Supplementary Material (ESI) for Photochemical & Photobiological Sciences

Conjugated Fluorene-Thiophenes Prepared From Azomethines Connections-I: The Effect of Electronic and Aryl Groups on the Spectroscopic and Electrochemical Properties

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Table of contents

Figure 1. ^{1}H spectrum of 1 (400 MHz, Acetone-d_6). 4
Figure 2. ^{13}C spectrum of 1 (80 MHz, DMSO-d_6). 5
Figure 3. ^{1}H spectrum of 2 (400 MHz, DMSO-d_6). 6
Figure 4. ^{13}C spectrum of 2 (80 MHz, Acetone-d_6). 7
Figure 5. ^{1}H spectrum of 3 (400 MHz, Acetone-d_6). 8
Figure 6. ^{13}C spectrum of 3 (80 MHz, DMSO-d_6). 9
Figure 7. ^{1}H spectrum of 4 (400 MHz, Acetone-d_6). 10
Figure 8. ^{1}H spectrum of 5 (400 MHz, Acetone-d_6). 11
Figure 9. ^{13}C spectrum of 5 (80 MHz, Acetone-d_6). 12
Figure 10. ^{1}H spectrum of 7 (400 MHz, DMSO-d_6). 13
Figure 11. ^{1}H spectrum of 9 (400 MHz, DMSO-d_6). 14
Figure 12. ^{1}H spectrum of 10 (400 MHz, DMSO-d_6). 15
Figure 13. Absorbance (black) and fluorescence (red) spectra of 1 measured in anhydrous and deaerated dichloromethane. 16
Figure 14. Absorbance (black) and fluorescence (red) spectra of 2 measured in anhydrous and deaerated dichloromethane. 16
Figure 15. Absorbance (black) and fluorescence (red) spectra of 3 measured in anhydrous and deaerated dichloromethane. 17
Figure 16. Absorbance (black) and fluorescence (red) spectra of 4 measured in anhydrous and deaerated dichloromethane. 17
Figure 17. Absorbance (black) and fluorescence (red) spectra of 5 measured in anhydrous and deaerated dichloromethane. 18
Figure 18. Absorbance (black) and fluorescence (red) spectra of 6 measured in anhydrous and deaerated dichloromethane. 18
Figure 19. Absorbance (black) and fluorescence (red) spectra of 7 measured in anhydrous and deaerated dichloromethane. 19
Figure 20. Absorbance (black) and fluorescence (red) spectra of 8 measured in anhydrous and deaerated dichloromethane. 19
Figure 21. Absorbance (black) and fluorescence (red) spectra of 9 measured in anhydrous and deaerated dichloromethane. 20
Figure 22. Oxidation cyclic voltamogram of 1 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 21
Figure 23. Reduction cyclic voltamogram of 1 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 21
Figure 24. Oxydation cyclic voltamogram of 2 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 22
Figure 25. Reduction cyclic voltamogram of 2 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 22
Figure 26. Oxydation cyclic voltamogram of 3 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 23
Figure 27. Reduction cyclic voltamogram of 3 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 23
Figure 28. Oxydation cyclic voltamogram of 4 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 24

Figure 29. Reduction cyclic voltamogram of 4 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 24
Figure 30. Oxydation cyclic voltamogram of 5 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 25
Figure 31. Reduction cyclic voltamogram of 5 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 25
Figure 32. Oxydation cyclic voltamogram of 6 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 26
Figure 33. Reduction cyclic voltamogram of 6 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 26
Figure 34. Oxydation cyclic voltamogram of 7 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 27
Figure 35. Reduction cyclic voltamogram of 7 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 27
Figure 36. Oxydation cyclic voltamogram of 8 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 28
Figure 37. Reduction cyclic voltamogram of 8 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 28
Figure 38. Oxydation cyclic voltamogram of 9 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 29
Figure 39. Reduction cyclic voltamogram of 9 measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec. 29
Table 1. Details of Crystal Structure Determination for 6. 30

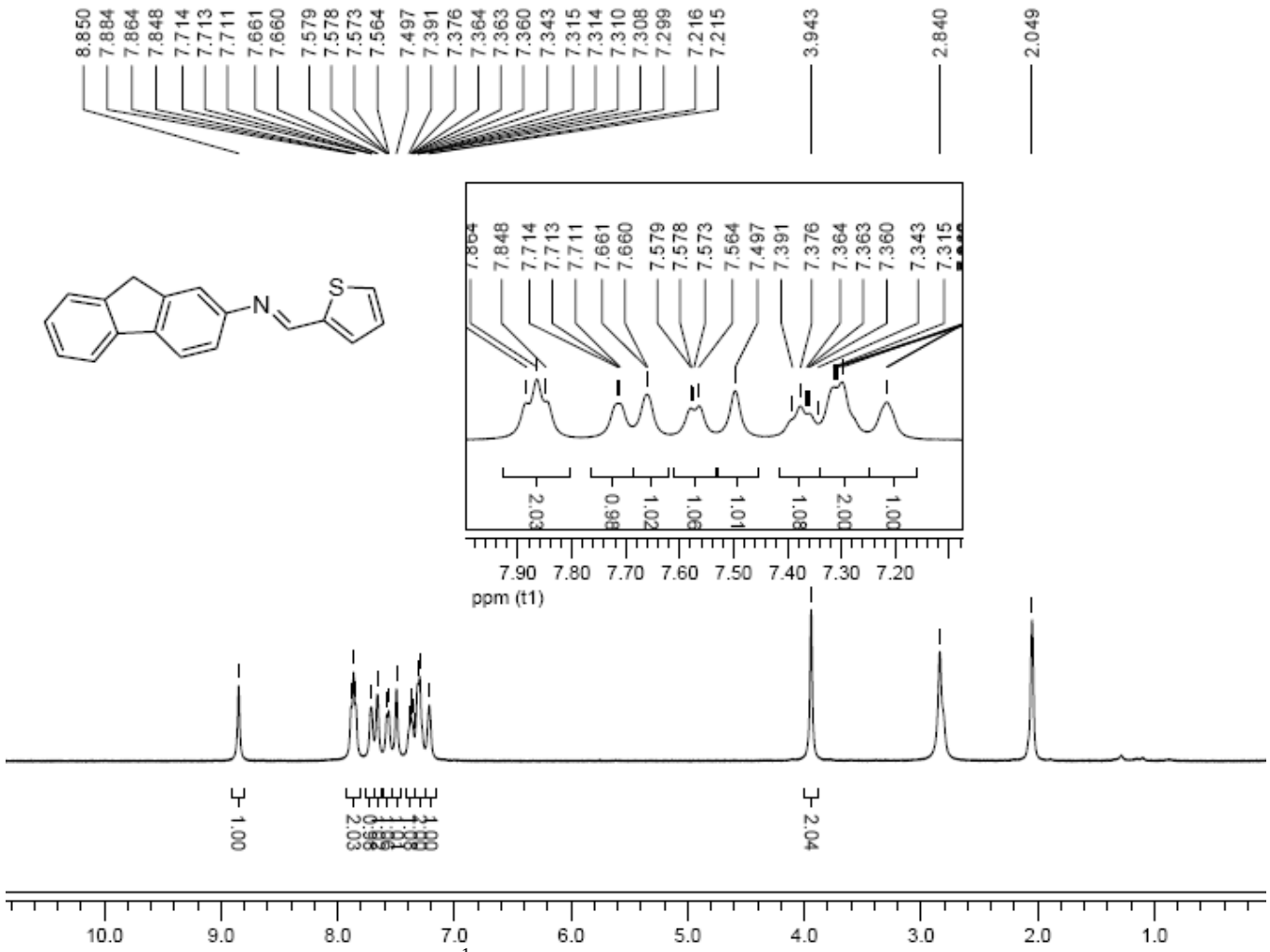

Figure 1. ^{1}H spectrum of **1** (400 MHz, Acetone-d_6).

