Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Gel properties of T-shaped tetrathiafulvalene-pyridazine conjugates and regulation in the presence of F_4TCNQ

Yucun Liu, Yanfeng Dai, Bingzhu Yin*

E-mail: zqcong@ybu.edu.cn

Key Laboratory for Natural Resources of Changbai Mountain & Functional Molecules of Ministry of Education and Department of Chemistry, Yanbian University, Yanji, Jilin 133002 (China)
Fax: +86 433 2732456; Tel: +86 433 2732298

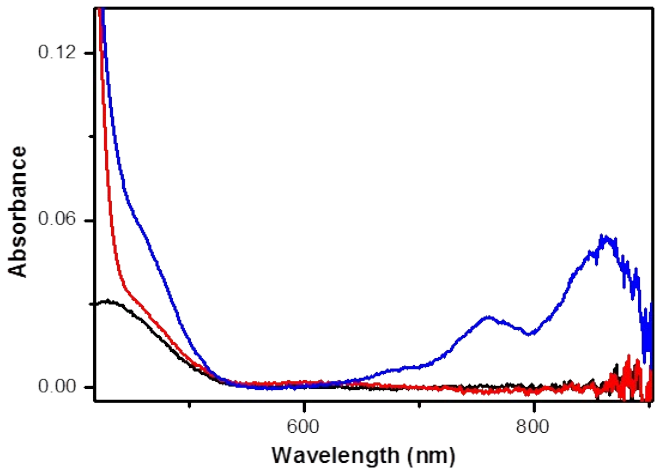


Figure S1. Absorption spectra of **1b** (black line), after addition of 1 equiv. of F_4TCNQ (blue line) and F_4TCNQ (red line) in $CHCl_3$ (5×10^{-5} M) solution.

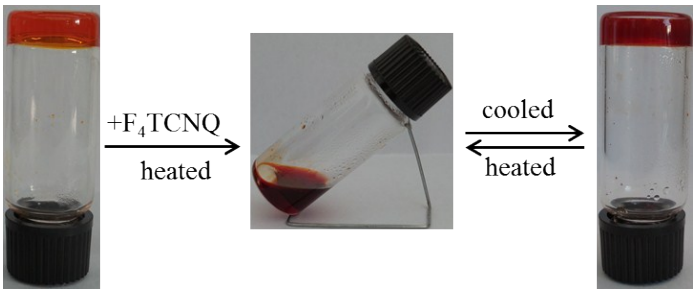


Figure S2. Tuning the gel formation of gelator **1b** by the addition of 1.0 equiv. F_4TCNQ in toluene.

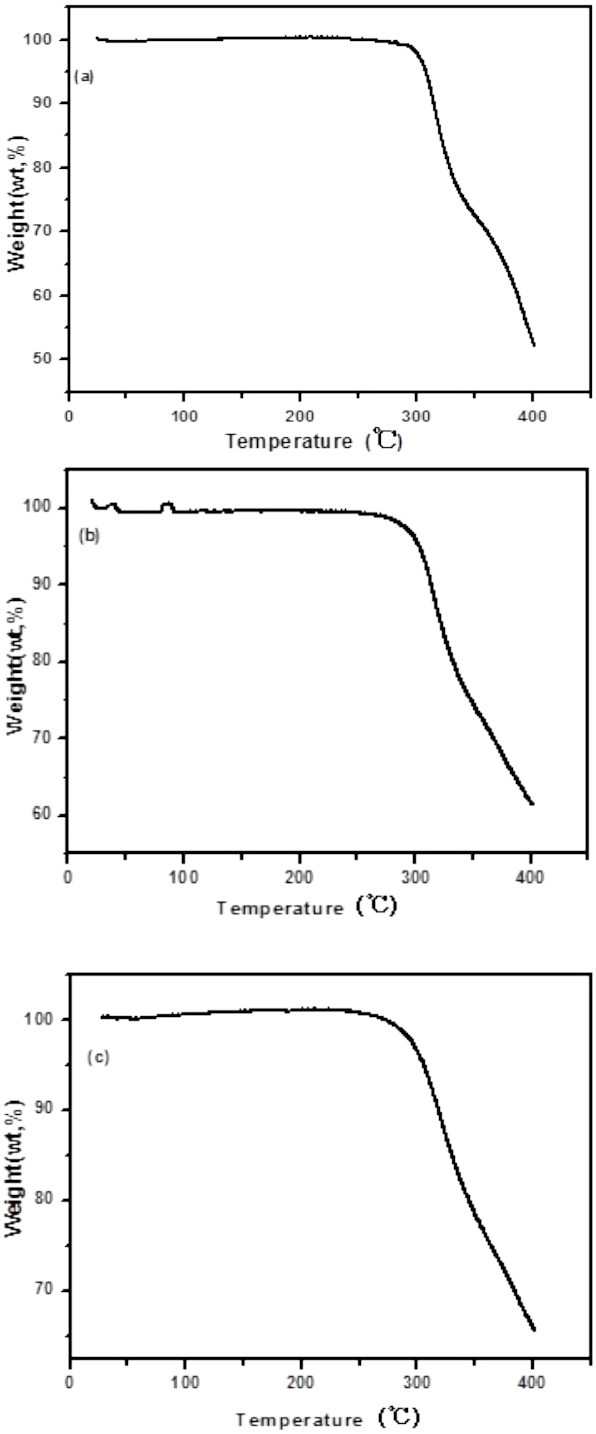


Figure S3. TGA curves of the gelators **1a-c**.

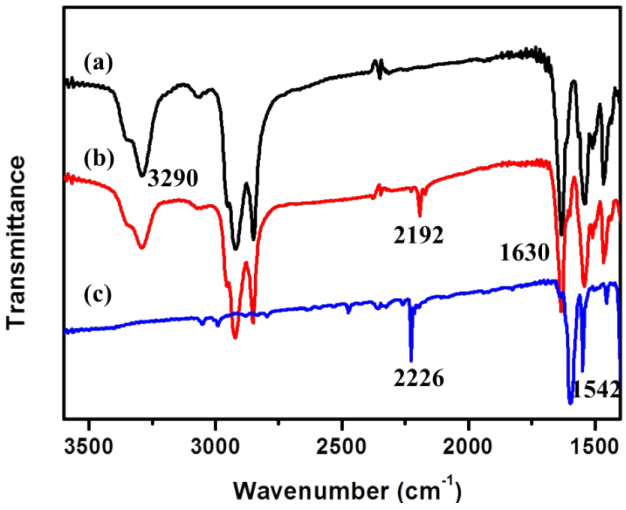


Figure S4. FT-IR spectra of native xerogel of **1b** from toluene (b), the CT complex gel of **1b** with F_4TCNQ (mole ratio = 1 : 1) from toluene (c) and the F_4TCNQ powder (d).

