Supplementary Information

Proton Triggered Colorimetric and Fluorescence Response of a Novel Quinoxaline Compromising A Donor-Acceptor System

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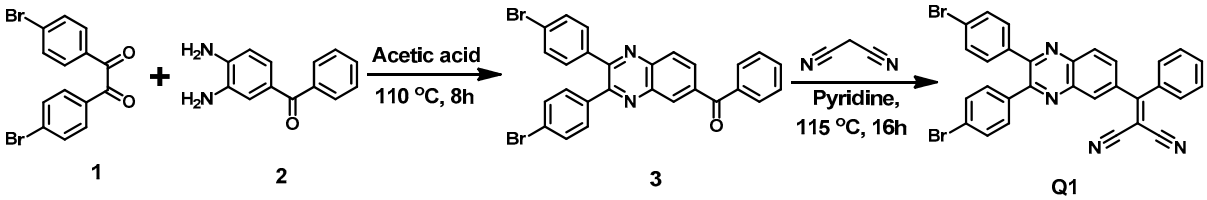
Experimental Procedures

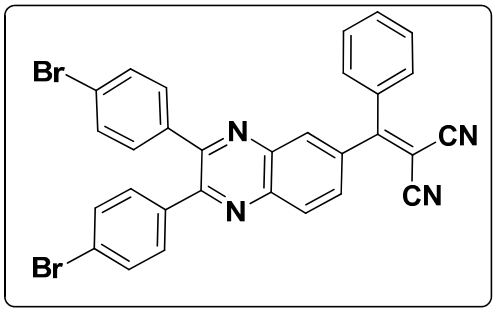


Scheme S1 Synthesis of compound **Q1**.

Synthesis of Compound 3

Synthesis of compound **3** was achieved from 4,4'-dibromobenzil **1** and 3,4-diaminobenzophenone **2** *via* cyclic condensation in acetic acid by following reported procedure in the literature.[1]

Synthesis of Compound Q1



To a 25 ml flask compound **3** (100 mg, 2 mmol), 5 ml pyridine and malononitrile (0.5 ml, 5 mmol) were added. The reaction mixture was heated at 115 °C for 16 h. Completion of reaction was checked by thin layer chromatography (TLC). The reaction mixture was quenched with ice-cold water and the product was extracted by using EtOAc further washed with 0.1 N HCL solution and brine solution respectively to afford crude solid. The crude product was purified by column chromatography using CH_2Cl_2/*n*-hexane mixture as an eluent and yielded pale yellow solid compound **2** (86 mg, 79%). M.p. = 228-230 °C; FT-IR (KBr, $^{-}$ v cm^{1}): 538, 593, 707, 766, 825, 976, 1009, 1072, 1182, 1338, 1391, 1443, 1535, 1588, 2224, 2924 and 3439. ^{1}H NMR ($CDCl_3$, 400 MHz) δ: 7.35 (m, 4H), 7.52 (m, 8H), 7.62 (m, 1H), 7.79 (dd, *J* = 8.5, 1H), 8.25 (d, J= 8.9, 2H). ^{13}C NMR (100 MHz, $CDCl_3$) δ: 83, 113.5, 128.3, 129.1, 129.7, 130.4, 132.5, 132.9, 135.7, 137.1, 138.3, 140.2, 142.5, 155.1 and 173.5. ESI-MS (*m/z %*): 593 (100) $[M+H]^+$.