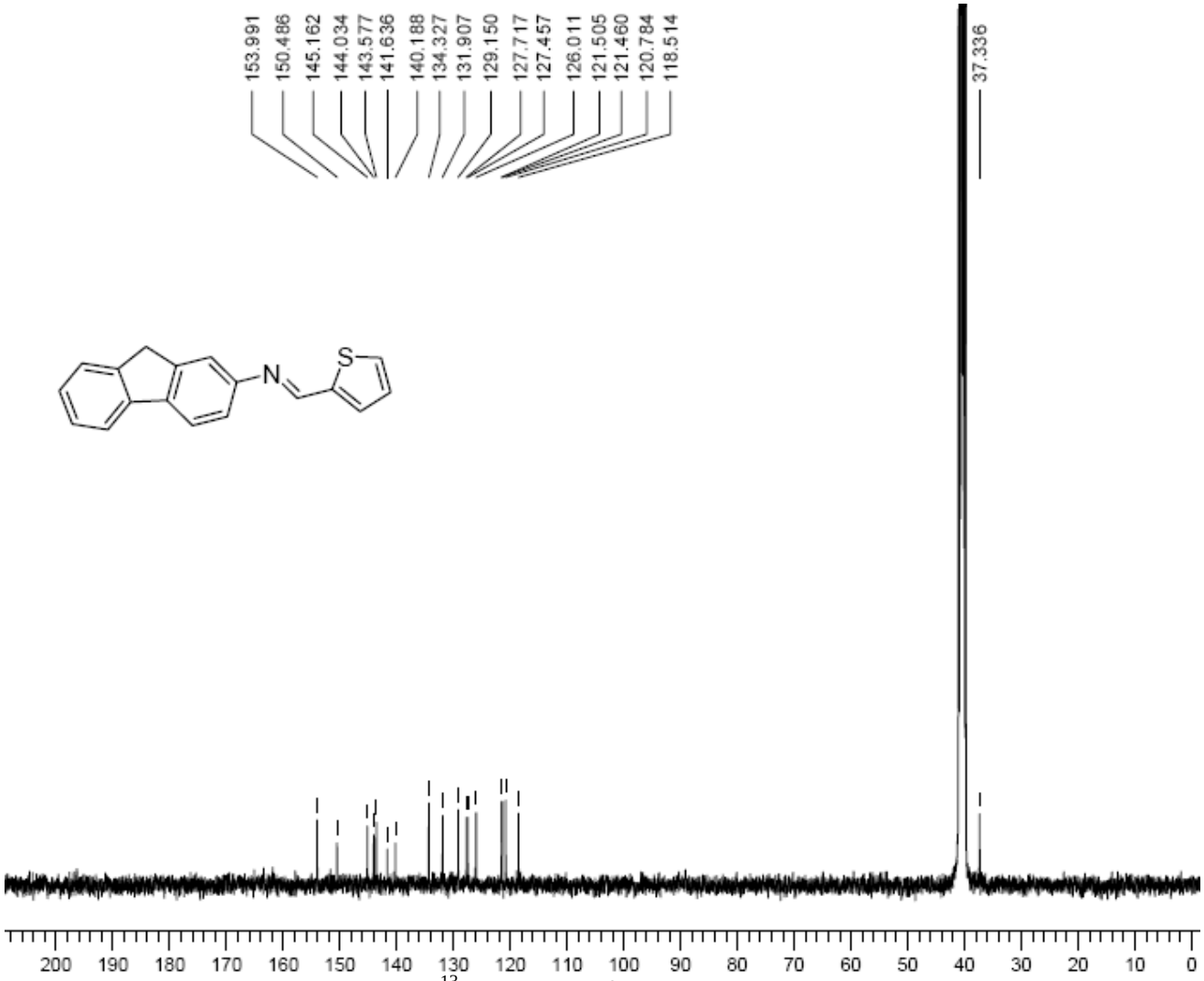

Figure 2. ^{13}C spectrum of **1** (80 MHz, DMSO-d_6).

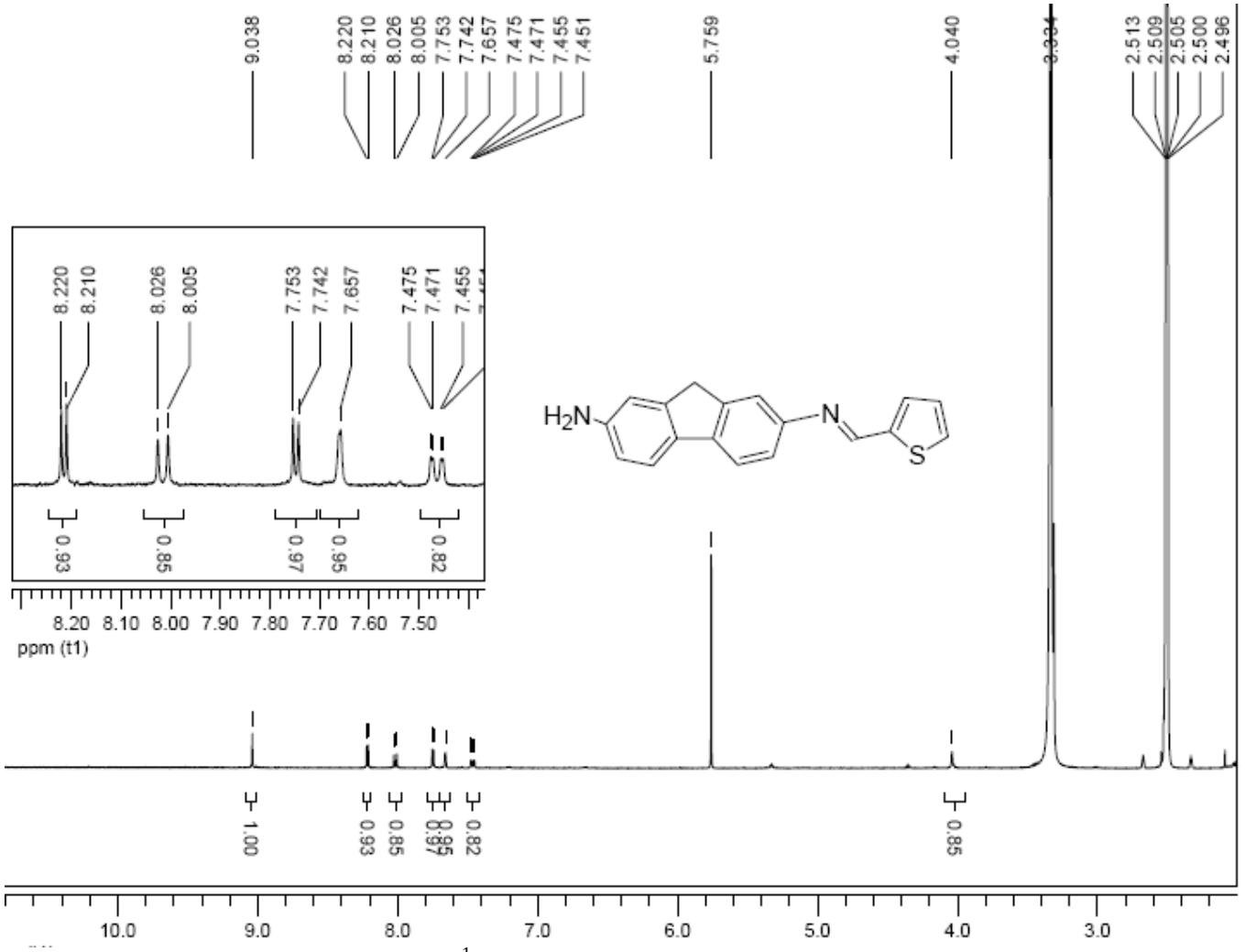

Figure 3. ^{1}H spectrum of **2** (400 MHz, DMSO-d_6).

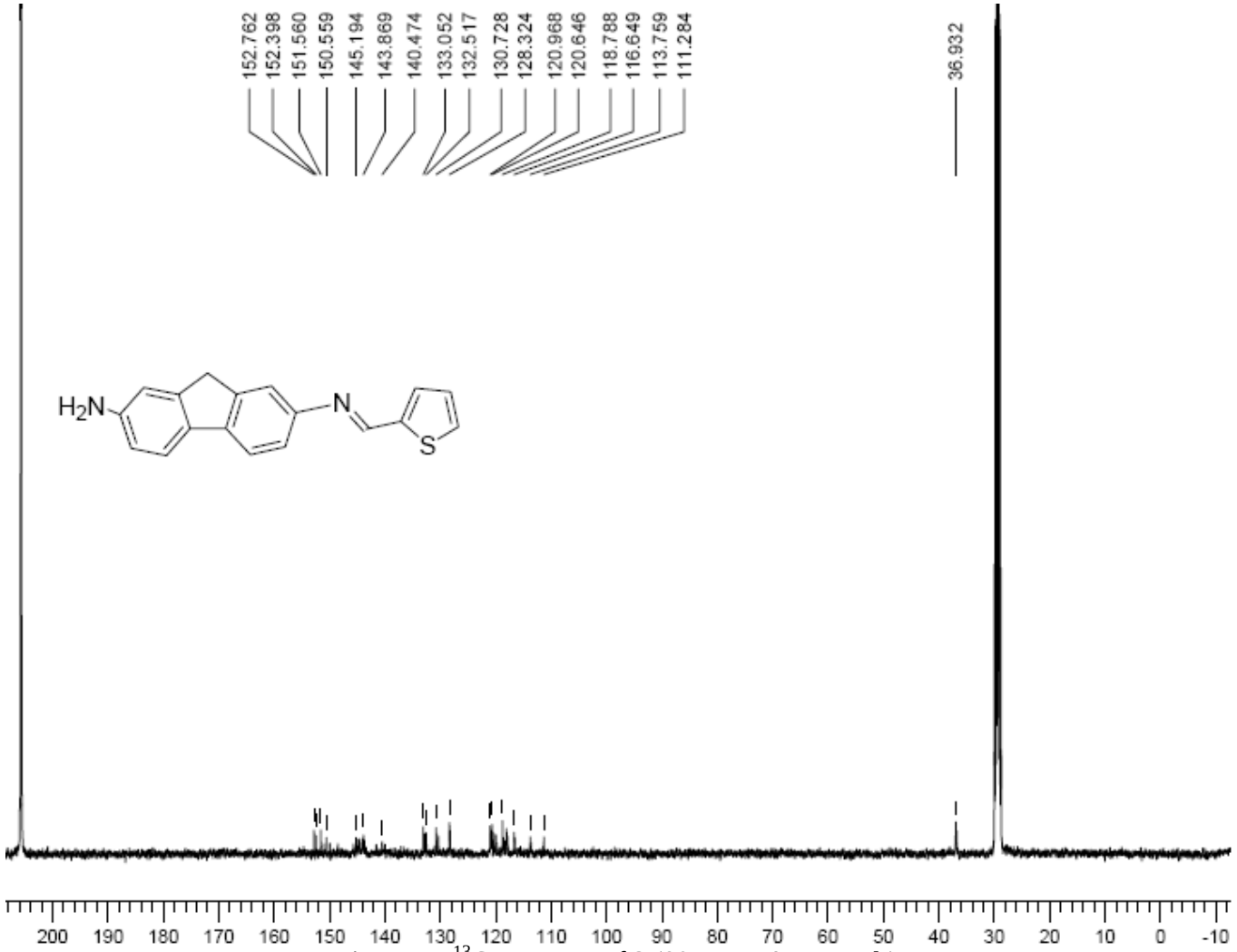

Figure 4. ^{13}C spectrum of **2** (80 MHz, Acetone-d_6).