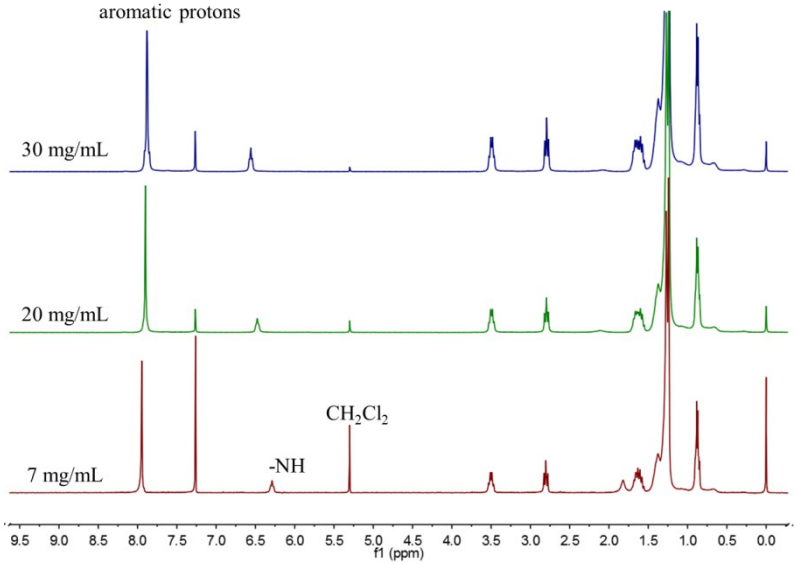


Figure S5. Variable-concentration ^{1}H-NMR spectra of **1b** in $CDCl_3$.

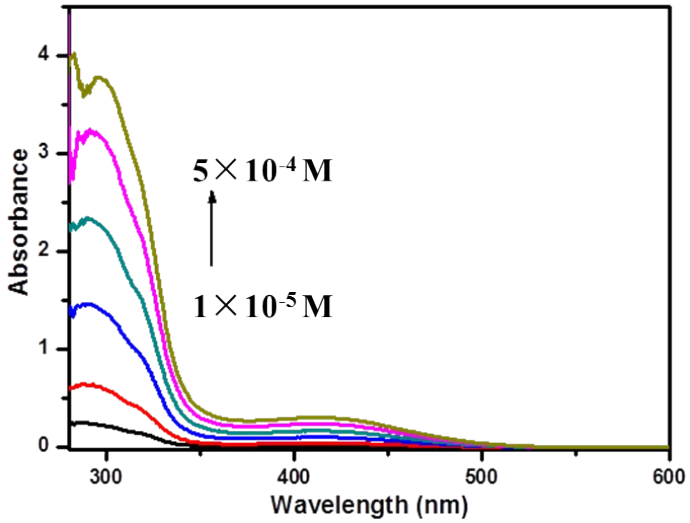


Figure S6. Variable-concentration UV-Vis spectra of **1b** in DMF dilute solution. Concentrations from bottom to top: 1×10^{-5}M, 3×10^{-5}M, 6×10^{-5}M, 9×10^{-5}M, 2×10^{-4}M, 5×10^{-4}M, respectively.

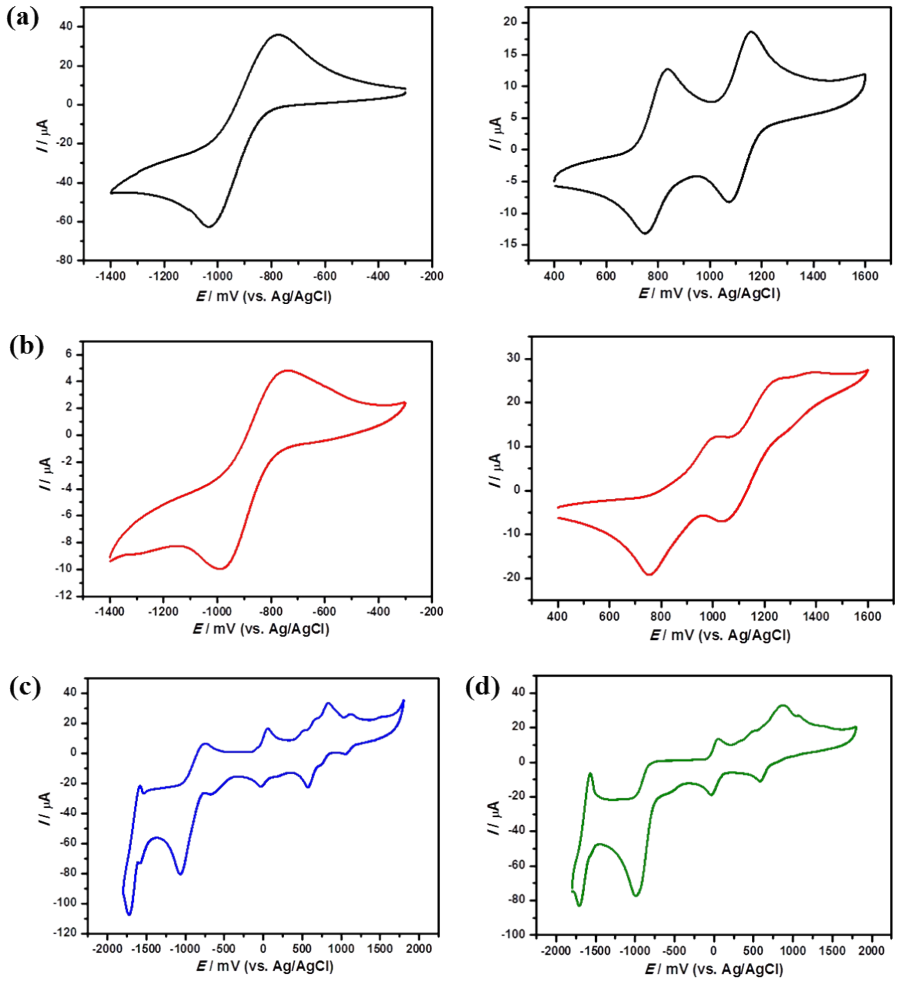


Figure S7. The CV curves of (a) **1b** (1 mM), (b) native xerogel of **1b** from DMF, (c) CT complex xerogel of **1b** with F_4TCNQ and (d) F_4TCNQ (1 mM) in benzonitrile. Scan rate was 100 mV s^{-1}, with Pt as the counter electrode, glass carbon as the working electrode and Ag/AgCl electrode (saturated KCl) as the reference electrode, and Bu_4NPF_6 (0.1 M) as supporting electrolyte.

