

Supporting Information

Torsionally Responsive Tropone-fused Conjugated Polymers

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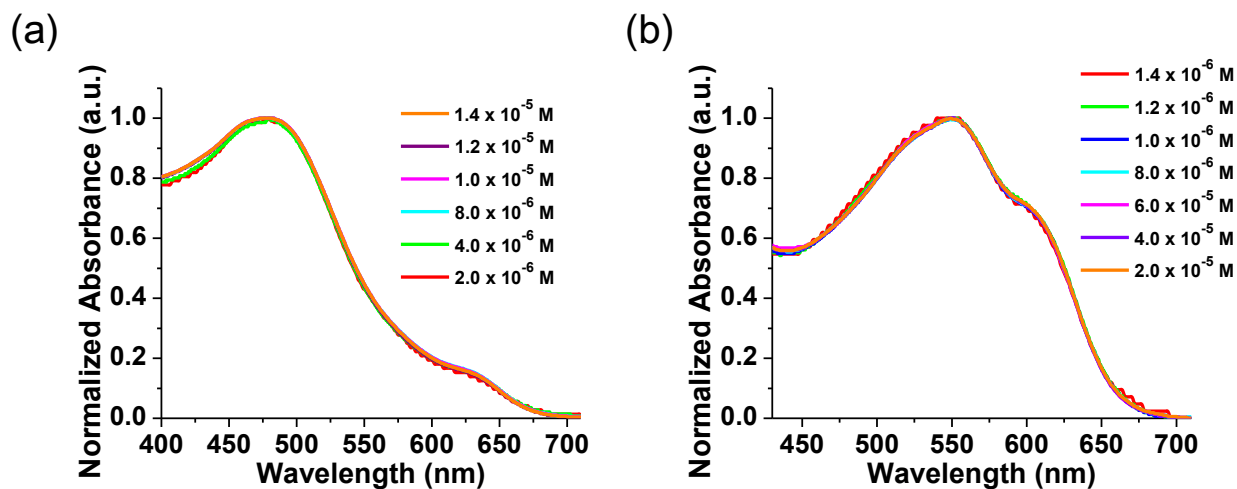


Figure S1. UV-vis spectra of (a) **PBTr-T** and (b) **PBTr-Tz** in CHCl_3 with different concentrations.

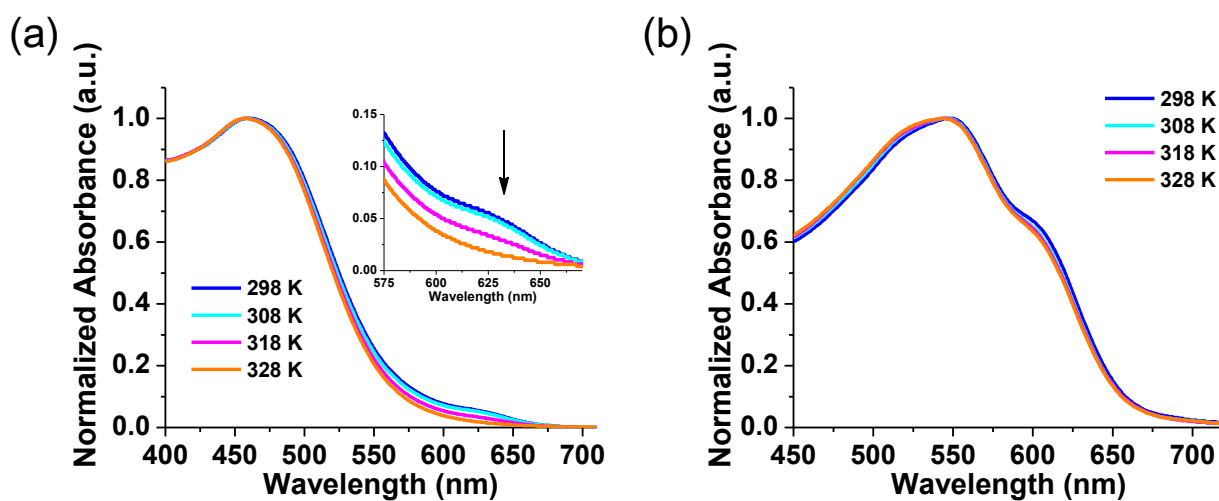


Figure S2. UV-vis spectra of (a) **PBTr-T** and (b) **PBTr-Tz** in CHCl_3 with different temperatures.

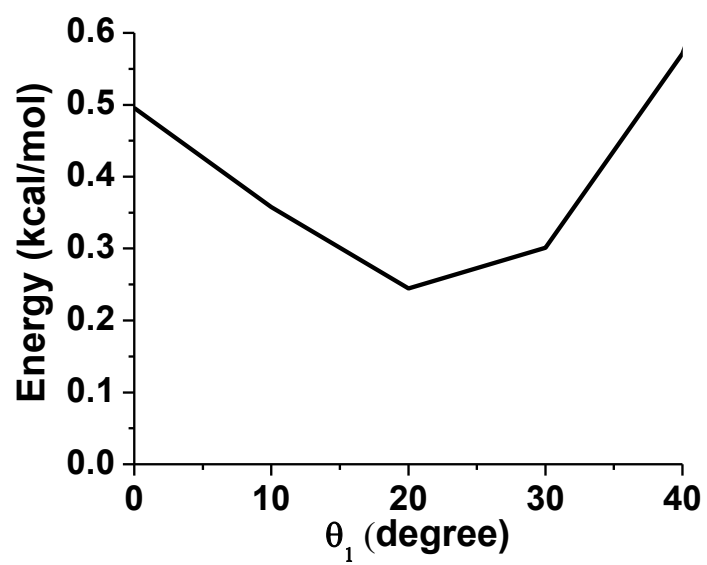


Figure S3. Calculation about different dihedral angle θ_1 of thiazole-bridged-thienotropone by DFT Method.