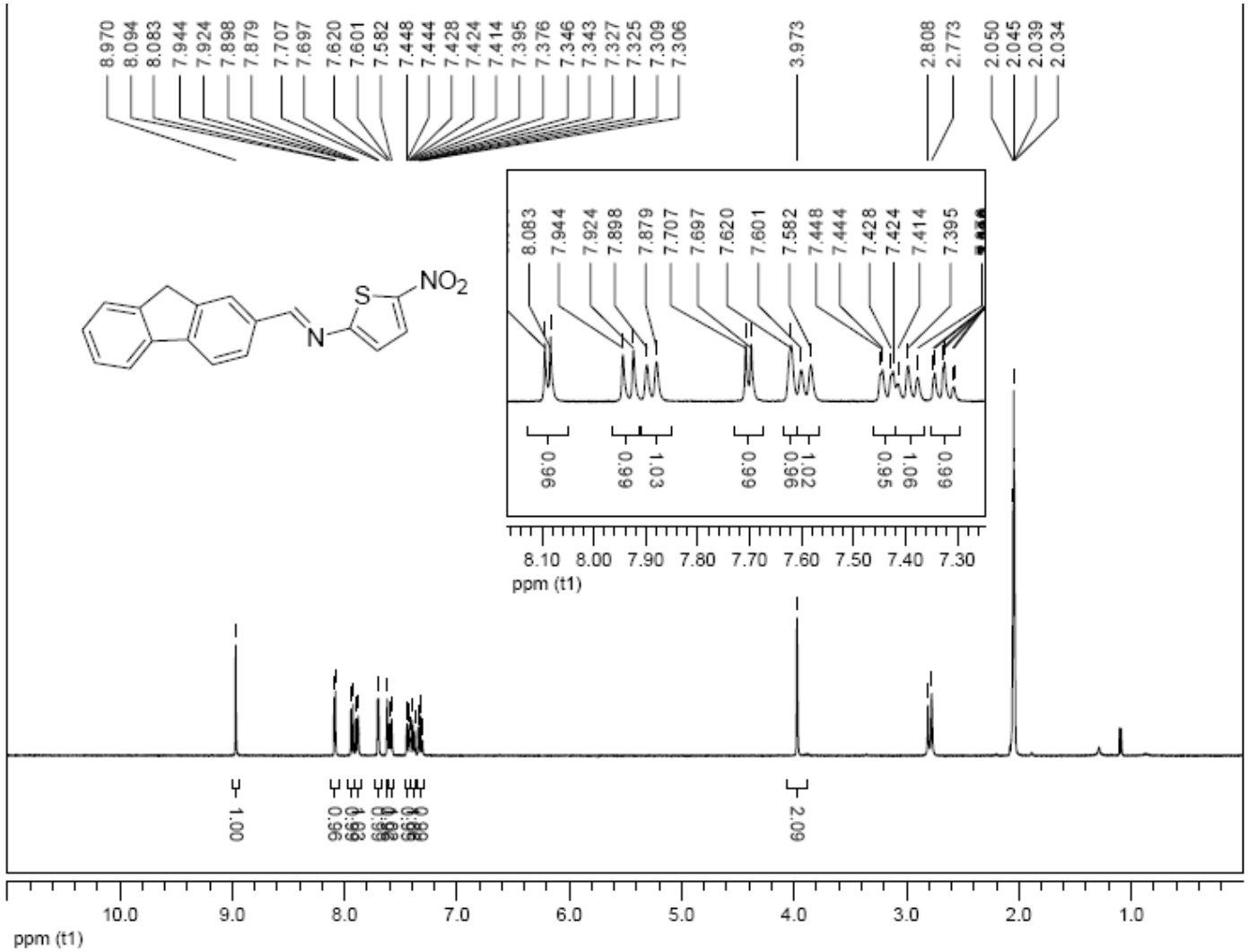

Figure 5. ^{1}H spectrum of **3** (400 MHz, Acetone-d_6).

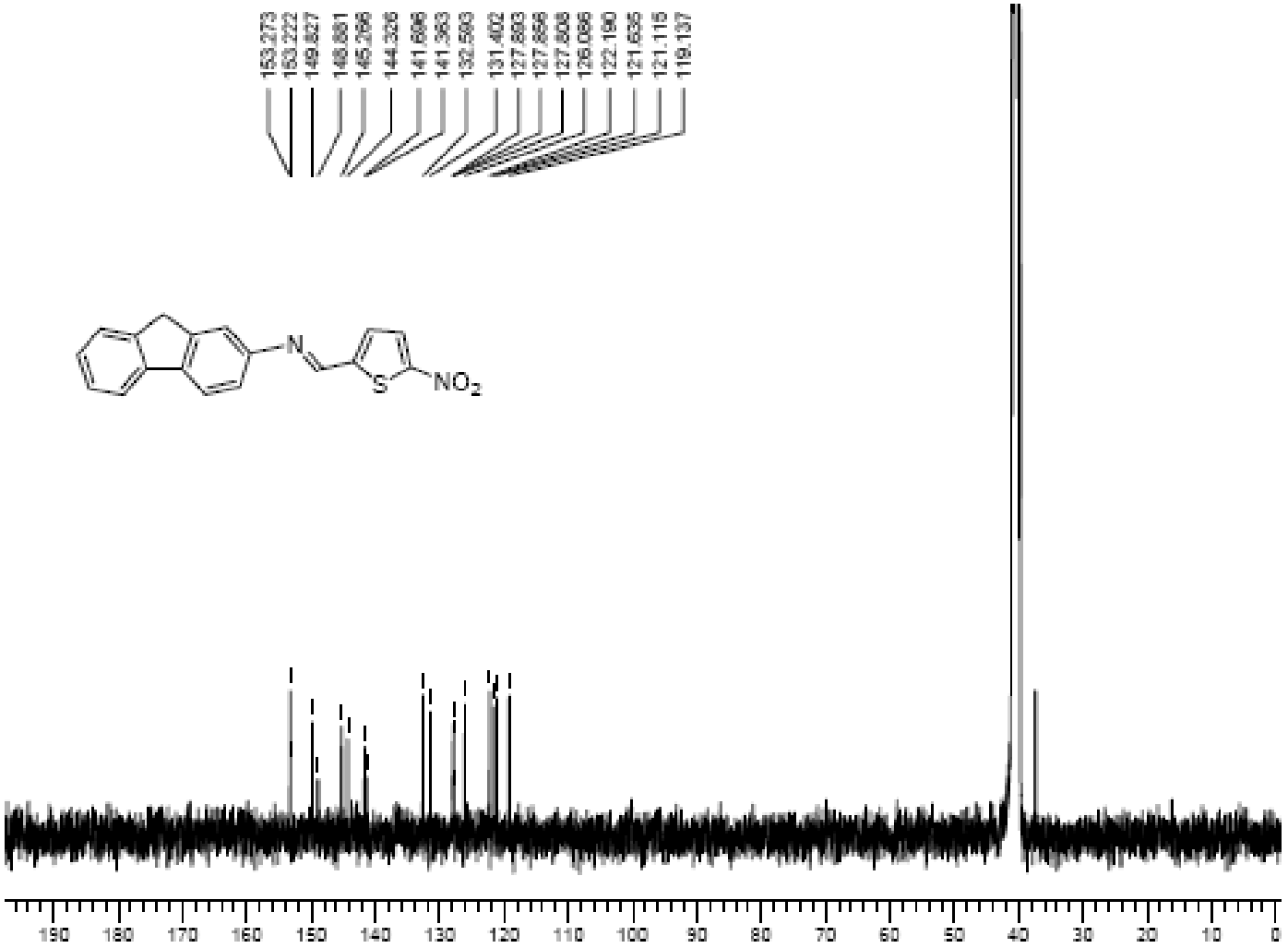

Figure 6. ^{13}C spectrum of **3** (80 MHz, DMSO-d_6).

