

## Supporting Information

### A highly selective TPE-based AIE fluorescent probe for silver ion

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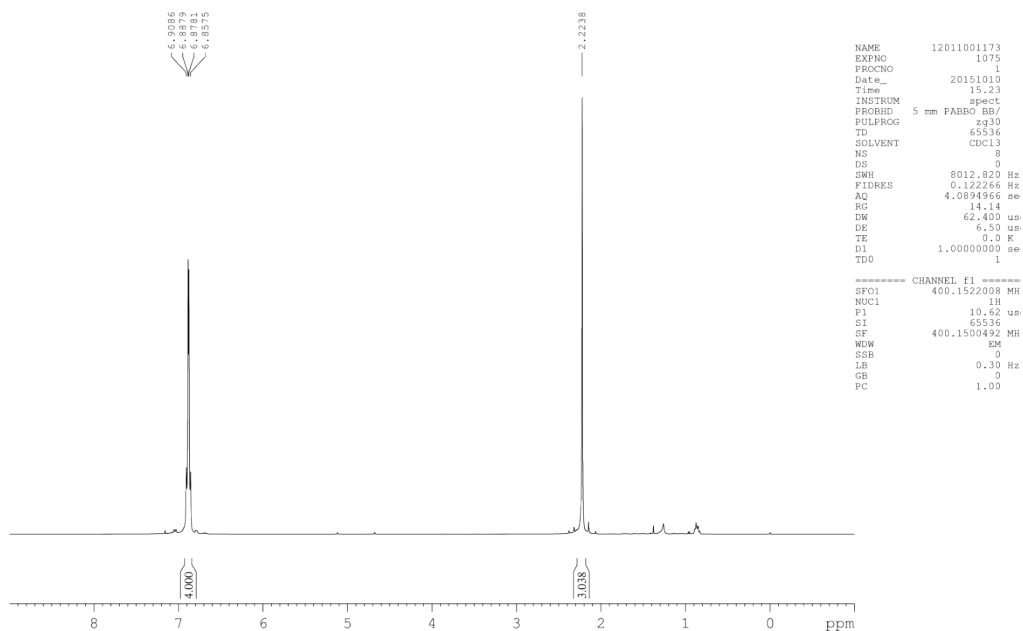


Figure S1.  $^1\text{H}$  NMR spectrum of compound (1) in  $\text{CDCl}_3$ .

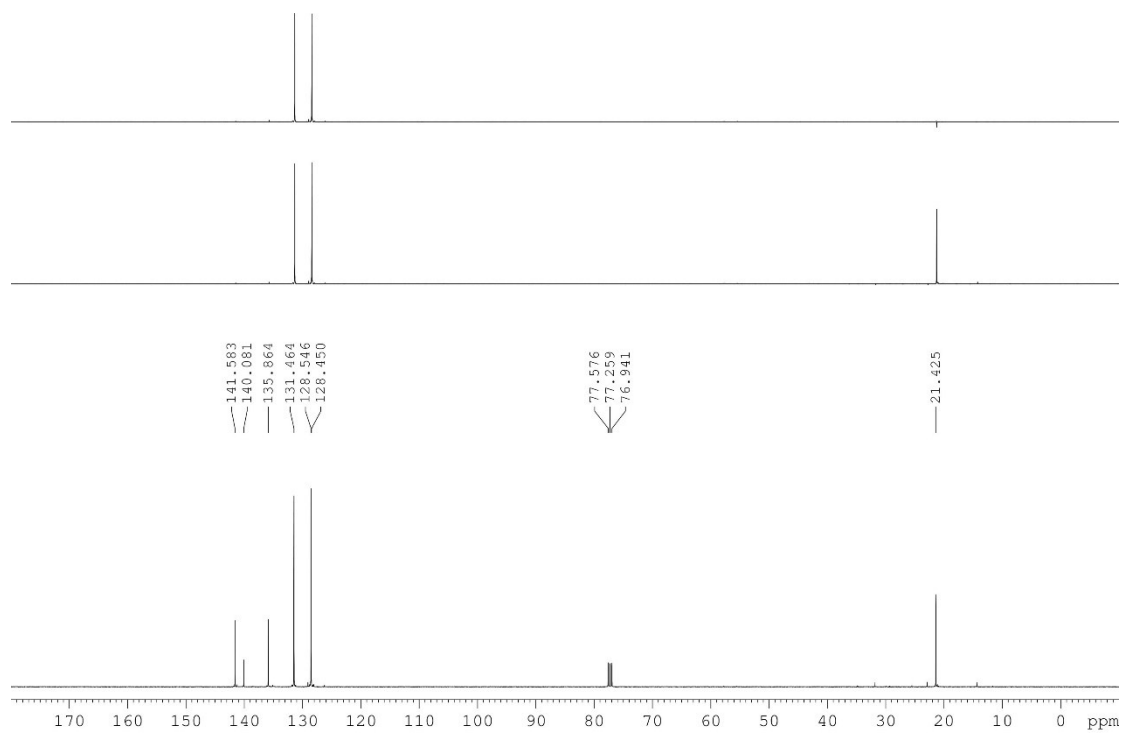


Figure S2.  $^{13}\text{C}$  NMR spectrum of compound (1) in  $\text{CDCl}_3$ .

