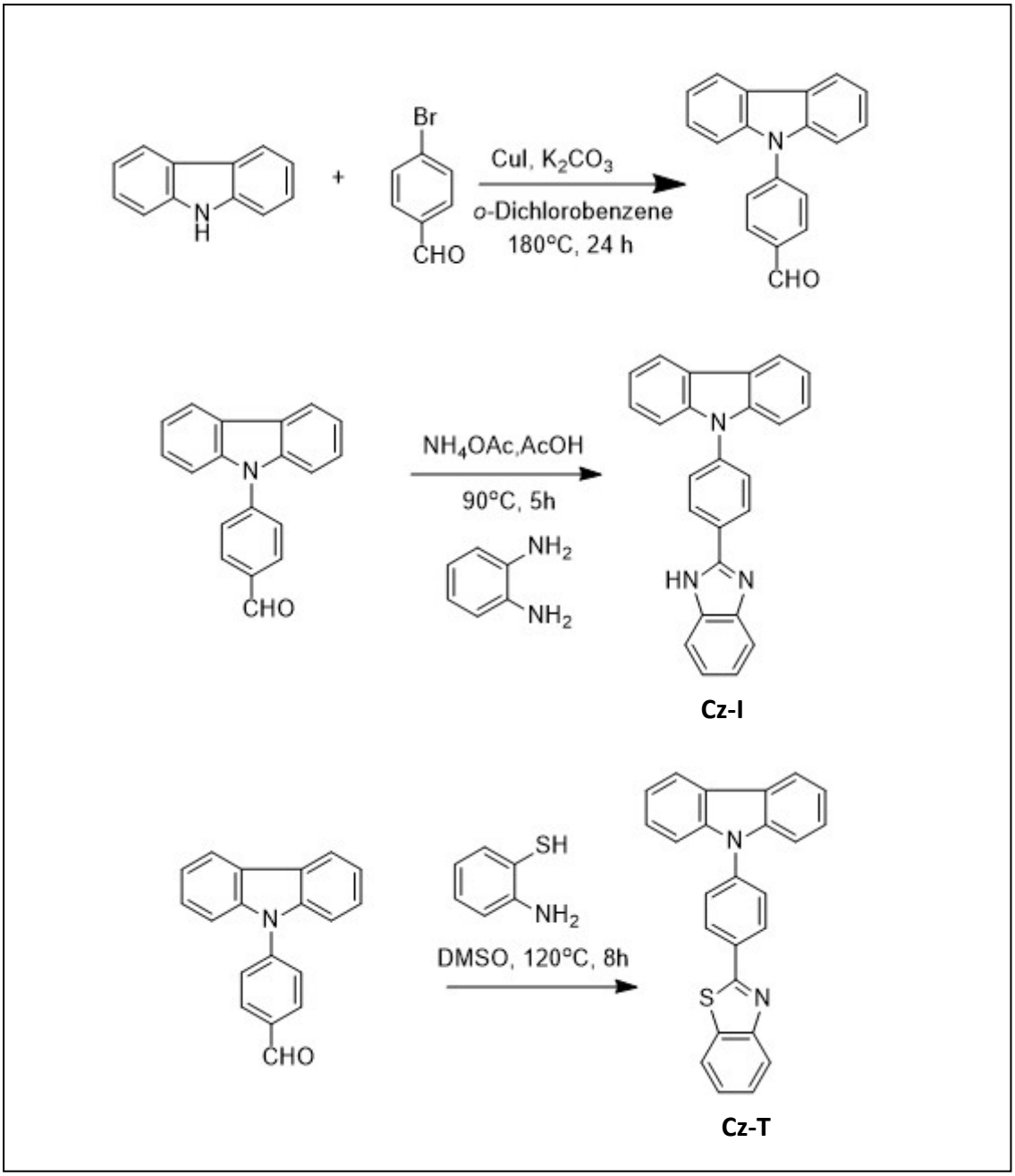
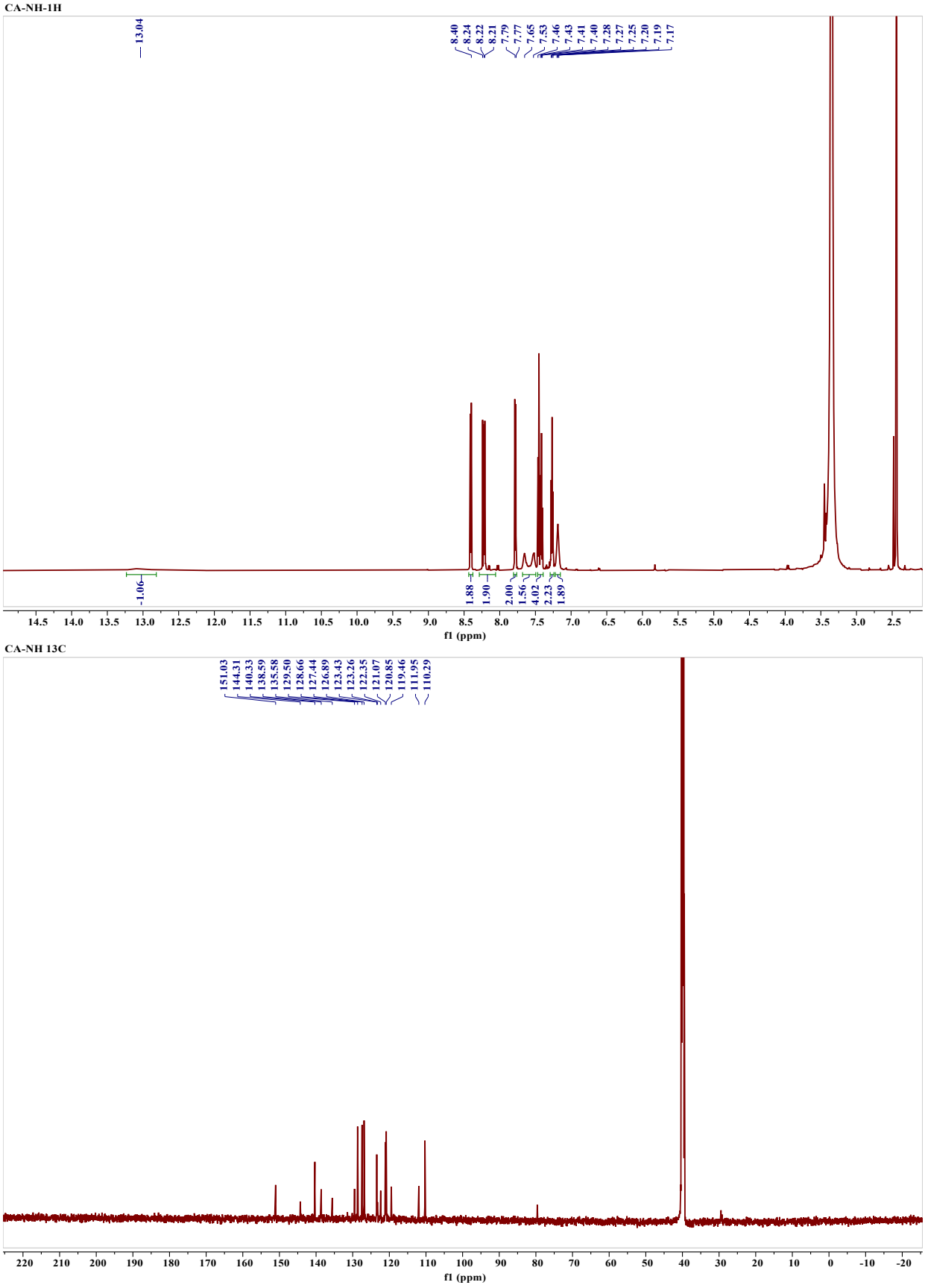
Electronic Supplementary Information (ESI)

