Supporting Information

A novel symmetrical imidazole framework as a fluorescence sensor for selective detection of Silver ions

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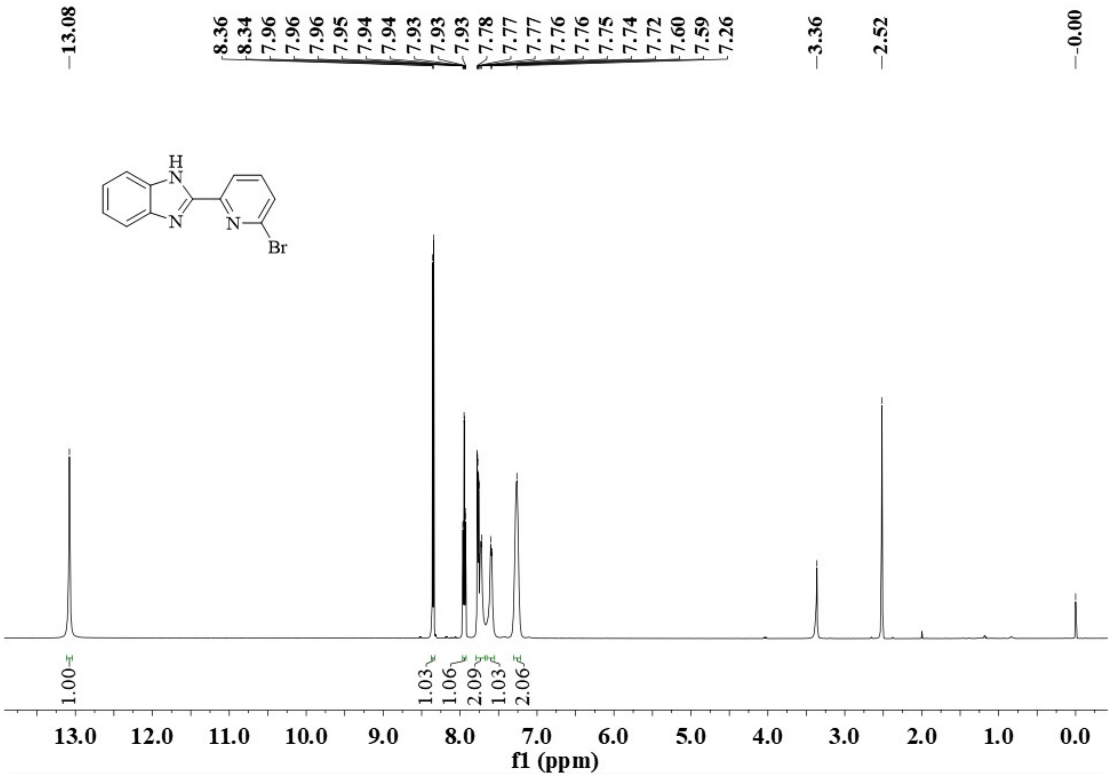