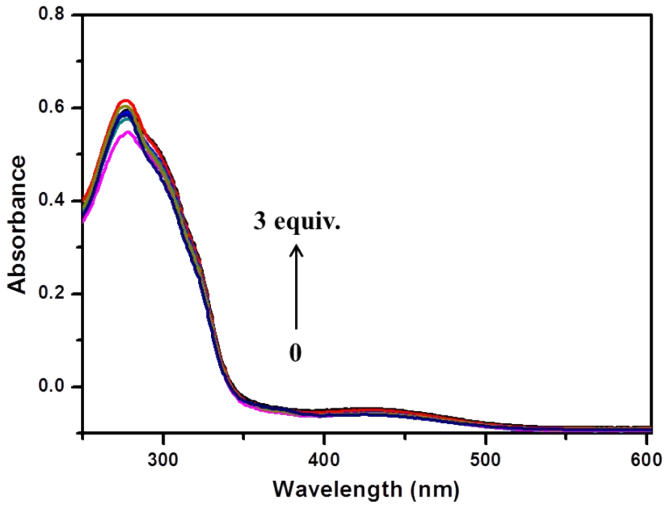
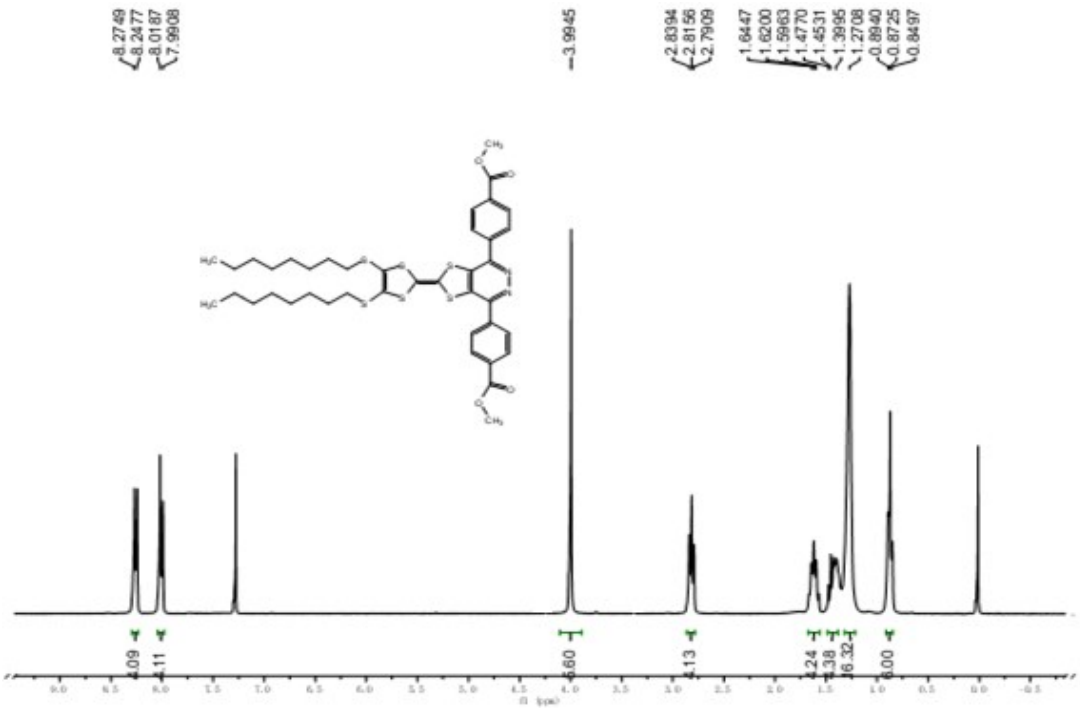


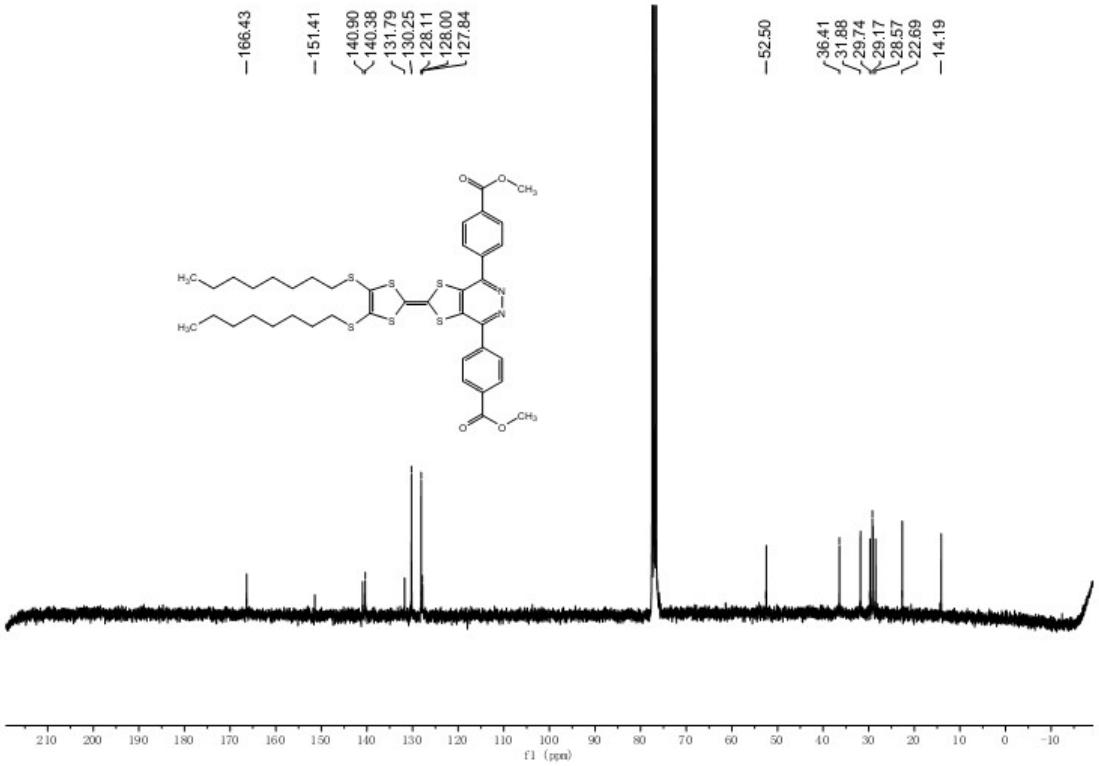
Figure S8. UV-Vis absorption spectra of **1b** in $CHCl_3$ (2×10^{-5} M) solution with gradually increasing the concentration of F^-: 0 eq. F^- (black line), 0.5 eq. F^- (pink line), 1.0 eq. F^- (blue line), 2.0 eq. F^- (yellow-green line), 3.0 eq. F^- (red line).

Figure S9. Photographs of the **1b** organogel (toluene, 25 mg/mL) upon the addition of 2.0 equiv. of each anion. From left to right is F^-, Cl^-, Br^-, I^-, AcO^-, HSO_4^-, $H_2PO_4^-$, respectively.

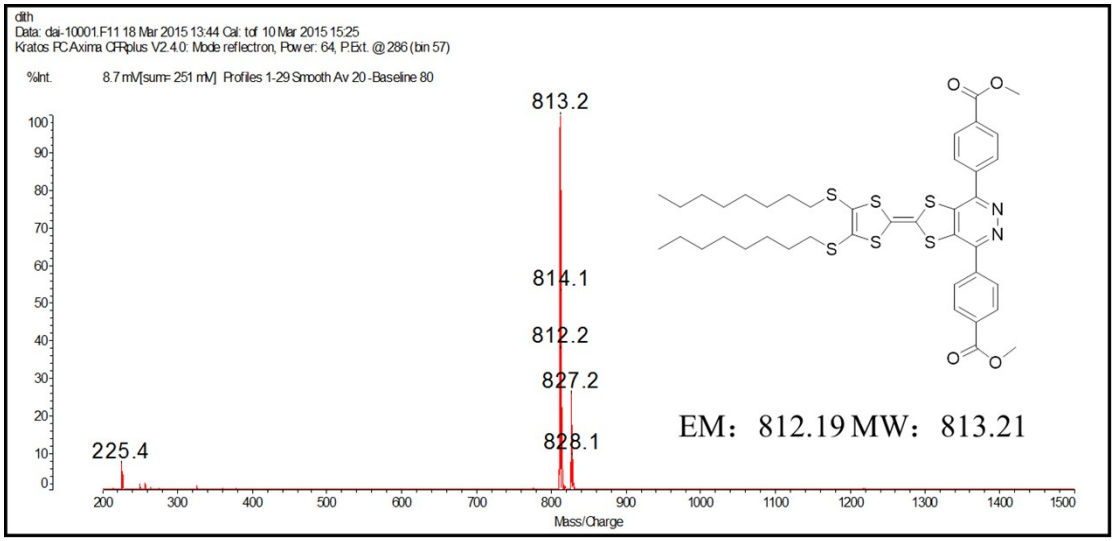
^{1}H, ^{13}C NMR and MALDI-TOF-MS Spectra