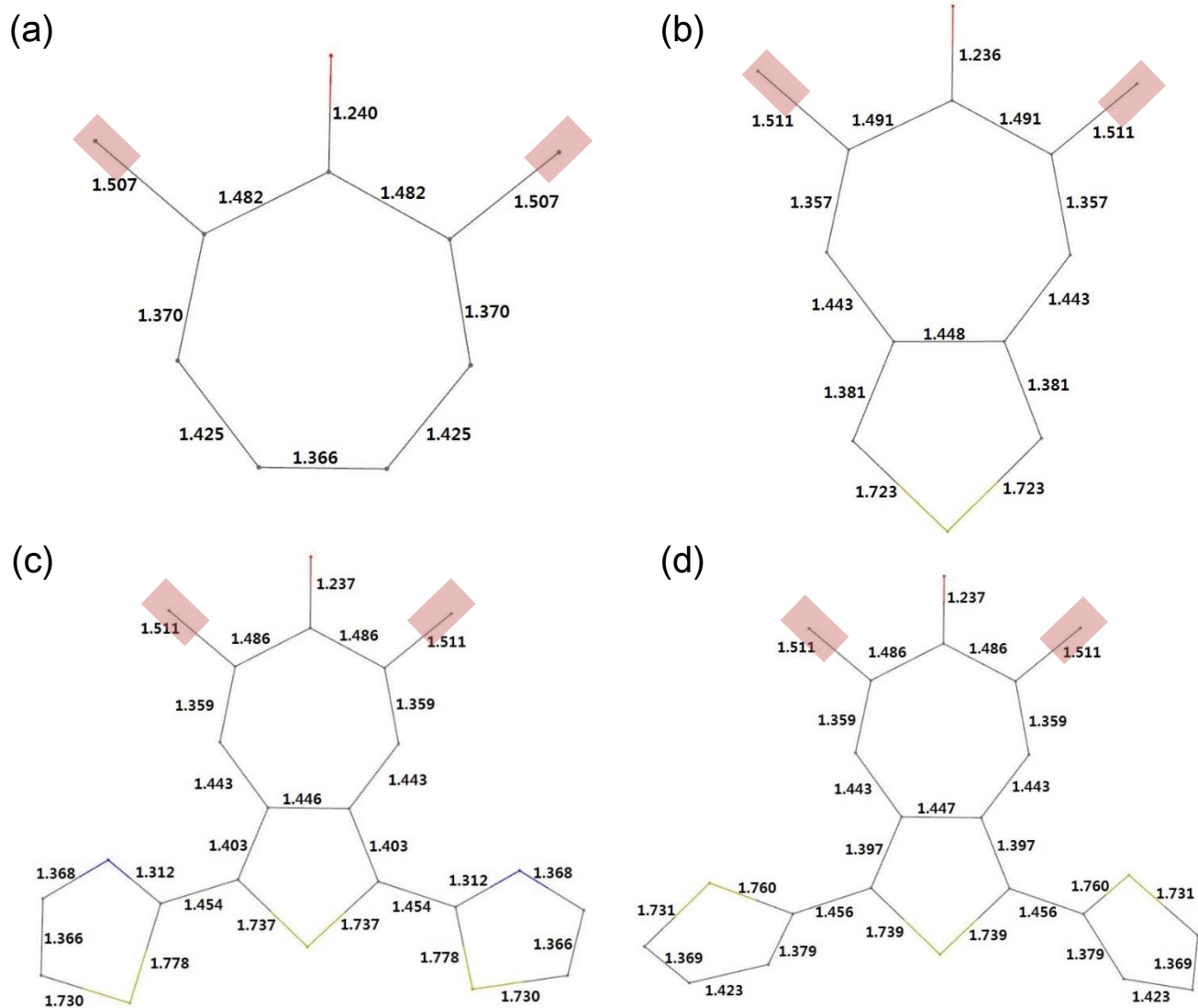


Figure S4. Calculated structure and bond length of (a) tropone, (b) **2**, (c) **4**, (d) **6** instead of octyl to methyl at color-labeled position (2 position of tropone).

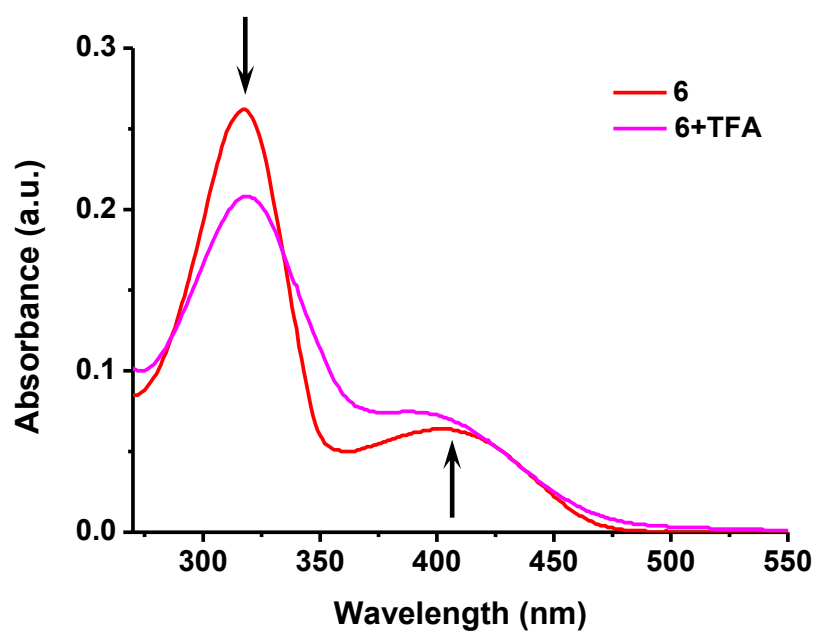


Figure S5. Change of UV-vis spectra of **6** by adding trifluoroacetic acid (TFA). (2.0×10^{-5} M)