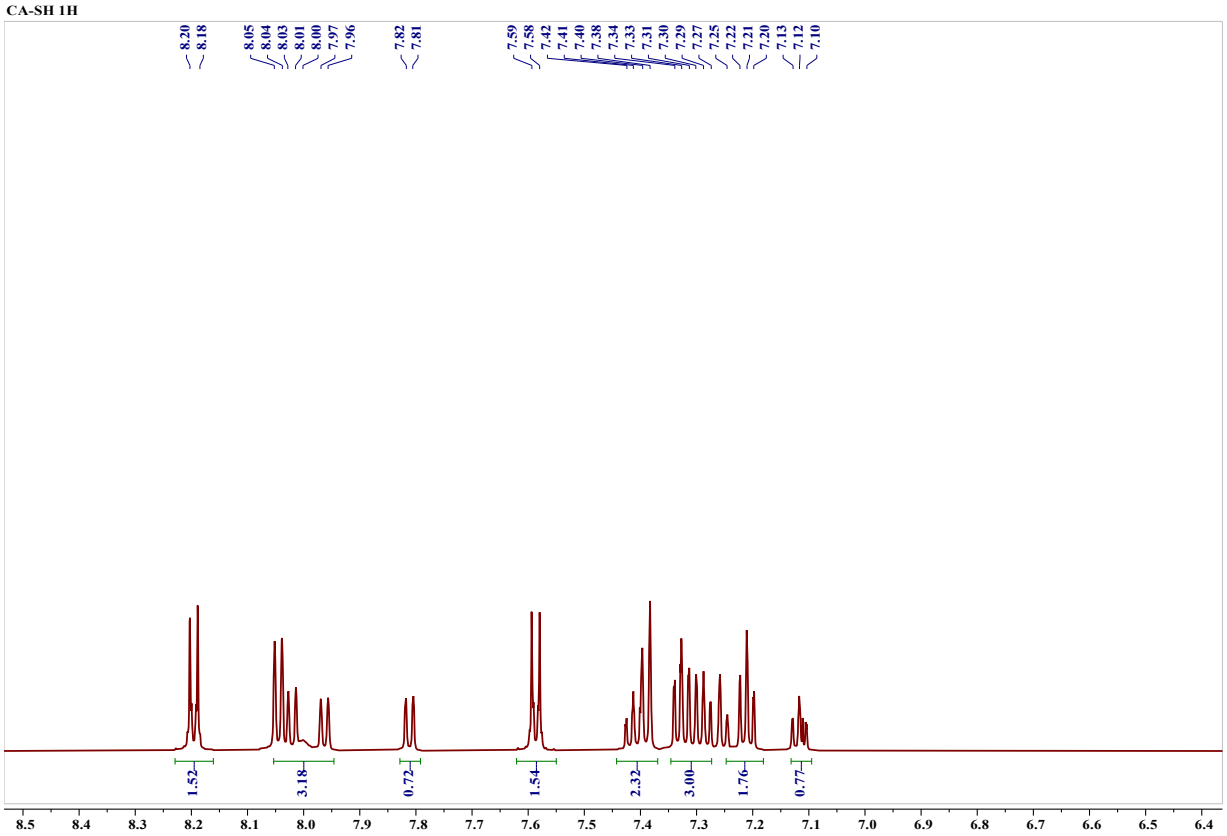
Carbazole fluorophore with imidazole/thiazole unit: Contrasting stimuli-induced fluorescence switching, water sensing and deep blue emission