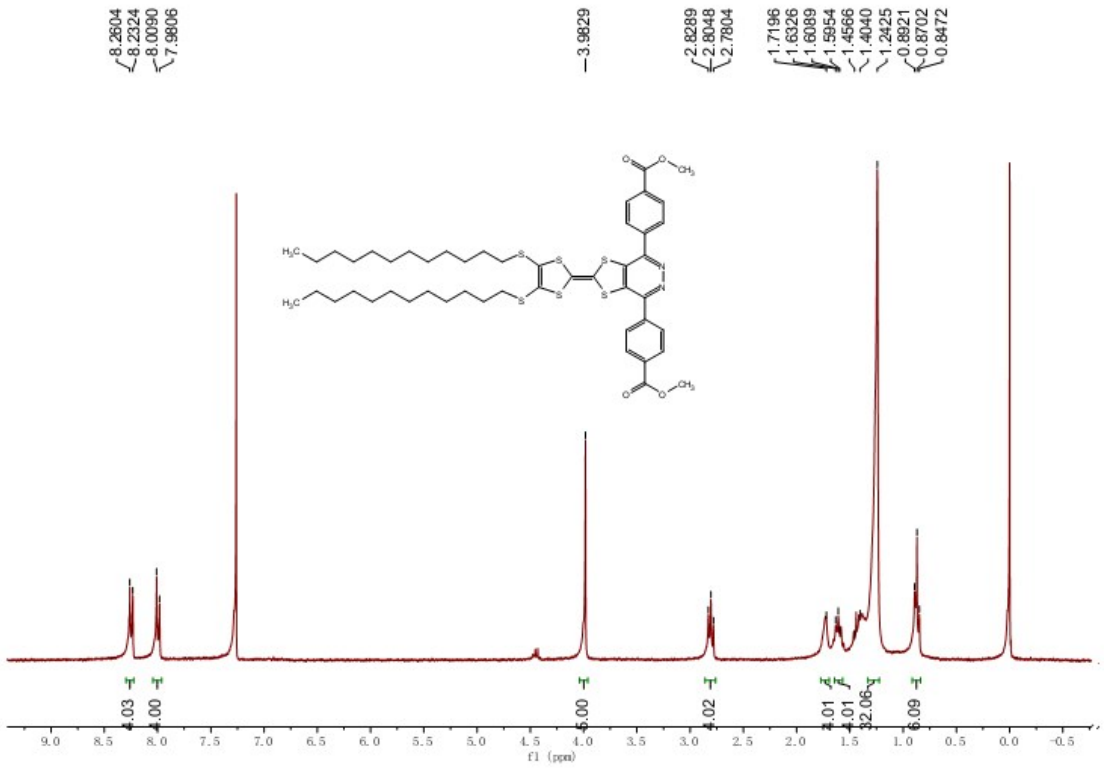
^{1}H NMR of **3a**



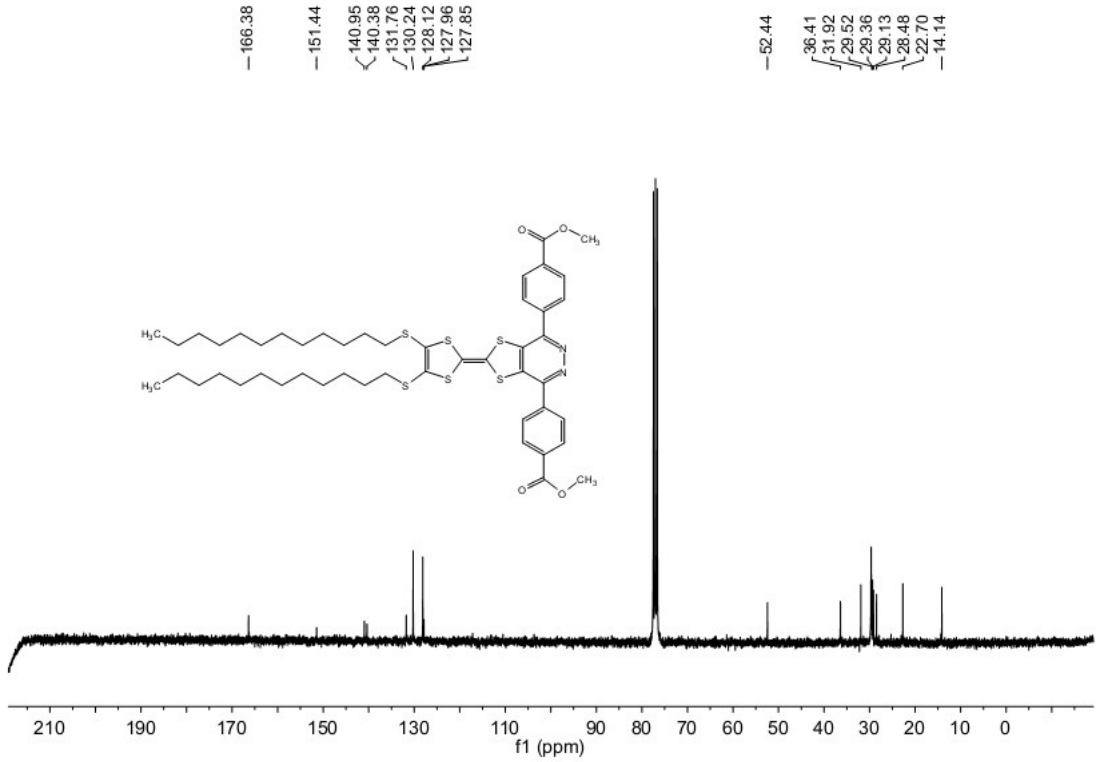
^{13}C NMR of **3a**



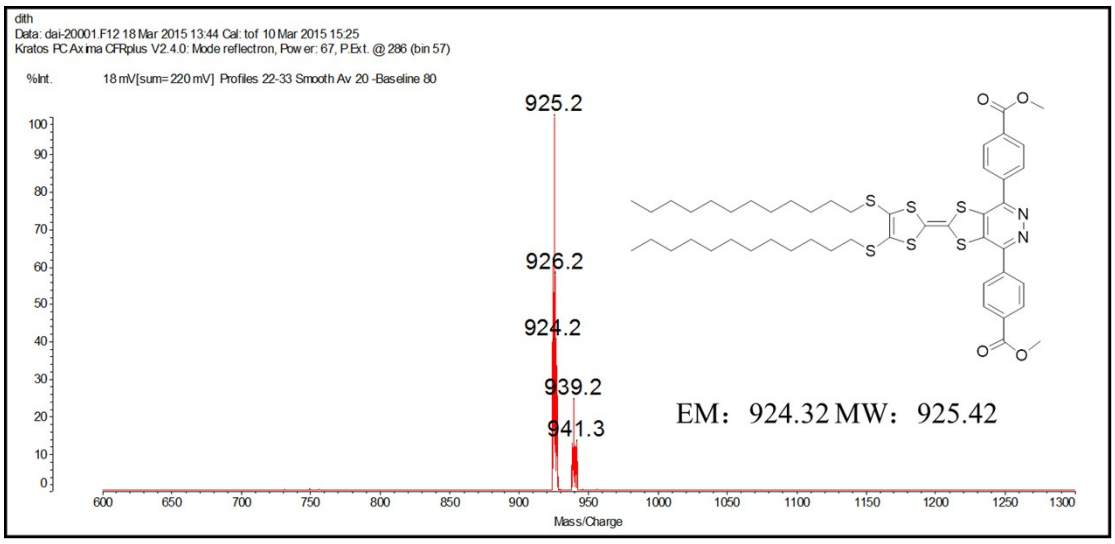
MALDI-TOF-MS of **3a**