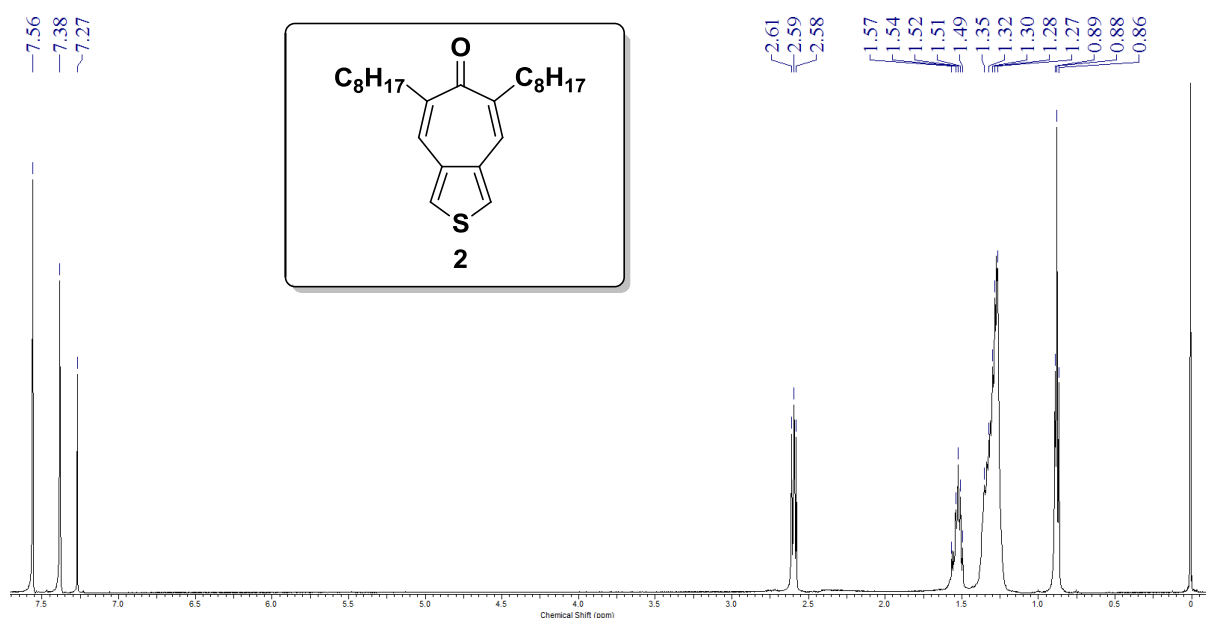


Figure S6. ¹H-NMR spectrum of compound **2** (500 MHz, CDCl₃)

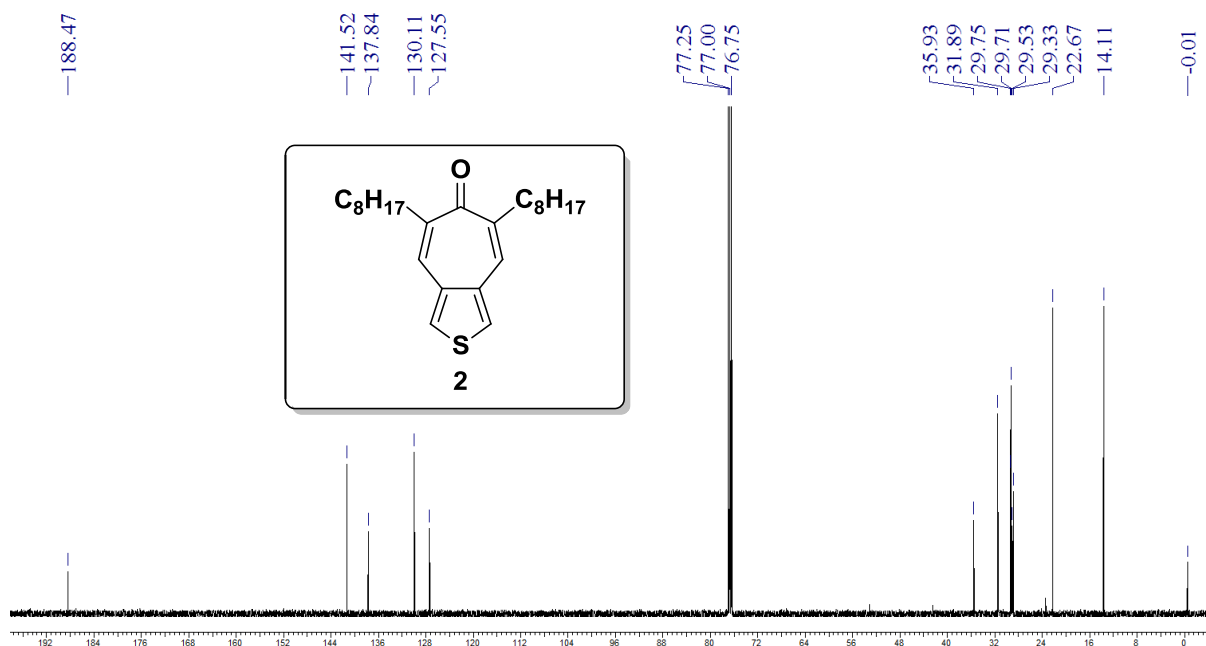


Figure S6. ¹³C-NMR spectrum of compound **2** (125 MHz, CDCl₃)

