Electronic Supplementary Material (ESI) for RSC Advances

Modulation of Singlet and Triplet Excited States Though σ Spacers in Ternary 1,3,5-Triazines

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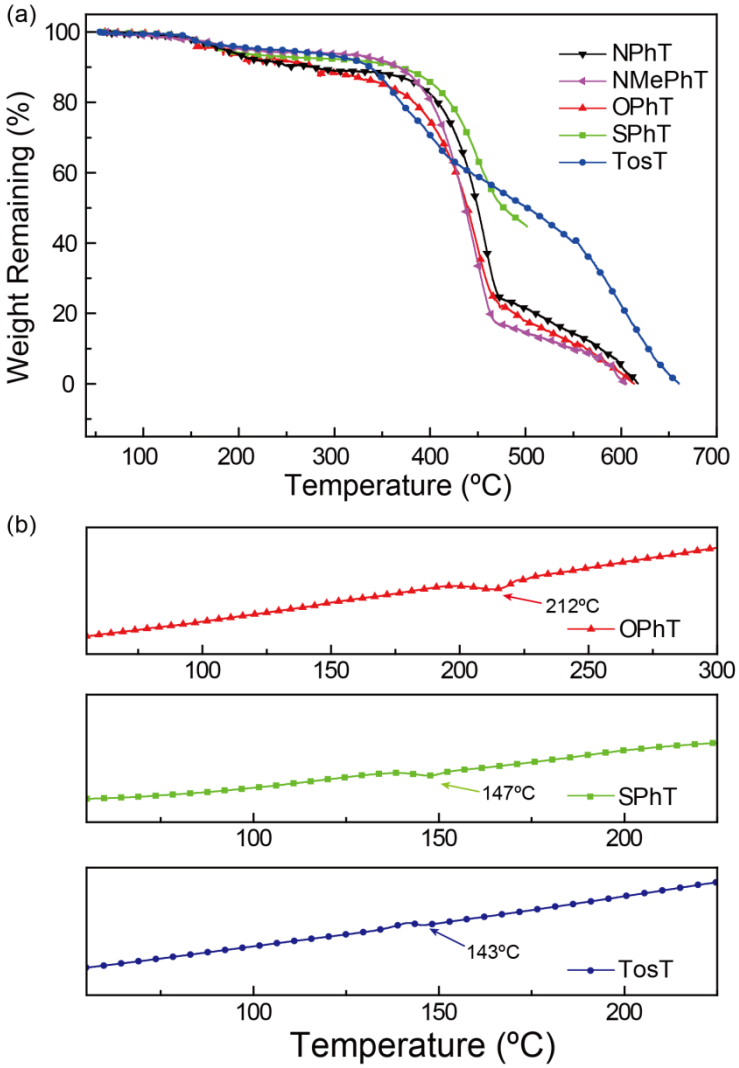

Figure S1. Thermal properties of σ-spaced triazines. (a)TGA and (b) DSC curves

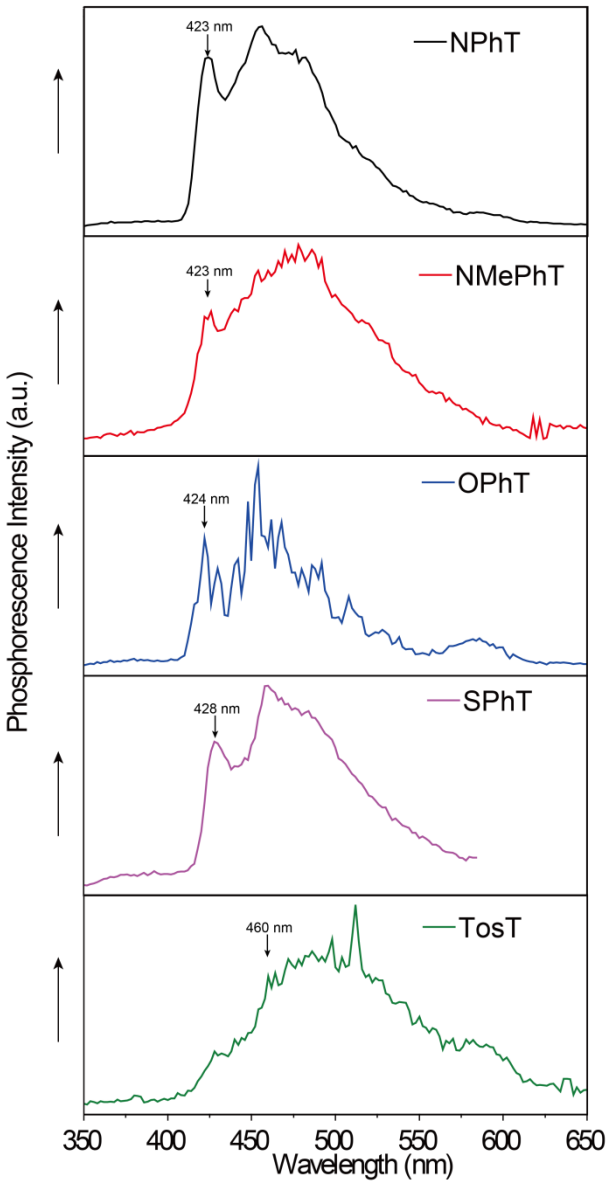

Figure S2. The normalized phosphorescent spectra of σ-spaced triazines in chloroform glass at 77 K after a delay of 5 ms.