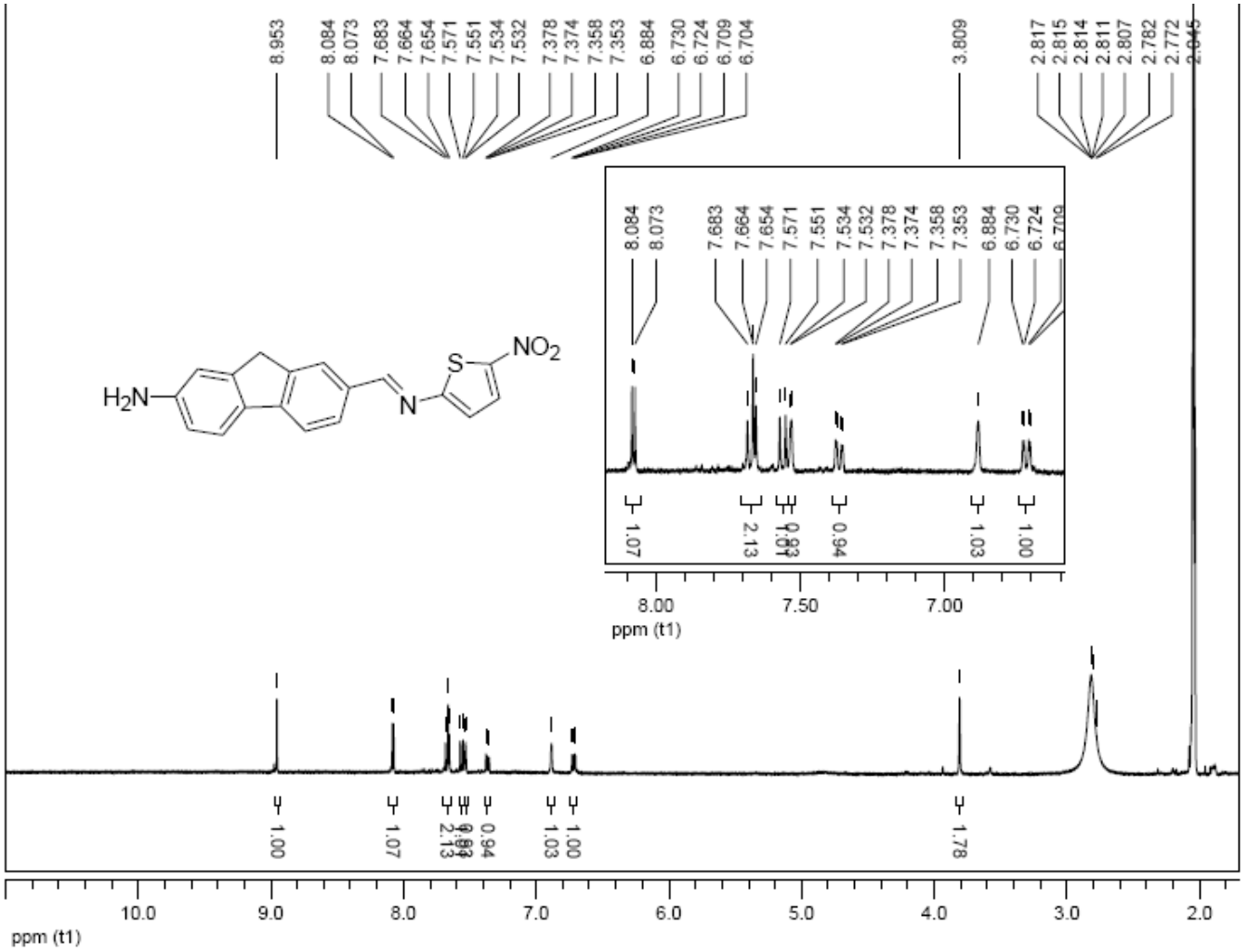

Figure 7. ^{1}H spectrum of **4** (400 MHz, Acetone-d_6).

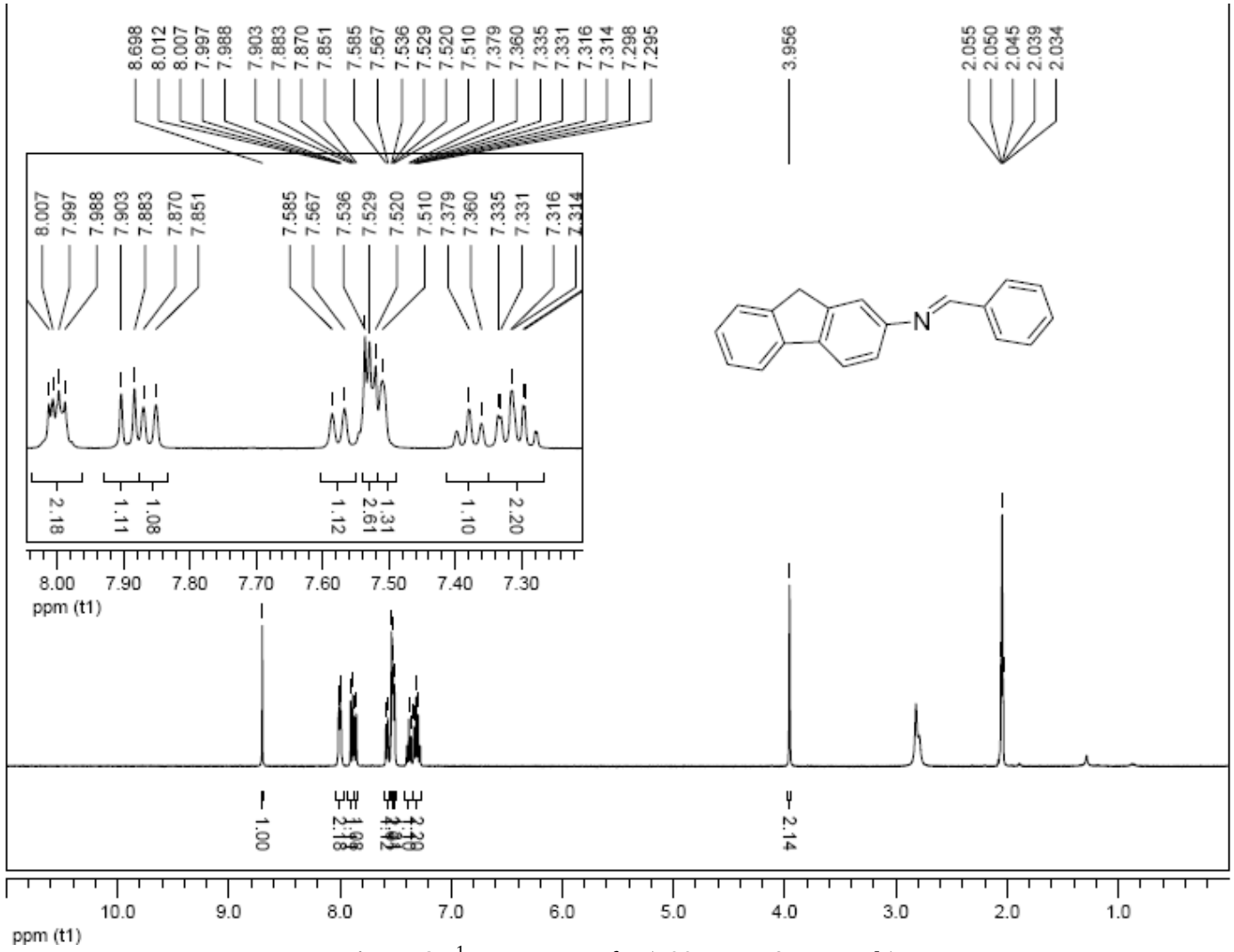

Figure 8. ^{1}H spectrum of **5** (400 MHz, Acetone-d_6).

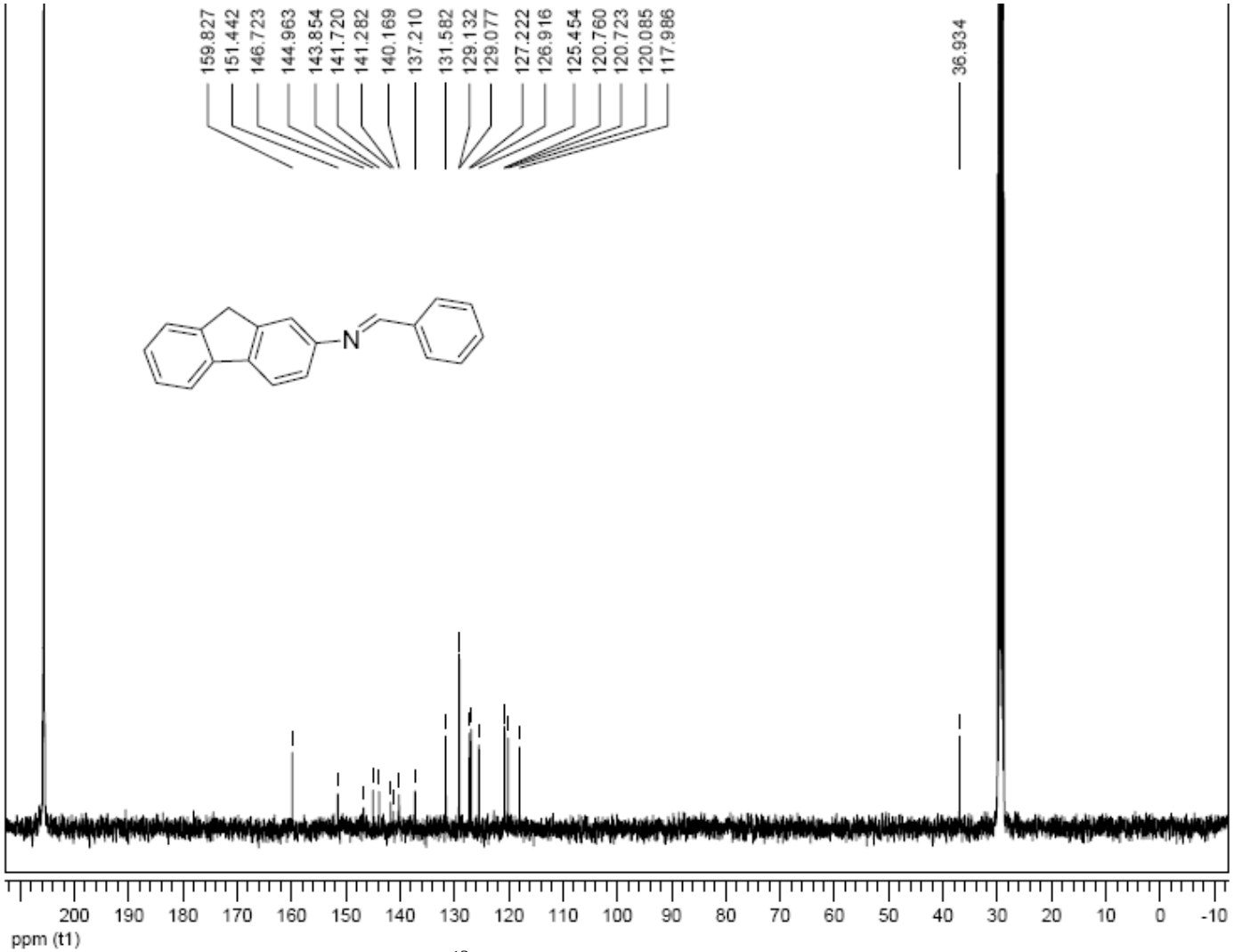

Figure 9. ^{13}C spectrum of **5** (80 MHz, Acetone-d_6).

