

SUPPORTING INFORMATION

Thieno[3,4-*b*]pyrazine-based Oligothiophenes: Simple Models of Donor-Acceptor Polymeric Materials

Li Wen, Christopher L. Heth, and Seth C. Rasmussen*

Department of Chemistry and Biochemistry, North Dakota State University, NDSU Dept. 2735, P.O. Box 6050, Fargo, ND 58108-6050, United States. Fax: 1-701-231-8747; Tel: 1-701-231-8831; E-mail: seth.rasmussen@ndsu.edu

Table of Contents:

I. Figure S1. ^1H NMR Spectrum of Compound 3a	S2
II. Figure S2. ^1H NMR Spectrum of Compound 10a	S2
III. Figure S3. ^{13}C NMR Spectrum of Compound 10a	S2
IV. Figure S4. ^1H NMR Spectrum of 2,3-dimethyl-5-(trimethylsilyl)-7-(trimethylstannyl)thieno-[3,4- <i>b</i>]pyrazine.....	S3
V. Figure S5. ^1H NMR Spectrum of Compound 3b	S3
VI. Figure S6. ^{13}C NMR Spectrum of Compound 3b	S3
VII. Figure S7. ^1H NMR Spectrum of Compound 3c	S4
VIII. Figure S8. ^1H NMR Spectrum of Compound 4b	S4
IX. Figure S9. ^{13}C NMR Spectrum of Compound 4b	S4
X. Figure S10. ^1H NMR Spectrum of Compound 4c	S5
XI. Figure S11. ^1H NMR Spectrum of Compound 6	S5
XII. Figure S12. ^{13}C NMR Spectrum of Compound 6	S5
XIII. Figure S13. ^1H NMR Spectrum of Compound 8	S6
XIV. Figure S14. ^{13}C NMR Spectrum of Compound 8	S6
XV. Figure S15. Extrapolation of absorption data for the oligomeric series 3a-c	S6
XVI. Figure S16. UV-vis spectra of mixed TP-thiophene terthienyls 5 and 6	S7
XVII. Figure S17. UV-vis spectra of mixed TP-EDOT terthienyls 7 and 8	S7
XVIII. Figure S18. Cyclic voltammograms of mixed terthienyls 5-8	S8
XIX. Figure S19. Electronic density contours for mixed TP-thiophene oligomers 5 and 6	S9
XX. Figure S20. Electronic density contours for mixed TP-EDOT oligomers 7 and 8	S9

