Supporting Information for

Ultrasensitive and Stable Determination of Lead Ion by Phenanthroline-based Electropolymerized Film Modified Glassy Carbon Electrode

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The synthesis route and structure of **TCFC** is as follows.

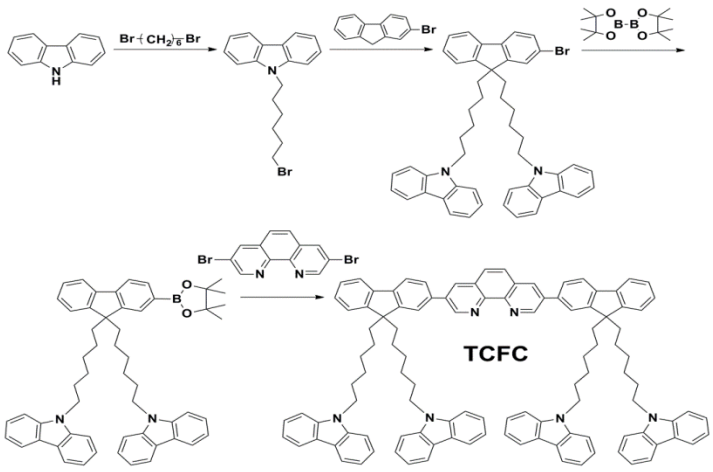

Figure S1. The synthesis route and structure of **TCFC.**

To a mixture of 3,8-dibromo-1,10-phenanthroline (0.03 g, mmol),and 2- (4, 4, 1, 5, 5 - tetramethyl-1, 3, 2 - dioxaborolan) -9, 9- (N-carbazole- hexyl) fluorene(150 mg, mmol) in 3 mL of toluene with 2 mL of 2.0 M Na_2CO_3, 17.5 mg $Pd(PPh_3)_4$, was

added under nitrogen atmosphere, and the resulting mixture was stirred at 80°C for 72 h. After cooling to room temperature, the mixture was extracted with dichloromethane. The organic layer was dried over anhydrous $MgSO_4$, The precipitated solid was filtrated and purified by chromatography using petroleum ether/dichloromethane as the eluent to afford a white solid 0.06 g (yield: 50 %).^{1}H NMR (500 MHz, DMSO) : δ 9.55 (d, 2H), 8.84 (d, 2H), 8.11 (d, 2H), 8.06 (d, 8H), 8.02 (s, 2H), 7.97 (m, 4H), 7.86 (m, 2H), 7.45 (d, 8H), 7.34 (m, 12H), 7.27(m, 2H), 7.1(t, 8H), 4.23 (t, 8H), 2.1 (m, 8H), 1.52 (m, 8H), 1.03 (m, 16H), 0.50 (m, 8H). MALDI-TOF-MS (m/z): 1506.01 [M^+] 1507.3.