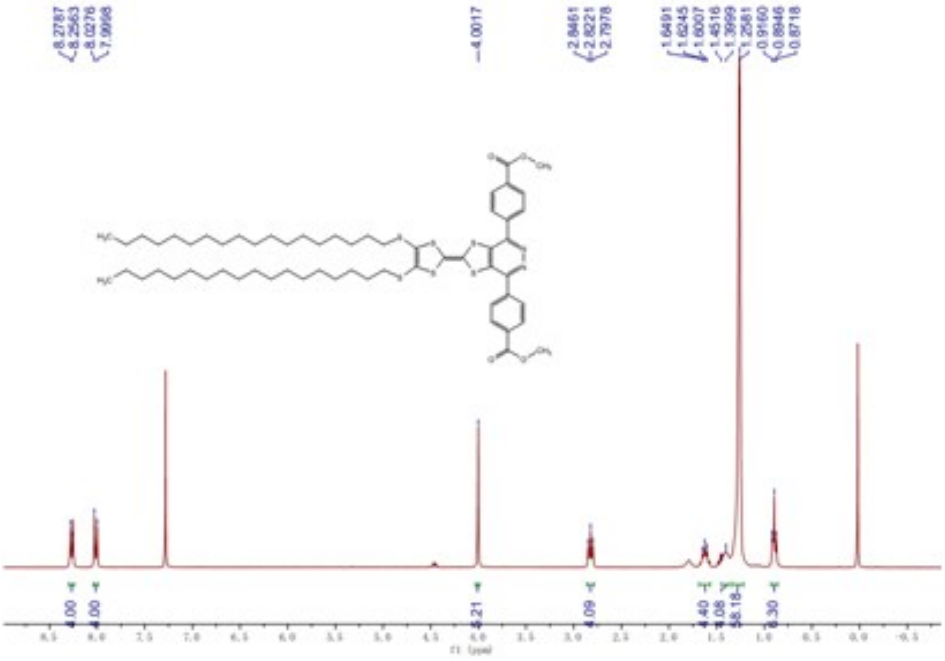
^{1}H NMR of **3b**



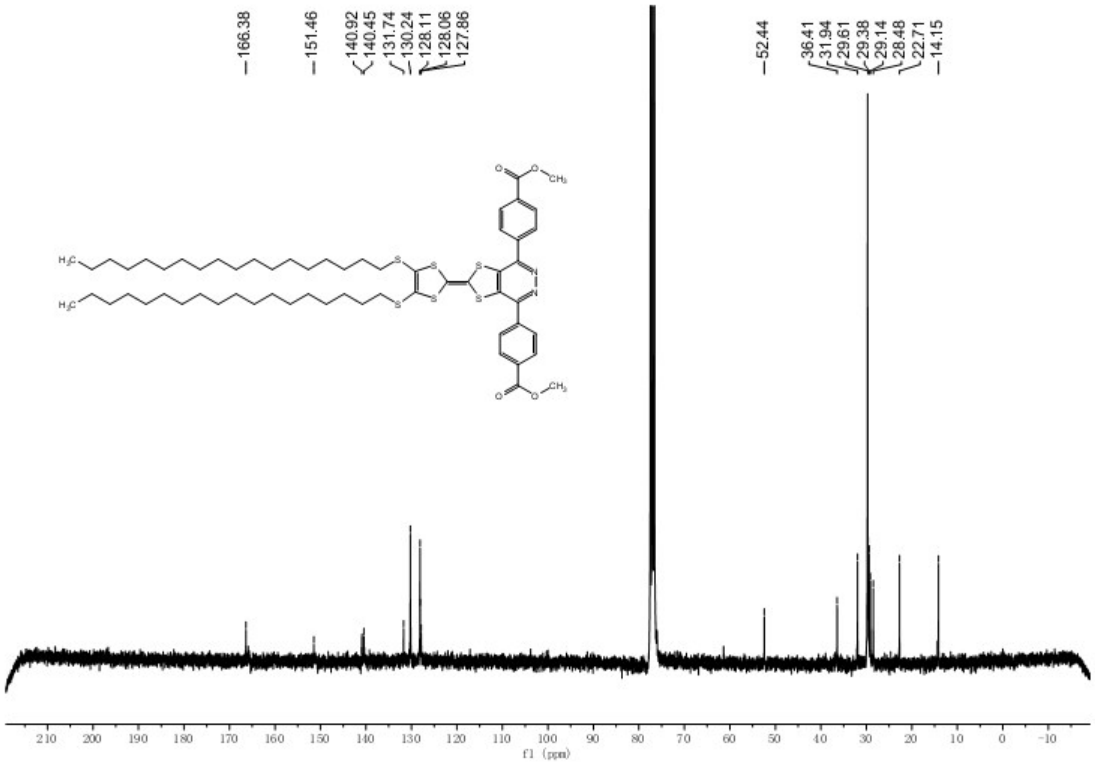
^{13}C NMR of **3b**



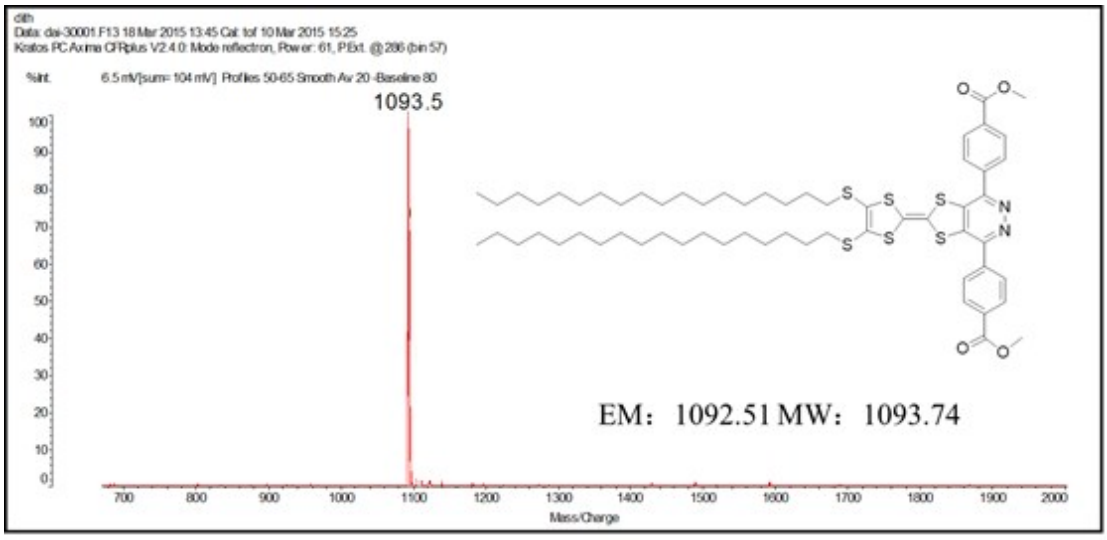
MALDI-TOF-MS of **3b**



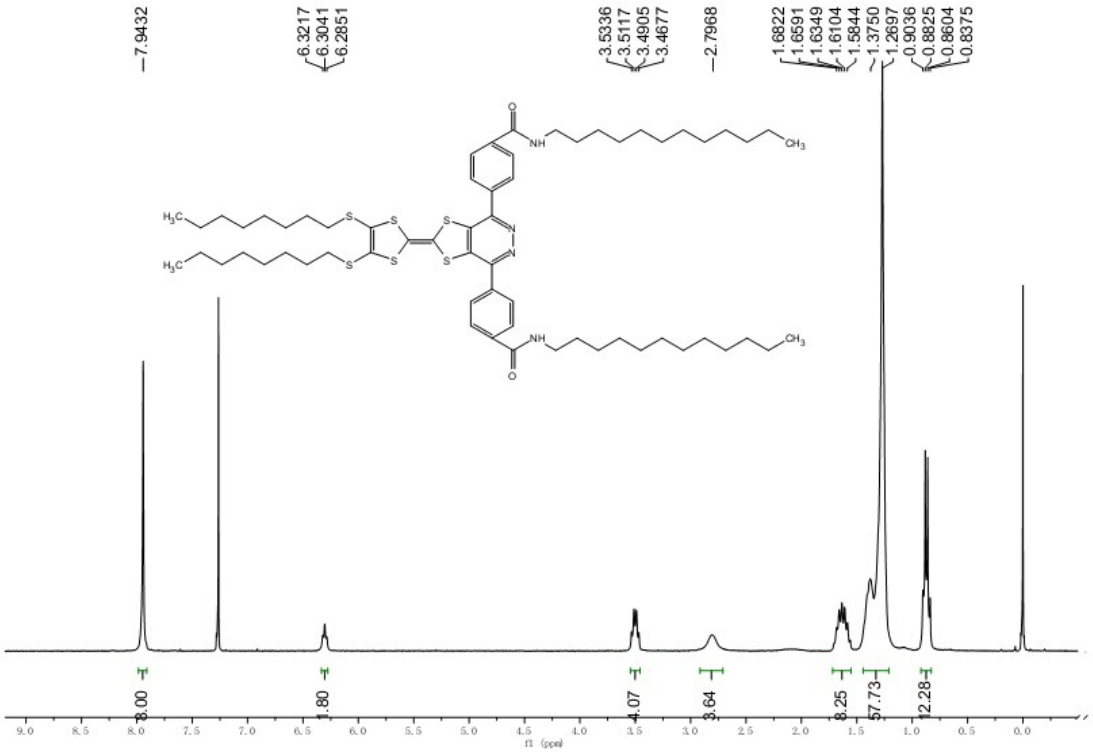