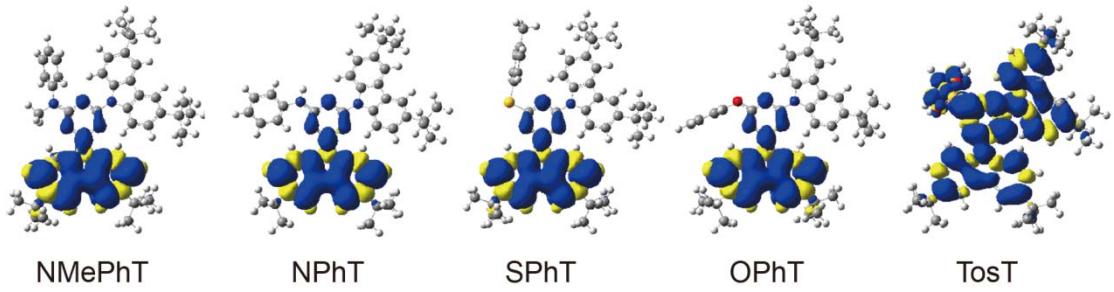

Figure S3. Spin density distribution of σ-spaced triazines

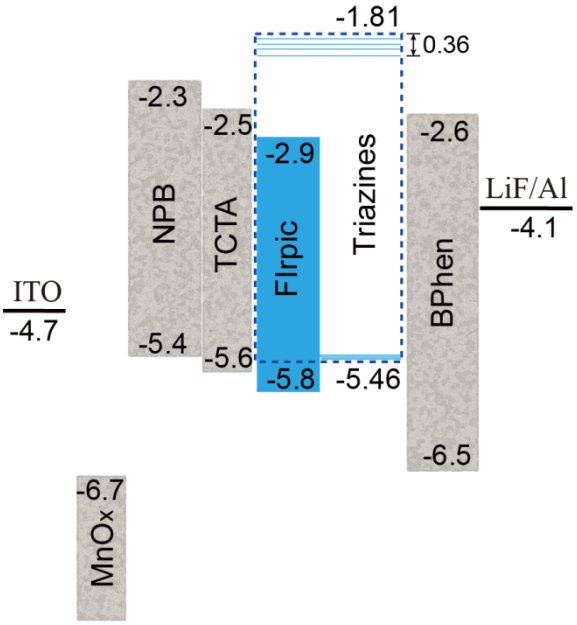

Figure S4. Energy level diagram of the device configurations

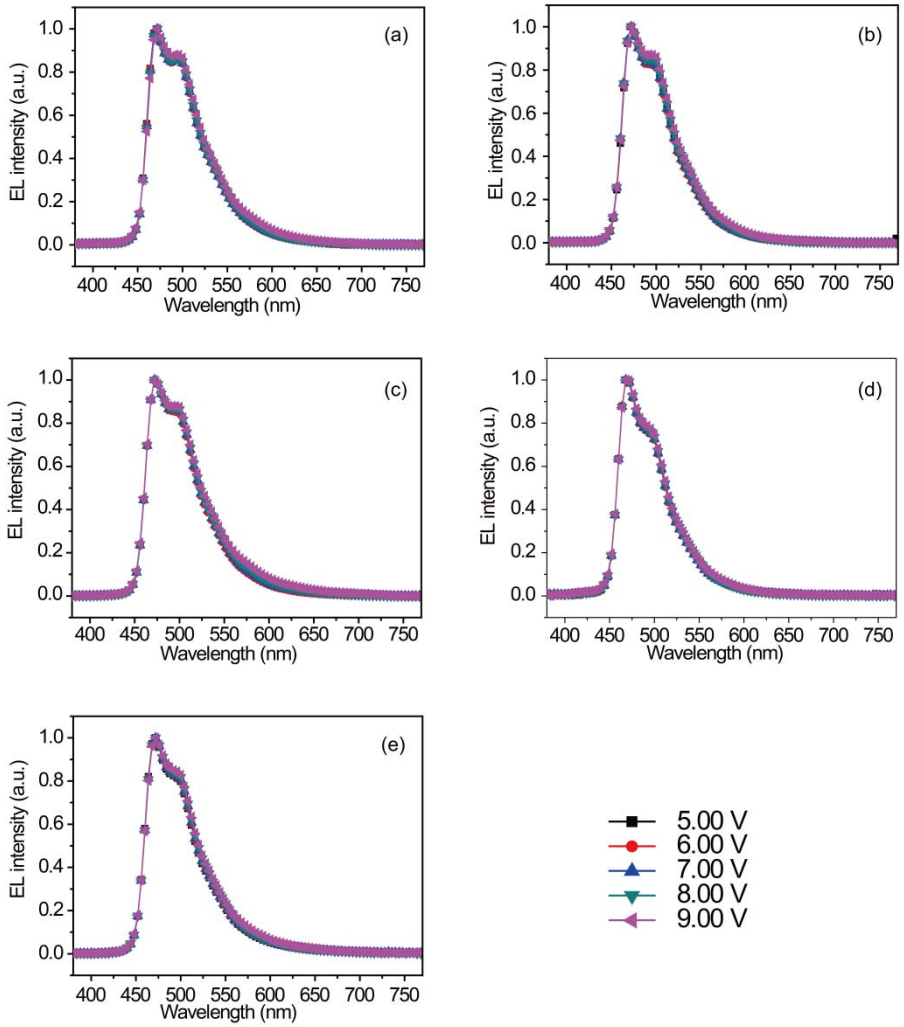

Figure S5. EL spectra of (a) NPhT, (b) NMePhT, (c) OPhT, (d) SPhT and (e) TosT at different voltages

