Supporting Information

Synthesis and Photophysical Properties of Triphenylamine-Based Multiply Conjugated Star Like Molecules

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Figure S1. Normalized absorption and fluorescence spectra of DTPA in different solvents.

Figure S2. Aggregation quenching absorption (a) and emission (b) spectra of TTPA in THF/water system.
Figure S3. Absorption and emission spectra of DTPA and TTPA in thinfilms.
Figure S4. TGA curve of synthesized triphenylamine based star like compounds of (a) DTPA (b) TTPA measured at 20 °C min⁻¹
Figure S5. DSC spectra of synthesized triphenylamine based star like compounds of (a) DTPA (b) TTPA measured heating at 10 °C min⁻¹
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Figure S6. $^1$H NMR Spectrum of 2a.

Figure S7. $^{13}$C NMR Spectrum of 2a.
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Figure S8. $^1$H NMR Spectrum of 2b.

Figure S9. $^{13}$C NMR Spectrum of 2b.
Figure S10. $^1$H NMR Spectrum of 3a.

Figure S11. $^{13}$C NMR Spectrum of 3a.
Figure S12. $^1$H NMR Spectrum of 3b.

Figure S13. $^{13}$C NMR Spectrum of 3b.
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Figure S14. $^1$H NMR Spectrum of 4a.

Figure S15. $^{13}$C NMR Spectrum of 4a.
Figure S16. $^1$H NMR Spectrum of 4b.

Figure 17. $^{13}$C NMR Spectrum of 4b.
**Figure S18.** $^1$H NMR Spectrum of 5a.

**Figure S19.** $^{13}$C NMR Spectrum of 5a.
Figure S20. $^1$H NMR Spectrum of 5b.

Figure S21. $^{13}$C NMR Spectrum of 5b.
Figure S22. $^1$H NMR Spectrum of 6.

Figure S23. $^{13}$C NMR Spectrum of 6.
Figure S24. $^1$H NMR Spectrum of 7.

Figure S25. $^{13}$C NMR Spectrum of 7.
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Figure S26. $^1$H NMR Spectrum of 8.

Figure S27. $^{13}$C NMR Spectrum of 8.
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Figure S28. $^1$H NMR Spectrum of 9.

Figure S29. $^{13}$C NMR Spectrum of 9.
Figure S30. $^1$H NMR Spectrum of 10.

Figure S31. $^{13}$C NMR Spectrum of 10
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Figure S32. $^1$H NMR Spectrum of 11a.

Figure S33. $^{13}$C NMR Spectrum of 11a.
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Figure S34. DEPT-135 NMR Spectrum of 11a.

Figure S35. $^1$H NMR Spectrum of 11b.
Figure S36. $^{13}$C NMR Spectrum of 11b.

Figure S37. DEPT-135 NMR Spectrum of 11b.
Figure S38. MALDI-TOF Mass Spectrum of 11a.

Figure S39. MALDI-TOF Mass Spectrum of 11b.