Supporting Information (SI)

Dimalononitrile-Containing Probe based on Aggregation-Enhanced Emission Feature for the Multi-Mode Fluorescence Detection of Volatile Amines

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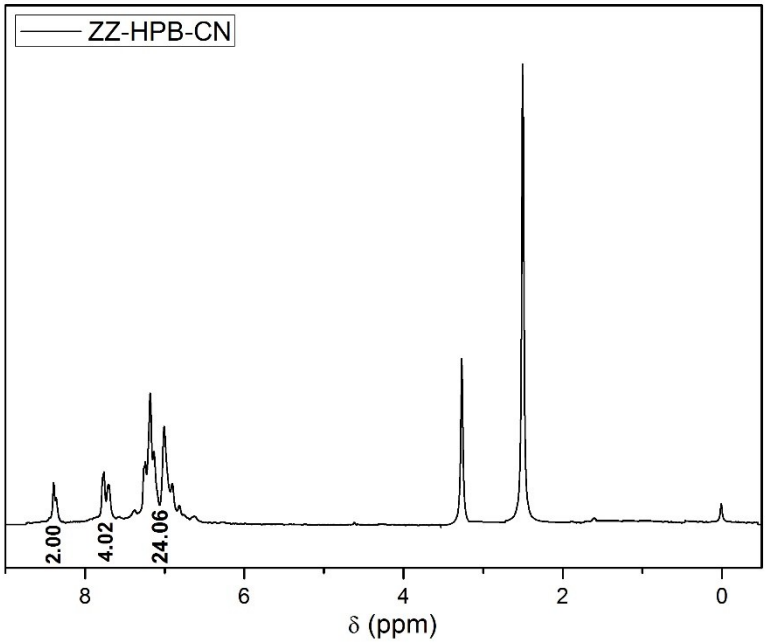

Figure S1: ^{1}H NMR spectrum of ZZ-HPB−CN recorded in DMSO-d6..

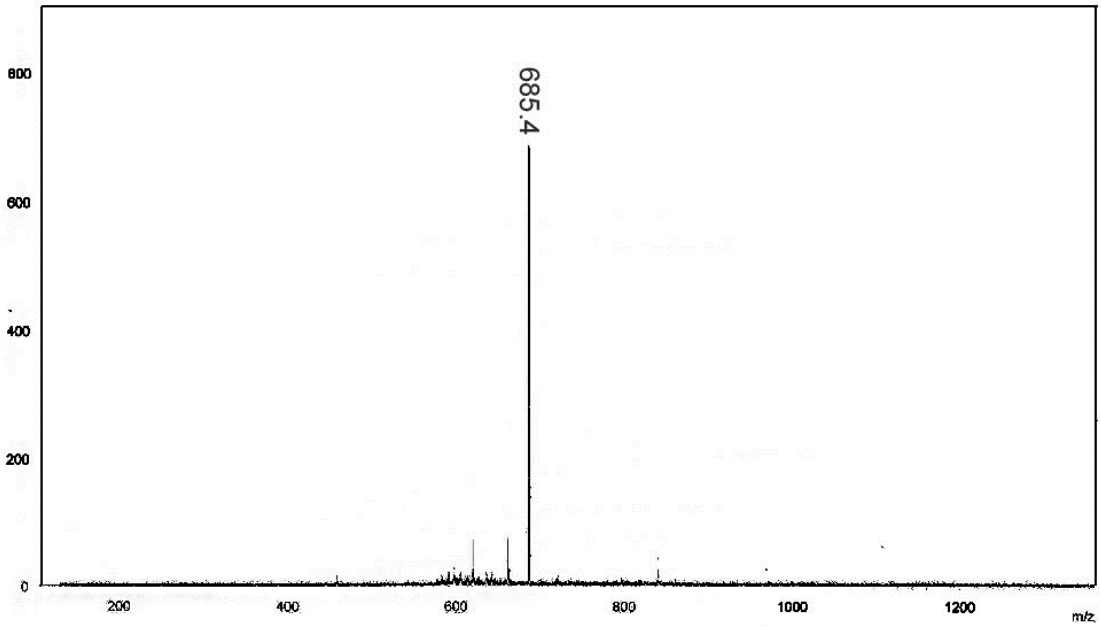

Figure S2: MS of ZZ-HPB-CN.