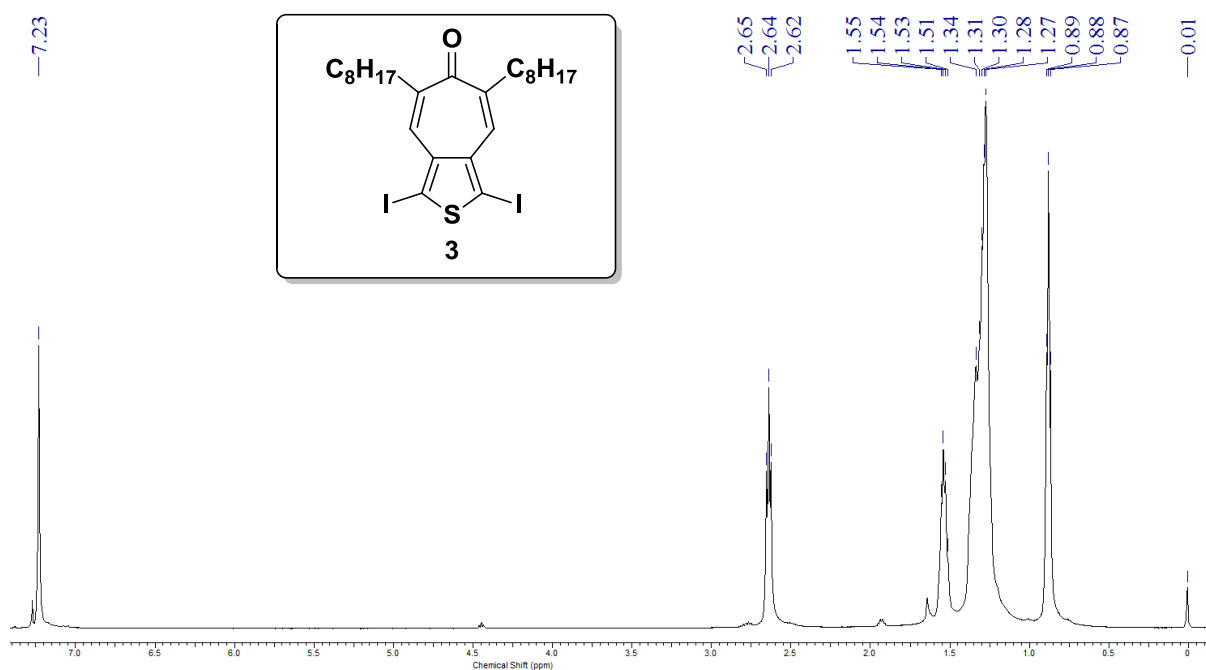


Figure S7. ^1H -NMR spectrum of compound **3** (500 MHz, CDCl_3)

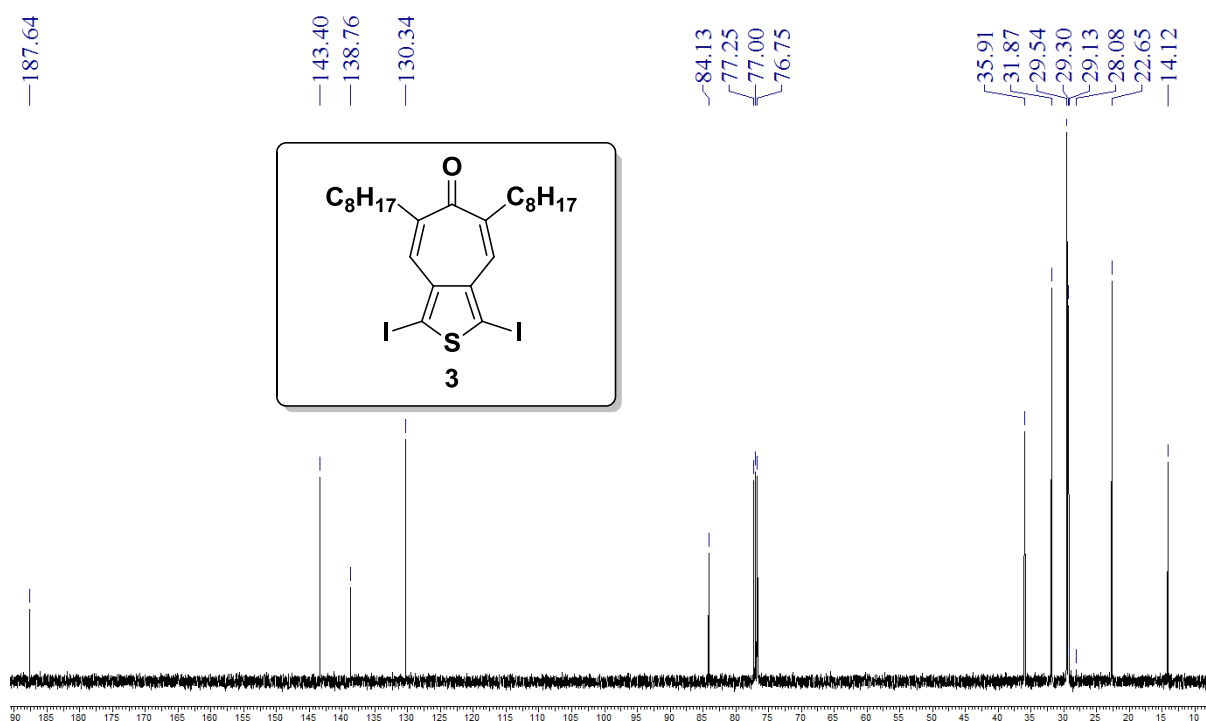


Figure S7. ^{13}C -NMR spectrum of compound **3** (125 MHz, CDCl_3)