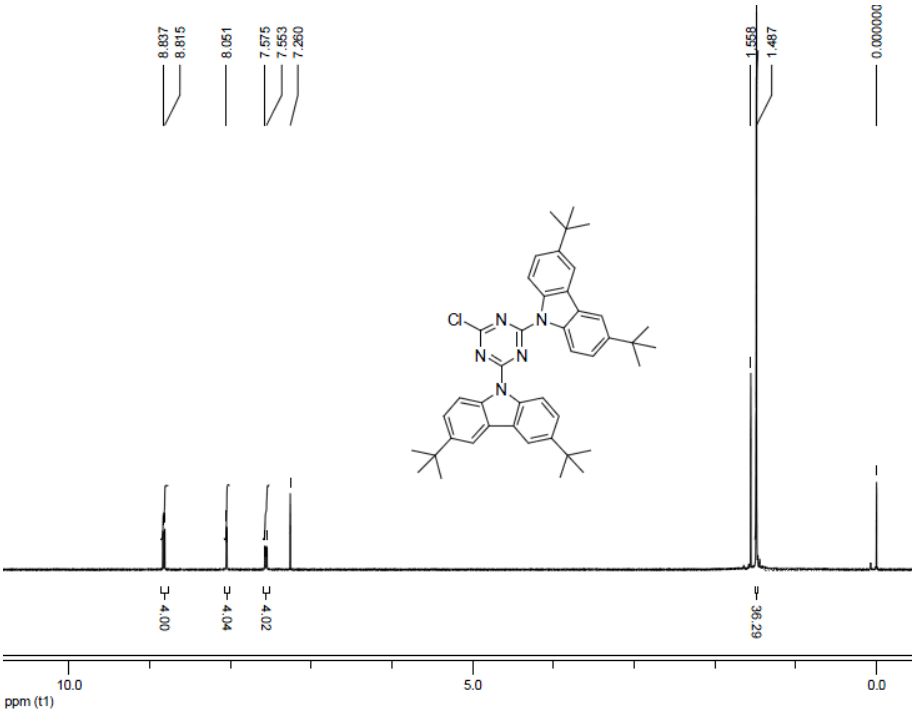

Figure S6-1. ^{1}H NMR spectrum of ClT in $CDCl_3$

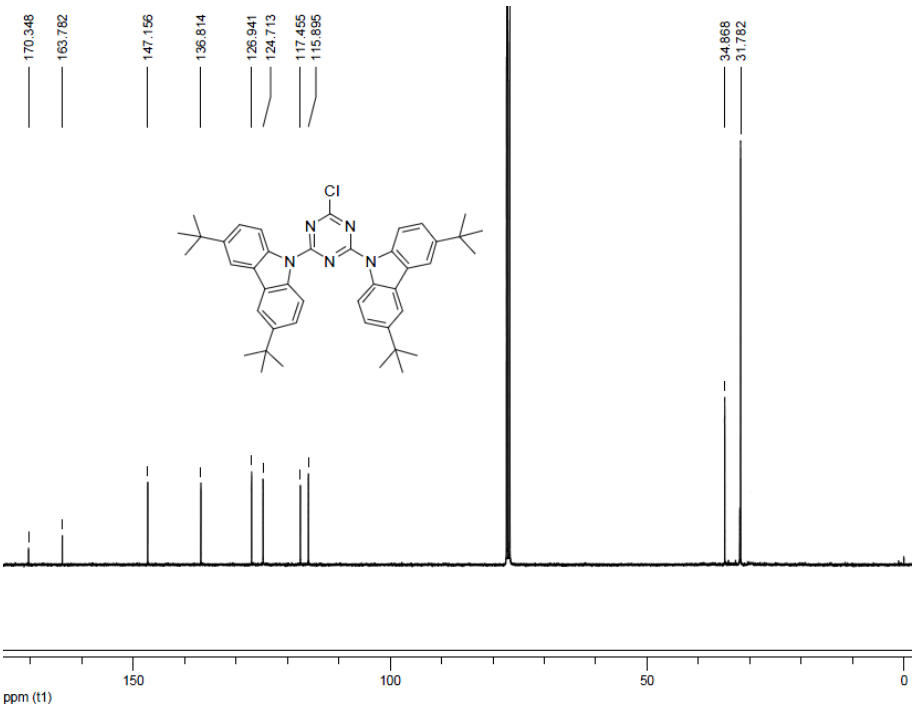

Figure S6-2. ^{13}C NMR spectrum of ClT in $CDCl_3$

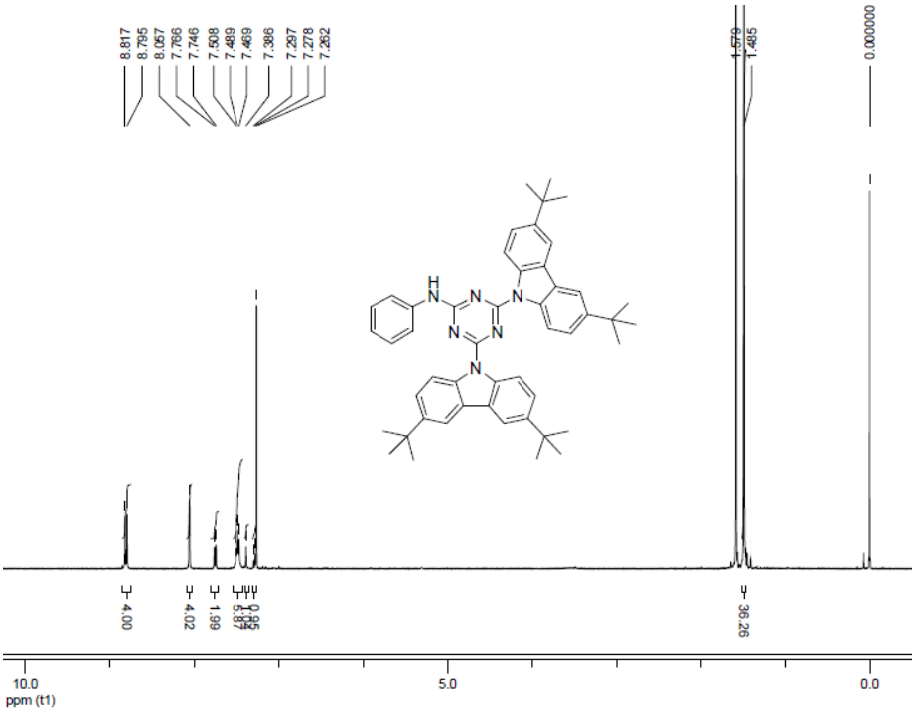