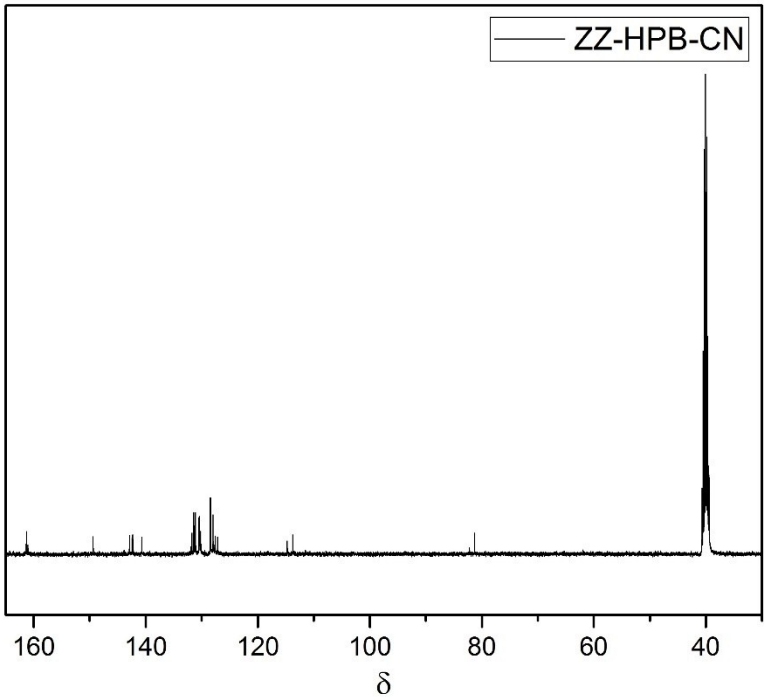

Figure S3:^{13}C NMR spectrum of ZZ-HPB−CN recorded in DMSO-d6.

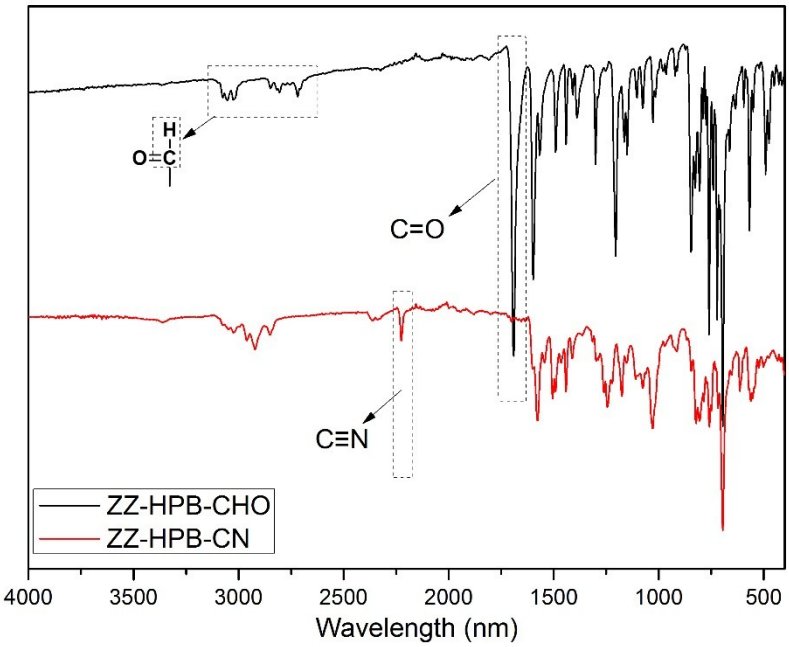

Figure S4: FTIR spectra of ZZ-HPB-CHO and ZZ-HPB-CN.