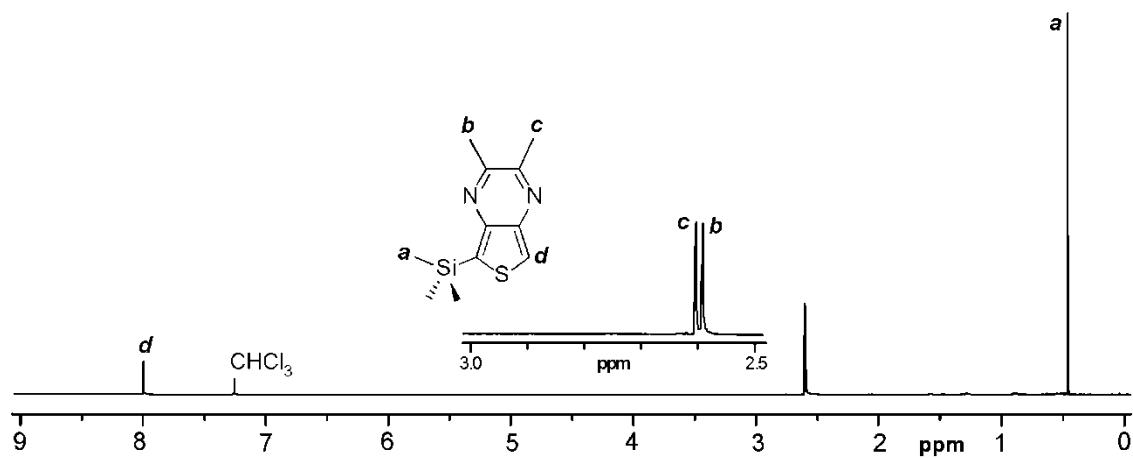


Figure S1. ¹H NMR Spectrum of Compound 3a

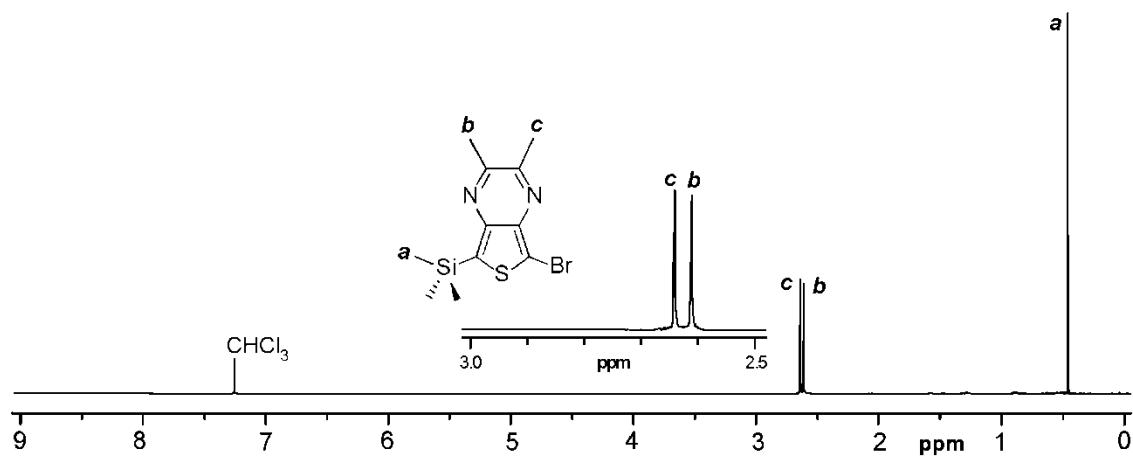


Figure S2. ¹H NMR Spectrum of Compound 10a

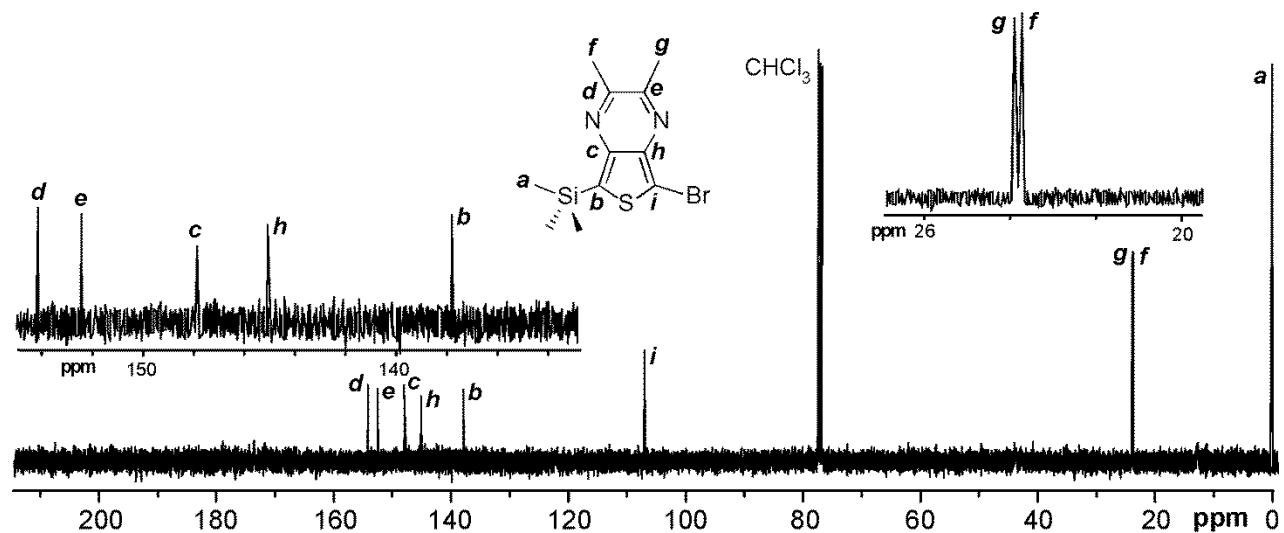


Figure S3. ¹³C NMR Spectrum of Compound 10a

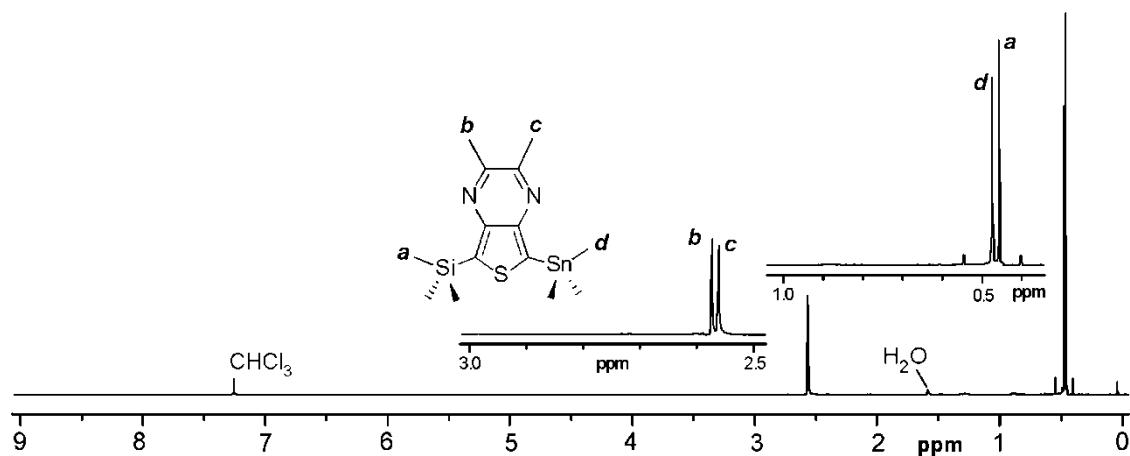


Figure S4. ¹H NMR Spectrum of 2,3-dimethyl-5-(trimethylsilyl)-7-(trimethylstannyl)thieno[3,4-*b*]pyrazine