Figure S7-1. ^{1}H NMR spectrum of NPhT in $CDCl_3$

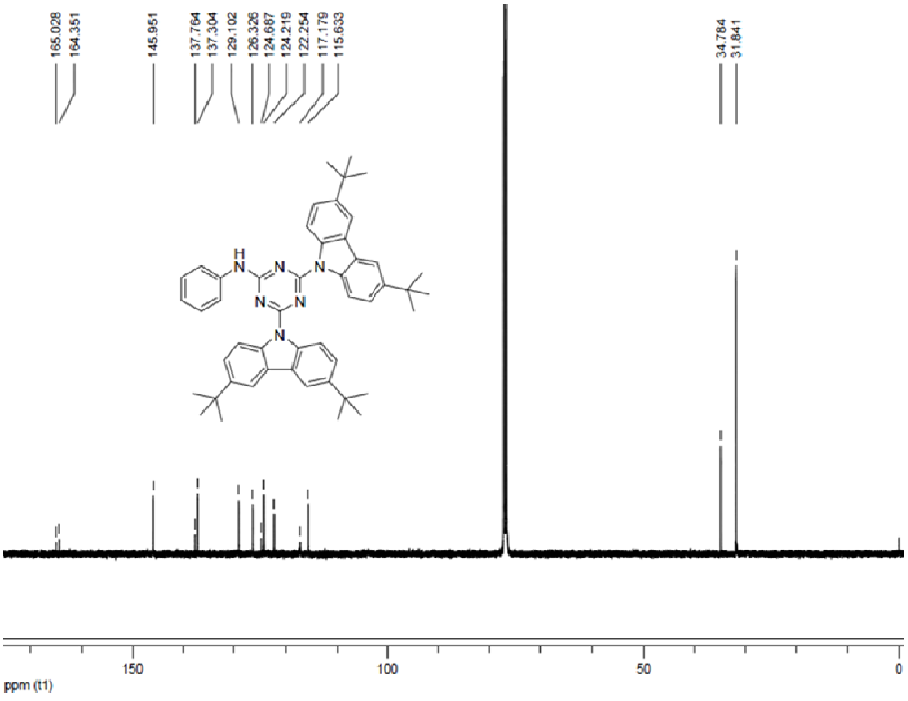

Figure S7-2. ^{13}C NMR spectrum of NPhT in $CDCl_3$

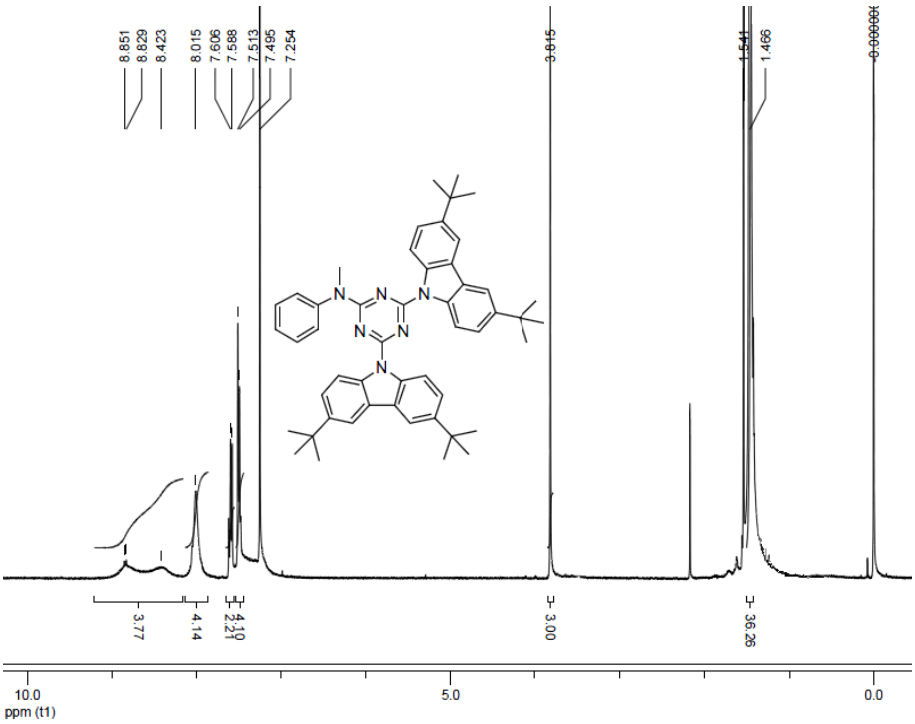

Figure S8-1. ^{1}H NMR spectrum of NMePhT in $CDCl_3$

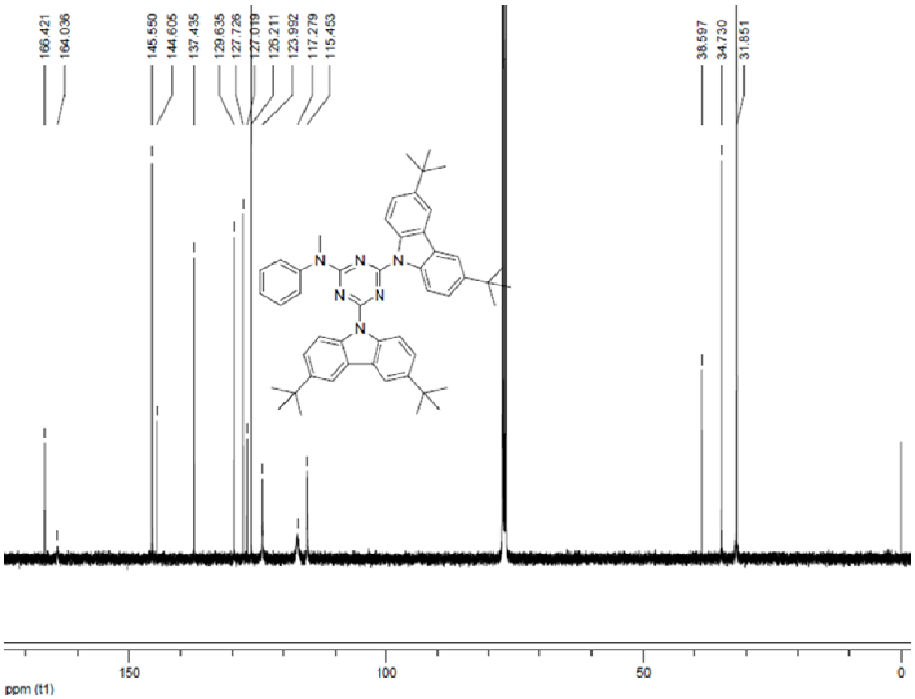