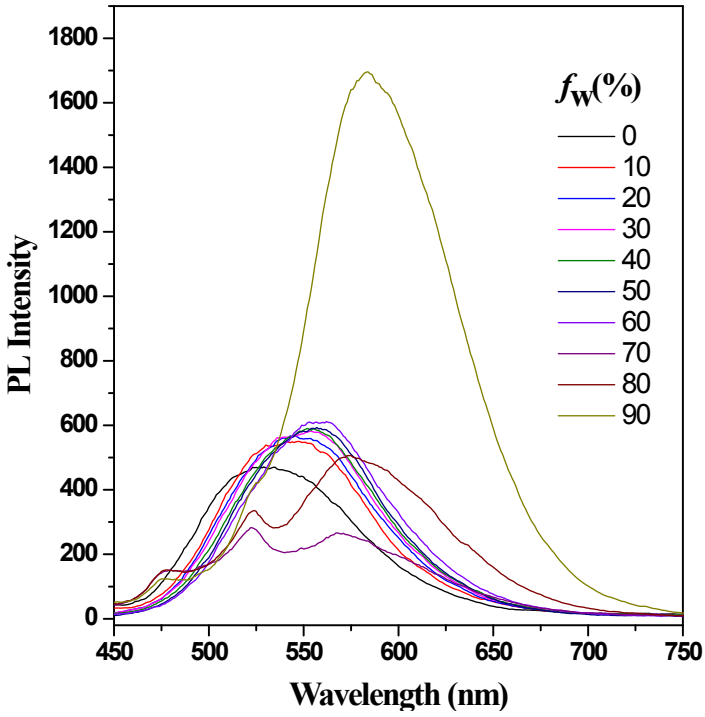

Figure S5 PL spectra of ZZ-HPB-CN in mixture of water and THF. [ZZ-HPB-CN] $=1\times10^{-4}$ M; λ_{ex} = 410 nm.

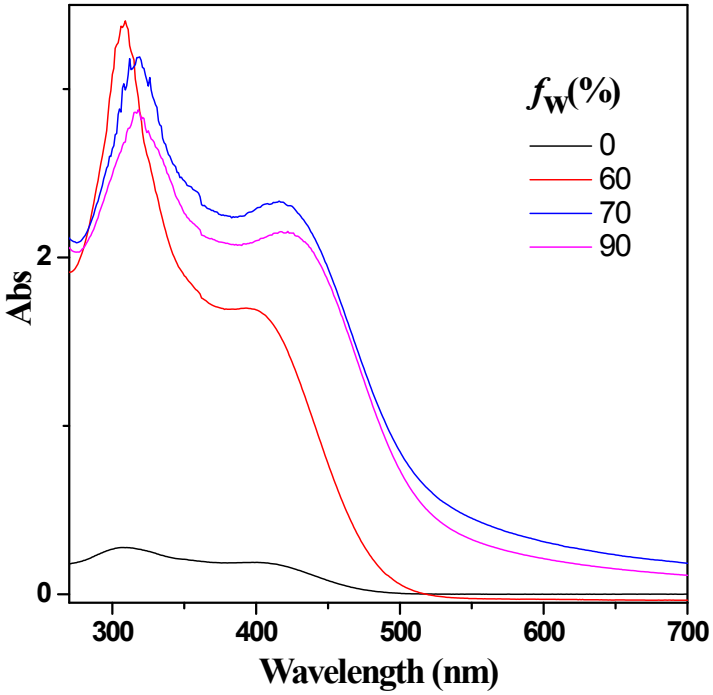

Figure S6. Abs spectra of ZZ-HPB-CN in mixture of water and THF. [ZZ-HPB-CN] $=1\times10^{-4}$ M; λ_{ex} = 410 nm.

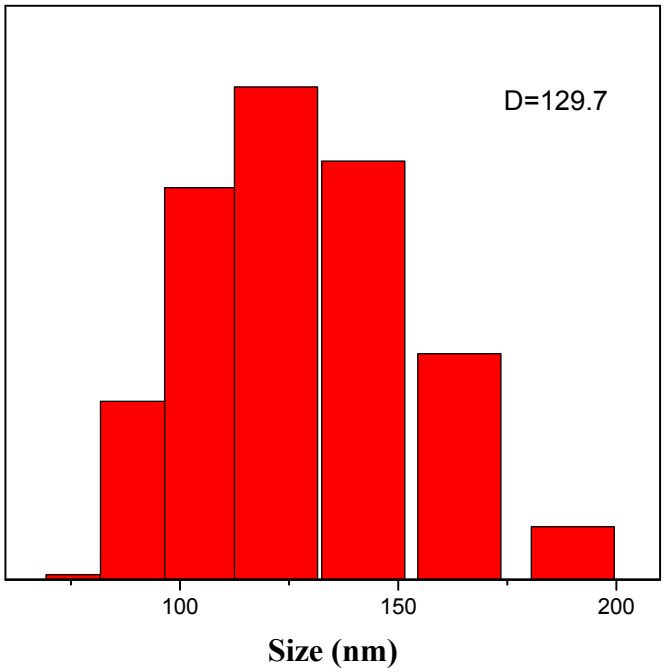

Figure S7. Dynamic light scattering results of ZZ-HPB-CN at 90% water fraction. [ZZ-HPB-CN] = 1×10^{-4} M.