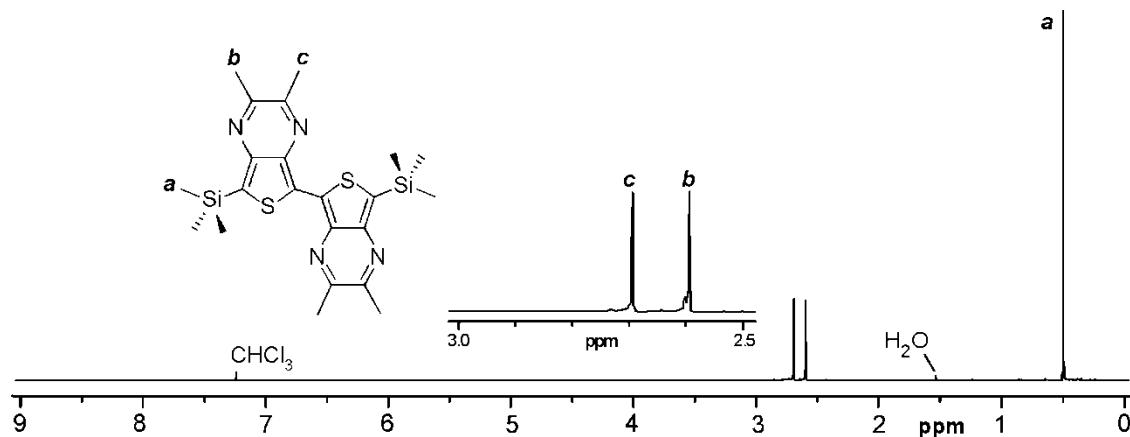


Figure S5. ¹H NMR Spectrum of Compound 3b

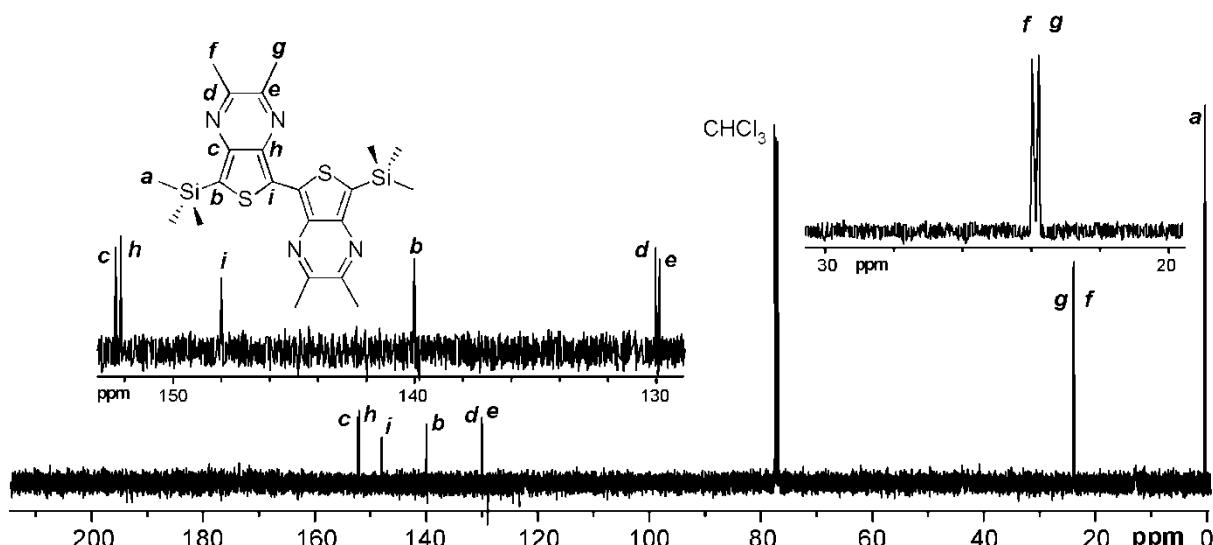


Figure S6. ¹³C NMR Spectrum of Compound 3b

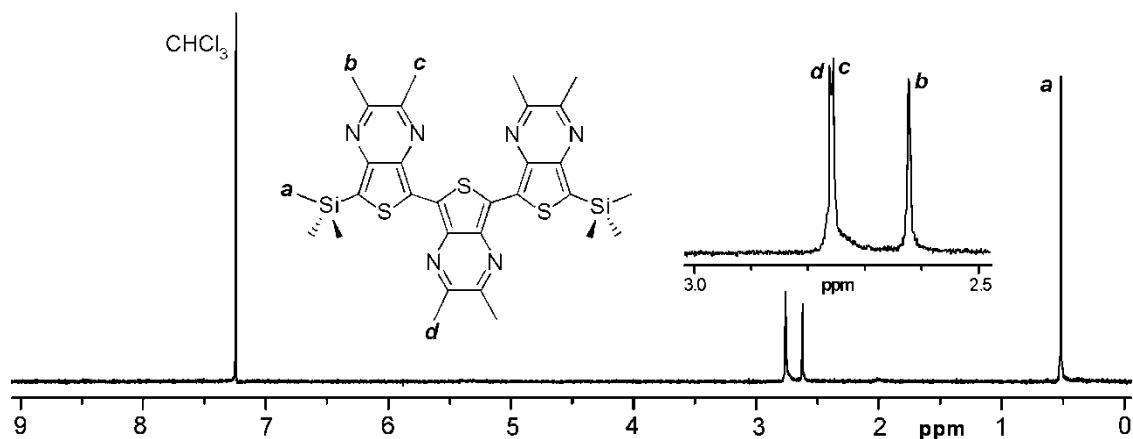


Figure S7. ¹H NMR Spectrum of Compound 3c

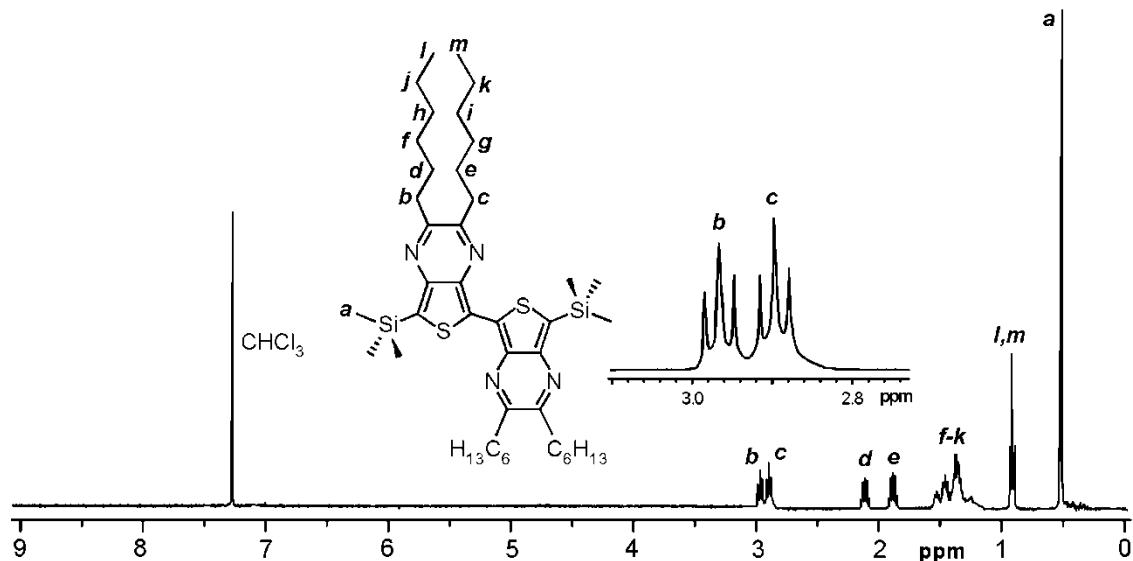