Figure S8-2. ^{13}C NMR spectrum of NMePhT in $CDCl_3$

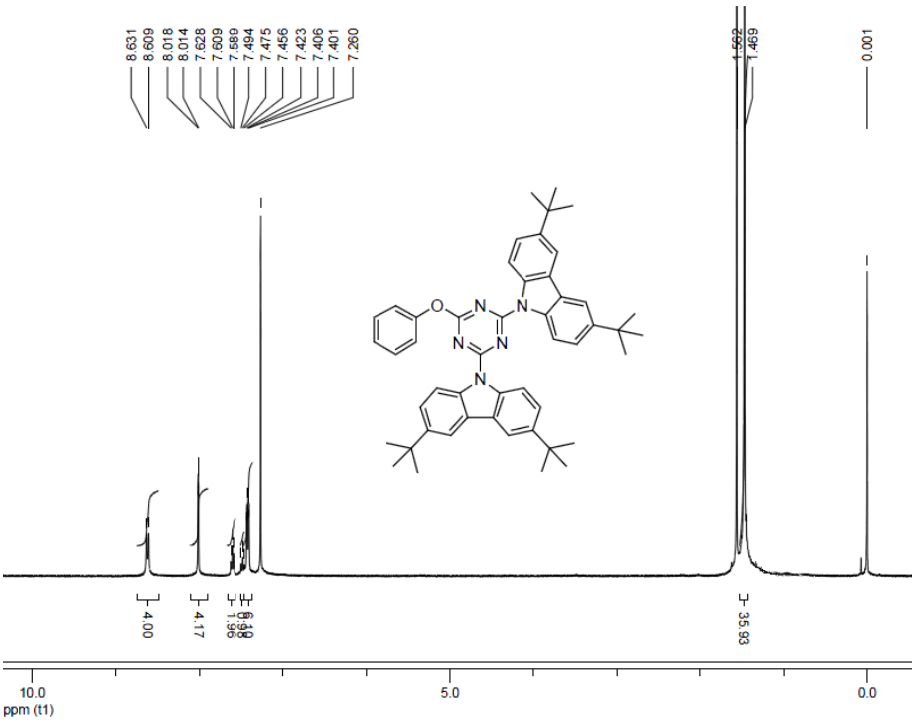

Figure S9-1. ^{1}H NMR spectrum of OPhT in $CDCl_3$

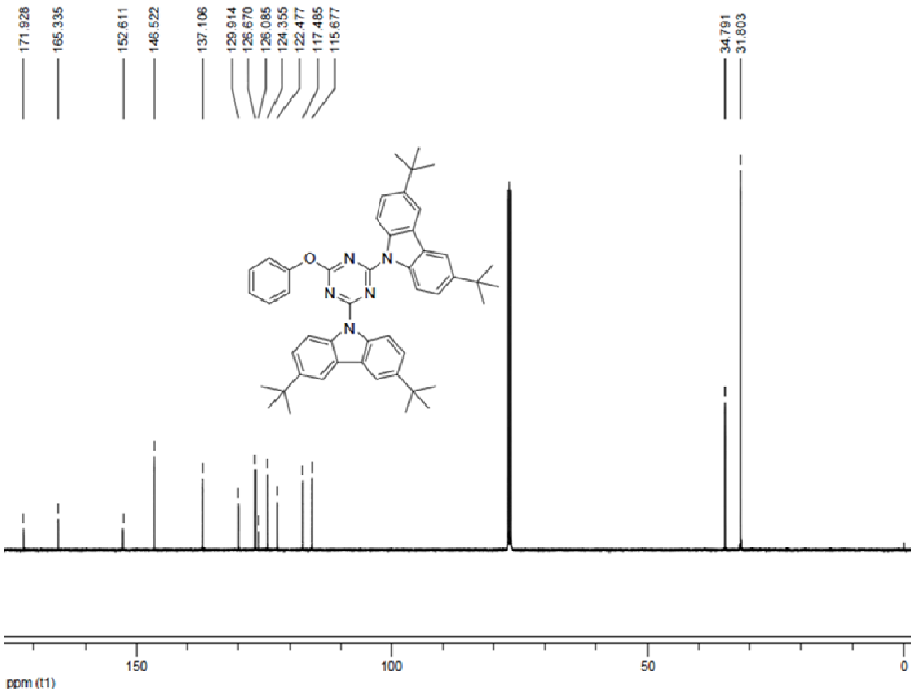

Figure S9-2. ^{13}C NMR spectrum of OPhT in $CDCl_3$