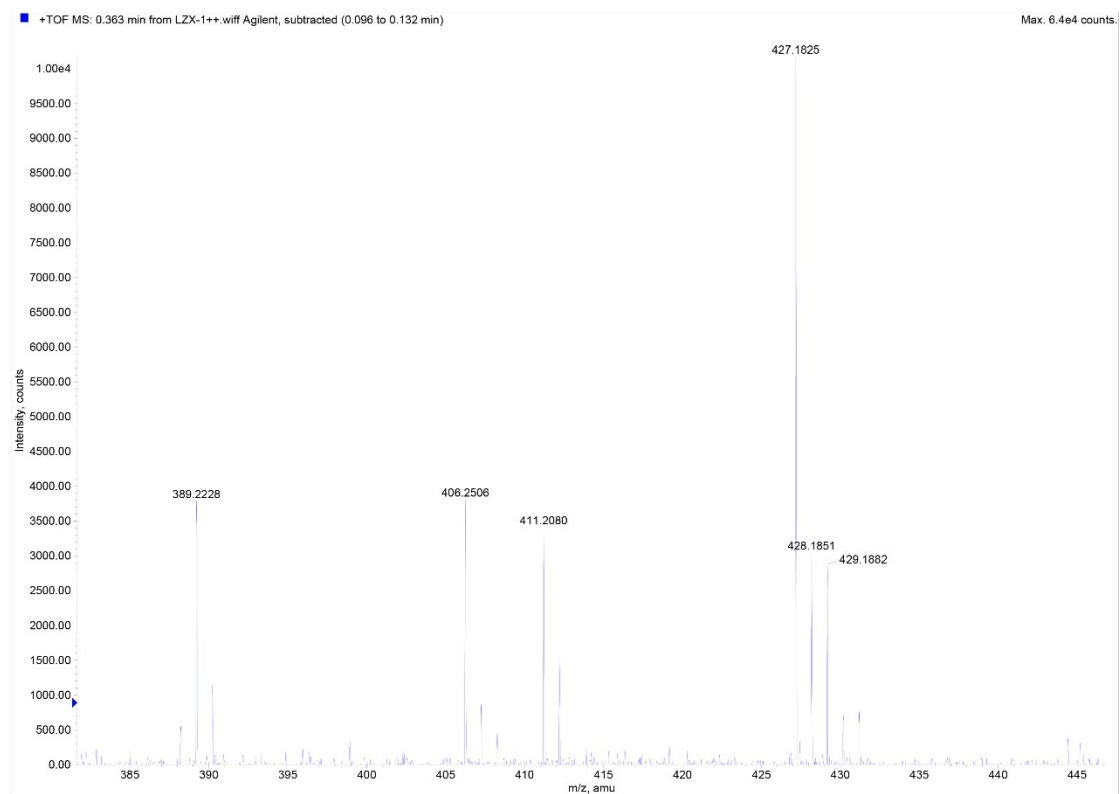


Figure S3. High-resolution mass spectrum of compound (1).

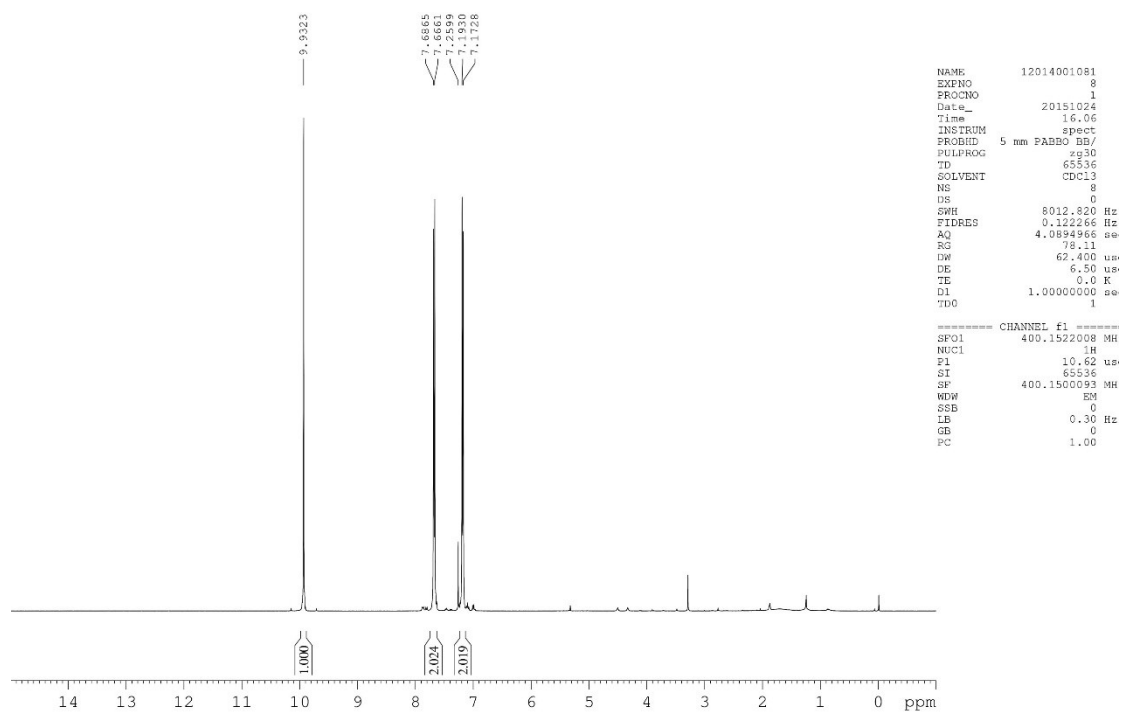


Figure S4.  $^1\text{H}$  NMR spectrum of compound (3) in  $\text{CDCl}_3$ .