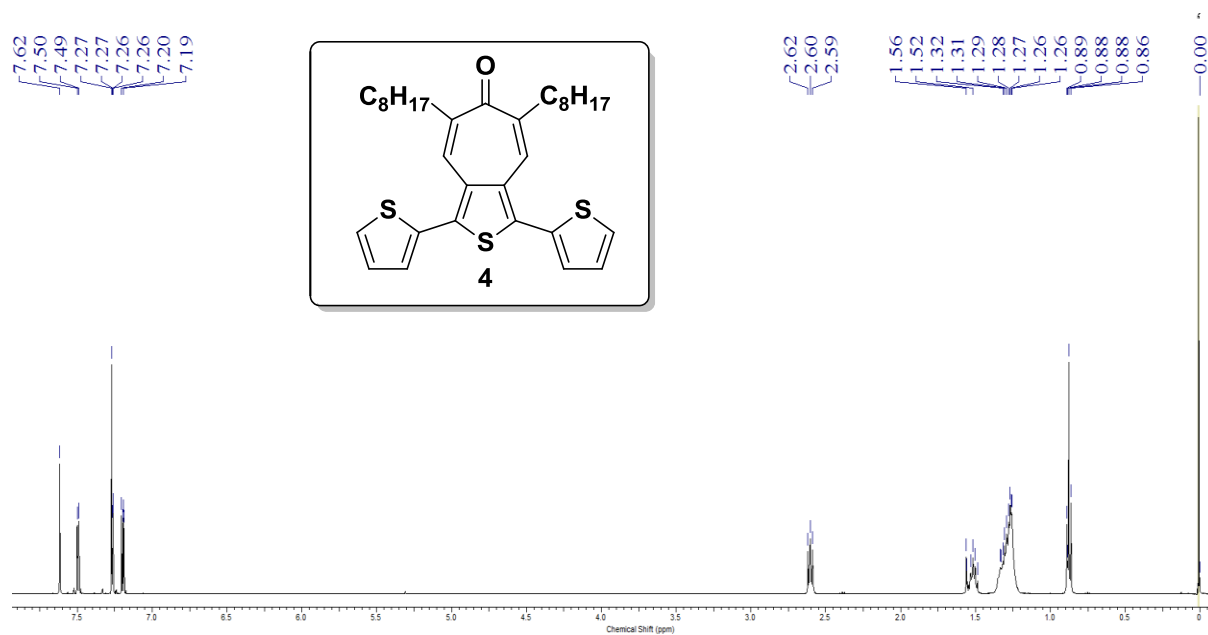


Figure S8. ^1H -NMR spectrum of compound **4** (500 MHz, CDCl_3)

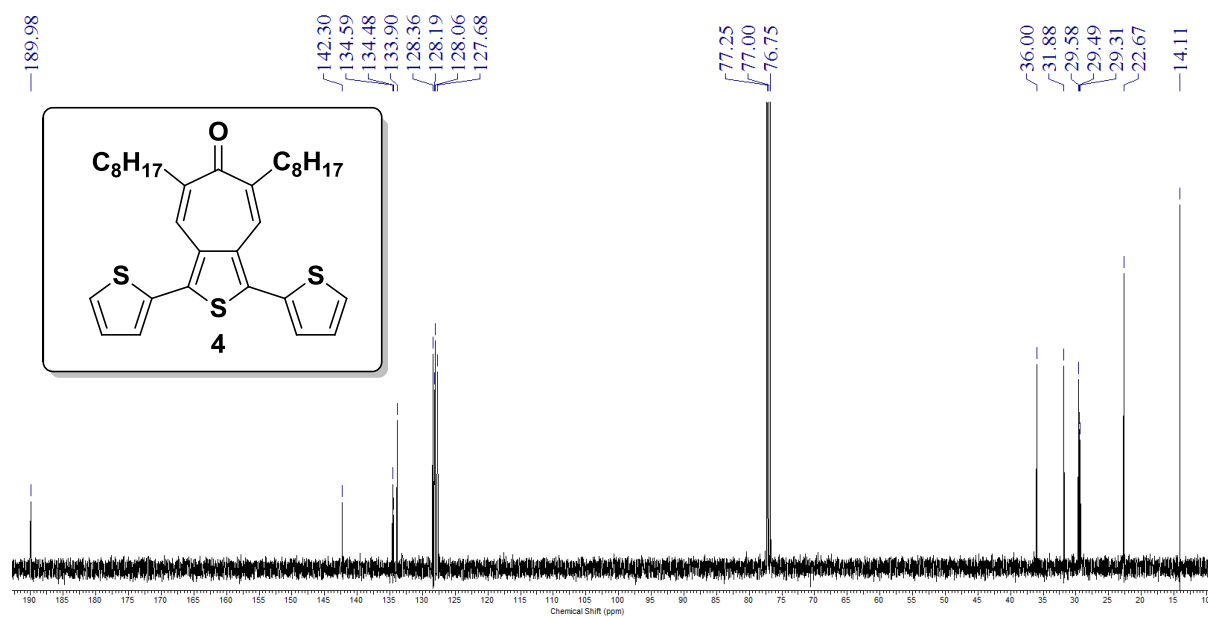


Figure S8. ^{13}C -NMR spectrum of compound **4** (125 MHz, CDCl_3)

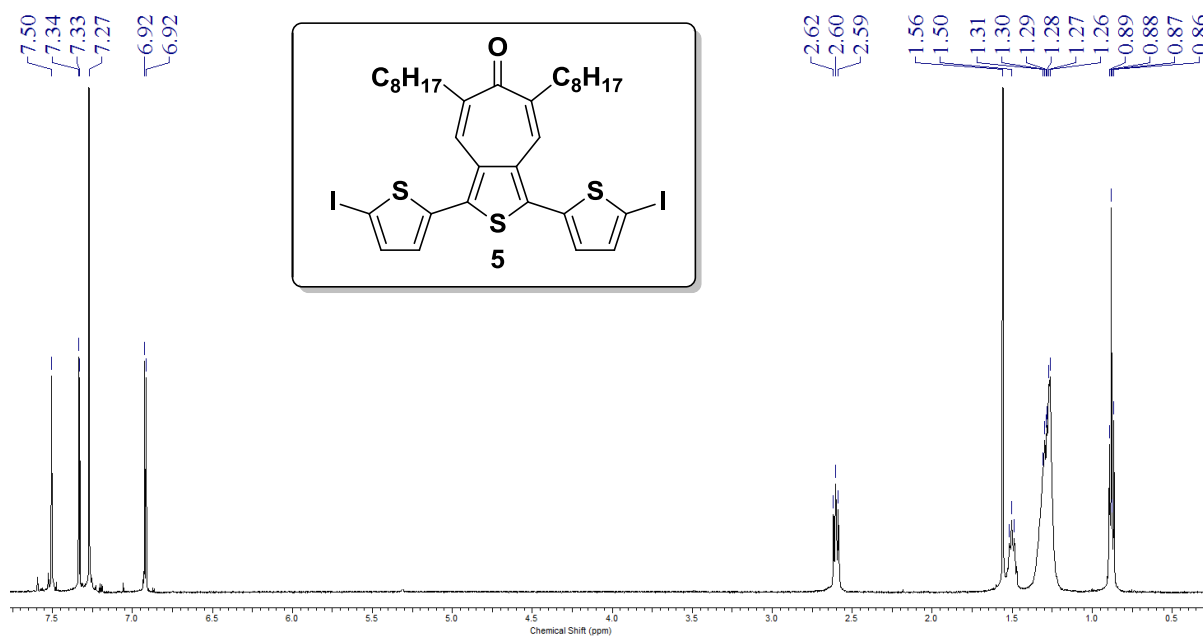


Figure S9. 1H -NMR spectrum of compound **5** (500 MHz, $CDCl_3$)