Fig. S1. ^{1}H NMR spectrum of compound **1**

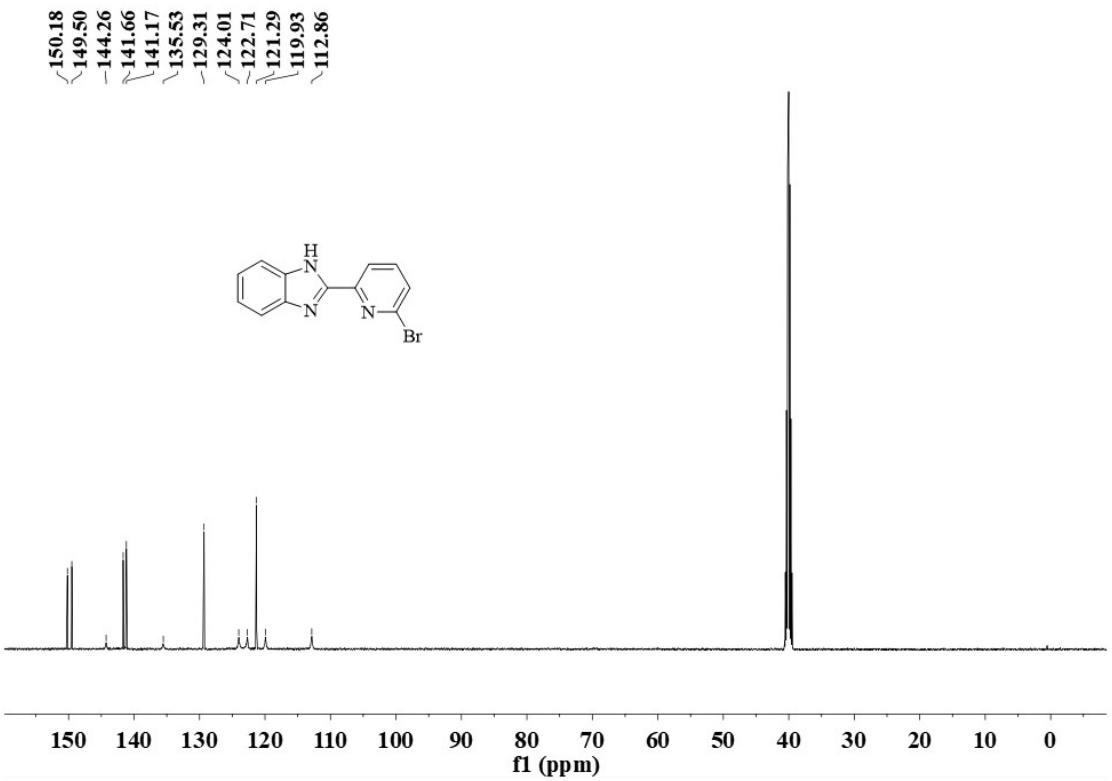

Fig. S2. ^{13}C NMR spectrum of compound **1**

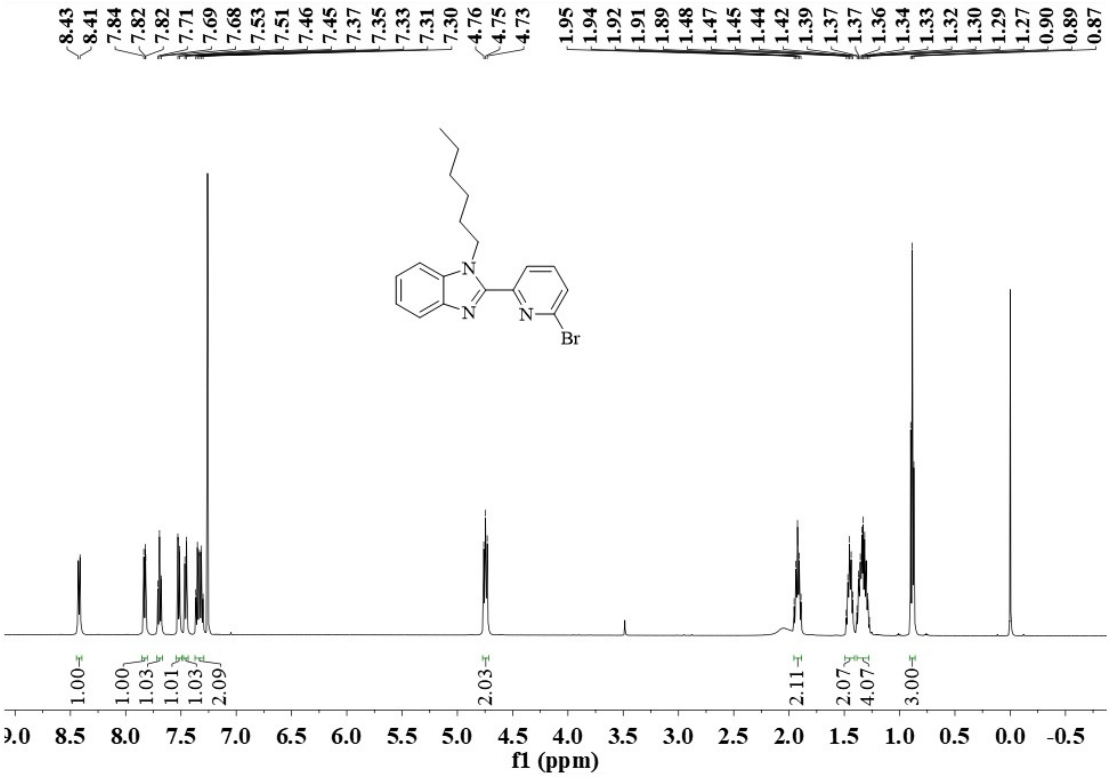