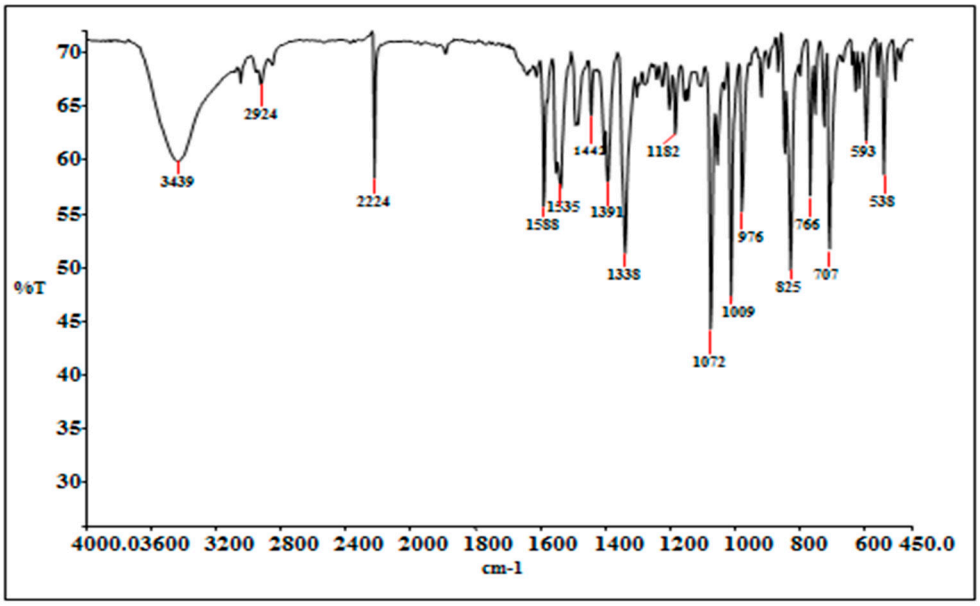


Figure S1. FT-IR of compound **Q1**.