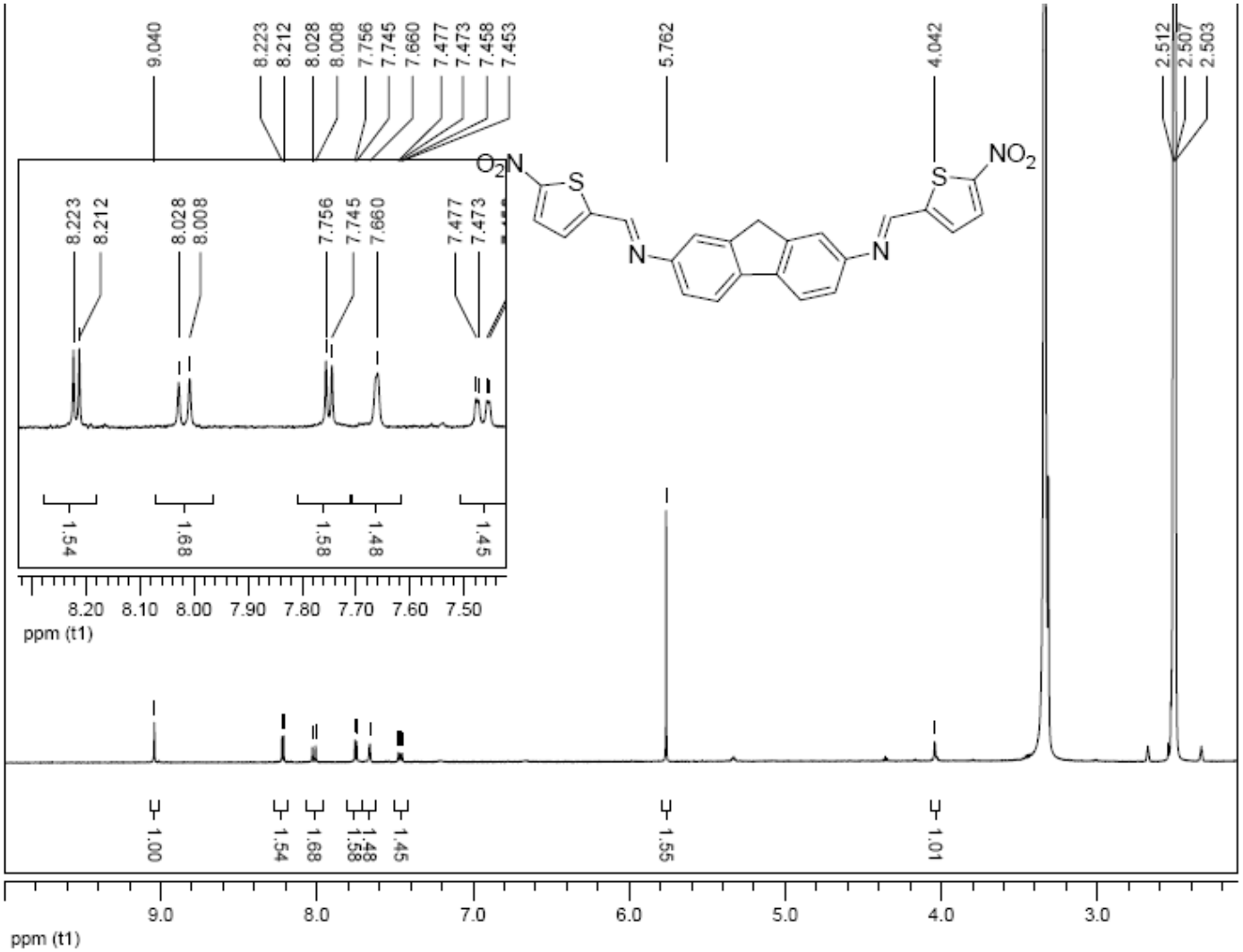

Figure 10. ^{1}H spectrum of **7** (400 MHz, DMSO-d_6).

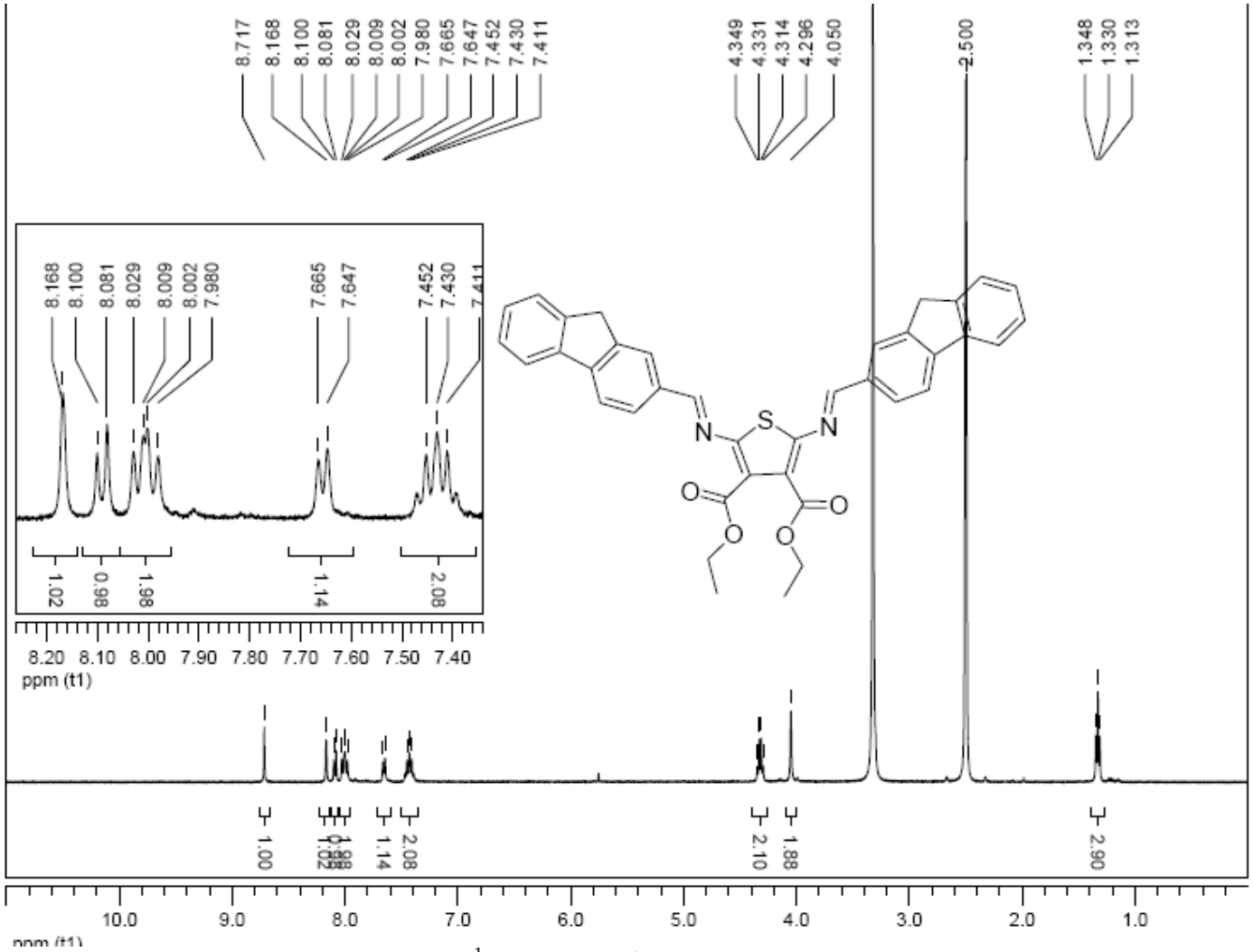

Figure 11. ^{1}H spectrum of **9** (400 MHz, DMSO-d_6).