Fig. S3. ^{1}H NMR spectrum of compound **2**

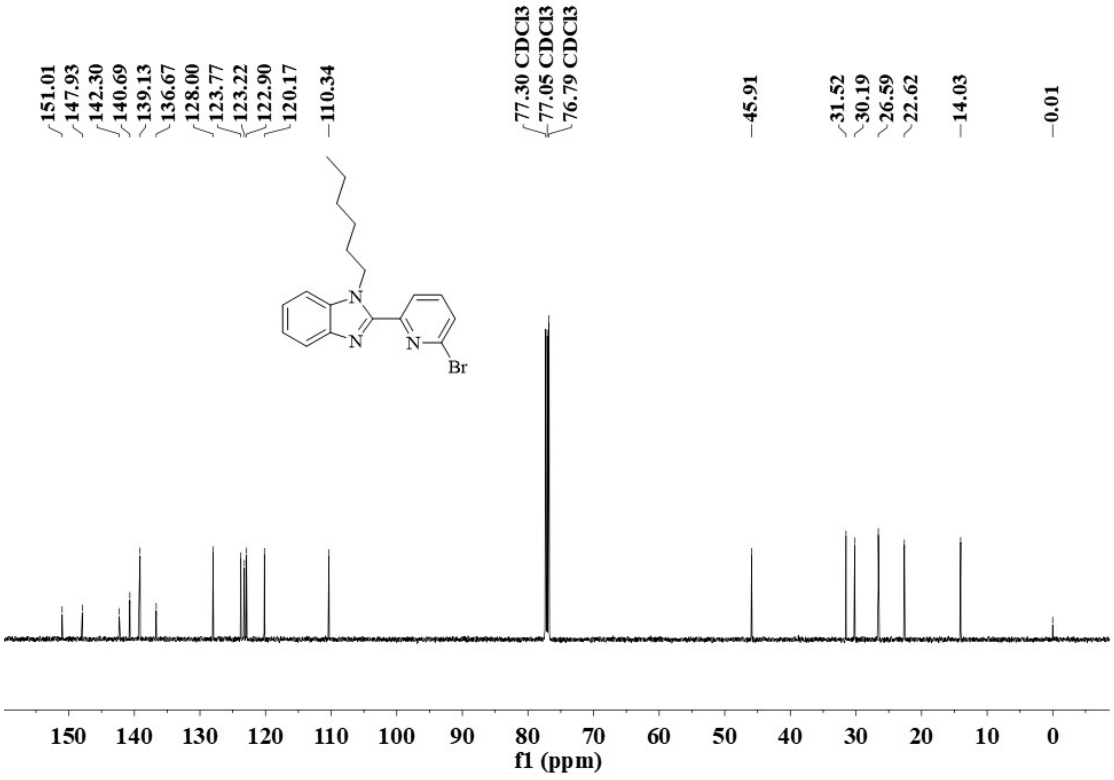

Fig. S4. ^{13}C NMR spectrum of compound **2**

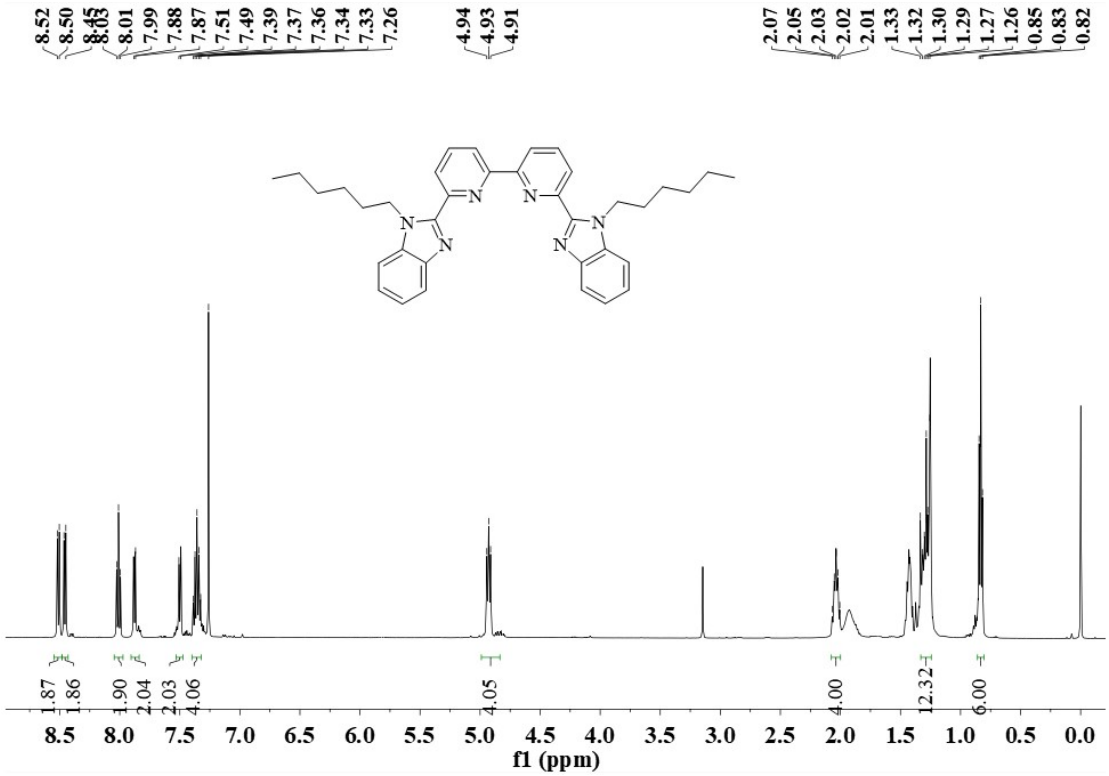

Fig. S5. ^{1}H NMR spectrum of **BIB**