Figure S8. ¹H NMR Spectrum of Compound 4b

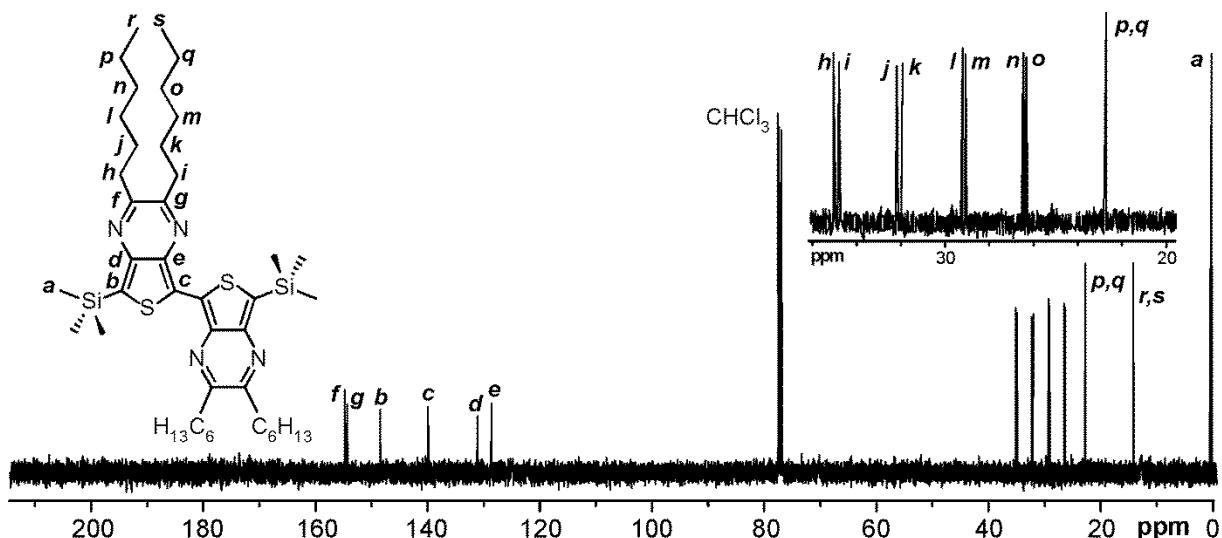


Figure S9. ¹³C NMR Spectrum of Compound 4b

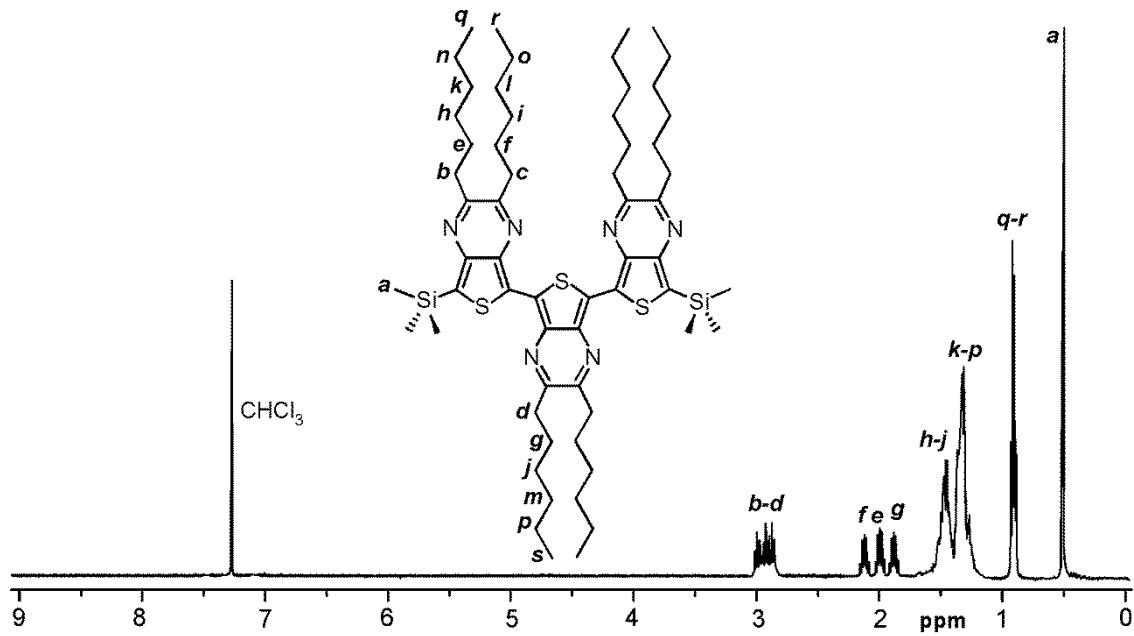


Figure S10. ¹H NMR Spectrum of Compound 4c

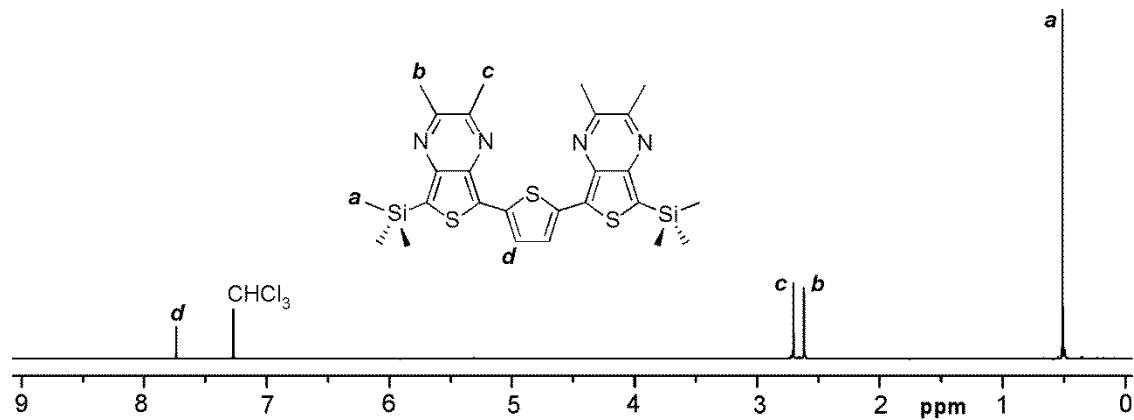


Figure S11. ¹H NMR Spectrum of Compound 6.