^{1}H NMR of **3c**



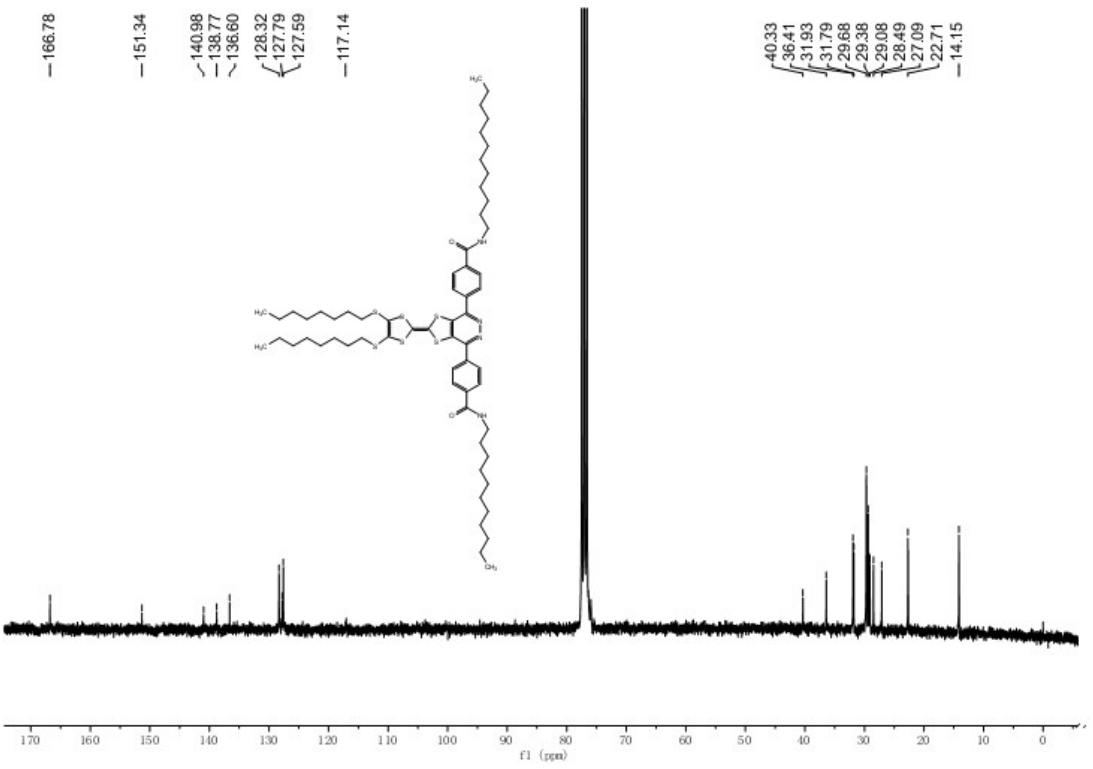
^{13}C NMR of **3c**



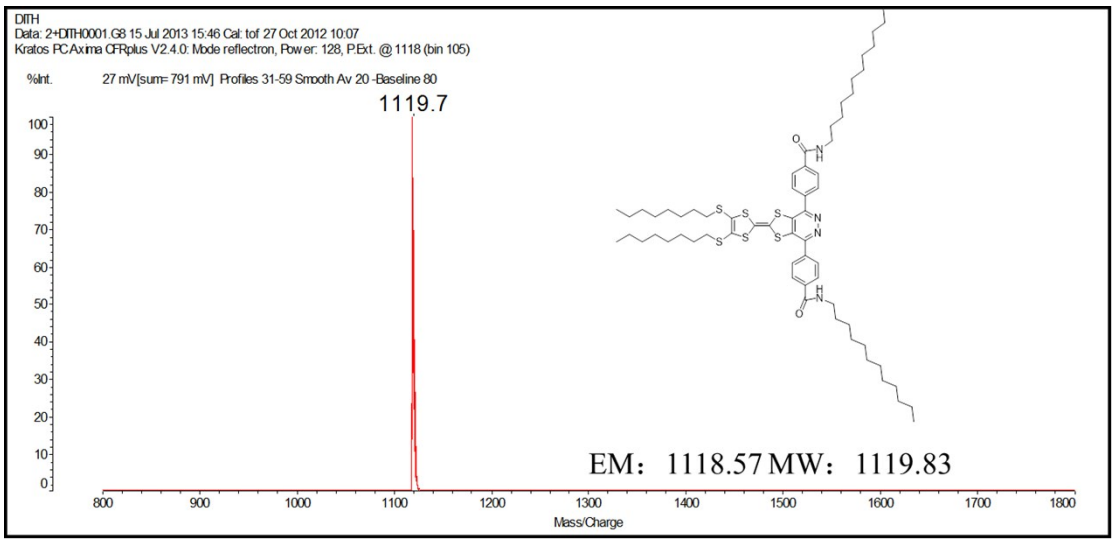
MALDI-TOF-MS of **3c**



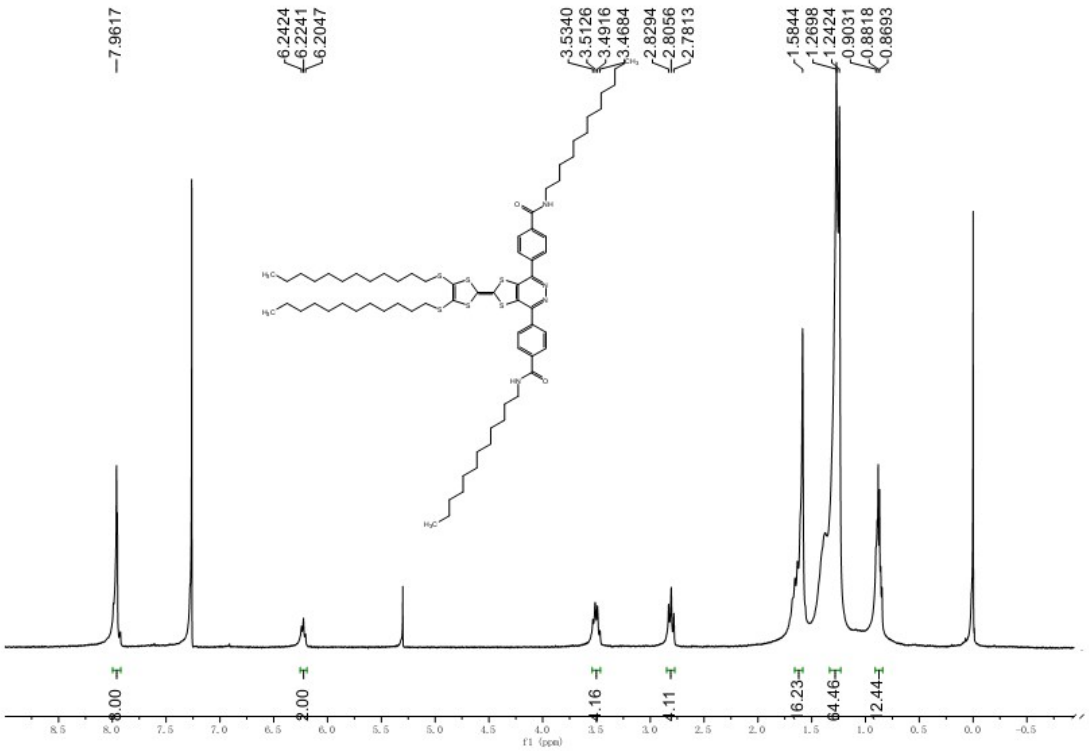
