

Supporting information for

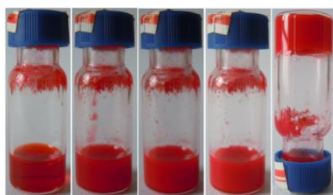
H- and J-aggregates formed from a nontraditional  
 $\pi$ -gelator depending on the solvent polarity for the  
detection of amine vapors

**Table S1** Photophysical data of **TCbzB** in different solvents.

Solvents	$\lambda_{\text{abs}}/\text{nm}$	$\lambda_{\text{em}}/\text{nm}$	Stokes shift/ $\text{cm}^{-1}$	FWHM <sup>a</sup> /nm	$\Phi_F$ <sup>b</sup>
Cyclohexane	357, 485	526	1607	90	0.38
Toluene	373, 488	590	3542	93	0.25
Diphenyl ether	372, 496	628	4237	108	0.04
Chloroform	371, 491	652	5029	131	0.01

<sup>a</sup> Full width at half maxima

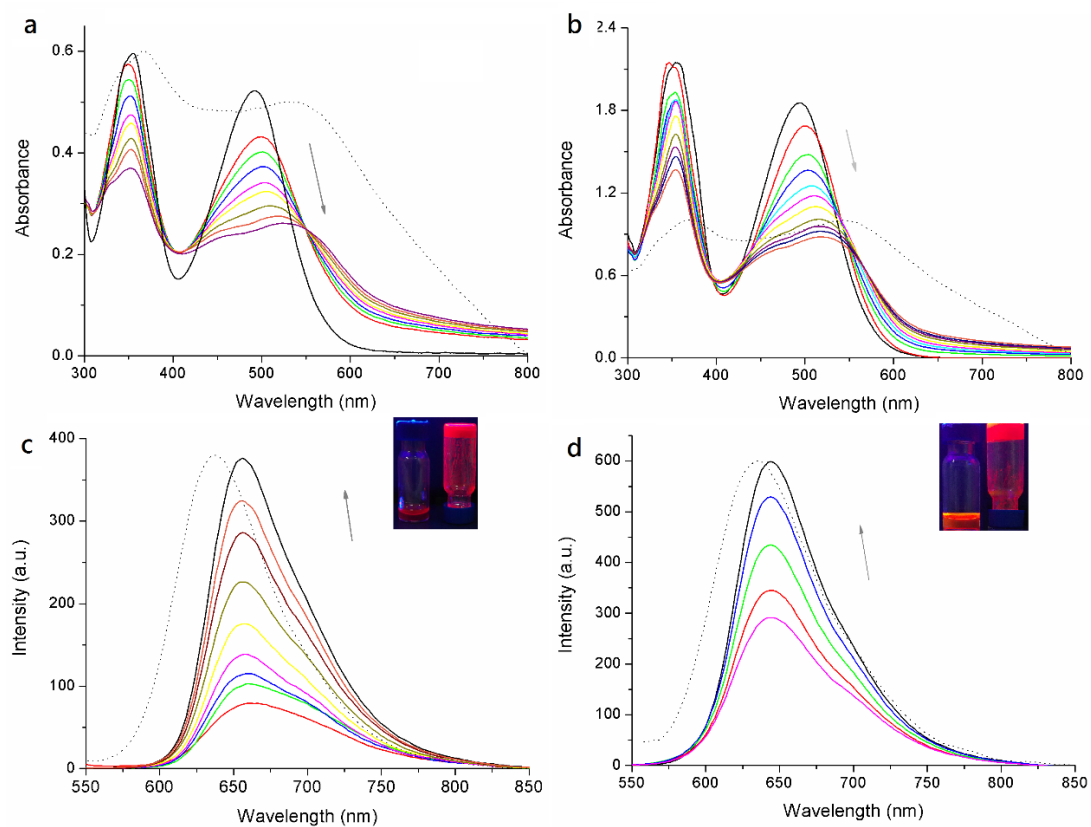
<sup>b</sup> Fluorescence quantum yield determined by a standard method with Fluorescein in 0.1 N NaOH ( $\Phi_F = 0.88$ ,  $\lambda_{\text{ex}} = 460$  nm) as reference.