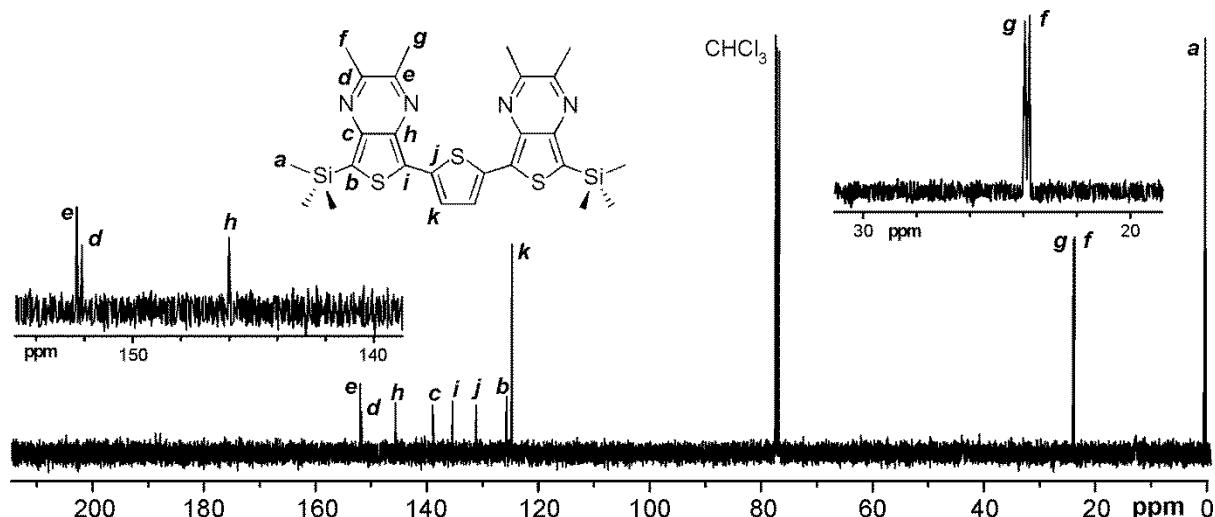


Figure S12. ¹³C NMR Spectrum of Compound 6

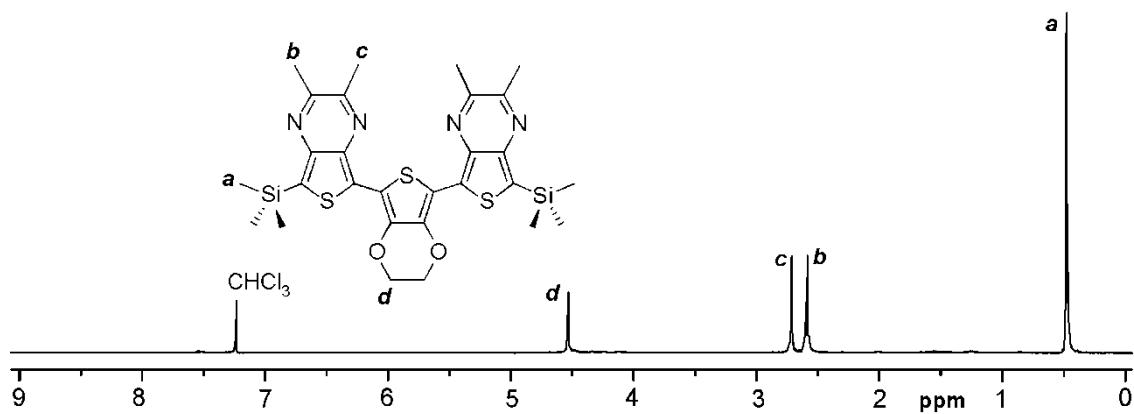


Figure S13. ^1H NMR Spectrum of Compound 8

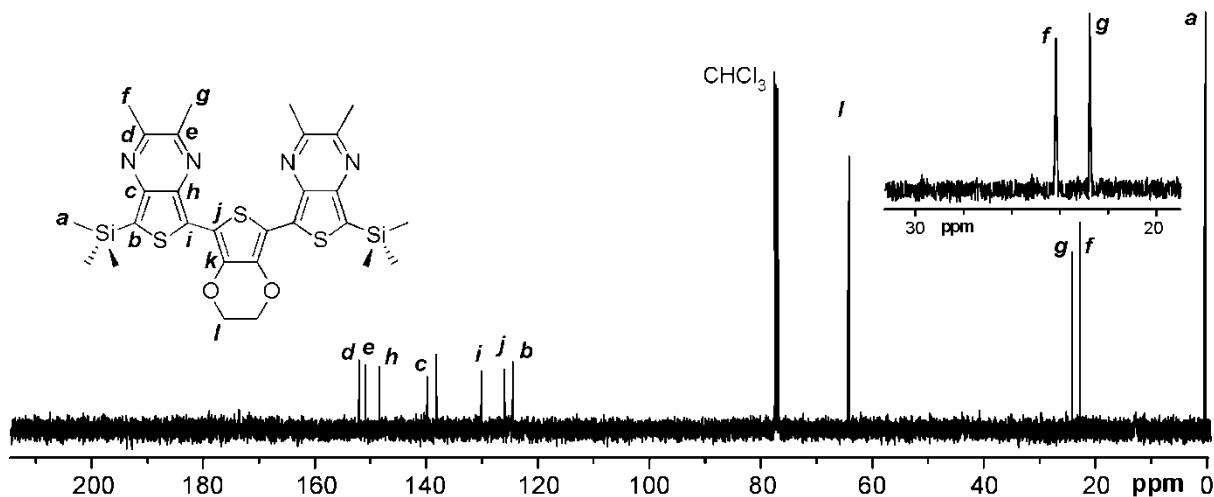


Figure S14. ^{13}C NMR Spectrum of Compound 8