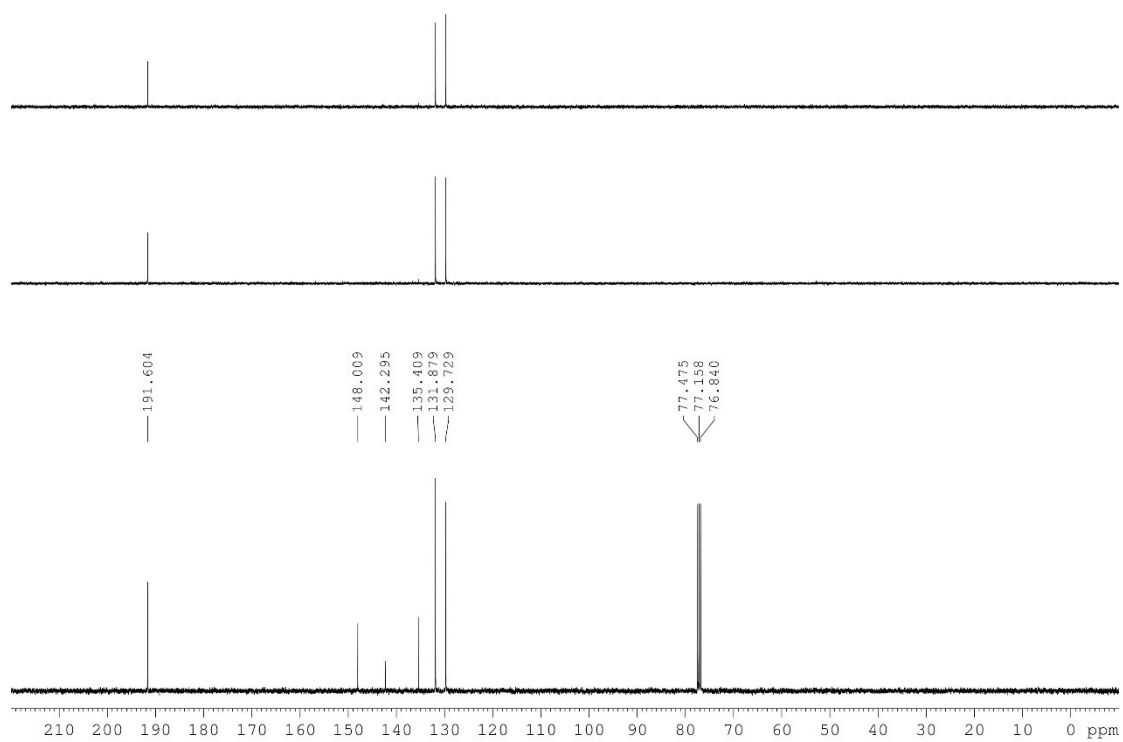


Figure S5.  $^{13}\text{C}$  NMR spectrum of compound (3) in  $\text{CDCl}_3$ .