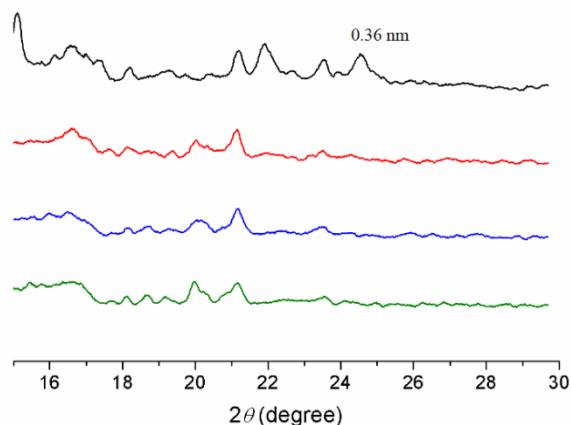
**Figure S1** Photographs of **TCbzB** in *o*-dichlorobenzene/cyclohexane ( $v/v = 1/5$ ) during the formation of red organogel under daylight.



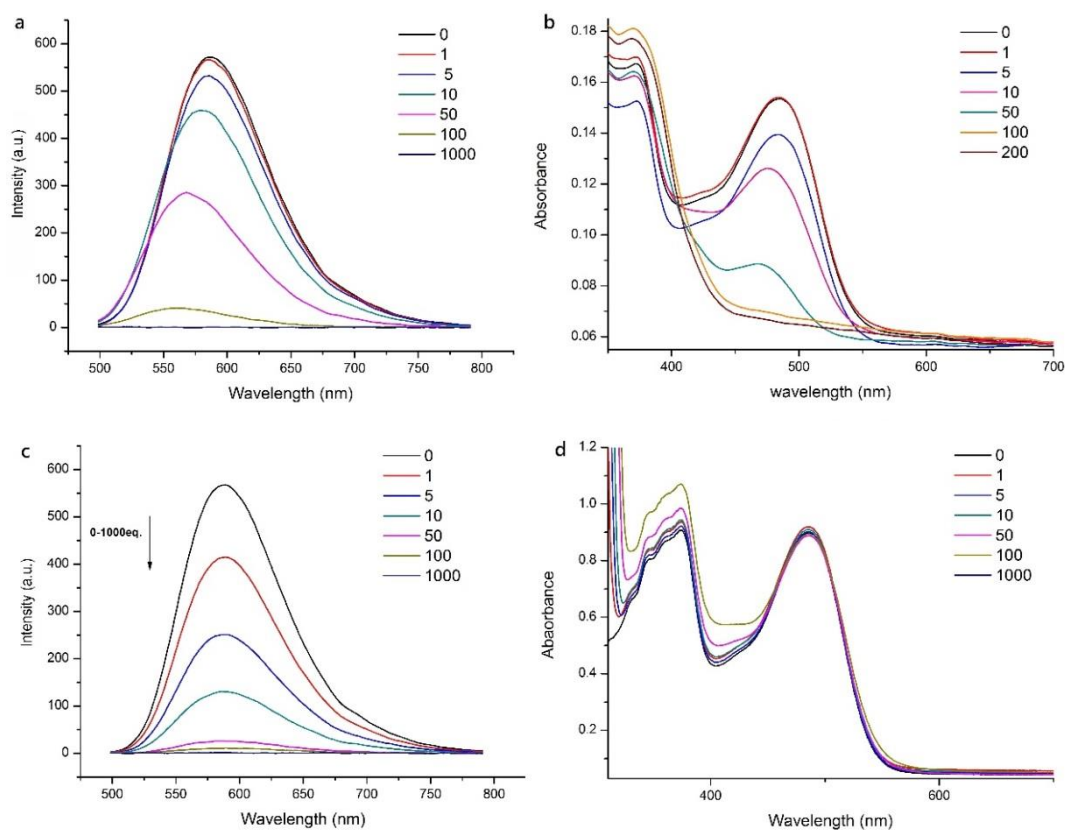
**Figure S2** Photographs of **TCbzB** in *o*-dichlorobenzene/cyclohexane ( $v/v = 1/2$ ) during the formation of orange organogel under daylight.