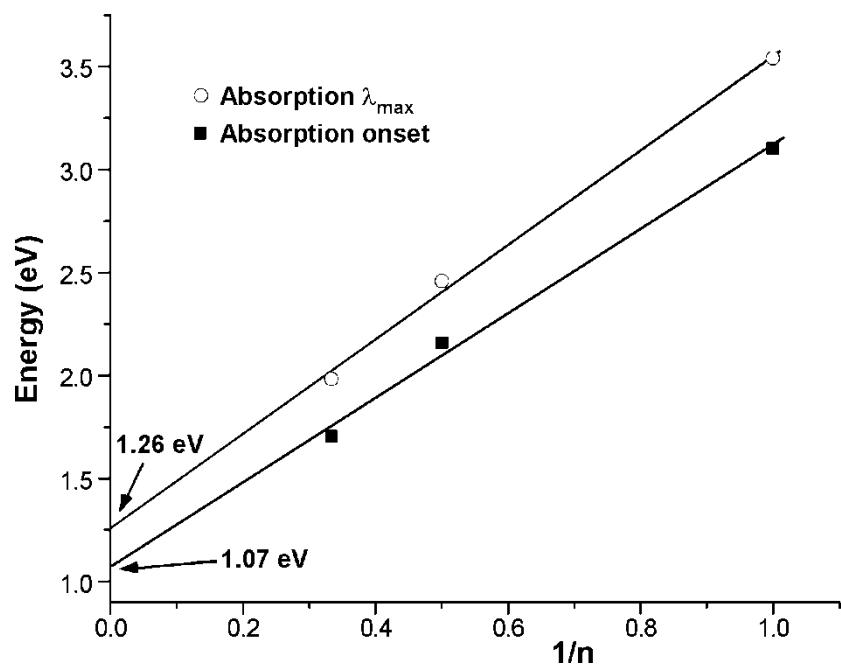


Figure S15. Extrapolation of absorption data for the oligomeric series 3a-c

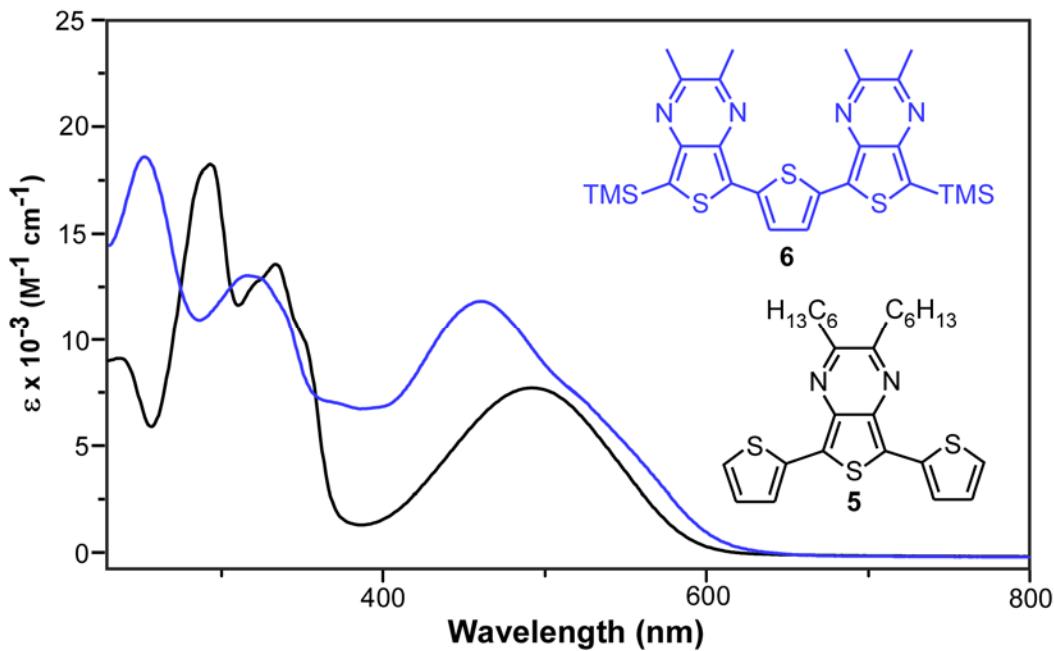


Figure S16. UV-vis spectra of mixed TP-thiophene terthienyls **5** and **6**