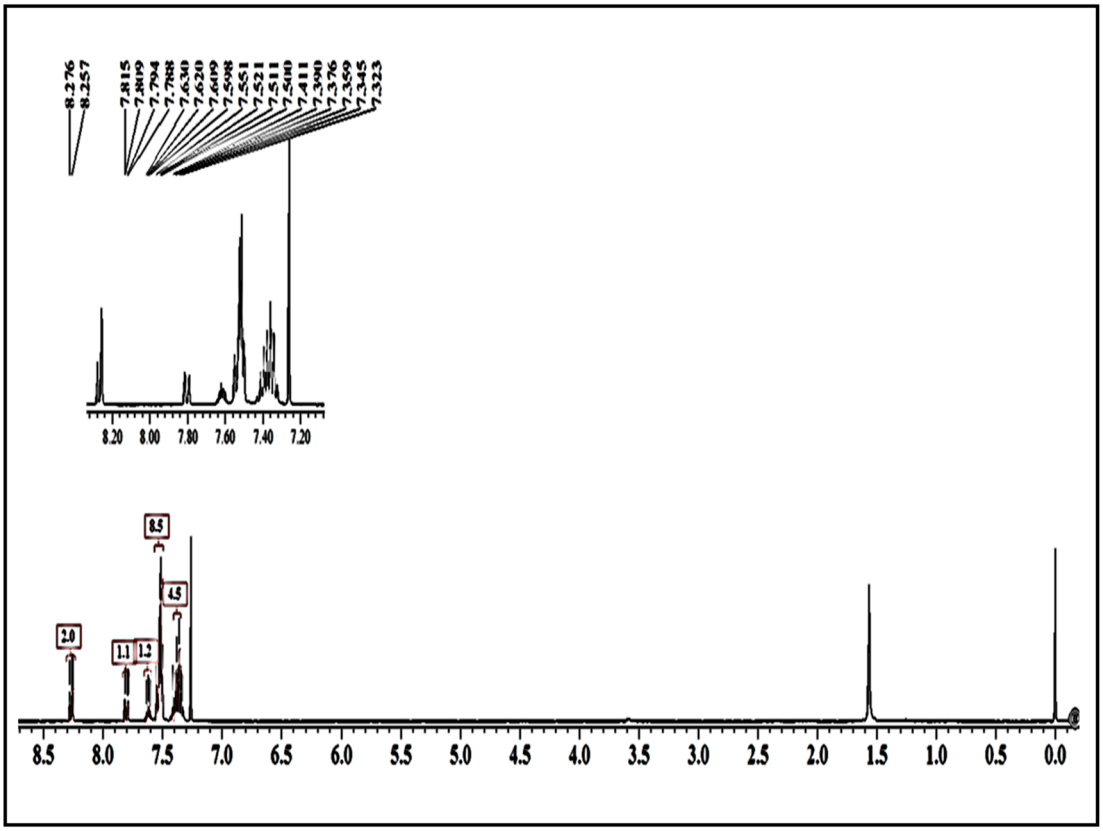


Figure S2. ^{1}H NMR of compound **Q1**.

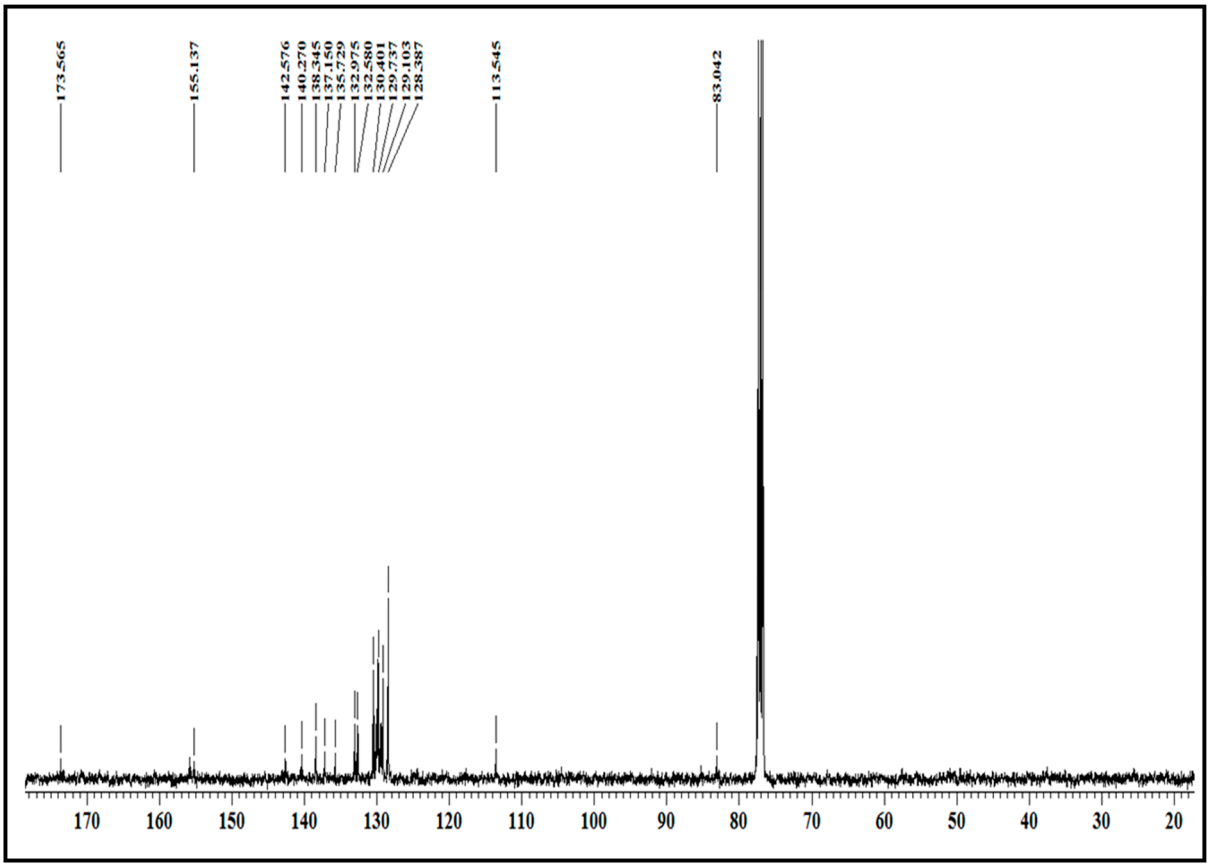


Fig. S3. ^{13}CNMR of compound **Q1**.