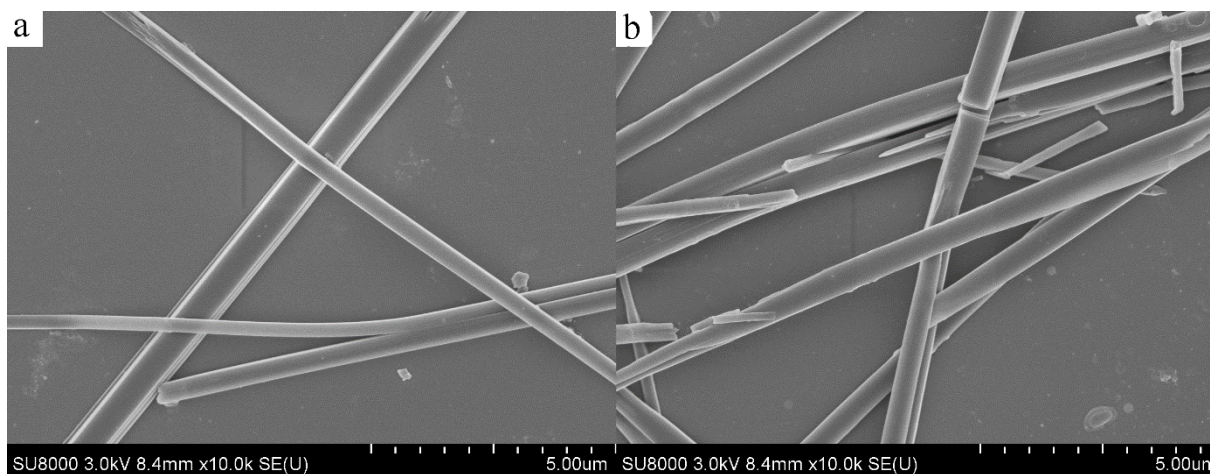
**Figure S3** Temperature-dependent UV-vis absorption (a, b) and fluorescence emission spectra (c, d) of **TCbzB** in toluene/cyclohexane (v/v = 1/2) (a, c), chlorobenzene/cyclohexane (v/v = 1/2) (b, d) during gelation. Dash line: the electronic spectra of **TCbzB** in xerogels. Insets in c-d: Photos of **TCbzB** in solutions (left vial) and in gel states (right vial) under 365 nm light.



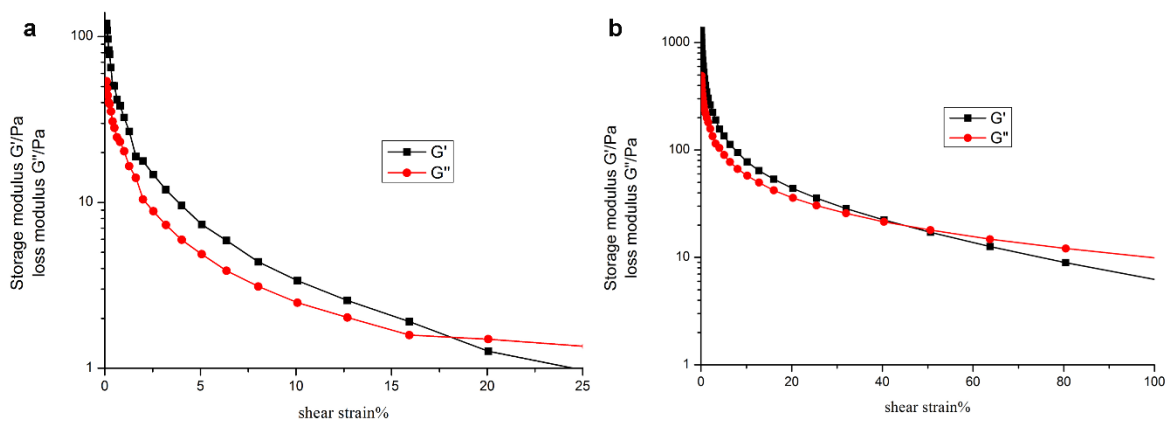
**Figure S4** XRD patterns of the xerogels of **TCbzB** gained in *o*-dichlorobenzene /cyclohexane ( $v/v = 1/2$ , black), *o*-dichlorobenzene/cyclohexane ( $v/v = 1/5$ , red), toluene/cyclohexane ( $v/v = 1/2$ , blue) and chlorobenzene/cyclohexane ( $v/v = 1/2$ , green).