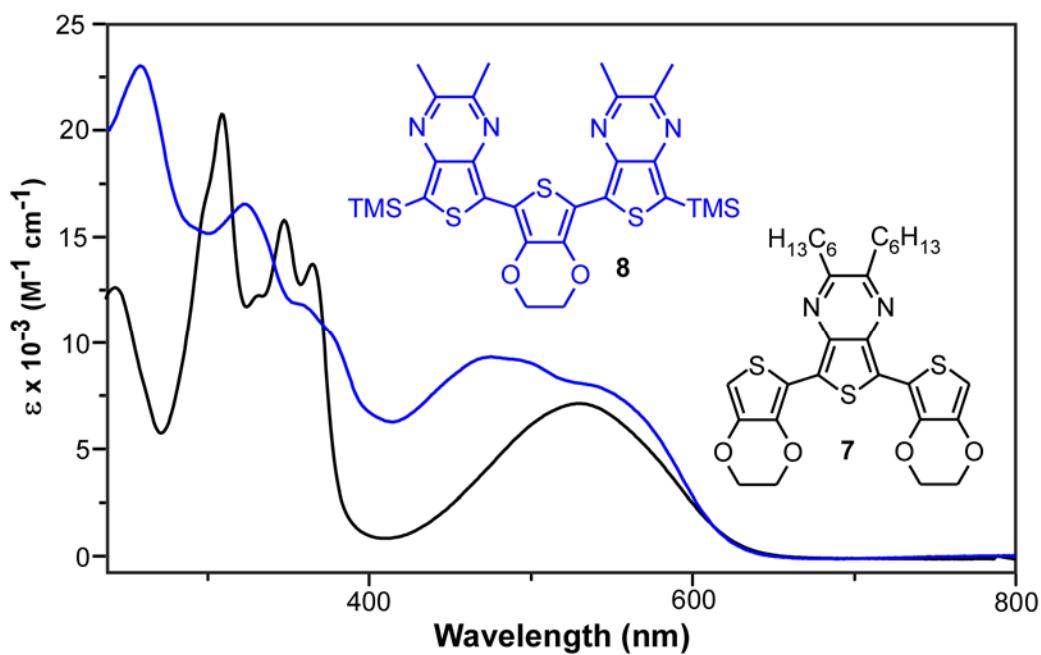


Figure S17. UV-vis spectra of mixed TP-EDOT terthienyls **7** and **8**

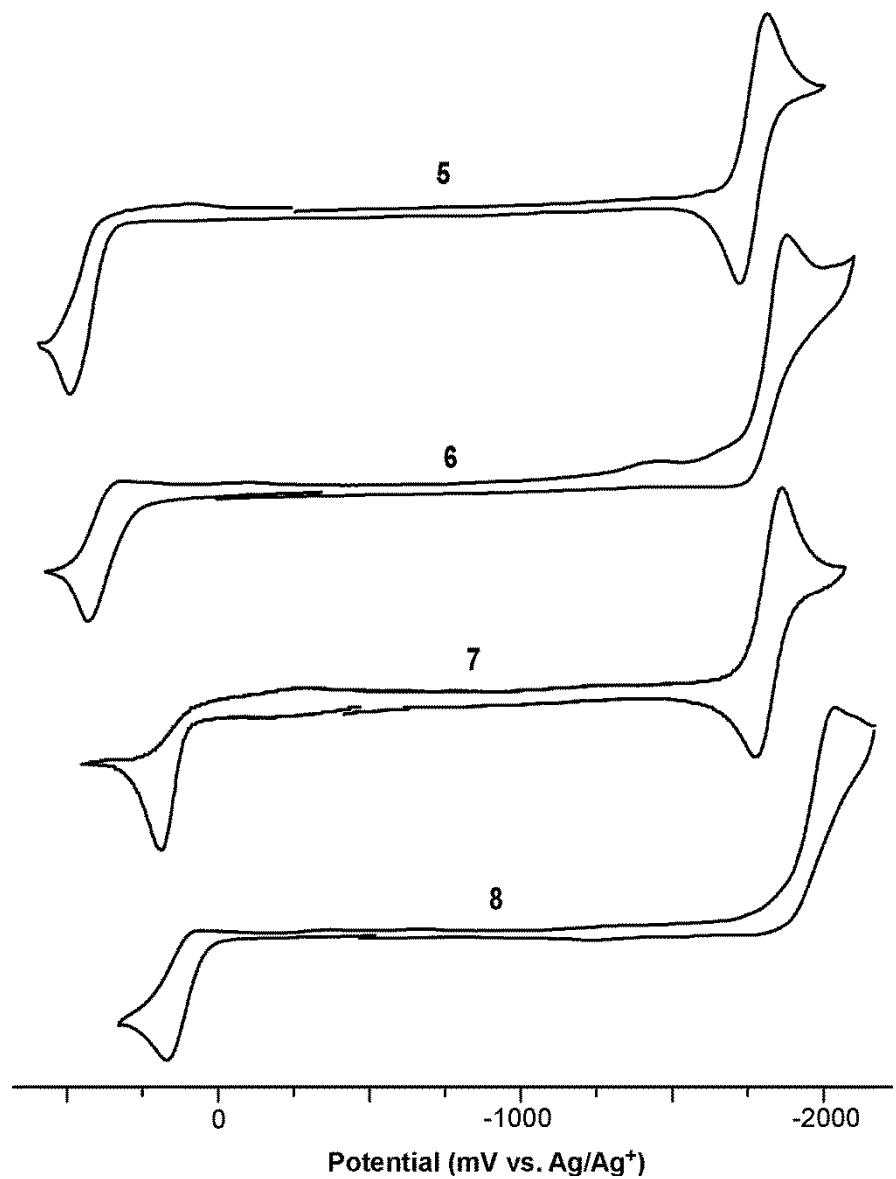


Figure S18. Cyclic voltammograms of mixed terthienyls **5-8**