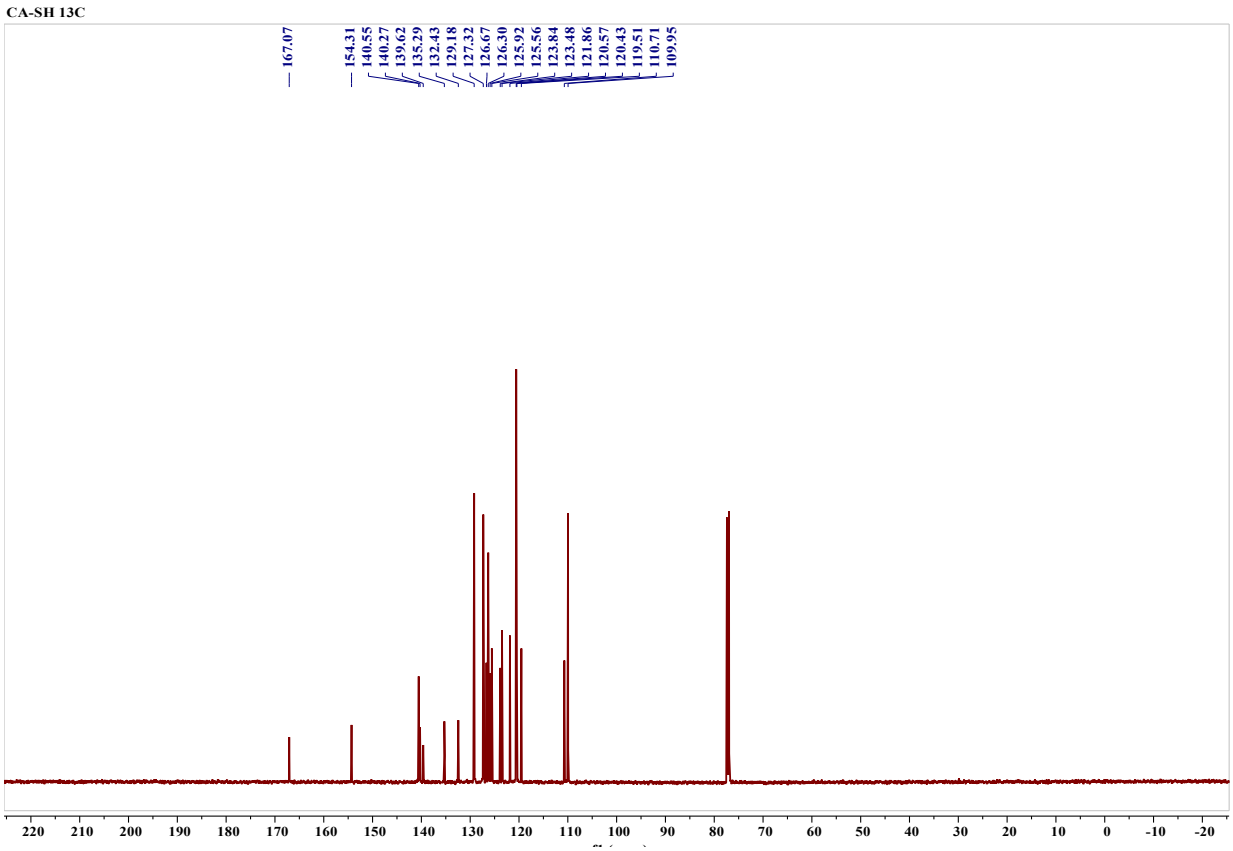


Scheme S1. Synthesis of **Cz-I** and **Cz-T**.