^{1}H NMR of **1a**



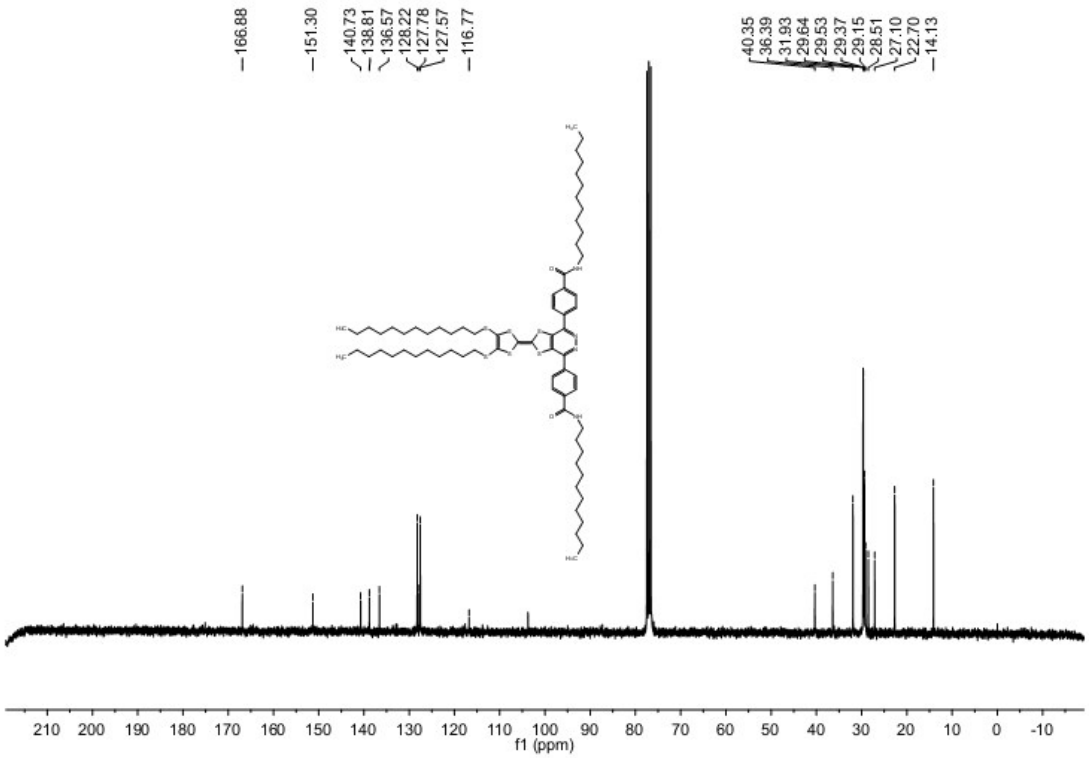
^{13}C NMR of **1a**



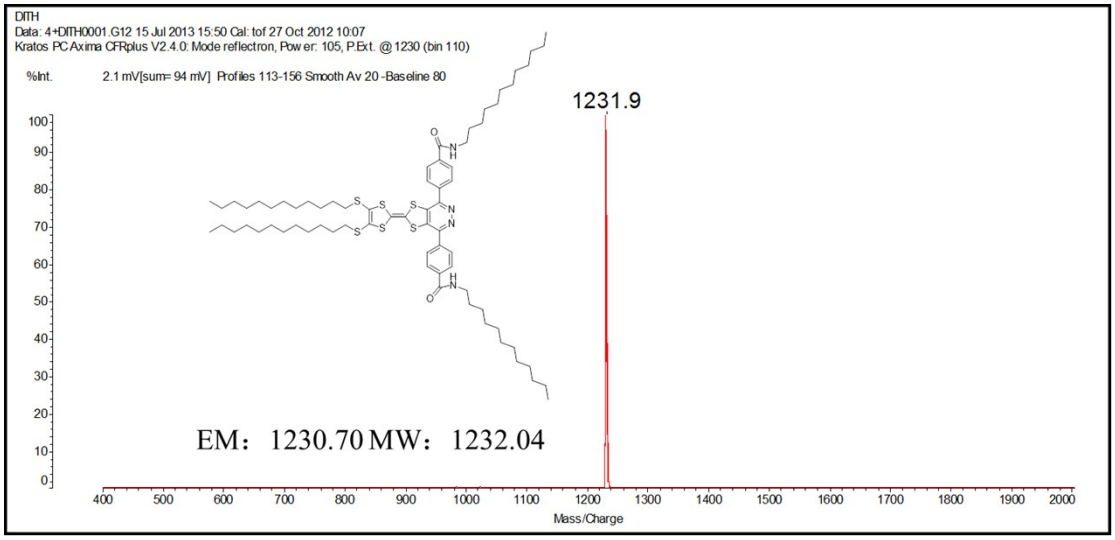
MALDI-TOF-MS of **1a**



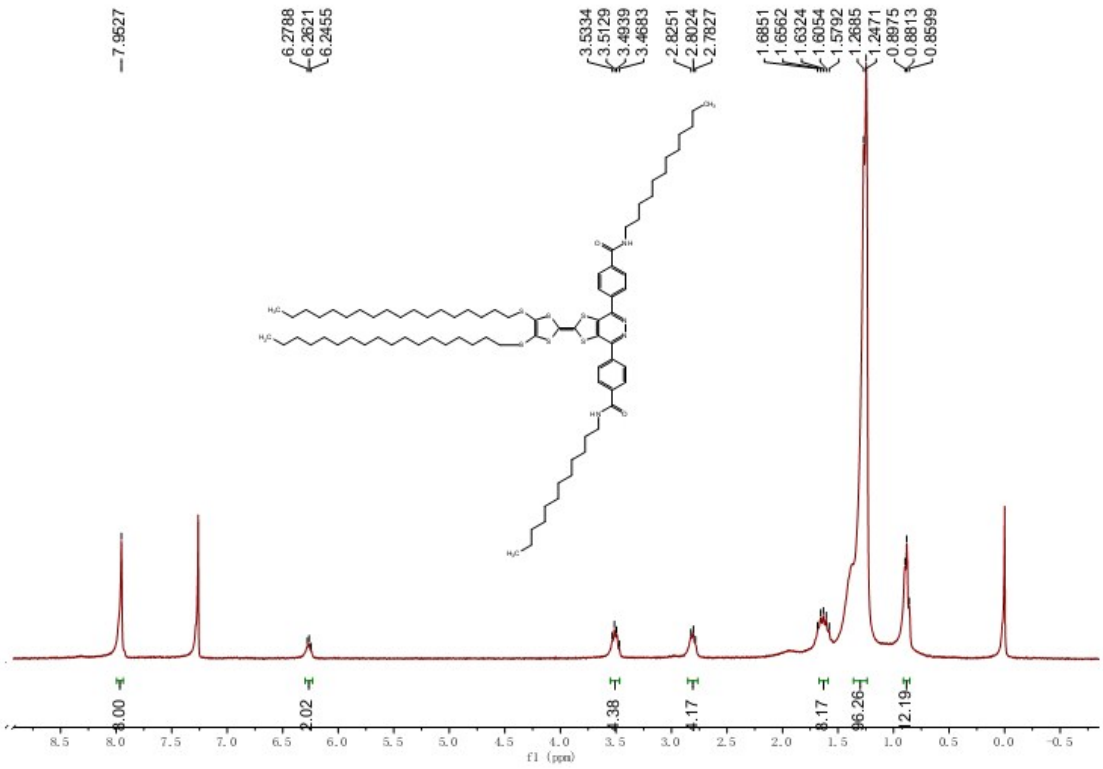
^{1}H NMR of **1b**