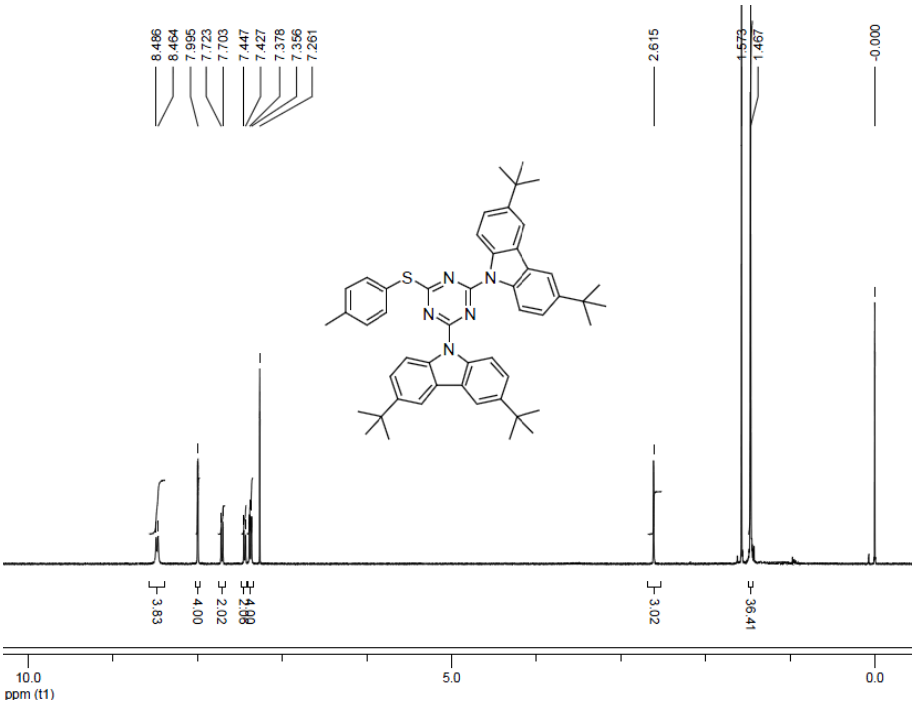

Figure S10-1. ^{1}H NMR spectrum of SPhT in $CDCl_3$

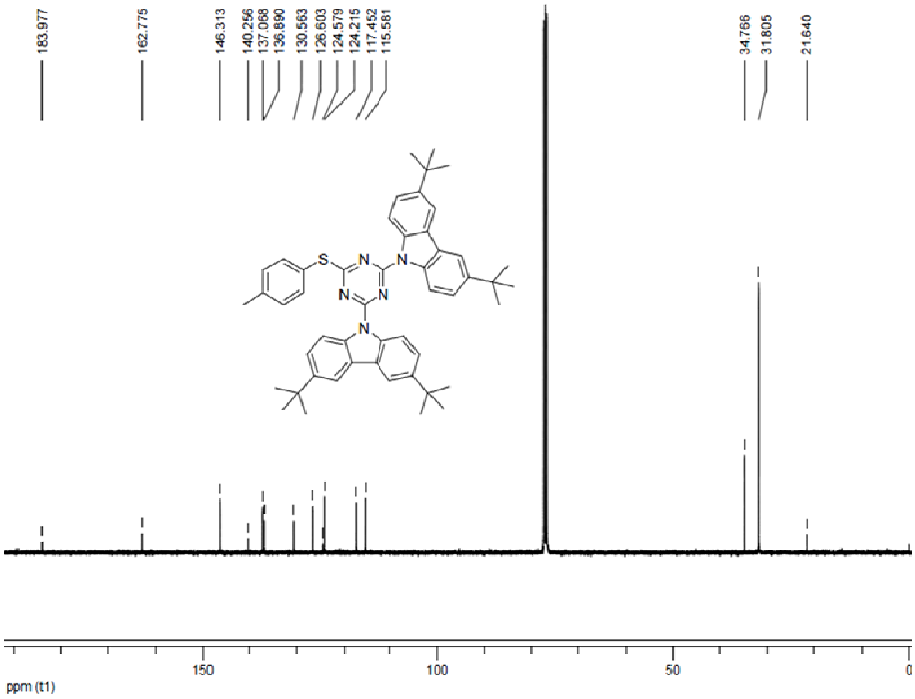

Figure S10-2. ^{13}C NMR spectrum of SPhT in $CDCl_3$

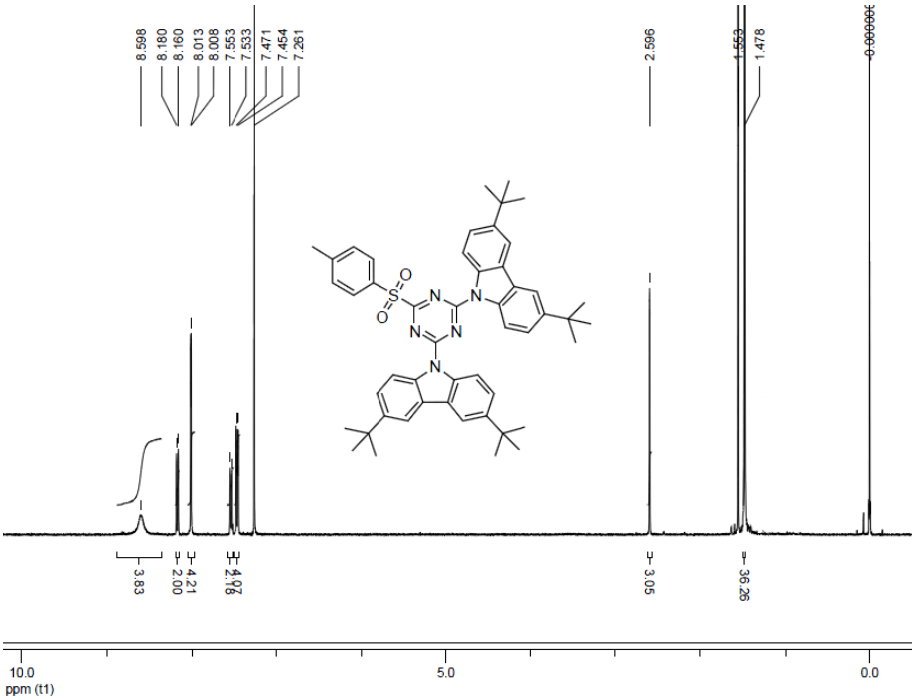