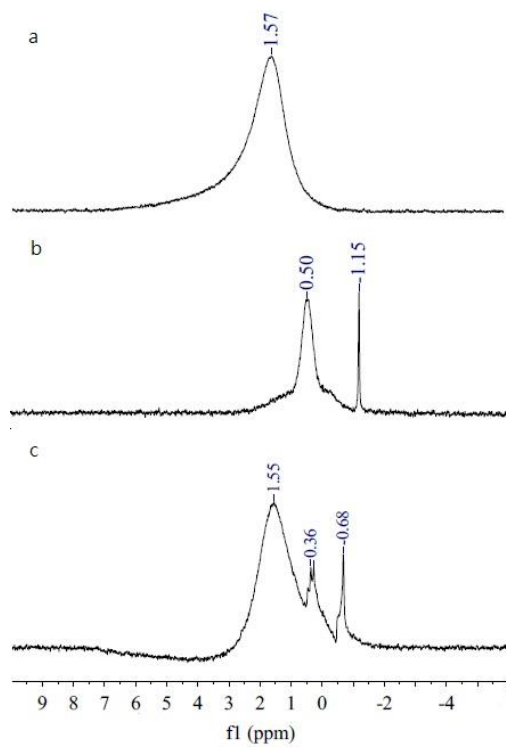
**Figure S5** The fluorescence emission (a, c  $\lambda_{ex} = 360$  nm) and UV-vis absorption (b, d) spectra of **TCbzB** in toluene ( $2.0 \times 10^{-6}$  M) upon adding different amount of *n*-propylamine (a, b) and aniline (c, d).



**Figure S6** SEM images of the xerogels of **TCbzB** obtained from toluene/cyclohexane ( $v/v = 1/2$ ) (a) and chlorobenzene/cyclohexane ( $v/v = 1/2$ ) (b).



**Figure S7** Dynamic strain sweep measurement ( $G'$ : storage modulus;  $G''$ : loss modulus) of the organogels formed in *o*-dichlorobenzene/cyclohexane ( $v/v = 1/2$ ) (a) and in *o*-dichlorobenzene/cyclohexane ( $v/v = 1/5$ ) (b).



**Figure S8**  $^{11}\text{B}$  NMR (128.3 MHz) spectra of compound **TCbzB** (a) and after adding *n*-propyl amine (b) and aniline (c).

