

Efficient synthesis of novel 1,2,3-triazole-linked quinoxaline scaffold via copper-catalyzed click reactions

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Characterization data and IR, ¹H NMR and ¹³C NMR spectra of the title compounds:

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Supporting information for this article is given via a link at the end.

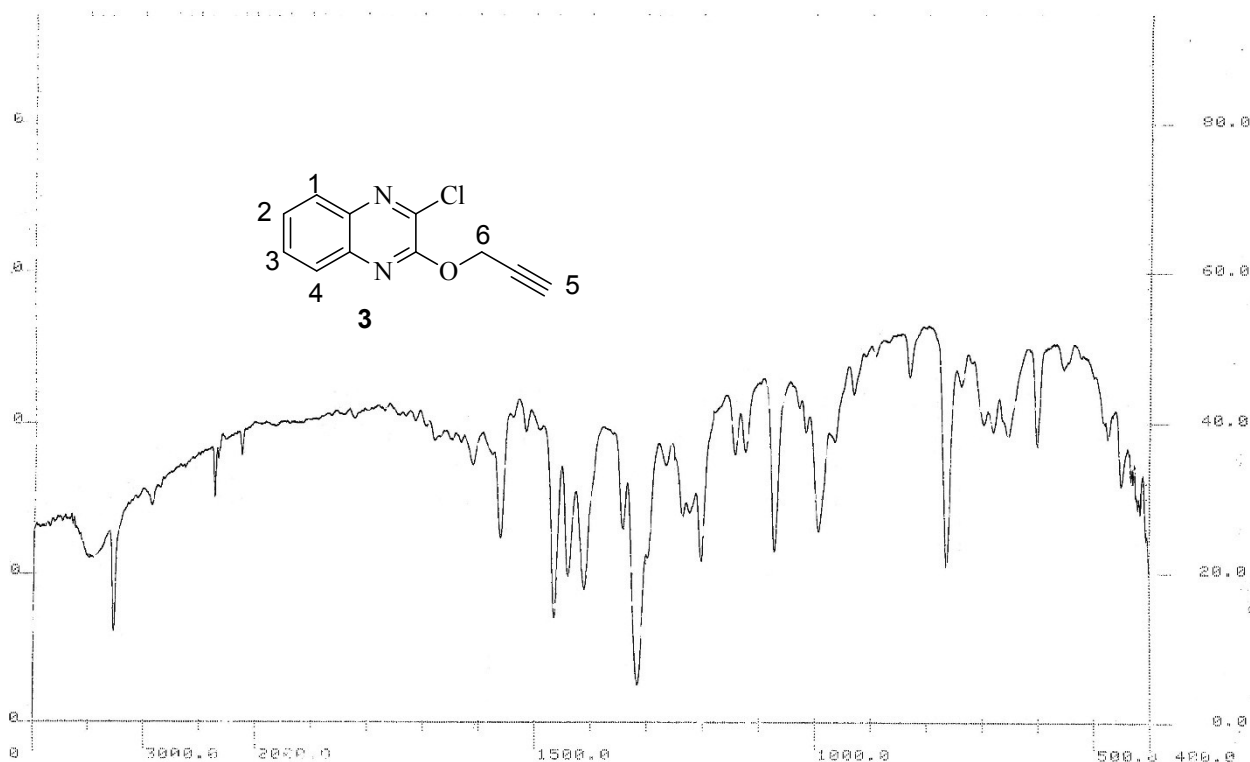
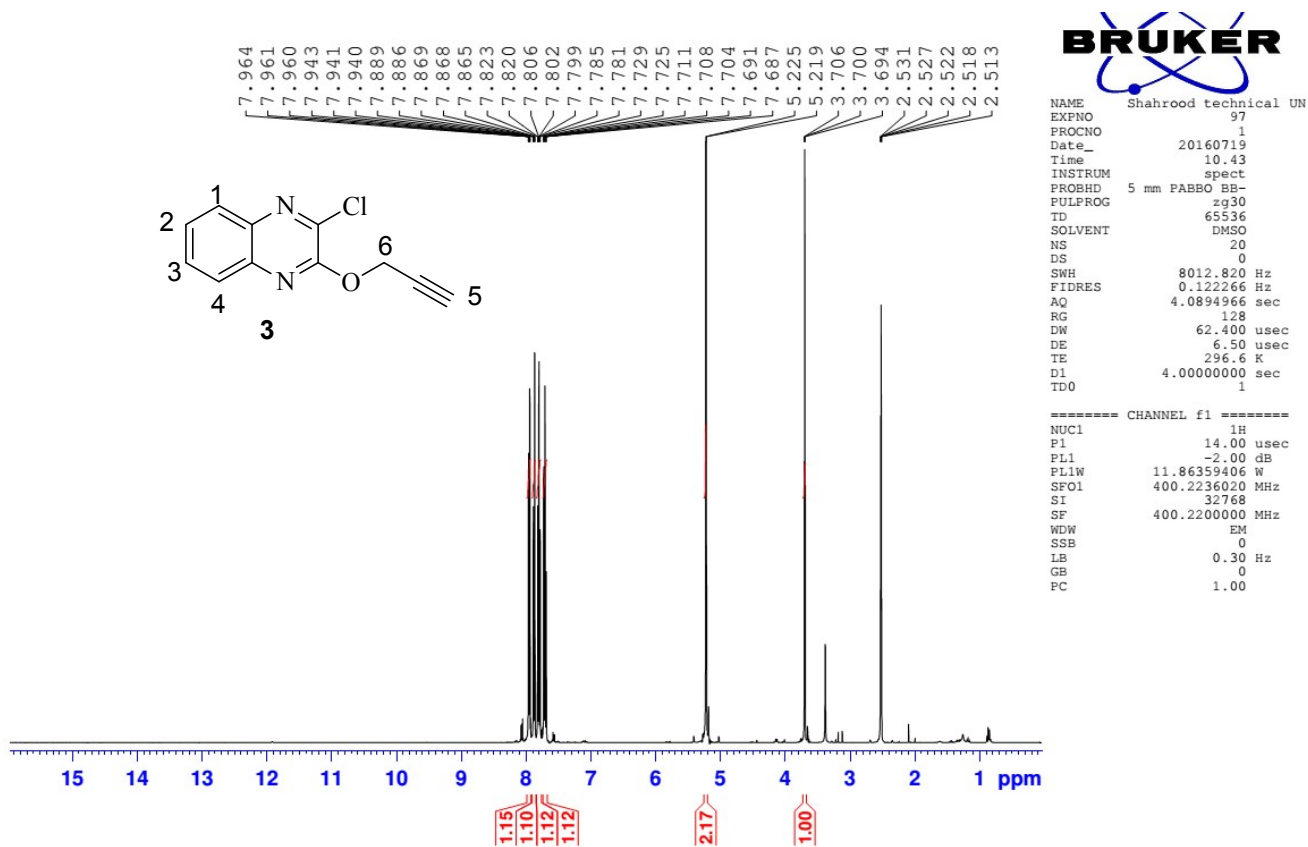