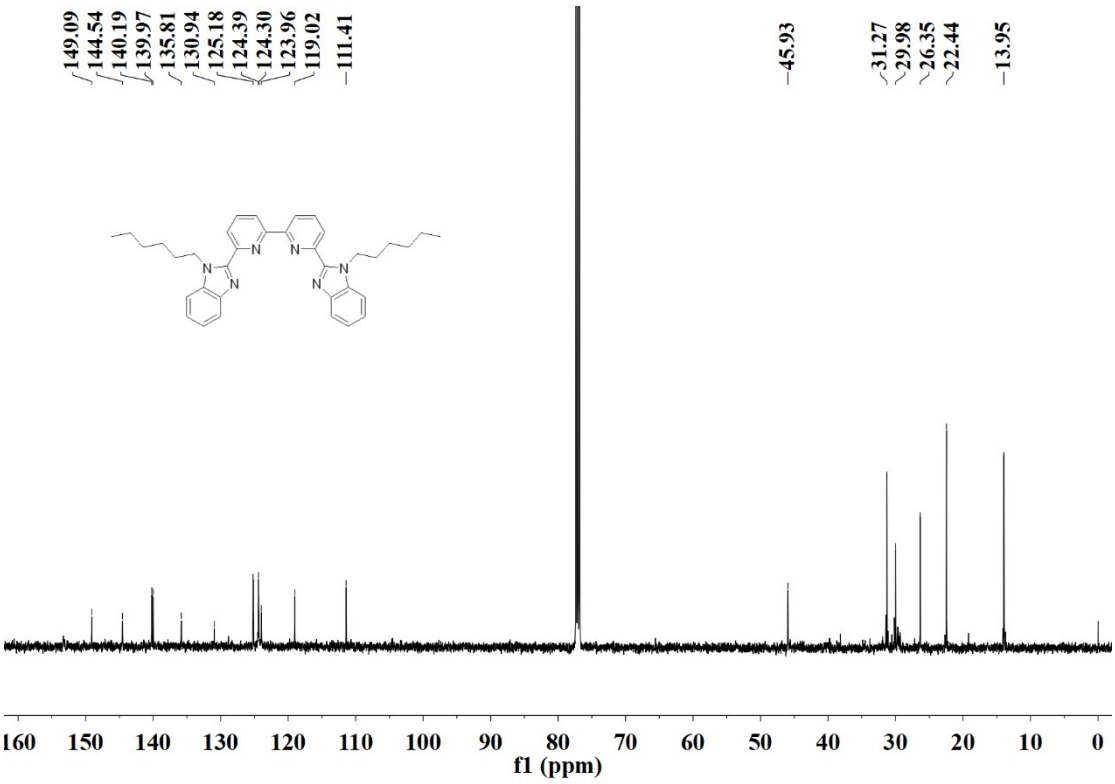

Fig. S6. ^{13}C NMR spectrum of **BIB**

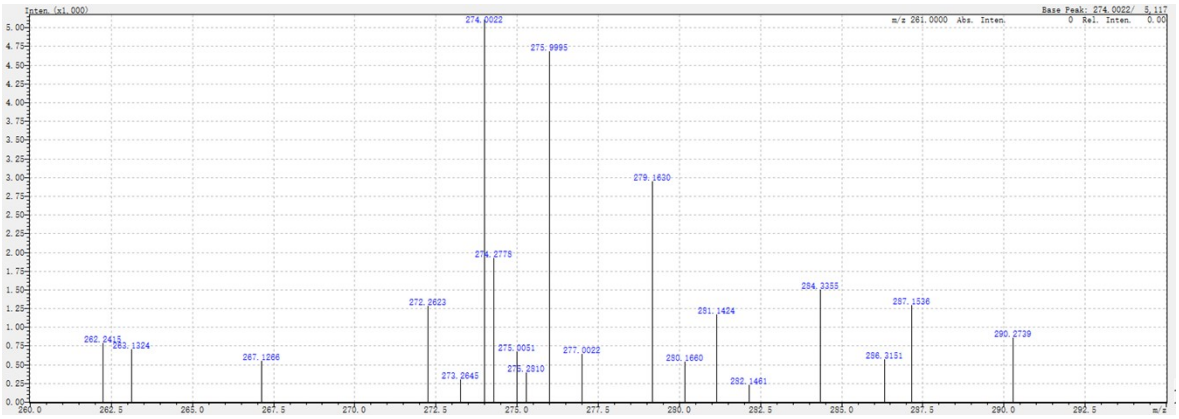

Fig. S7. HRMS spectrum of compound **1**

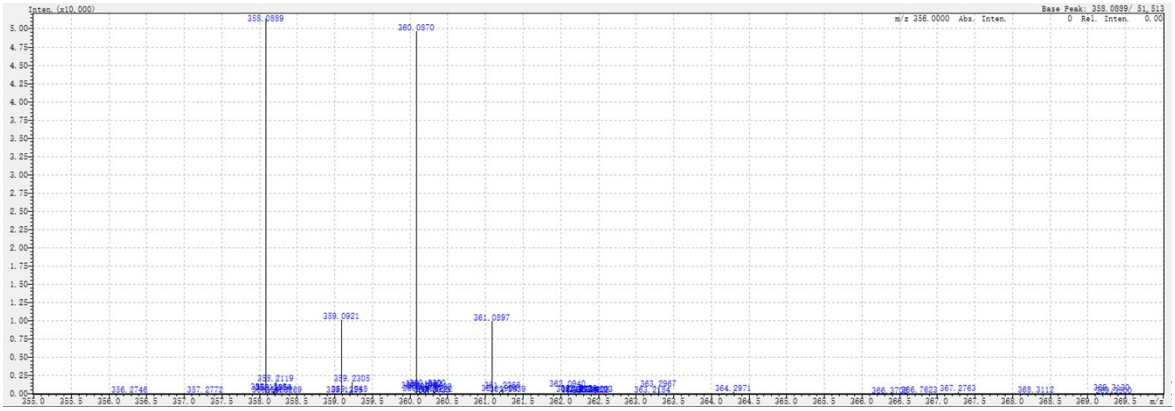