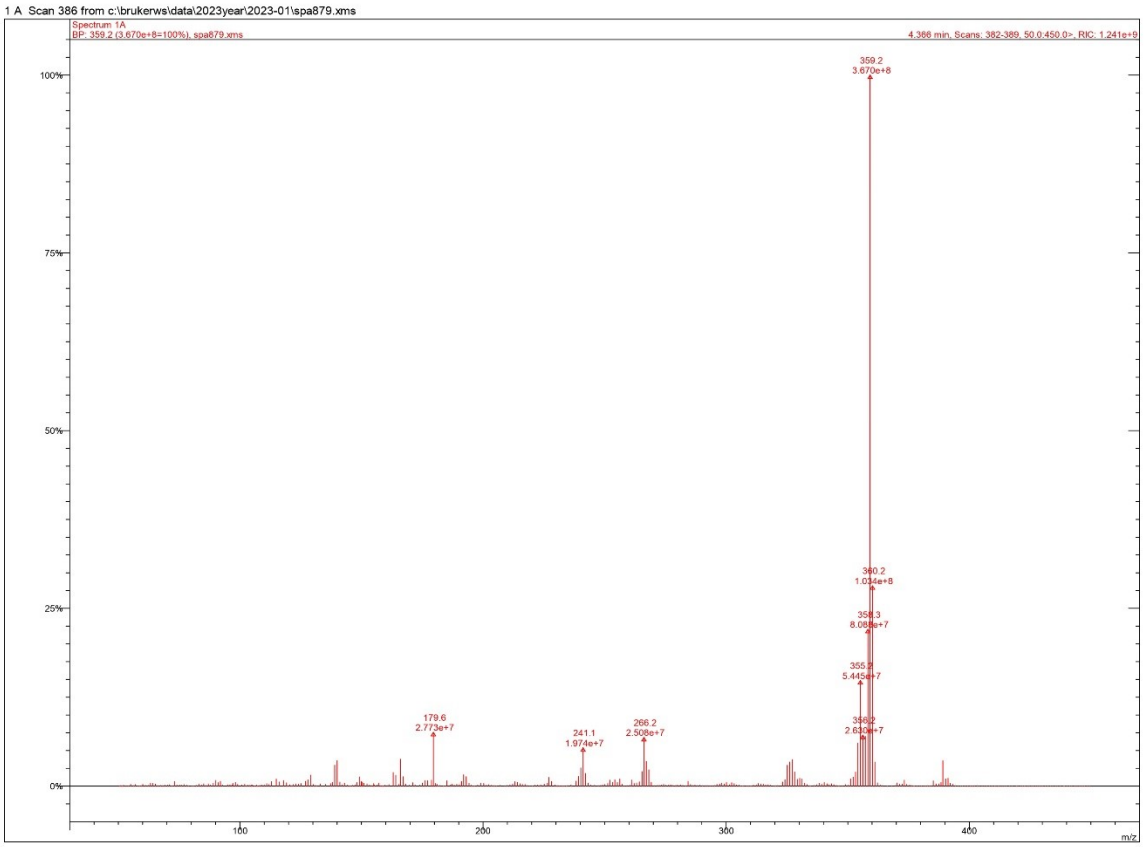


^{1}H & ^{13}C NMR of **Cz-I.**

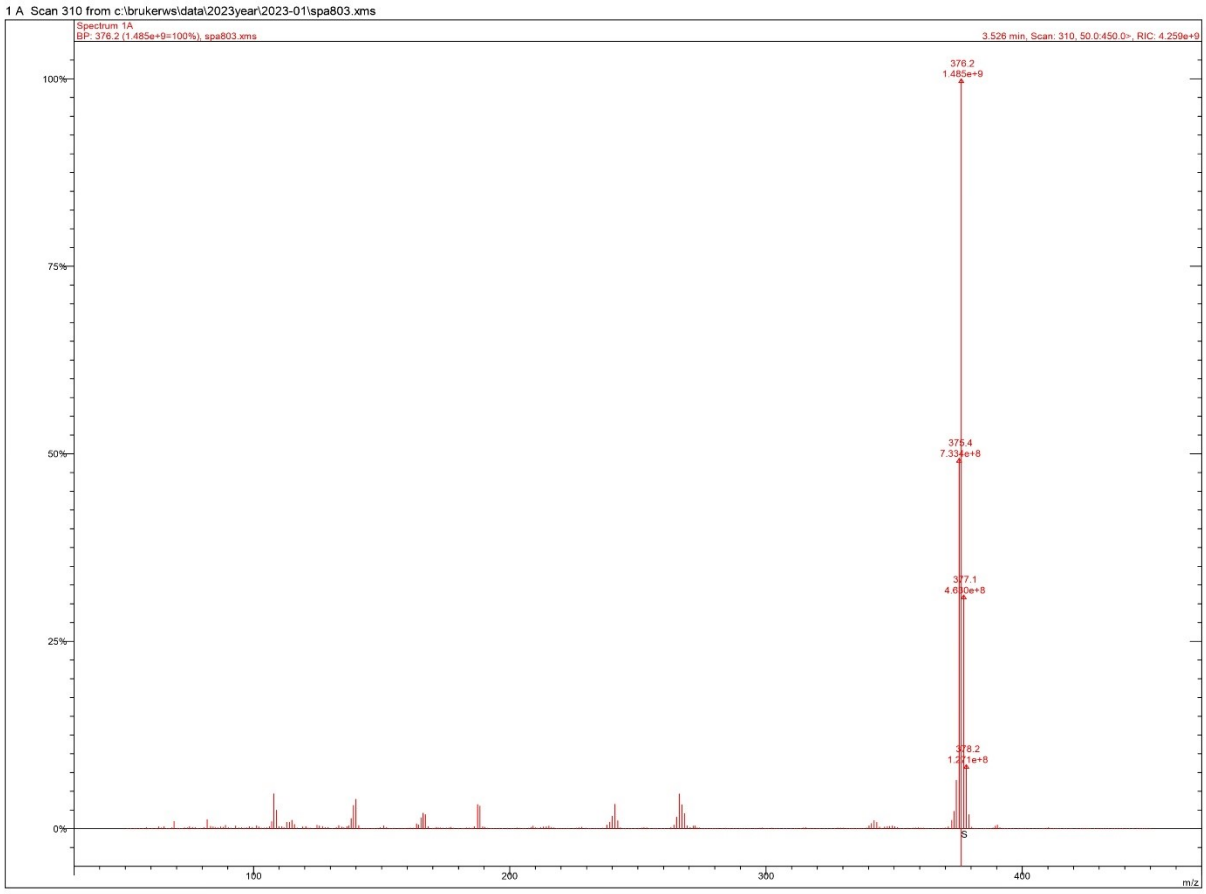




^{1}H & ^{13}C NMR of **Cz-T.**



Mass spectrum of **Cz-I** m/z calculated $C_{25}H_{17}N_3$ (M + H): 359.14, found: 359.2**.**



Mass spectrum of **Cz-T** m/z calculated $C_{25}H_{17}N_2S$ (M + H): 376.14, found: 376.2**.**