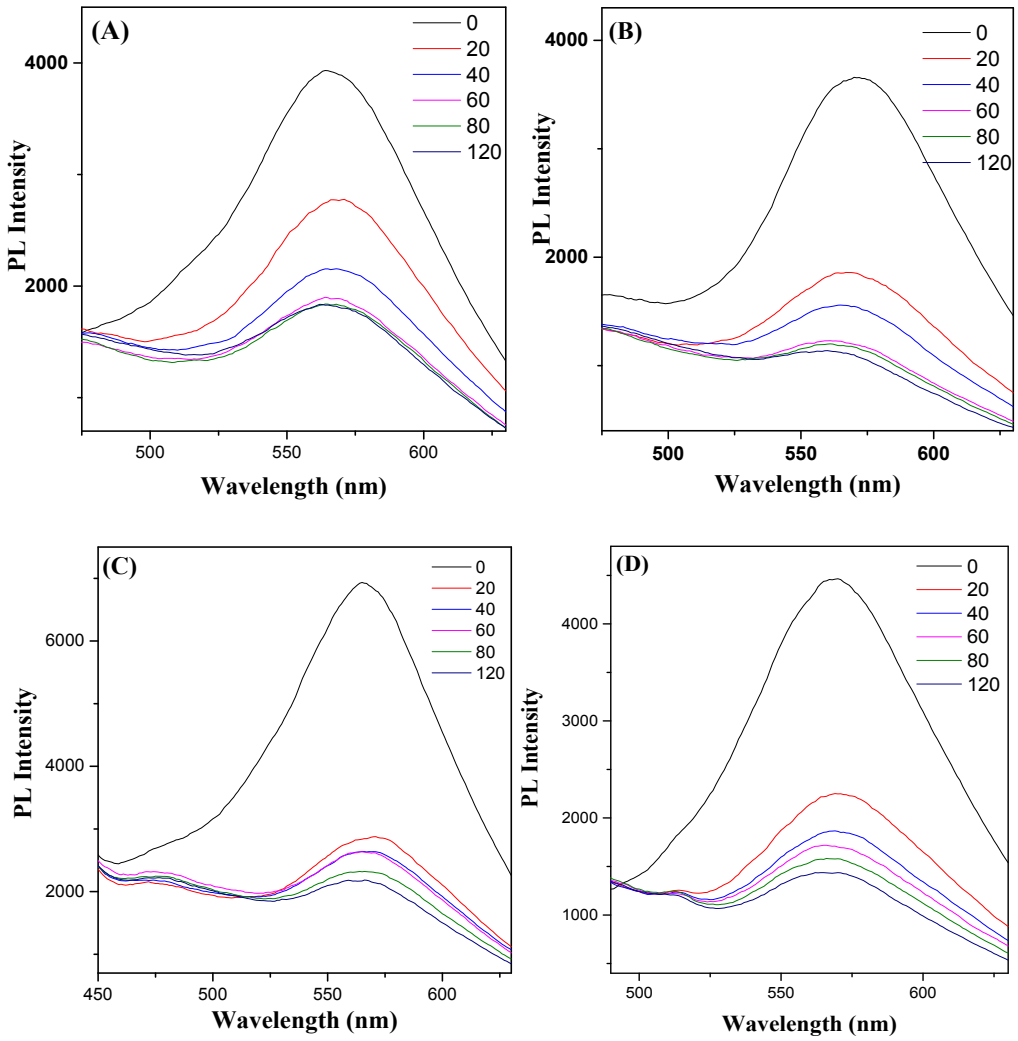

Fig.S8 The time-dependence fluorescence response to amine vapor (A) ethylenediamine, (B) di-n-propylamine, (C) diethylamine and (D)trimethylamine