Fig. S8. HRMS spectrum of compound **2**

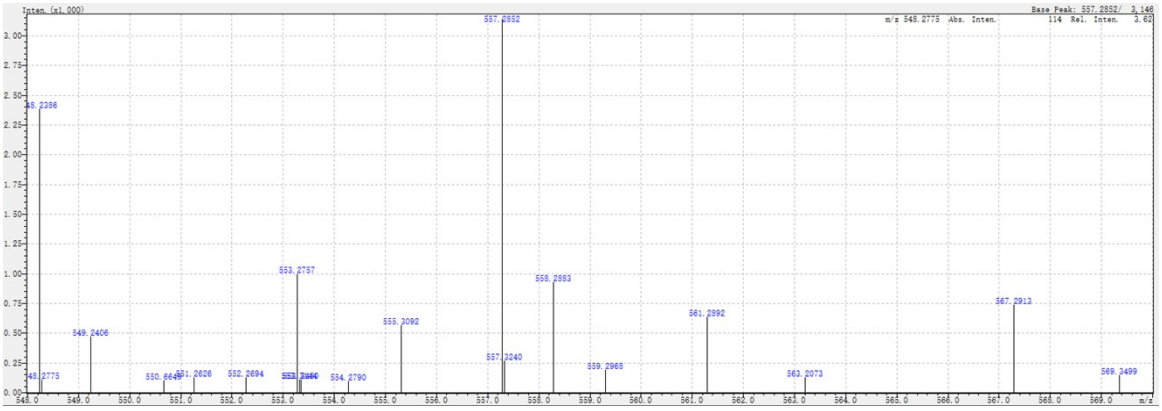

Fig. S9. HRMS spectrum of imidazoles **BIB**

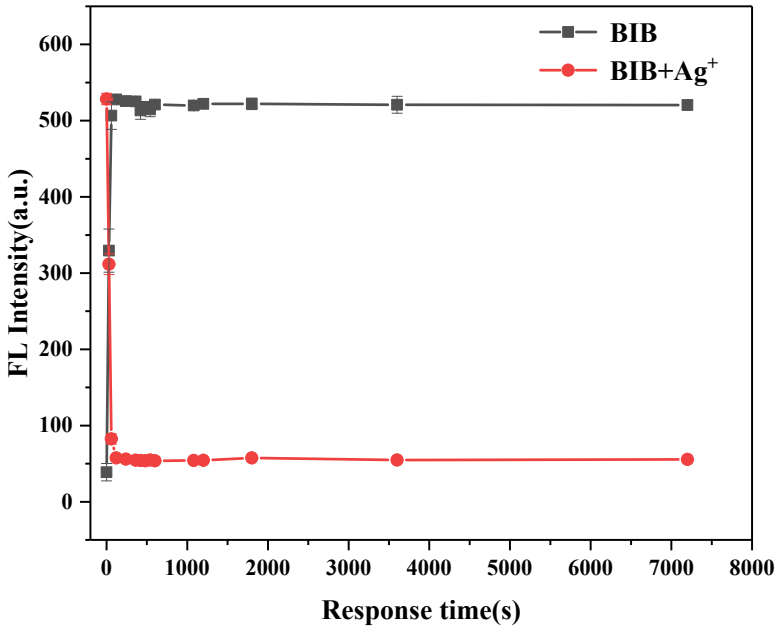