Figure S11-1. ^{1}H NMR spectrum of TosT in $CDCl_3$

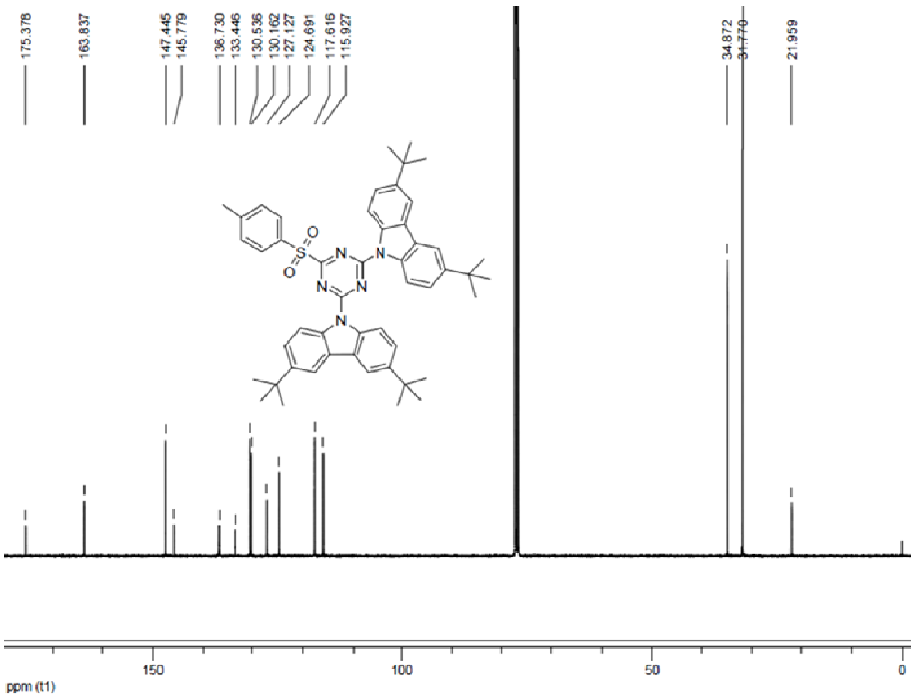

Figure S11-2. ^{13}C NMR spectrum of TosT in $CDCl_3$

Table S1. Electroluminescent performance of the σ-spaced triazine hosts for FIrpic-based PhOLEDs.

Host	η_{max} [cd/A][a]	$V_{turn\text{-}on}$ [V]	B [cd/m^2][b]	EQE_{max} [%][c]
NPhT	1.7	<5.0	825	0.6
NMePhT	4.9	<5.0	2628	2.0
OPhT	6.2	<4.0	815	1.9
SPhT	1.6	<5.0	647	1.0
TosT	1.9	<4.5	610	0.87

[a] Maximum current efficiency. [b] Luminance at 8.5 V. [c] External quantum efficiency