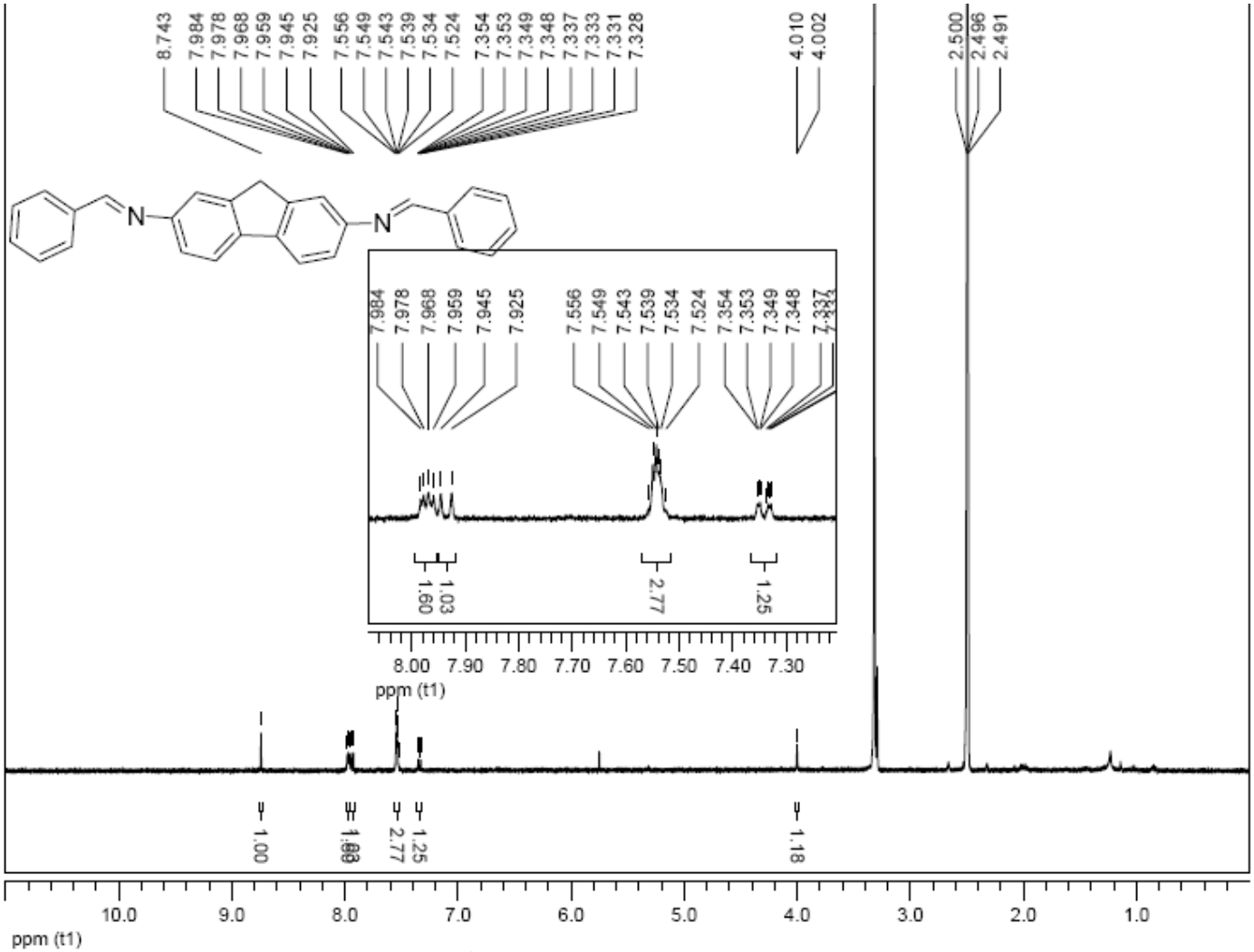

Figure 12. ^{1}H spectrum of **10** (400 MHz, DMSO-d_6).

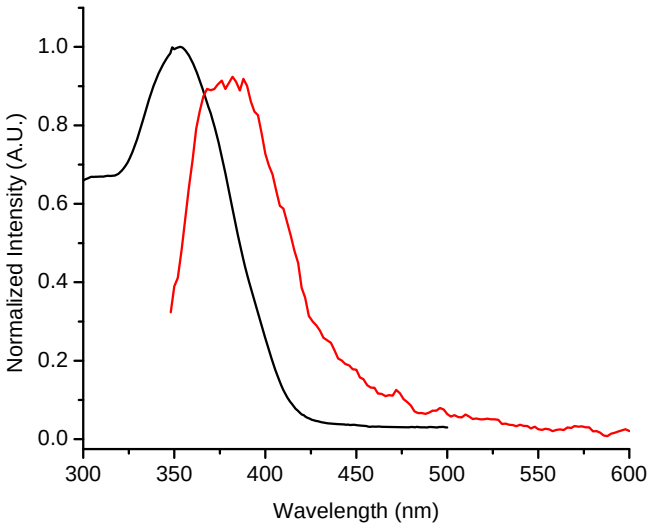

Figure 13. Absorbance (black) and fluorescence (red) spectra of **1** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 357 nm.

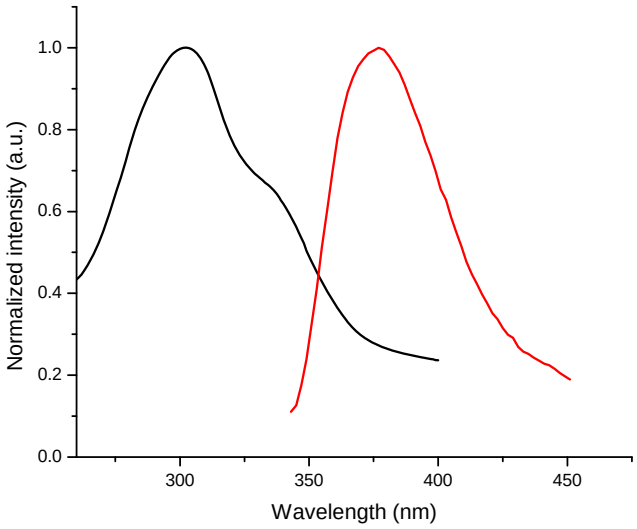

Figure 14. Absorbance (black) and fluorescence (red) spectra of **2** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 338 nm.

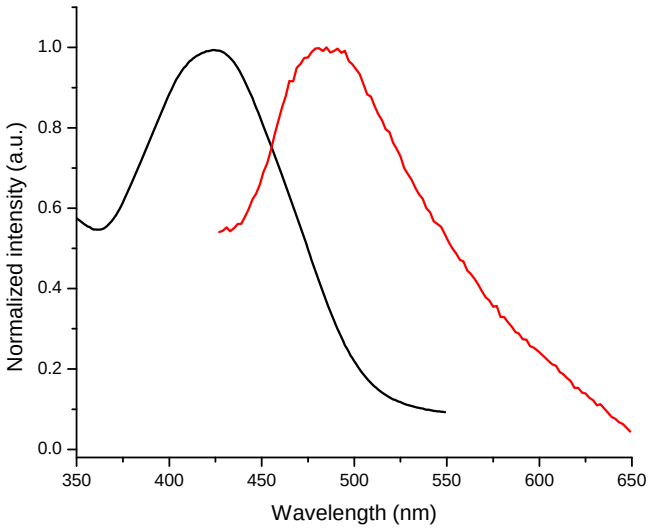

Figure 15. Absorbance (black) and fluorescence (red) spectra of **3** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 424 nm.

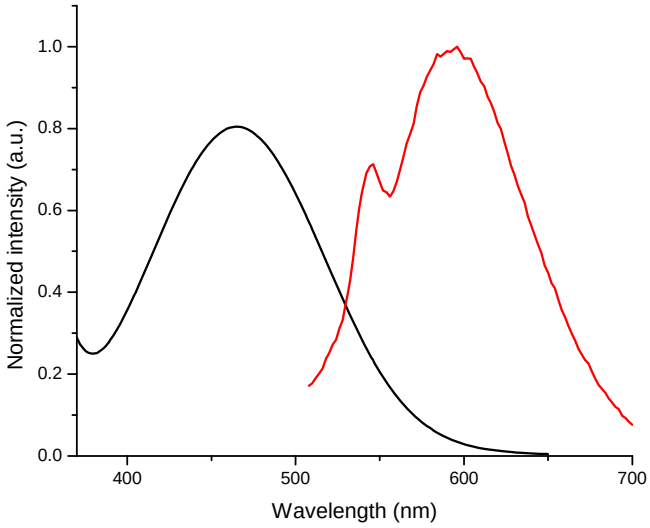

Figure 16. Absorbance (black) and fluorescence (red) spectra of **4** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 466 nm.

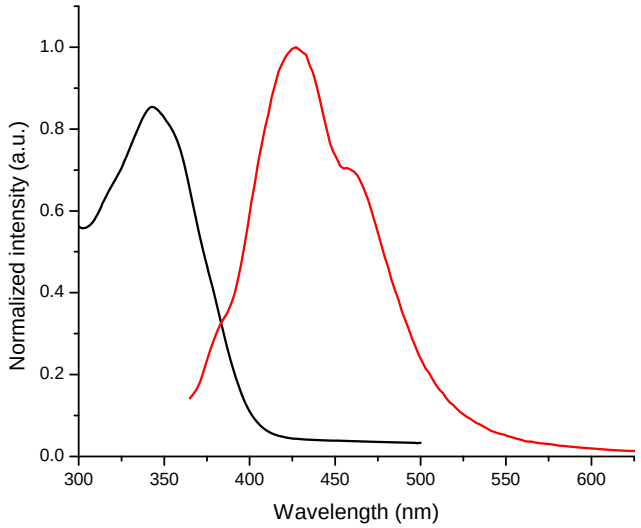

Figure 17. Absorbance (black) and fluorescence (red) spectra of **5** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 343 nm.

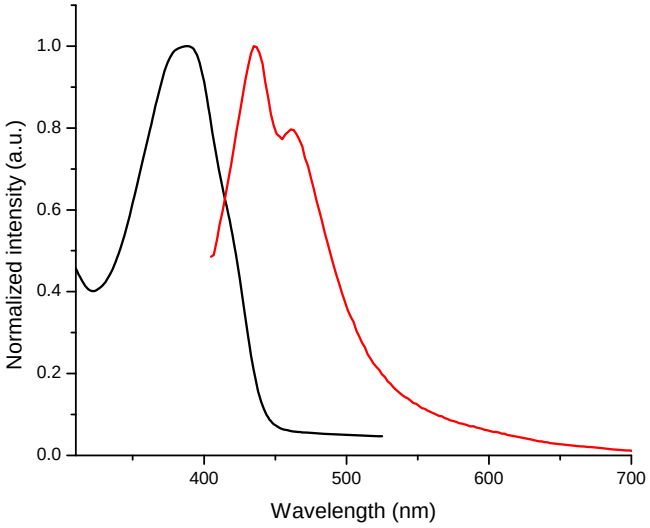

Figure 18. Absorbance (black) and fluorescence (red) spectra of **6** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 387 nm.