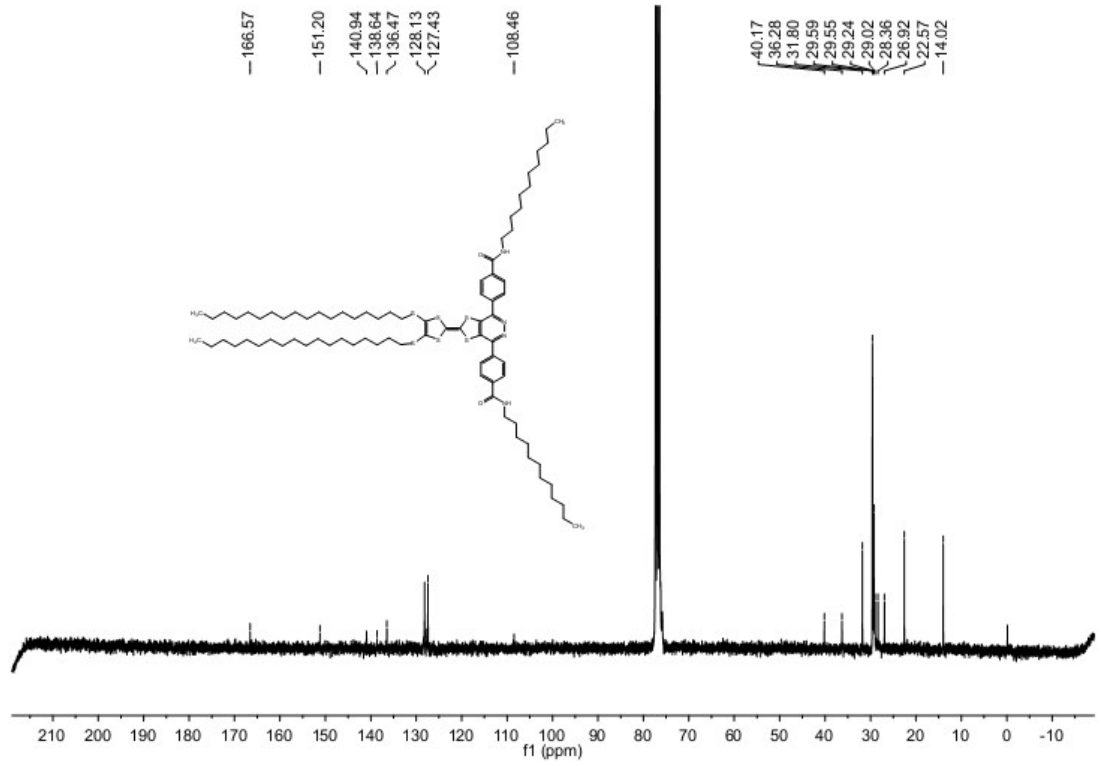
^{13}C NMR of **1b**



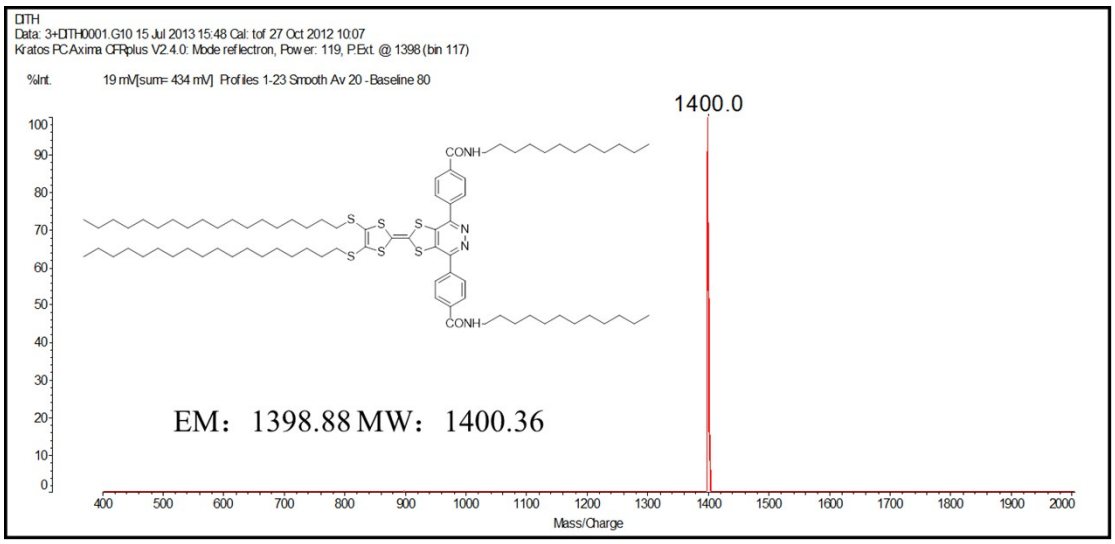
MALDI-TOF-MS of **1b**



^{1}H NMR of **1c**



^{13}C NMR of **1c**



MALDI-TOF-MS of **1c**