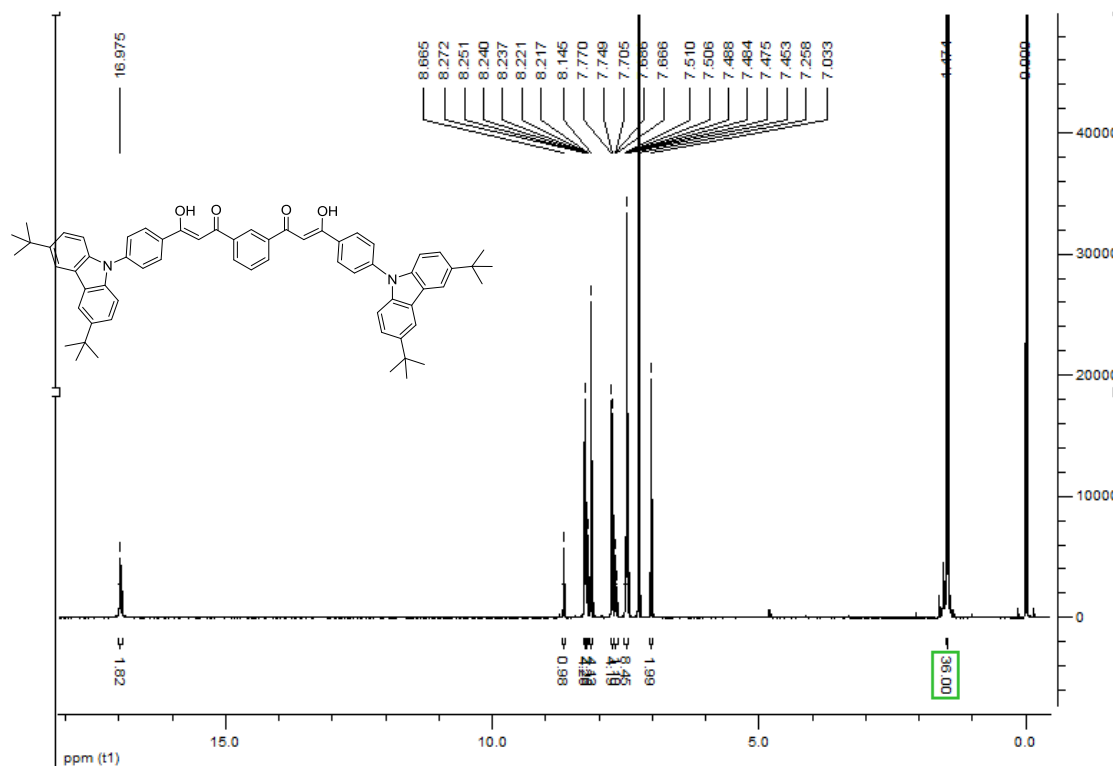


Figure S9  $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ) spectra of compound 3.