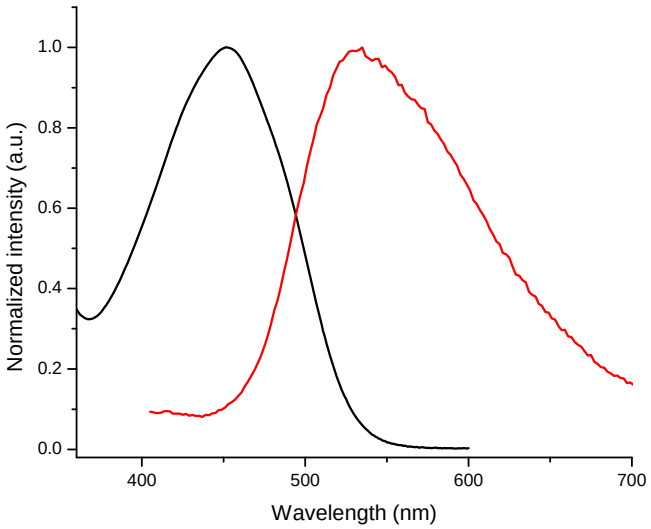

Figure 19. Absorbance (black) and fluorescence (red) spectra of **7** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 452 nm.

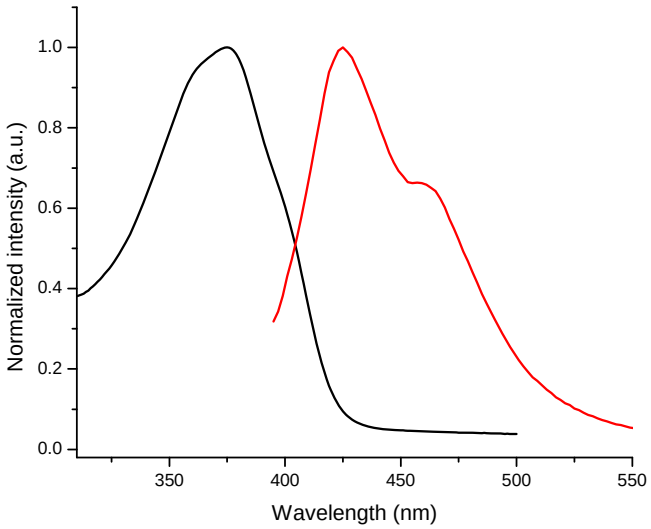

Figure 20. Absorbance (black) and fluorescence (red) spectra of **8** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 375 nm.

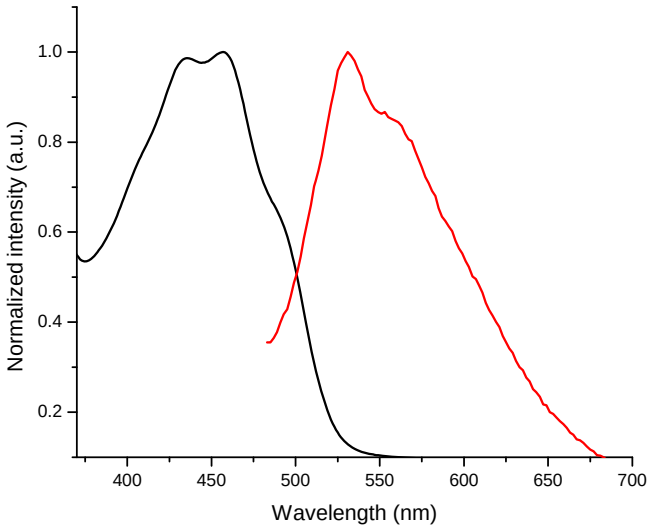

Figure 21. Absorbance (black) and fluorescence (red) spectra of **9** measured in anhydrous and deaerated dichloromethane. Excitation wavelength: 457 nm.

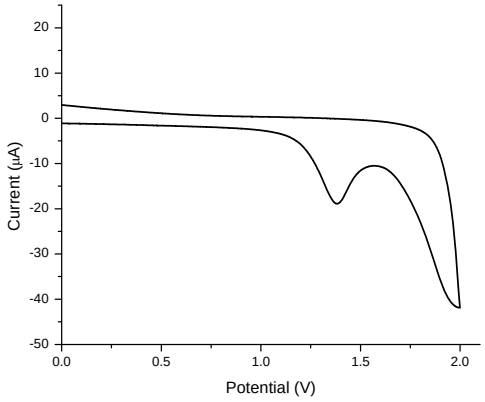

Figure 22. Oxidation cyclic voltamogram of **1** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

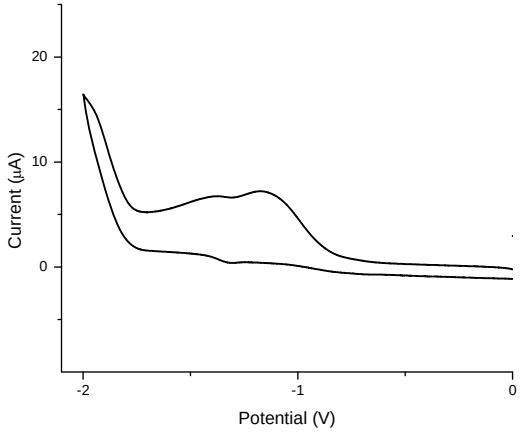

Figure 23. Reduction cyclic voltamogram of **1** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

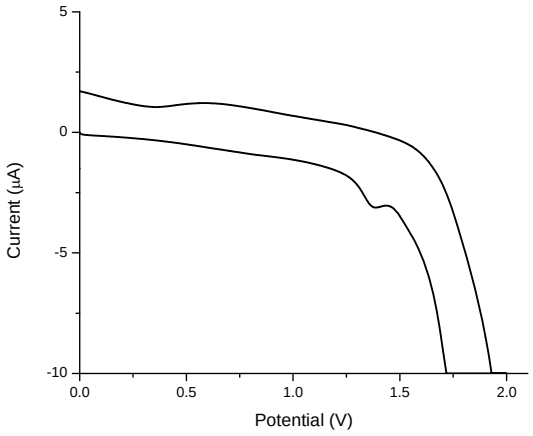

Figure 24. Oxydation cyclic voltamogram of **2** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

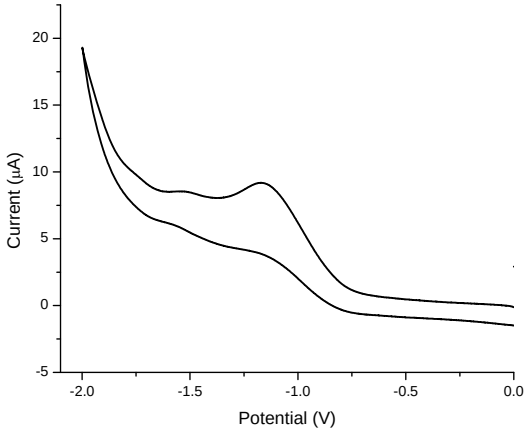

Figure 25. Reduction cyclic voltamogram of **2** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

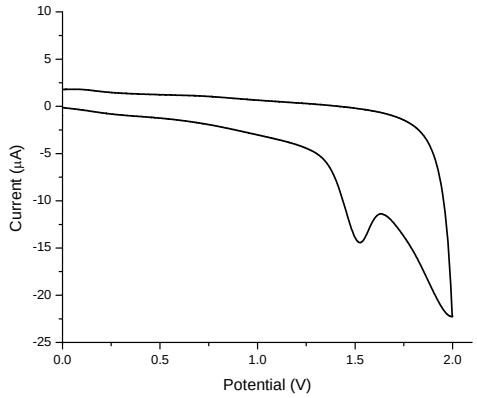

Figure 26. Oxydation cyclic voltamogram of **3** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

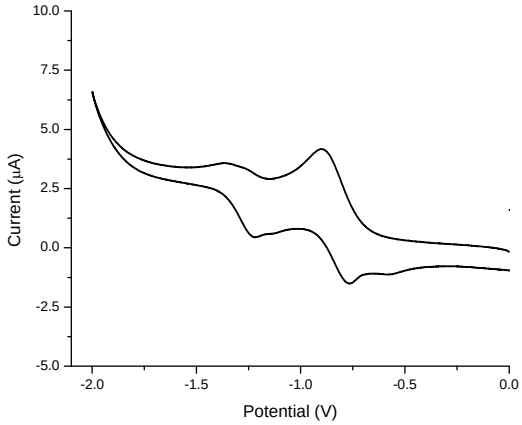

Figure 27. Reduction cyclic voltamogram of **3** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

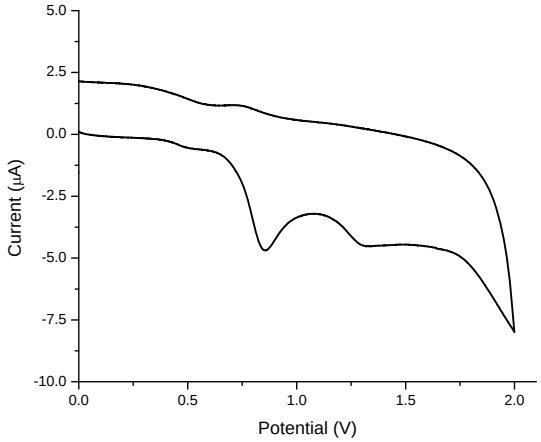

Figure 28. Oxydation cyclic voltamogram of **4** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

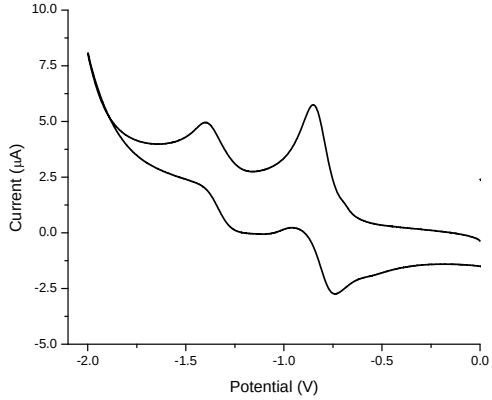

Figure 29. Reduction cyclic voltamogram of **4** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