Fig. S10. The response time of **BIB** in the absence and presence of Ag^{+}.

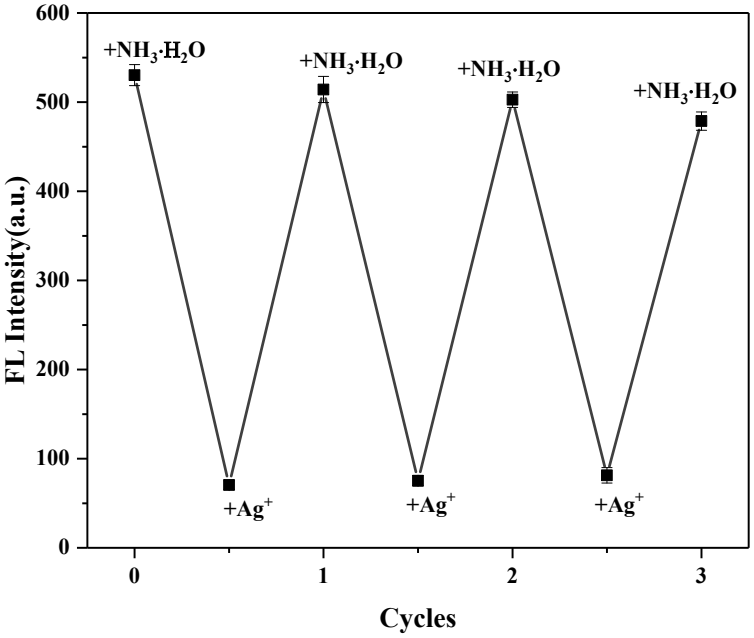

Fig. S11. Reversibility of **BIB** upon sequential addition of Ag^{+} and $NH_3 \cdot H_2O$.