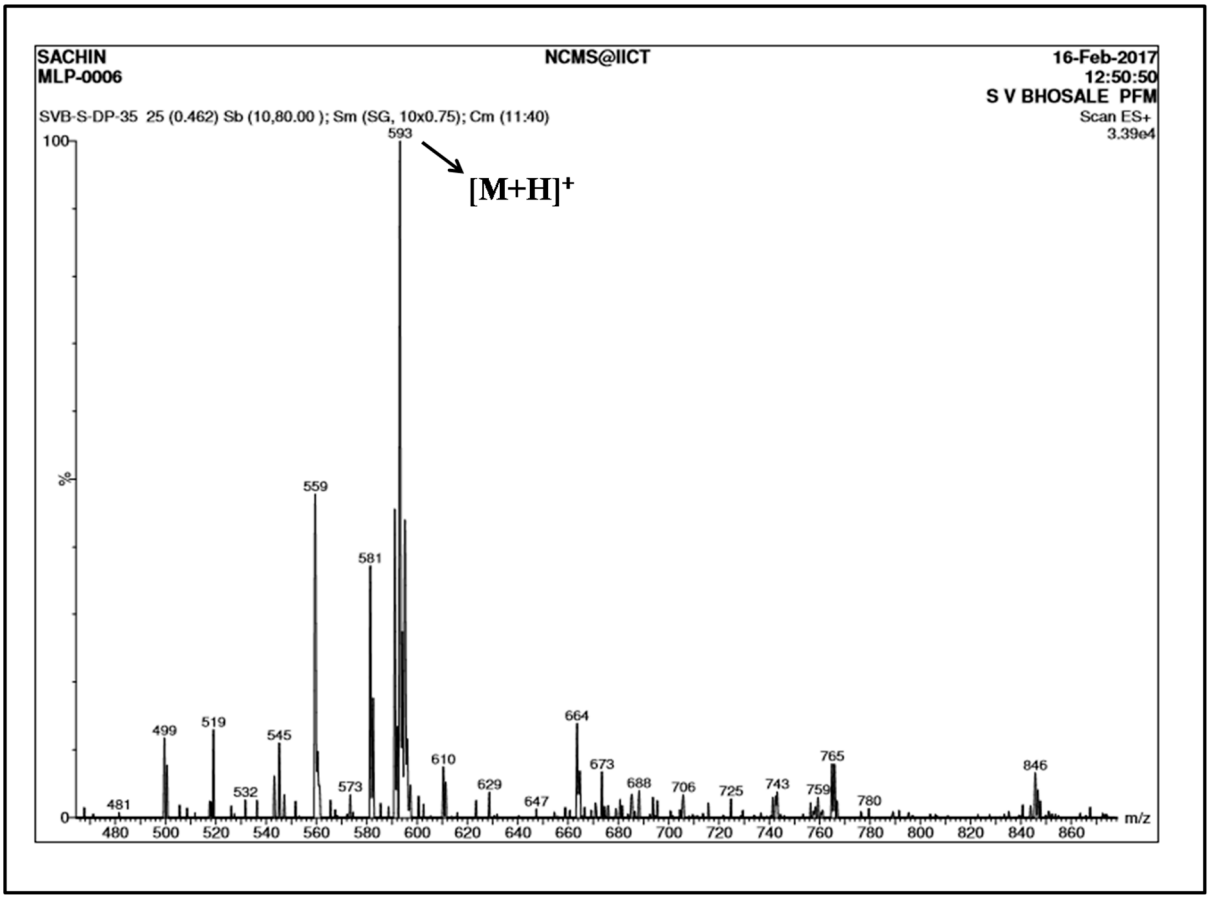


Fig. S4. ESI-MS of compound **Q1**.