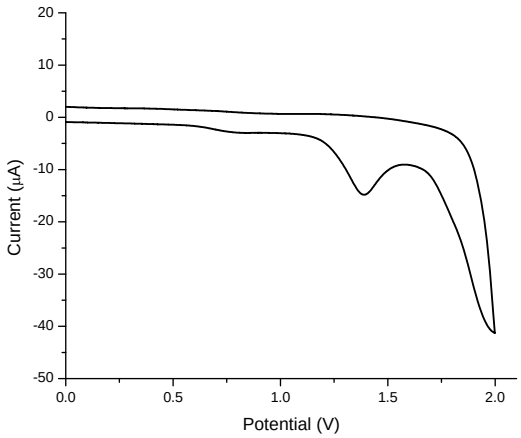

Figure 30. Oxydation cyclic voltamogram of **5** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

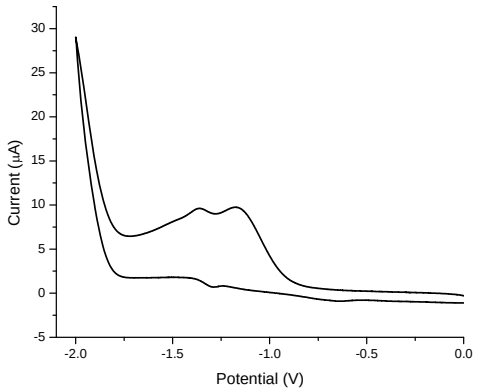

Figure 31. Reduction cyclic voltamogram of **5** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

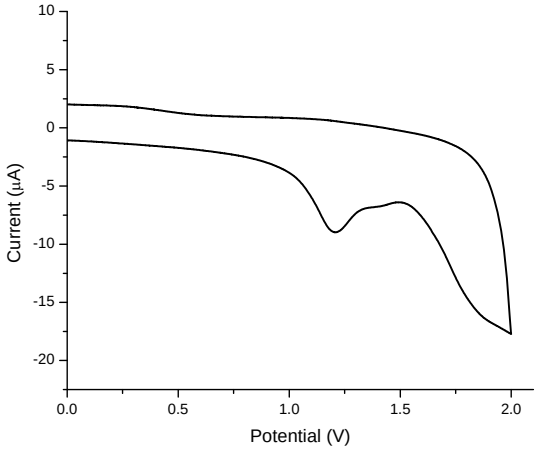

Figure 32. Oxydation cyclic voltamogram of **6** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

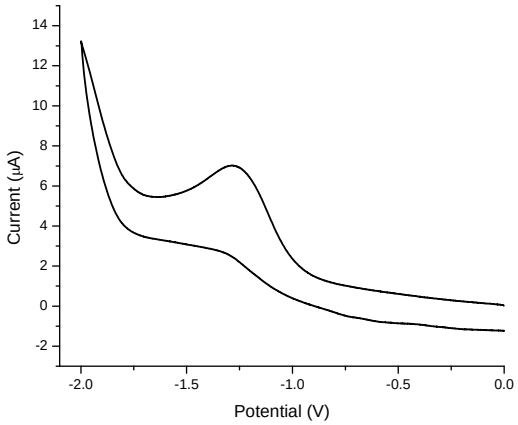

Figure 33. Reduction cyclic voltamogram of **6** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

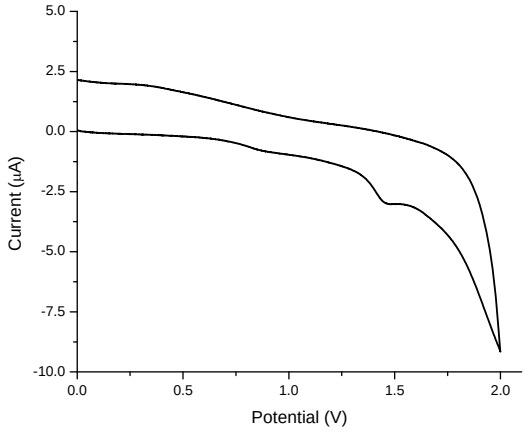

Figure 34. Oxydation cyclic voltamogram of **7** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

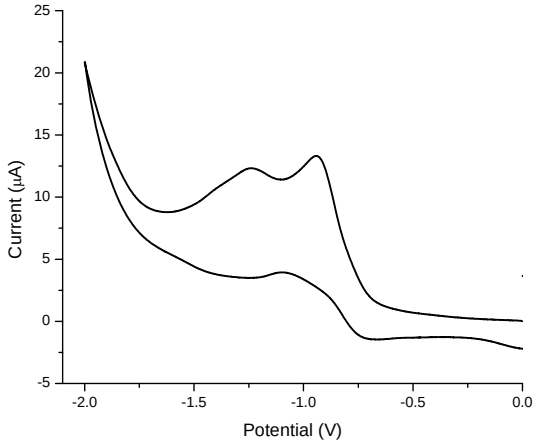

Figure 35. Reduction cyclic voltamogram of **7** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

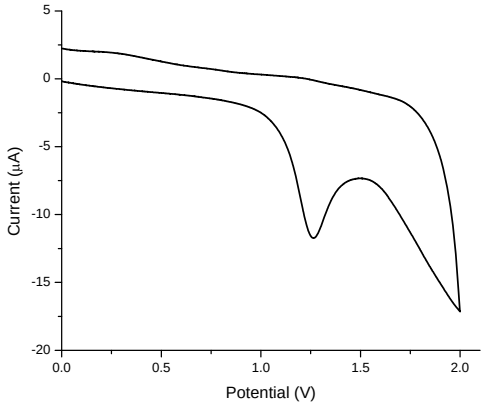

Figure 36. Oxydation cyclic voltamogram of **8** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

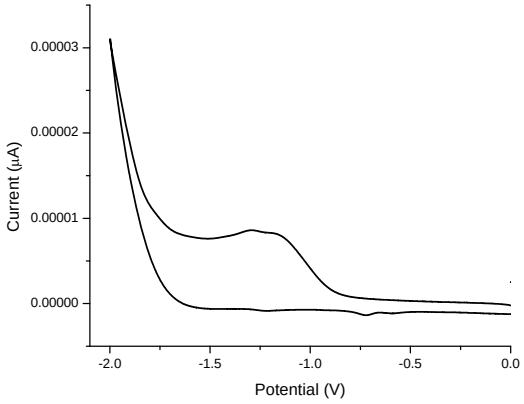

Figure 37. Reduction cyclic voltamogram of **8** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

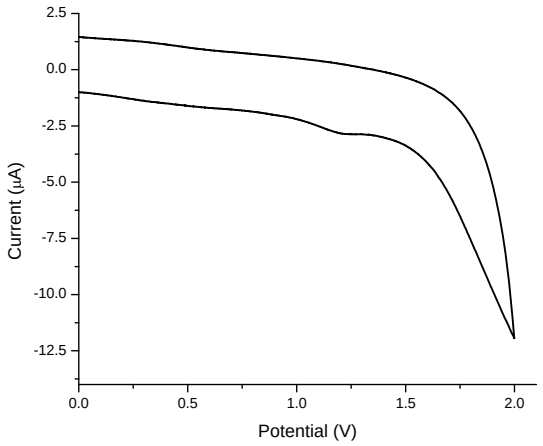

Figure 38. Oxydation cyclic voltamogram of **9** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

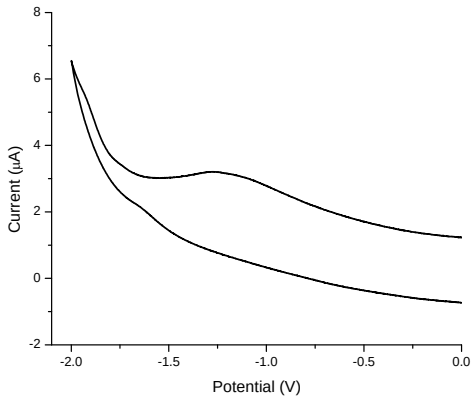

Figure 39. Reduction cyclic voltamogram of **9** measured in 0.1 M TBA•PF_6 in anhydrous DCM at a scan rate of 100 mV/sec.

Table 1. Details of Crystal Structure Determination for **6**.

Formula	$C_{23}H_{16}N_2S_2$
CCSD no.	see remark 1
Mw (g/mol); F(000)	384.50 g/mol ; 800
Crystal color and form	Yellow plate
Crystal size (mm)	0.48 x 0.46 x 0.08
T (K); $d_{calcd.}$ (g/cm^3)	293 (2) ; 1.363
Crystal System	Orthorhombic
Space Group	$P2_12_12_1$
Unit Cell: a (Å)	6.0019 (16)
b (Å)	9.123 (3)
c (Å)	34.230 (9)
α (°)	90.000
β (°)	90.000
γ (°)	90.000
V (Å^3); Z	1874.3 (9) ; 4
θ range (°); completeness	2.58 – 70.03 ; 1.000
Reflections: collected / independent; R_{int}	20210 / 3569 ; 0.034
μ (mm^{-1})	2.639
Abs. Corr.	Semi-empirical
R1(F); wR(F^2) [I > 2σ(I)]	0.0327; 0.0767
R1(F); wR(F^2) (all data)	0.0390; 0.0790
GoF(F^2)	0.928
Max. residual e$^-$ density	0.146 e$^-$·Å^{-3}