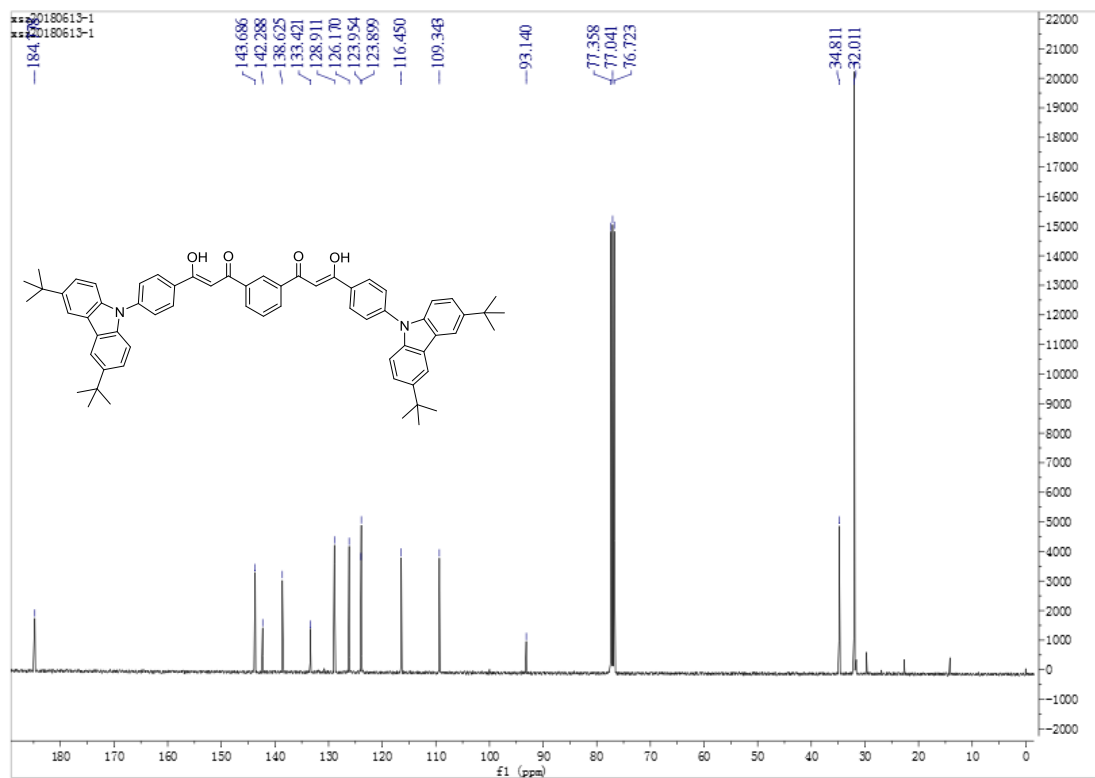
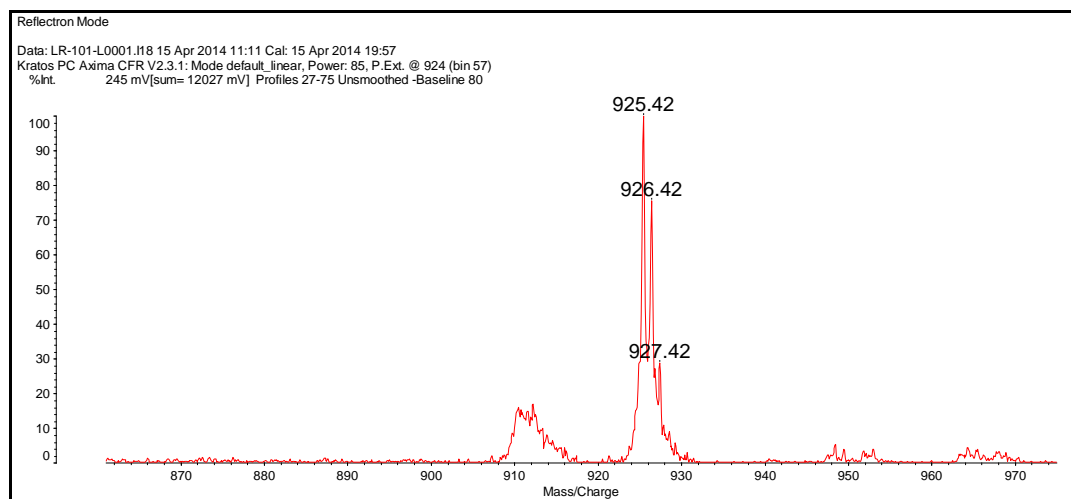
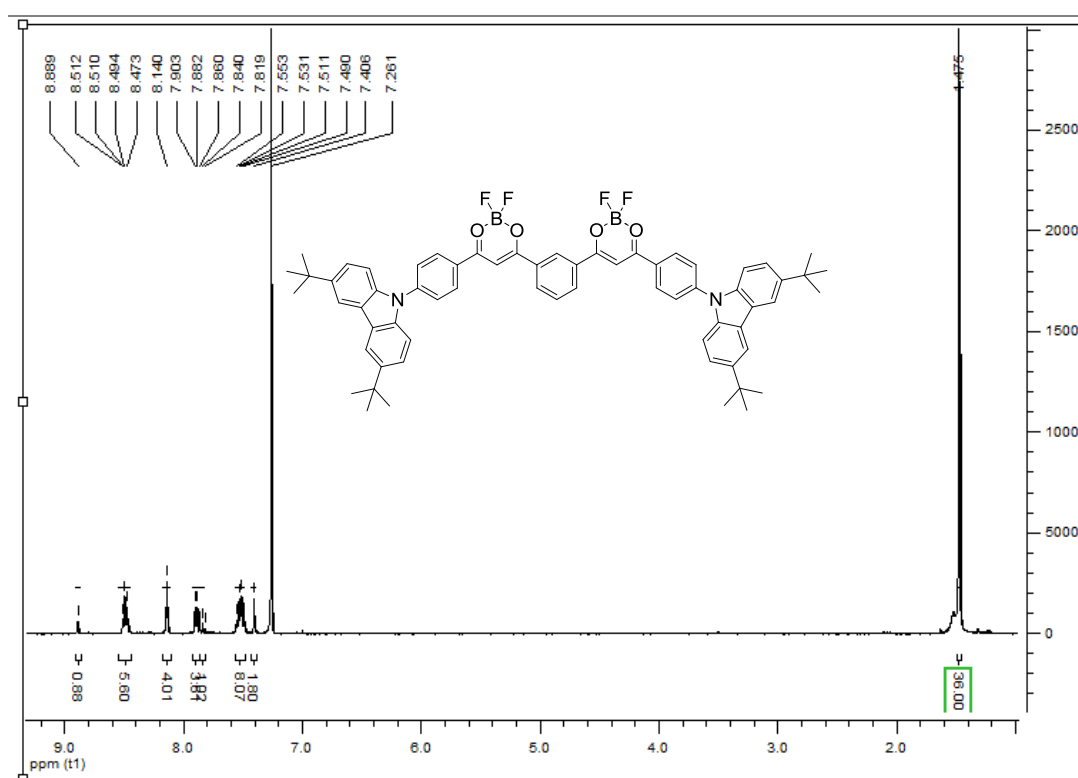


Figure S10  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectra of compound 3.