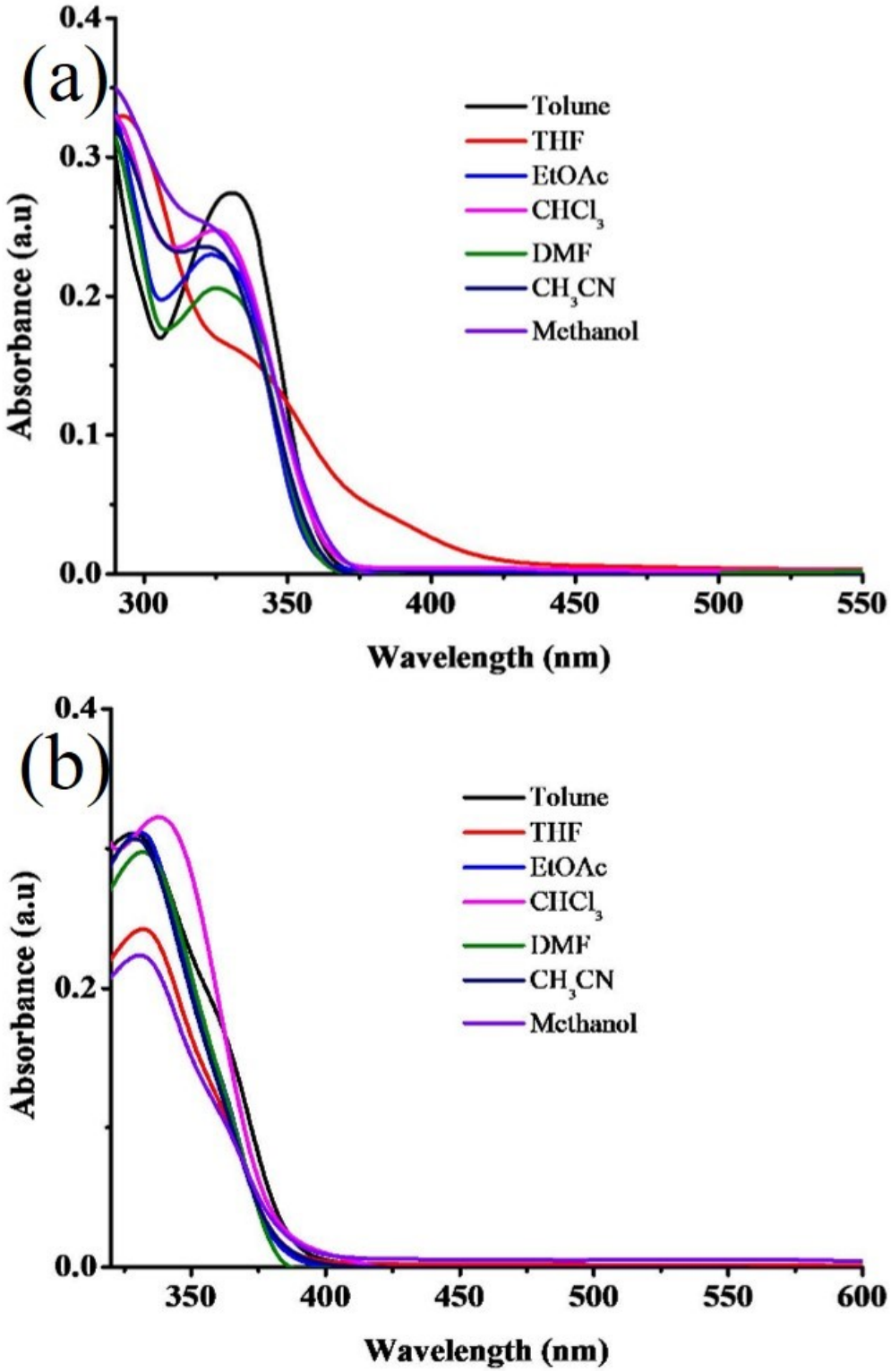


Figure S1. Absorption spectra of (a) **Cz-I** and (b) **Cz-T**.

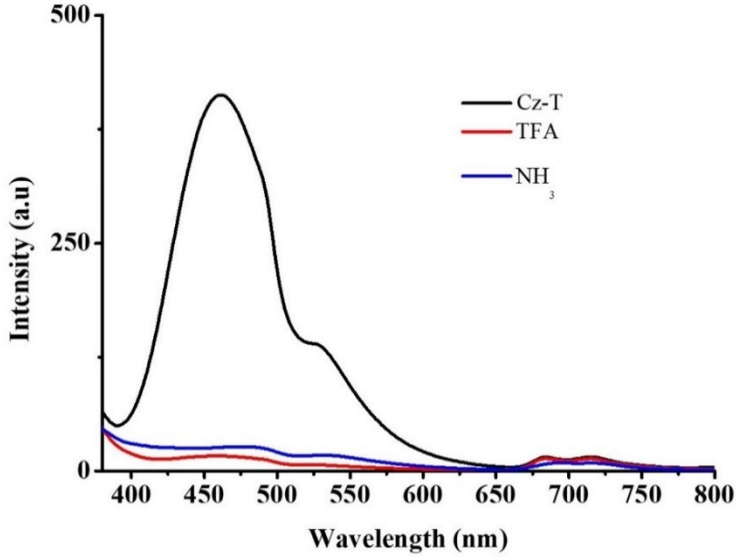


Figure S2. Halochromic fluorescence response of **Cz-T** by adding TFA/NH_3 in CH_3CN.