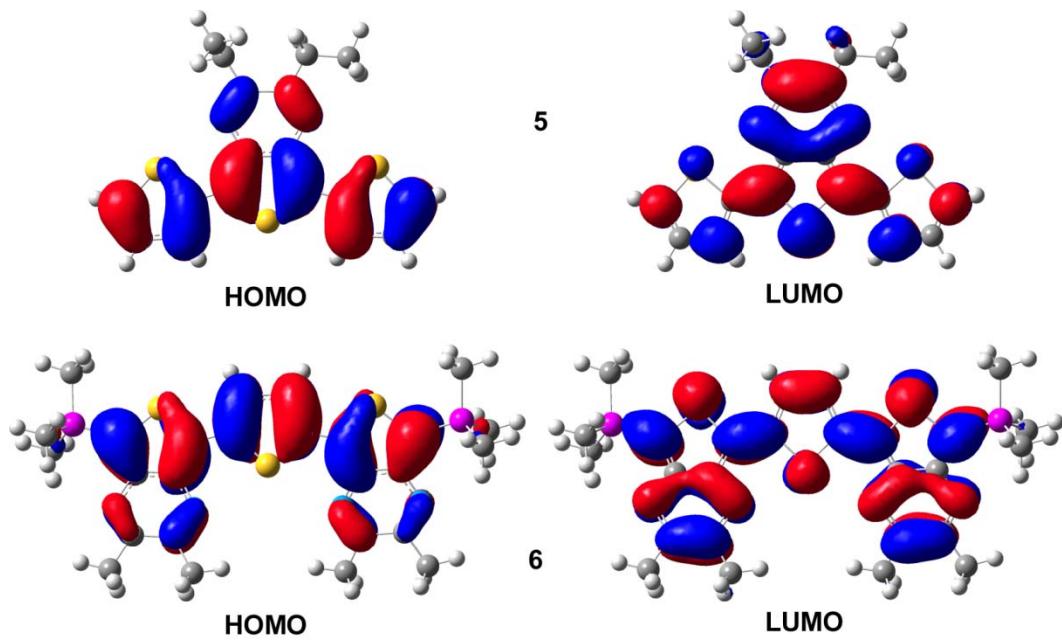


Figure S19. Electronic density contours for mixed TP-thiophene oligomers **5** and **6**.

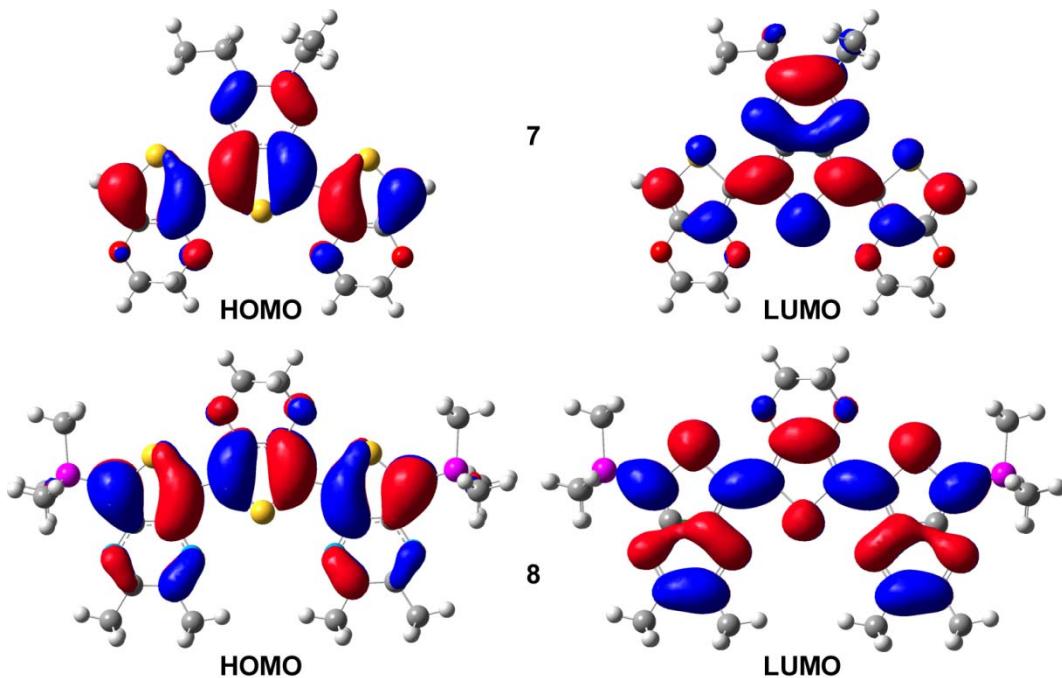


Figure S20. Electronic density contours for mixed TP-EDOT oligomers **7** and **8**.