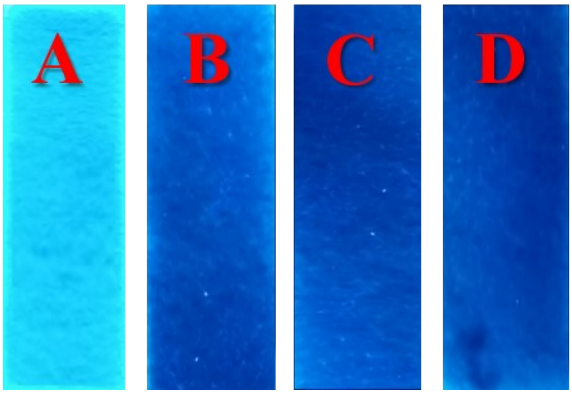

Fig. S12. Photographs of test paper strips with **BIB** (A: Blank) for detecting city water (B), lake water of university (C), and drinking water in market (D) with Ag^{+} (3 μM) under UV light at 365 nm.

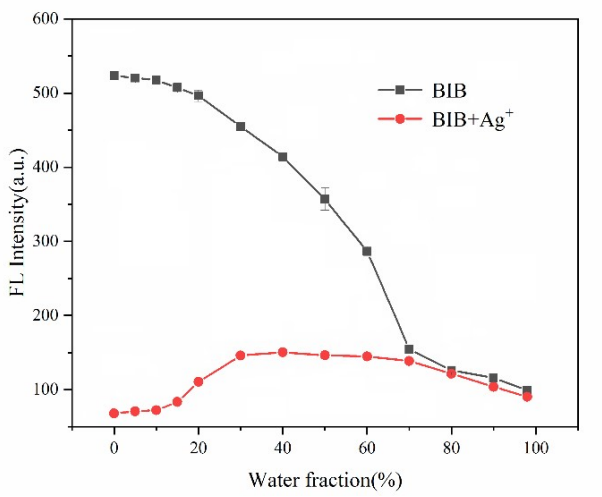

Fig. S13. The water content in DMF-H_2O affects the detection of Ag+ ions.

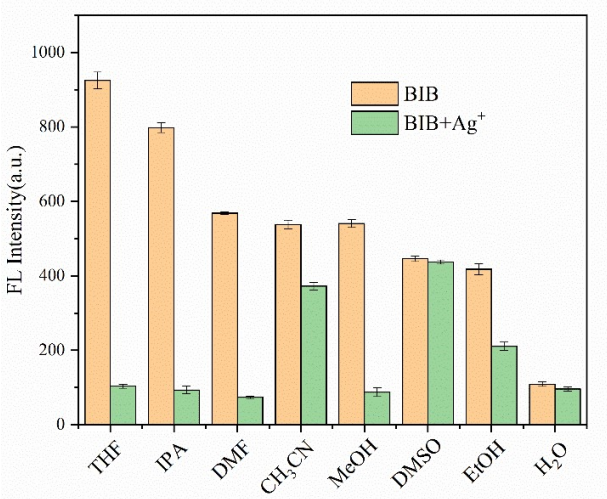

Fig. S14. The response of the detection of Ag+ ions in other solvents.

Table S1. Determination of Ag^+ in real samples using AAS analysis (n=3).

Real samples	Added ($\times10^{-6}$mol·L^{-1})	Found ($\times10^{-6}$mol·L^{-1})	Recovery (%)	RSD (%)
city water	2.00	2.08	104.00	0.37
	4.00	4.16	104.00	1.06
lake water of University	2.00	2.42	121.00	2.31
	4.00	4.09	102.25	0.42
drinking water in market	2.00	2.21	110.50	0.54
	4.00	4.39	109.75	1.86

Table S2. Determination of Ag^+ in real samples using test paper strips (n=5).

Real samples	Added ($\times10^{-6}$mol·L^{-1})	Found ($\times10^{-6}$mol·L^{-1})	Recovery (%)	RSD (%)
city water	3.00	3.48	116.00	2.09
lake water of University	3.00	3.22	107.00	3.63
drinking water in market	3.00	2.89	96.33	3.21