**Figure S11.** MALDI/TOF MS spectrum of compound **3**.



**Figure S12**  $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ) spectra of **TCbzB**.

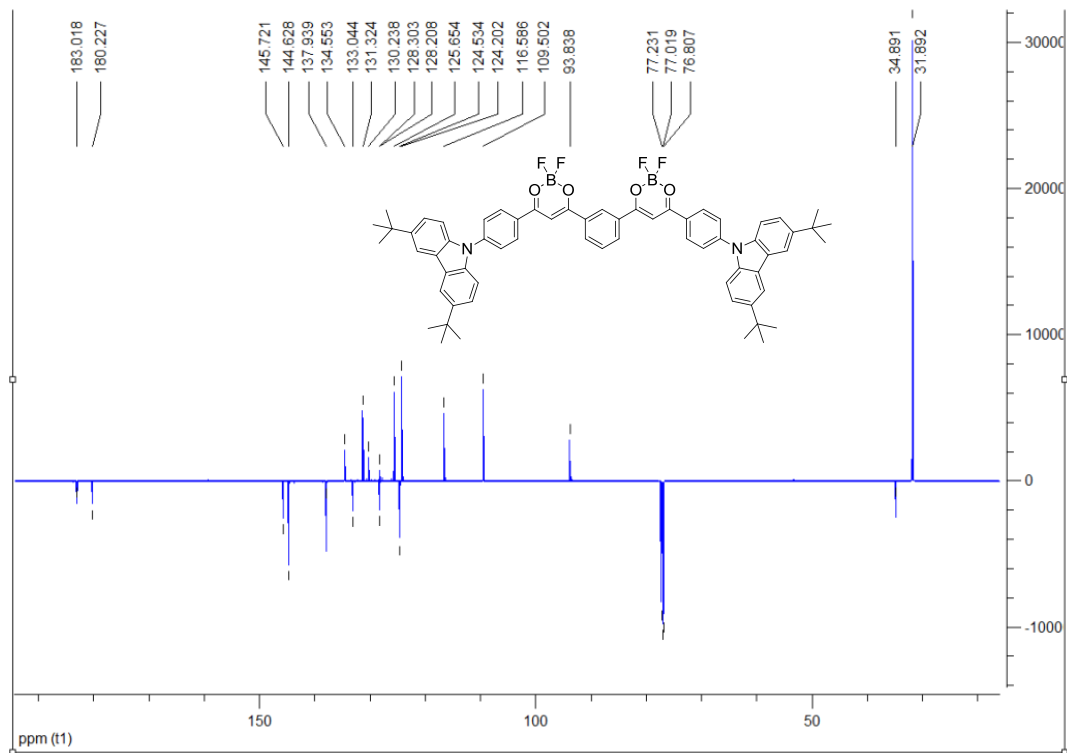


Figure S13  $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ ) spectra of **TCbzB**.

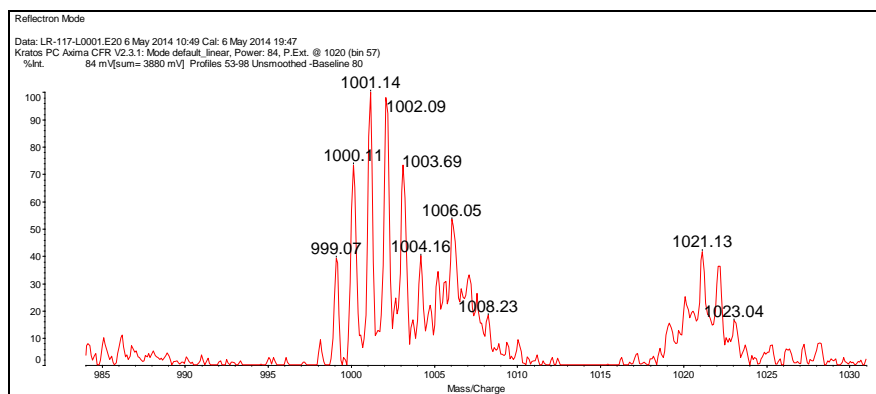


Figure S14 MALDI/TOF MS spectrum of **TCbzB**.