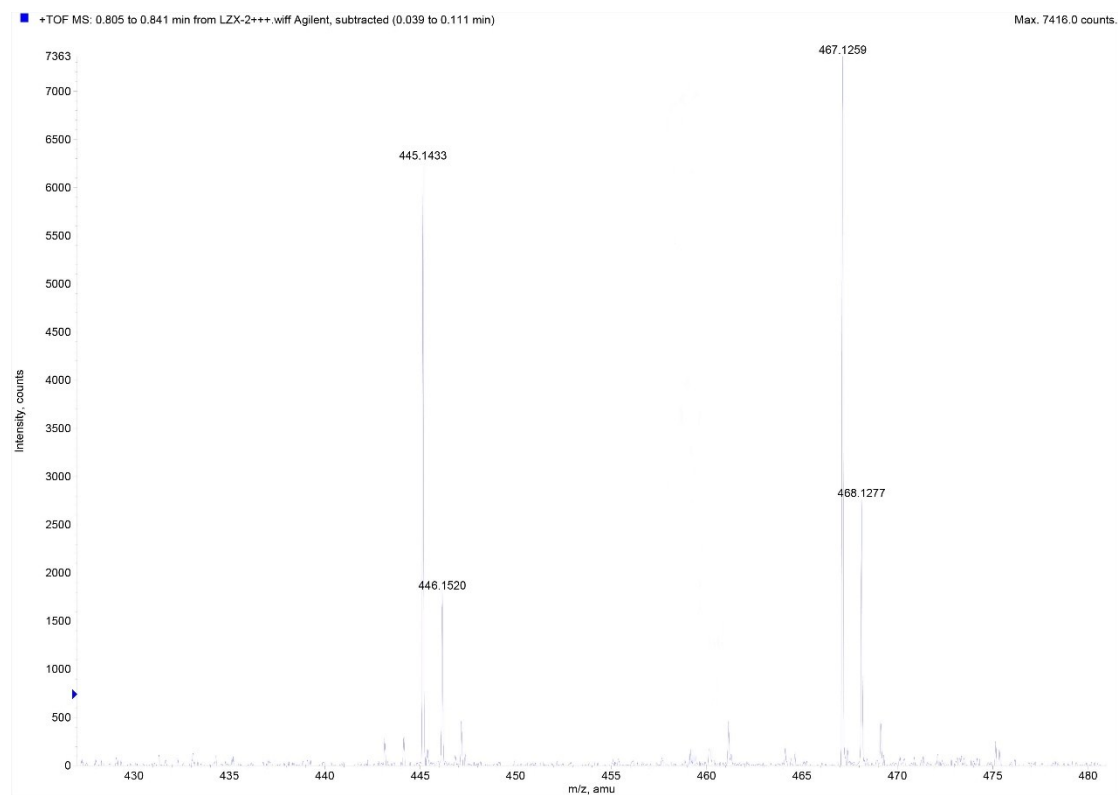


Figure S6. High-resolution mass spectrum of compound (3).

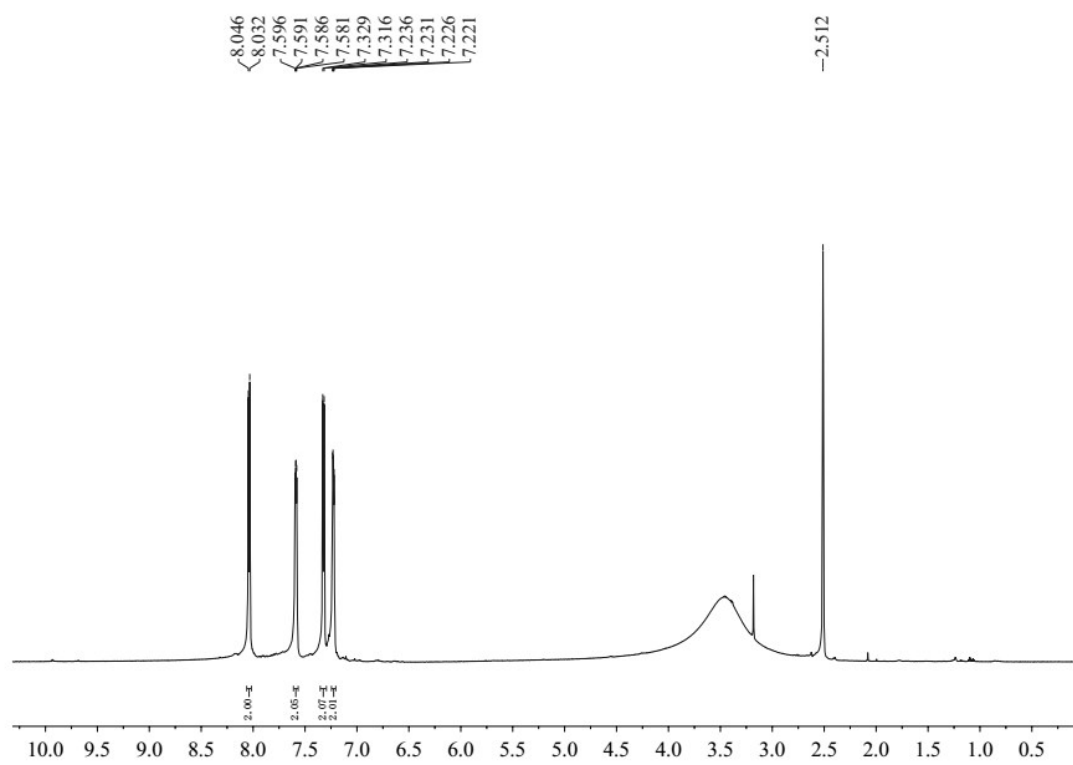


Figure S7.  $^1\text{H}$  NMR spectrum of compound (4) in  $\text{DMSO-}d_6$ .