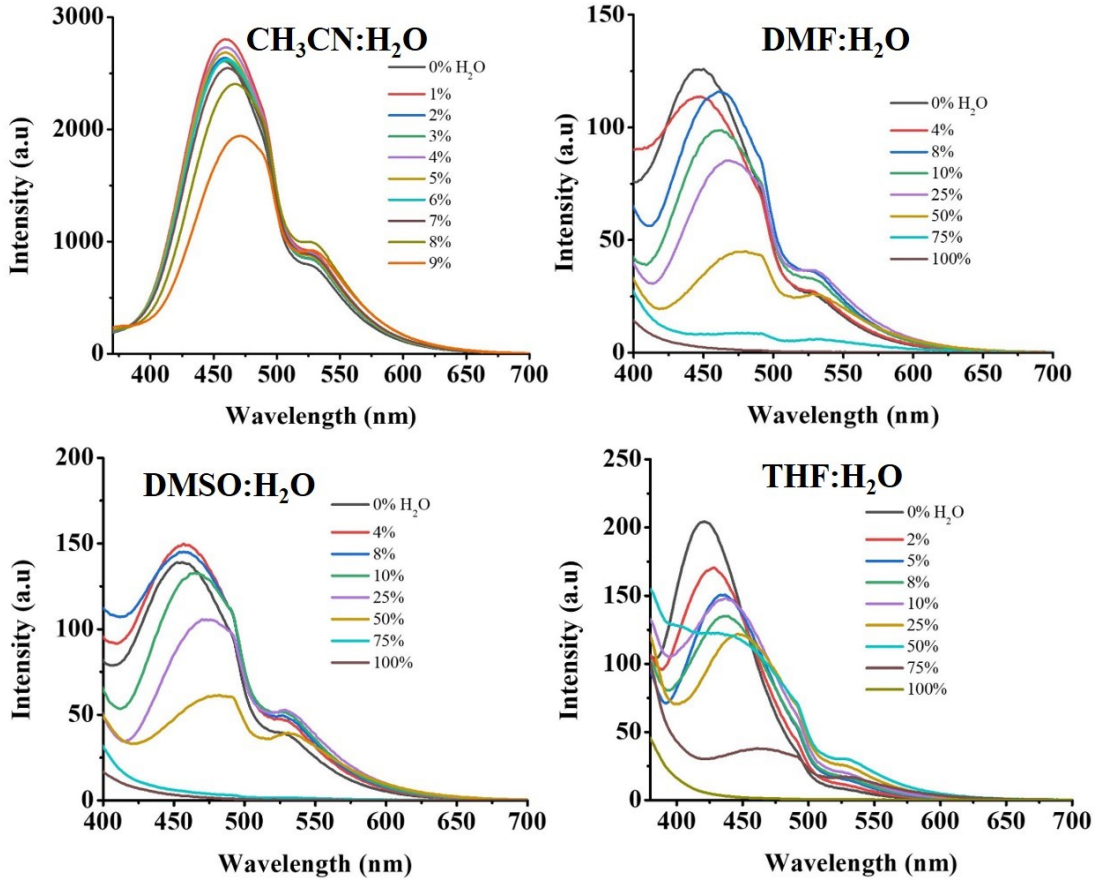


Figure S3. The change of **Cz-T** fluorescence response in CH_3CN, DMF, DMSO and THF with increasing water percentage.

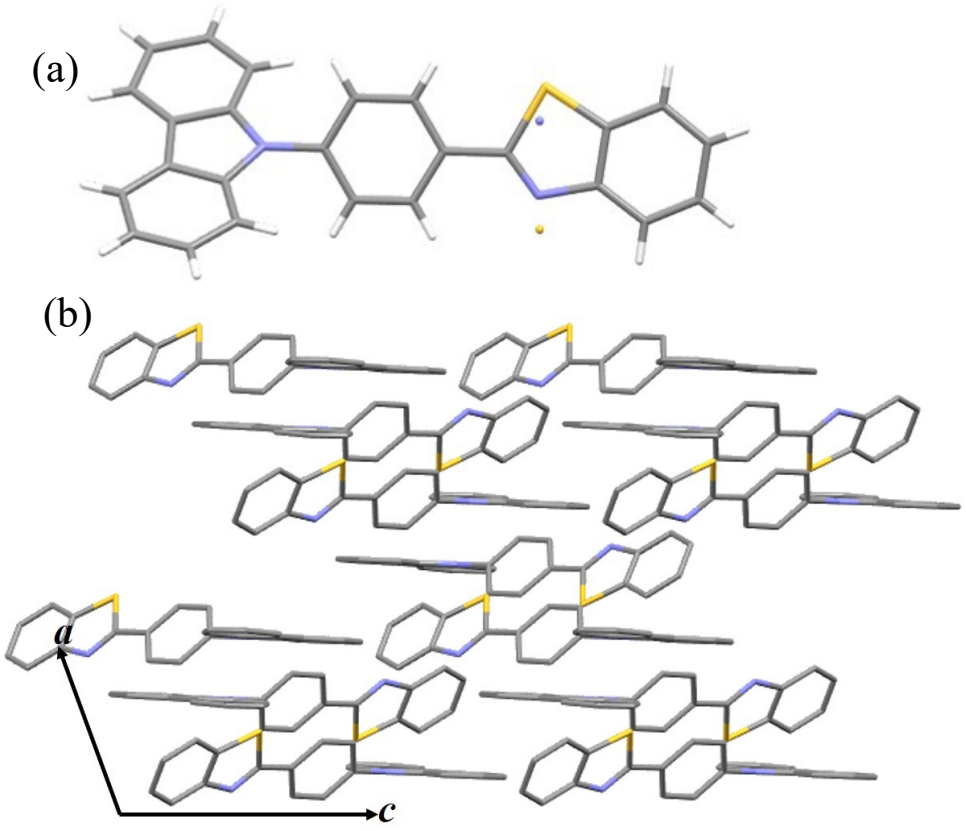


Figure S4. (a) Molecular structure and (b) packing of **Cz-T** in the crystal lattice.