 ± 0.03	0.9928	0.021
348	2.701 ± 0.03	0.9919	0.017

R: correlation coefficient; SD: standard deviation



Fig. S2 PL intensities of BCN dispersion under various conditions in aqueous solution (excitation at 280 nm; $[Ag^+] = 25 \ \mu M$; $[Hg^{2+}] = 25 \ \mu M$, $[Cys] = 800 \ \mu M$).