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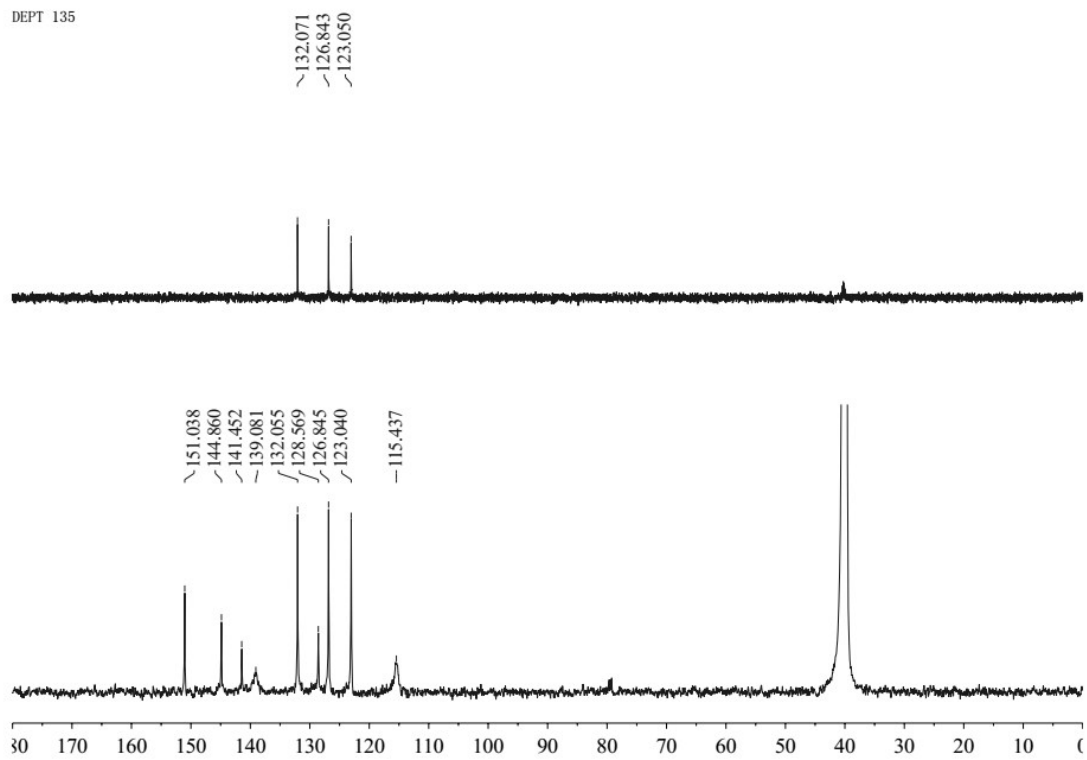


Figure S8.  $^{13}\text{C}$  NMR spectrum of compound (4) in  $\text{DMSO-}d_6$ .



Data File: F:\高分辨数据\cwz\1.lcd

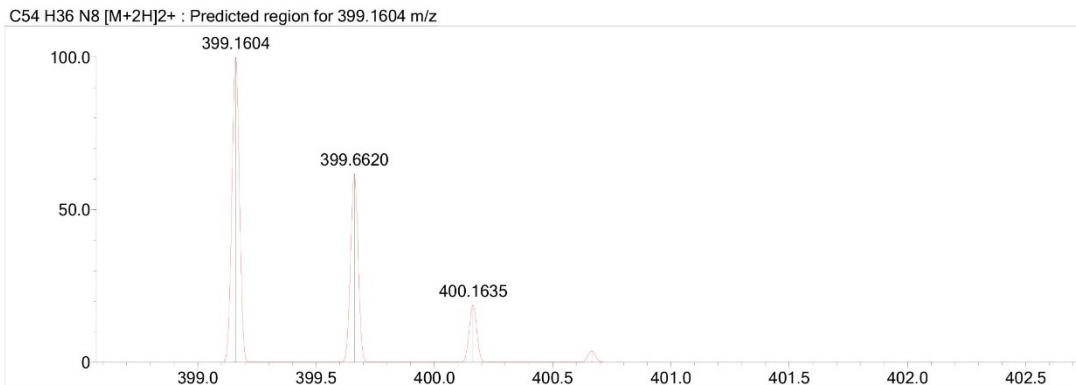
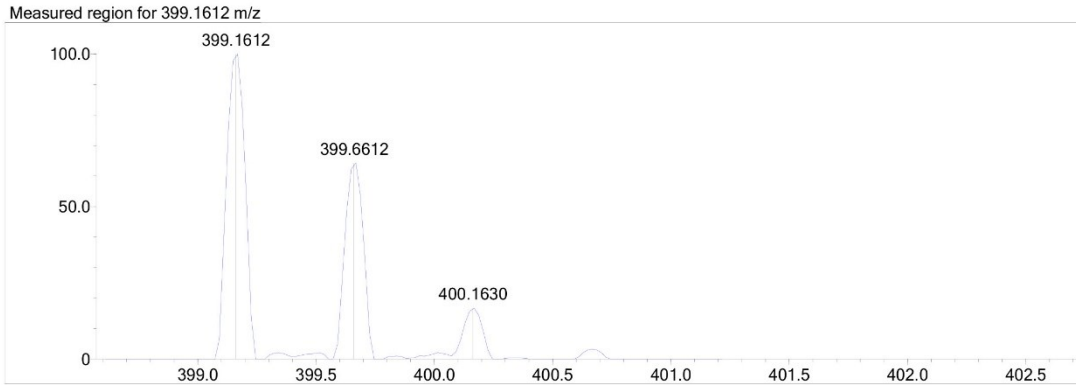
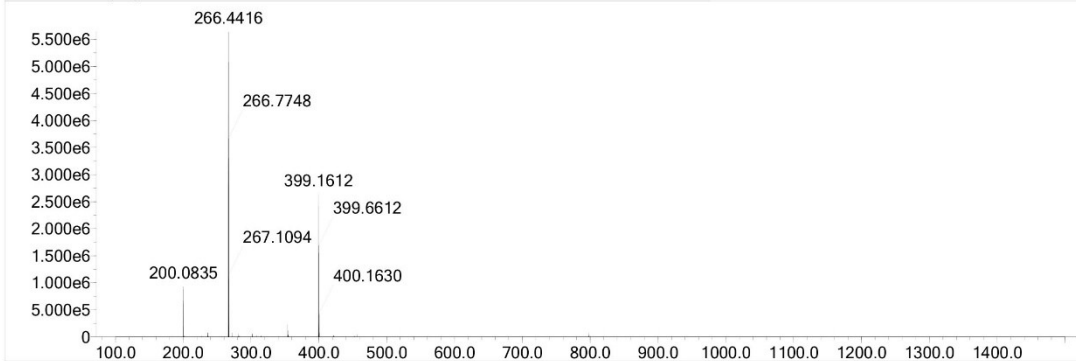
Elmt	Val.	Min	Max	Elmt	Val.	Min	Max	Elmt	Val.	Min	Max	Elmt	Val.	Min	Max	Use Adduct
H	1	0	100	O	2	0	0	P	3	0	0	Zn	2	0	0	H
2H	1	0	0	18O	2	0	0	S	2	0	10	Se	2	0	0	
B	3	0	0	F	1	0	0	Cl	1	0	0	Br	1	0	0	
C	4	0	75	Na	1	0	0	K	1	0	0					
N	3	0	8	Si	4	0	0	Mn	3	0	0					