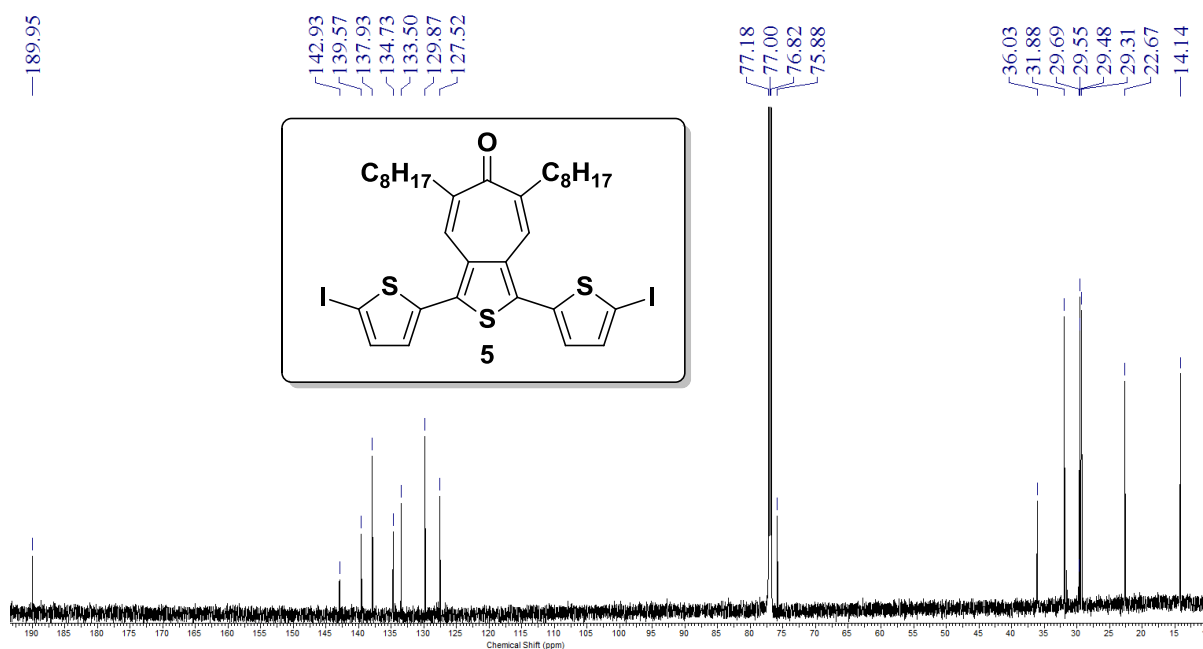


Figure S9. ^{13}C -NMR spectrum of compound **5** (125 MHz, $CDCl_3$)

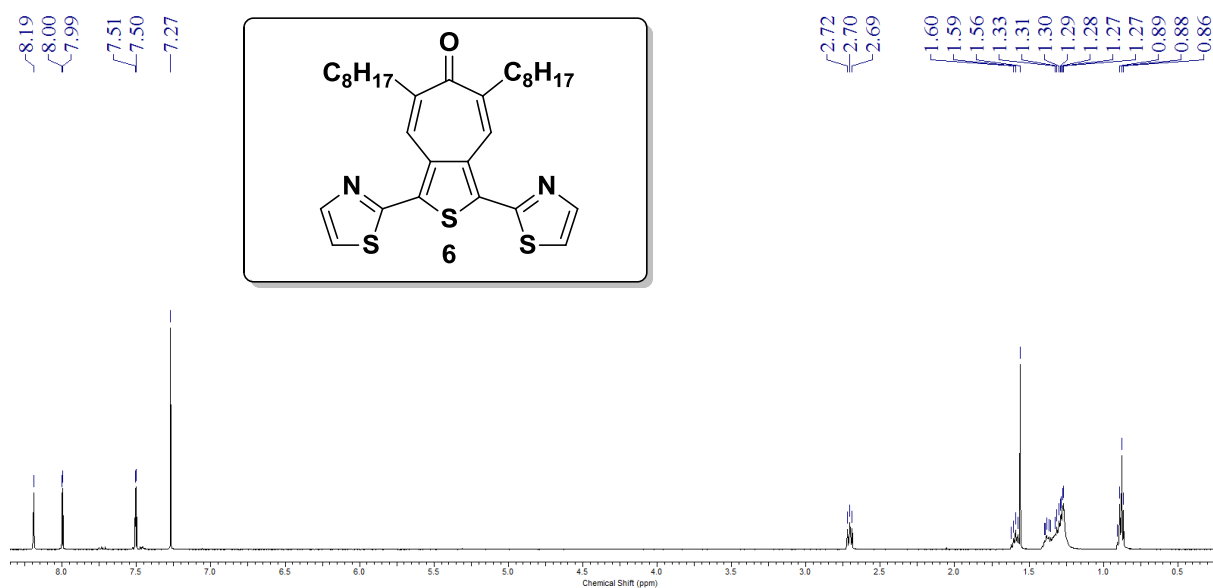


Figure S10. 1H -NMR spectrum of compound **6** (500 MHz, $CDCl_3$)