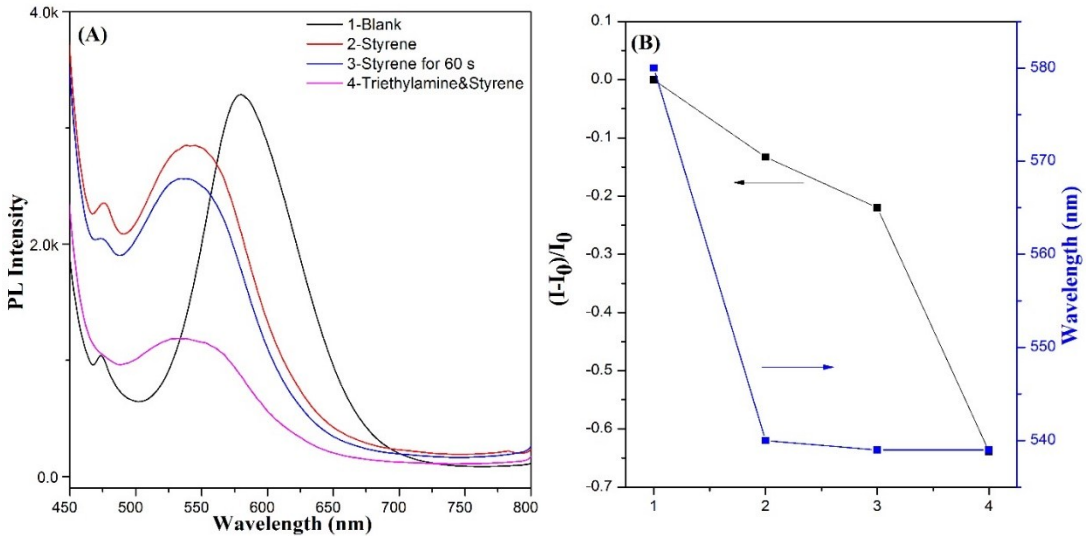

Fig.S9 (A) The fluorescent spectrum of 10^{-3} M ZZ-HPB-CN (1), (1) with 1 ppm styrene (2), (1) with 1 ppm styrene for 60 seconds (3), (1) with 1 ppm styrene and 1ppm triethylamine mixture (4); (B) The changes of fluorescence intensity and maximum emission wavelength of (1), (2), (3), (4).

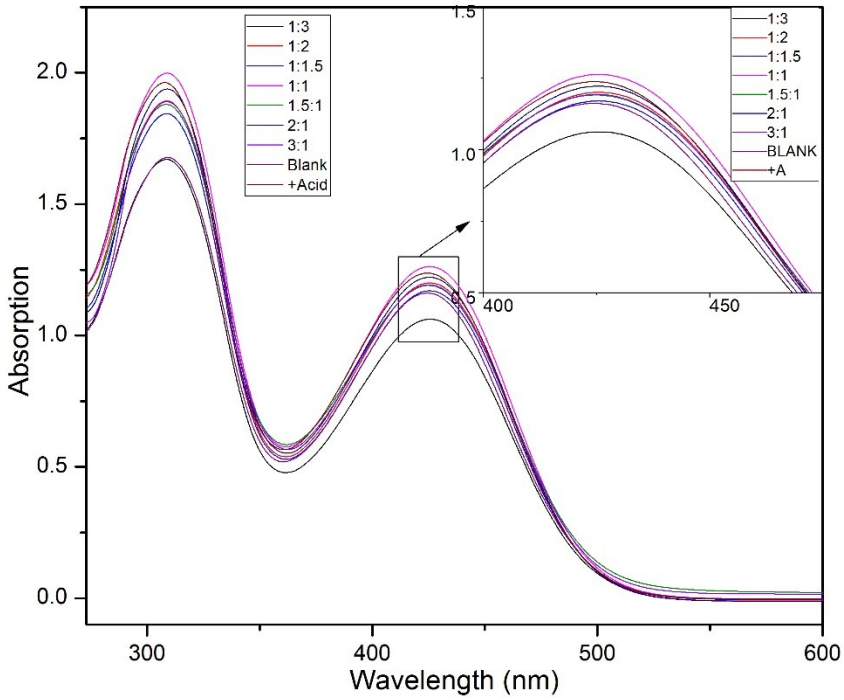

Fig.S10 The UV absorption of ZZ-HPB-CN (blank), Trimethylamine/ZZ-HPB-CN with different volume ratio and volume ratio was 1:1 adding with 5 μL 10^{-2} M HAc.