Error Margin (ppm): 100  
 HC Ratio: unlimited  
 Max Isotopes: all  
 MSn Iso RI (%): 75.00

DBE Range: -2.0 - 1000.0  
 Apply N Rule: yes  
 Isotope RI (%): 1.00  
 MSn Logic Mode: AND

Electron Ions: both  
 Use MSn Info: no  
 Isotope Res: 10000  
 Max Results: 500

Event#: 1 MS(E+) Ret. Time: 0.653 -> 0.680 - 0.453 <-> 1.253 Scan#: 99 -> 103 - 69 <-> 189



Rank	Score	Formula (M)	Ion	Meas. m/z	Pred. m/z	Df. (mDa)	Df. (ppm)	Iso	DBE
1	88.52	C54 H36 N8	[M+2H]2+	399.1612	399.1604	0.8	2.00	90.79	41.0

Figure S9. High-resolution mass spectrum of compound (4).

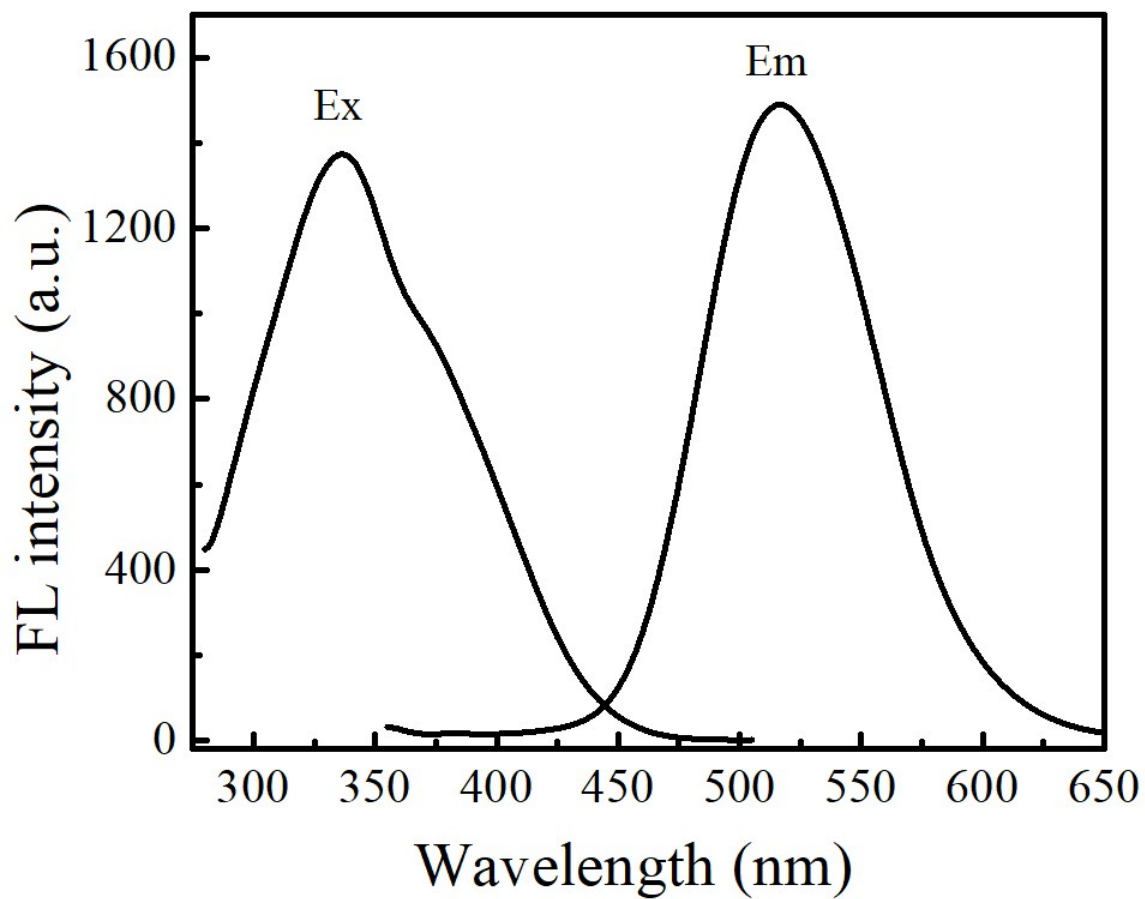


Figure S10 Emission spectra and excitation spectra of TBI-TPE CH<sub>3</sub>OH/ water=80 %, concentration = 10  $\mu$ M. Ex=335 nm, Em=525 nm.

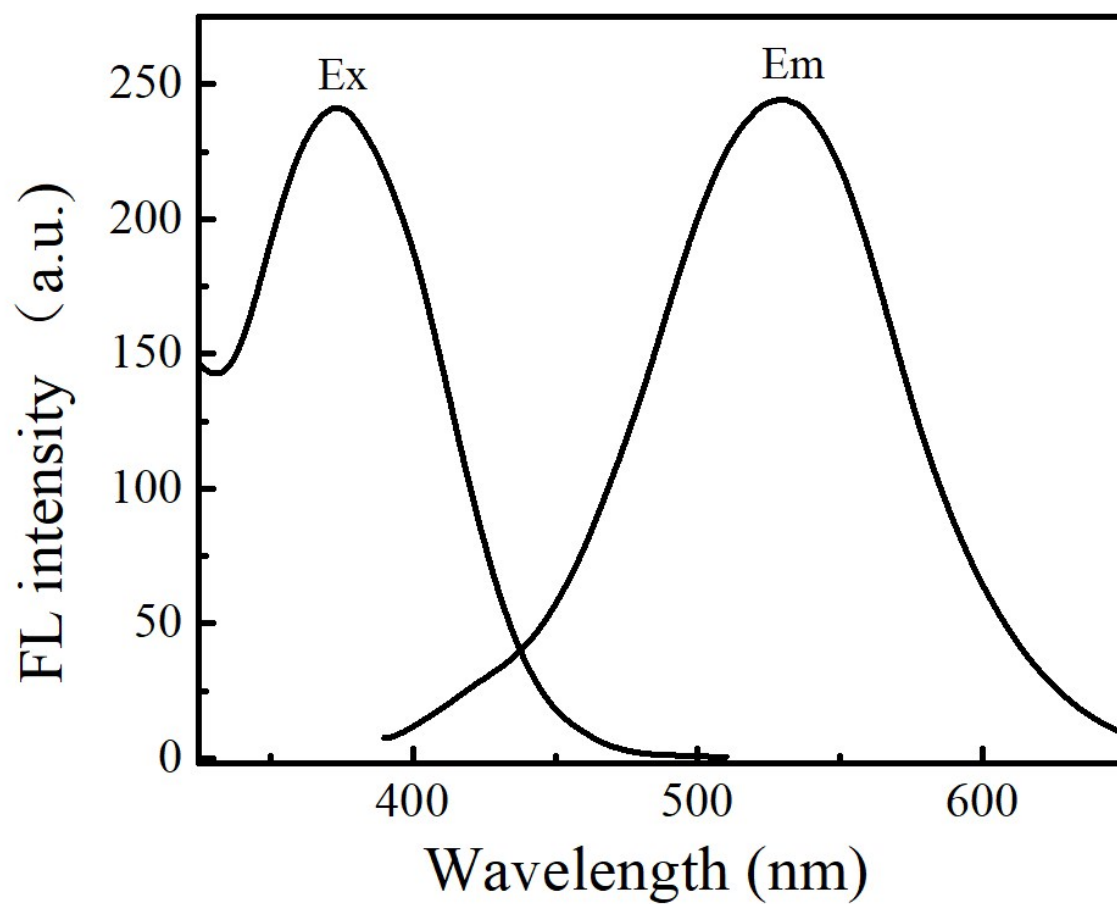


Figure S11 Emission spectra and excitation spectra of TBI-TPE in CH<sub>3</sub>OH in the presence of Ag<sup>+</sup> (4 μM). Ex=370 nm, Em=525 nm.