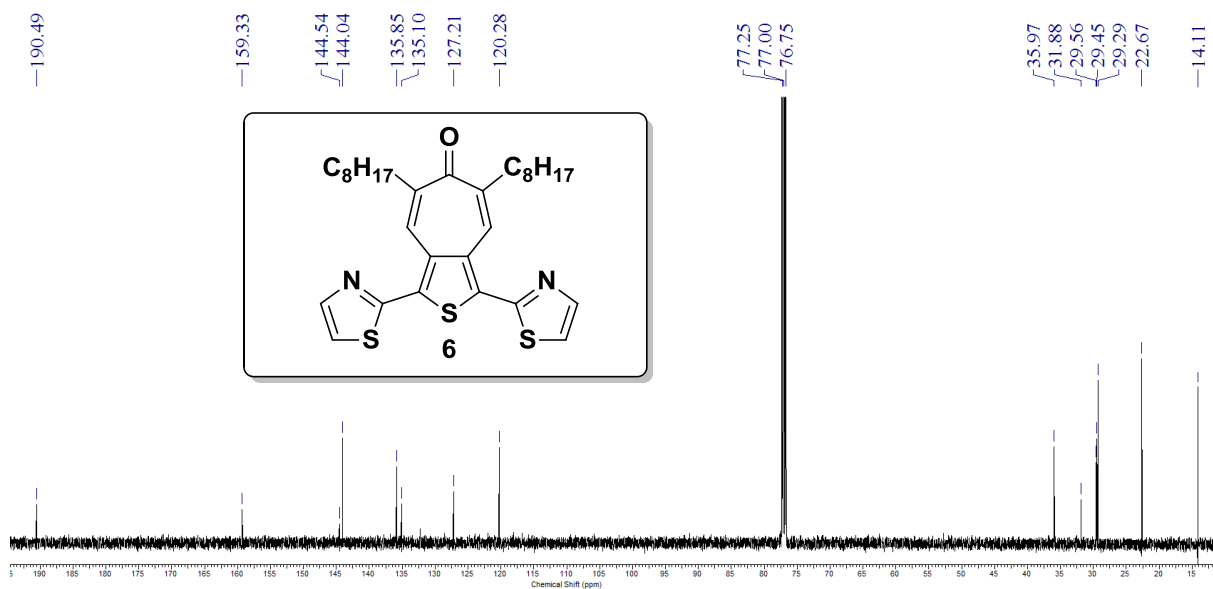
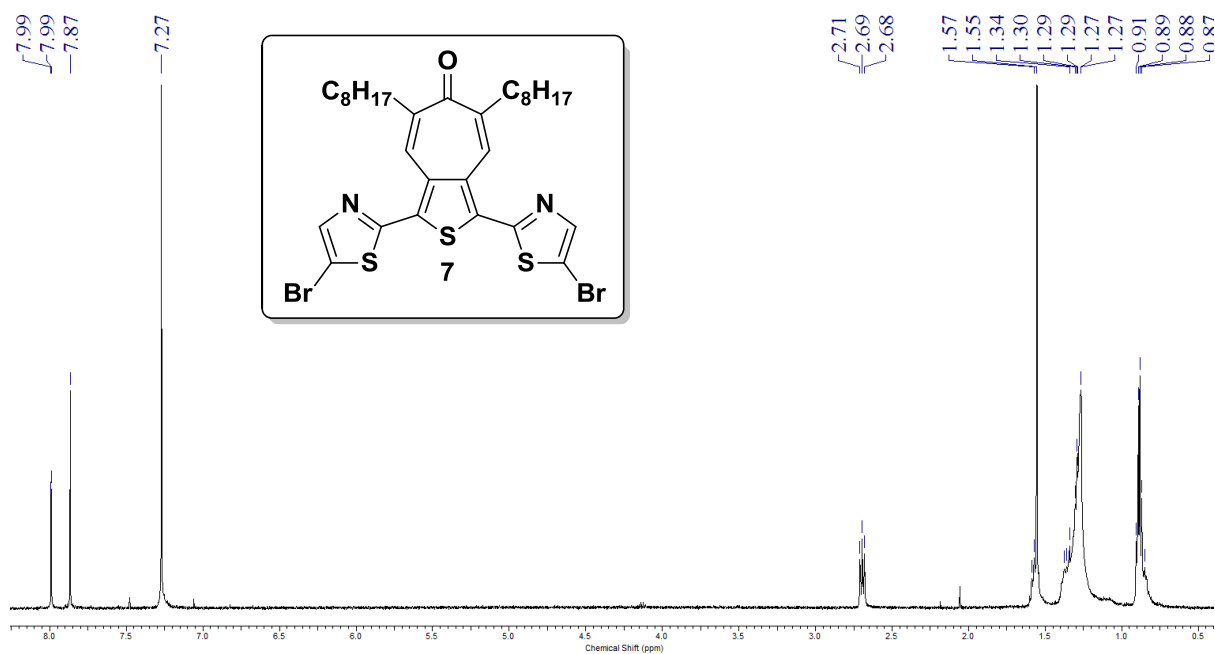


Figure S10. ^{13}C -NMR spectrum of compound **6** (125 MHz, $CDCl_3$)



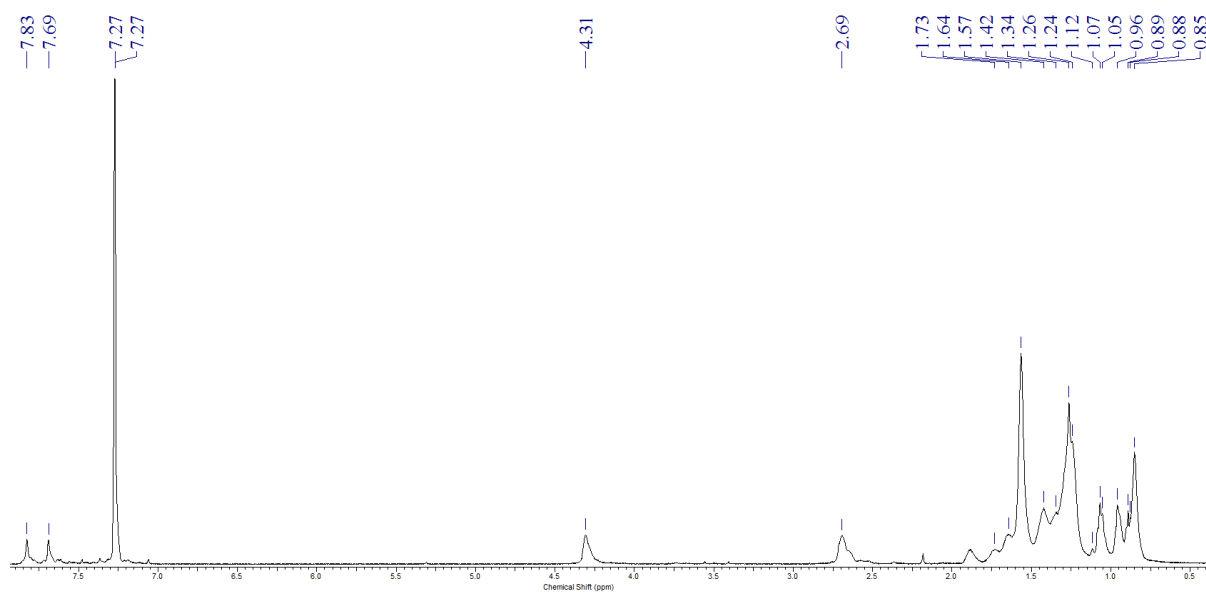


Figure S12. ^1H -NMR spectrum of **PTrB** (500 MHz, CDCl_3)

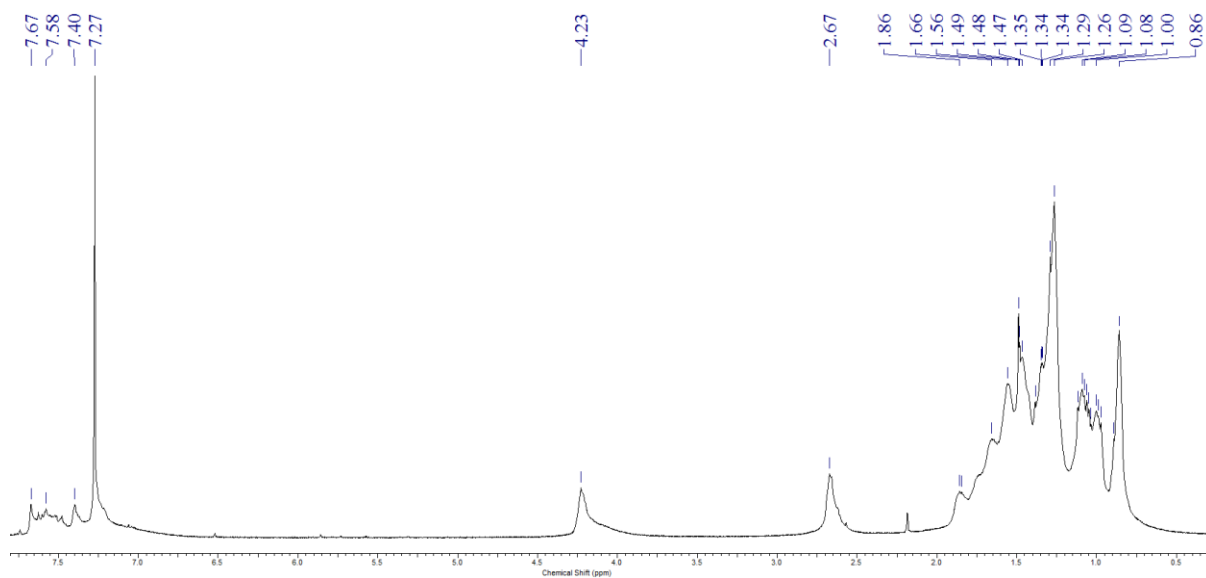


Figure S13. ^1H -NMR spectrum of **PTrTB** (500 MHz, CDCl_3)

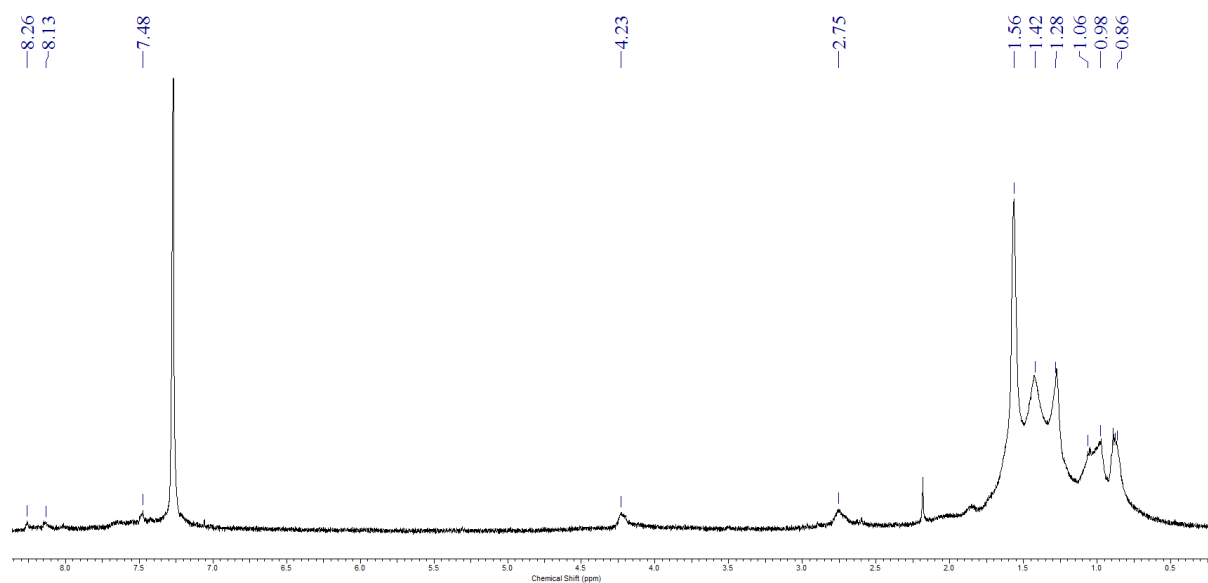


Figure S14. ¹H-NMR spectrum of **PTrTzB** (500 MHz, CDCl₃)