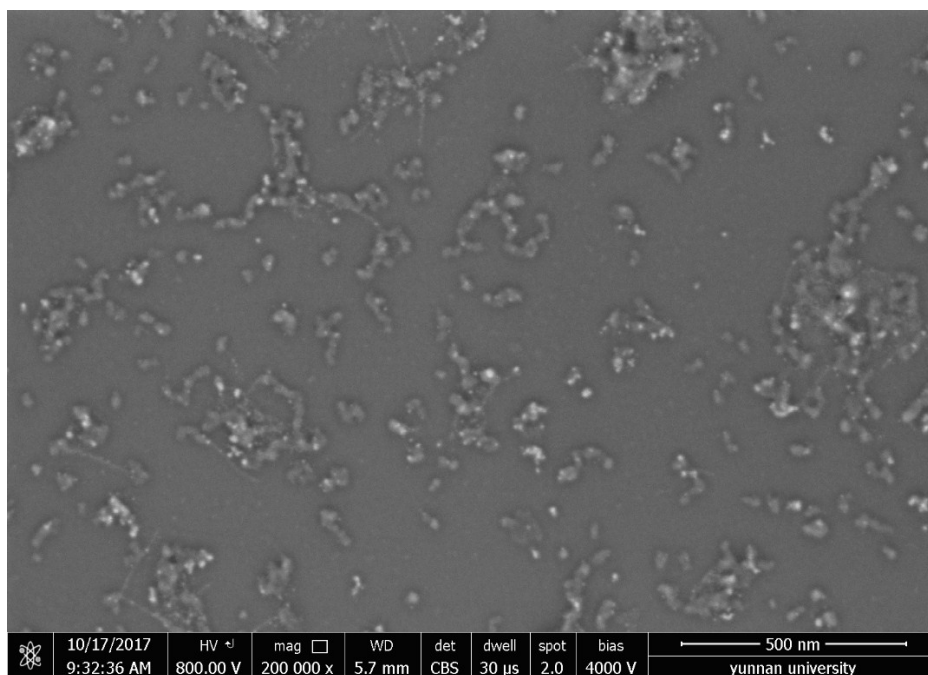


Figure S12 SEM image of complex

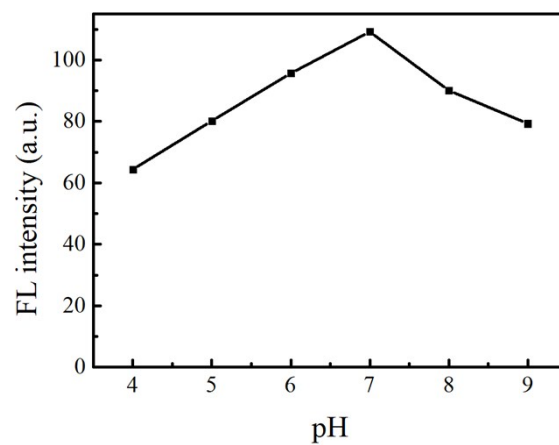


Figure S13 The effect of pH on the fluorescence intensities at 525 nm between  $\text{Ag}^+$  and the probe (TBI-TPE=4  $\mu\text{M}$ ,  $\text{Ag}^+$  =12  $\mu\text{M}$ ). ( $\lambda_{\text{ex}}$  = 370 nm)

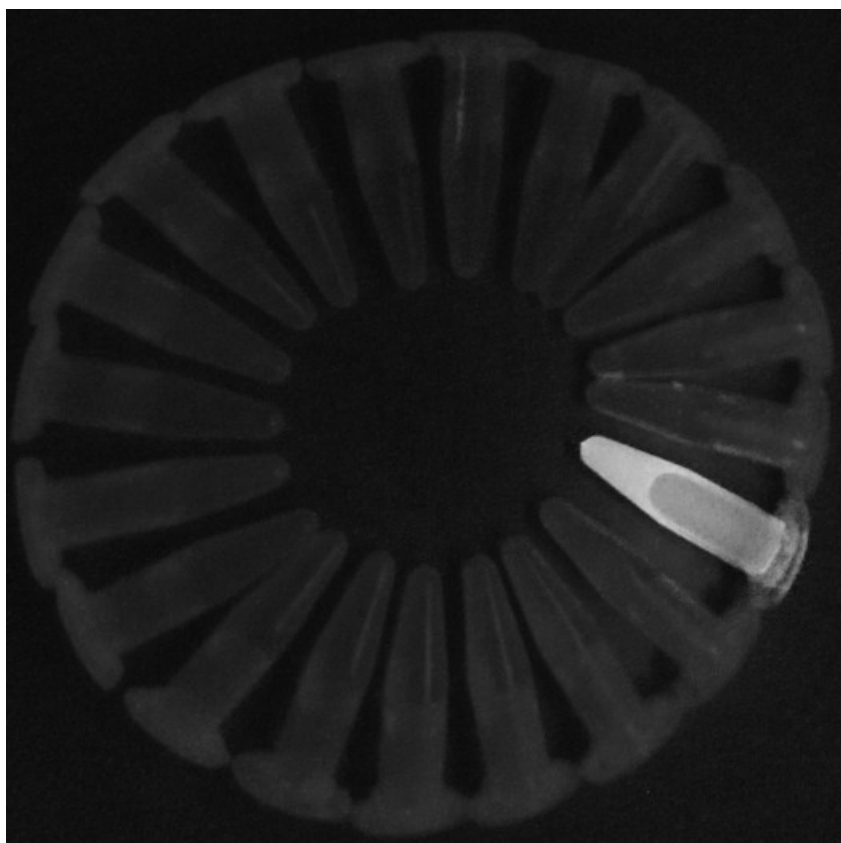


Figure S14 Images of TBI-TPE in presence of a series of metal ions under UV light illumination ( $\lambda_{\text{ex}}=365\text{ nm}$ ).