Figure 1: IR spectrum of 3



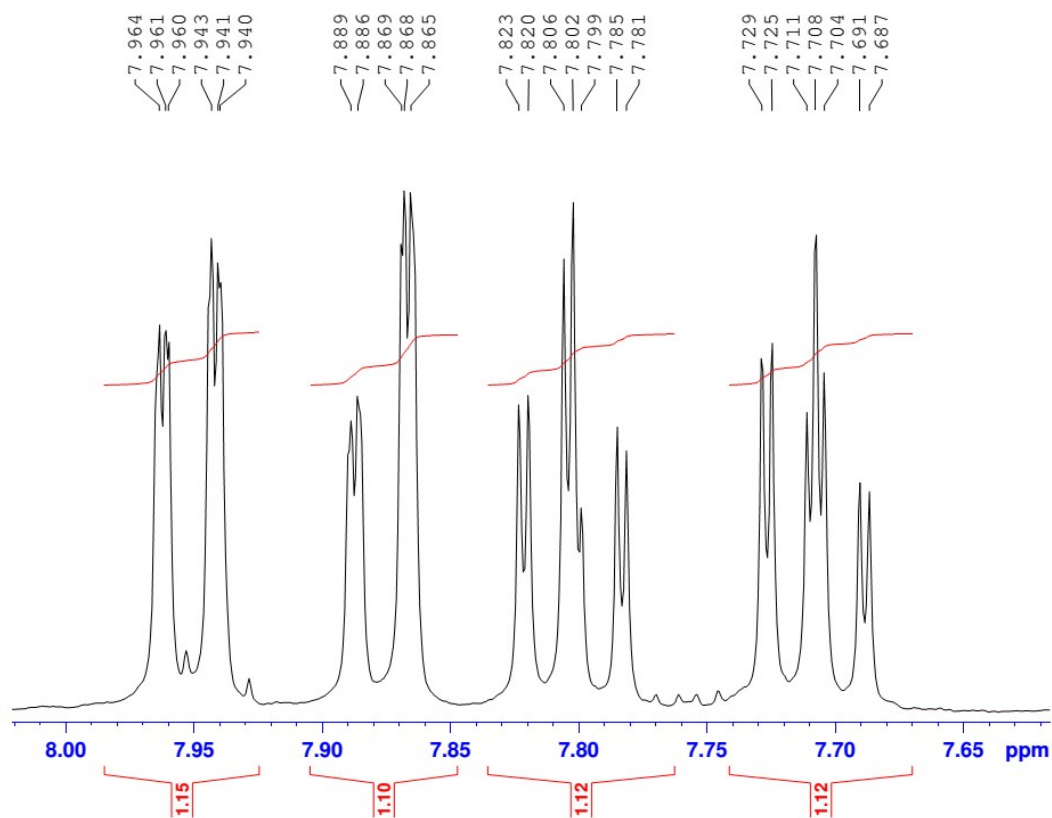
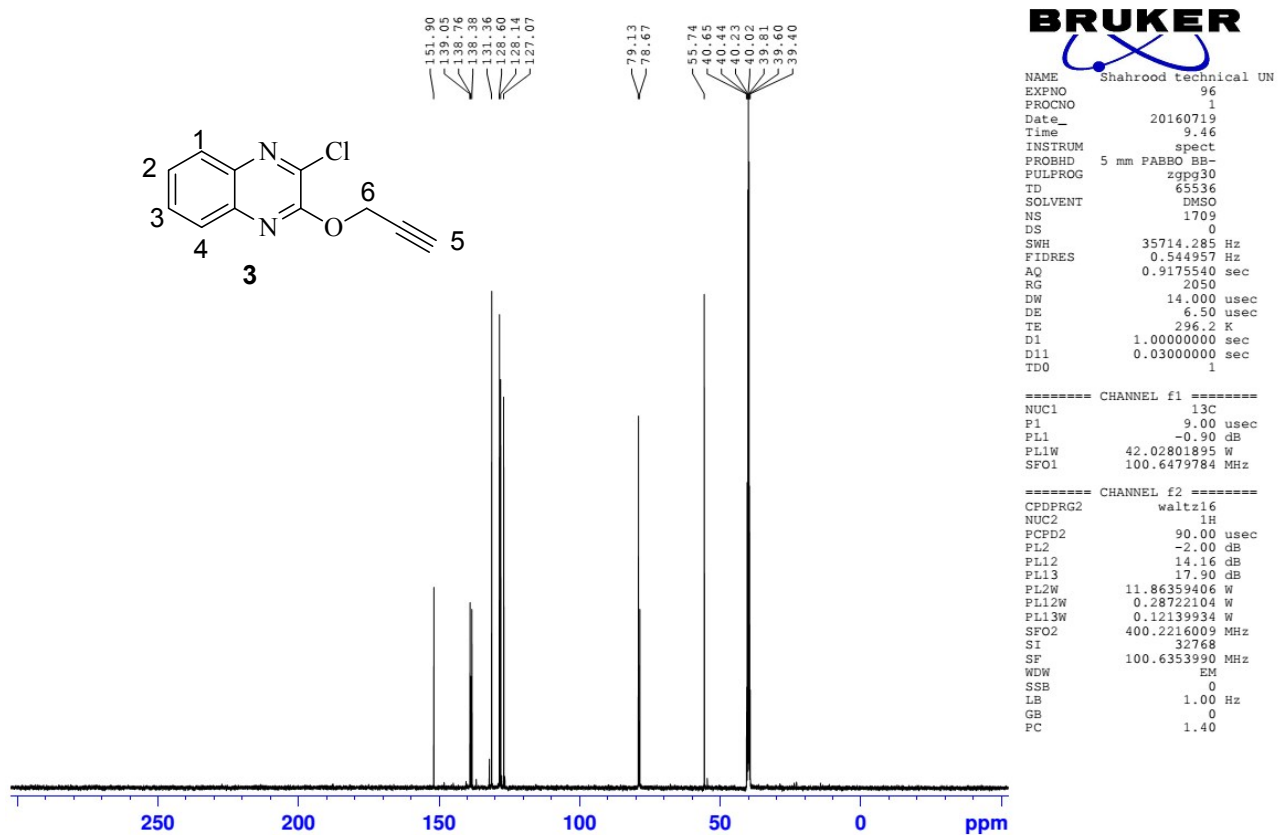


Figure 2: ^1H NMR spectrum of **3**



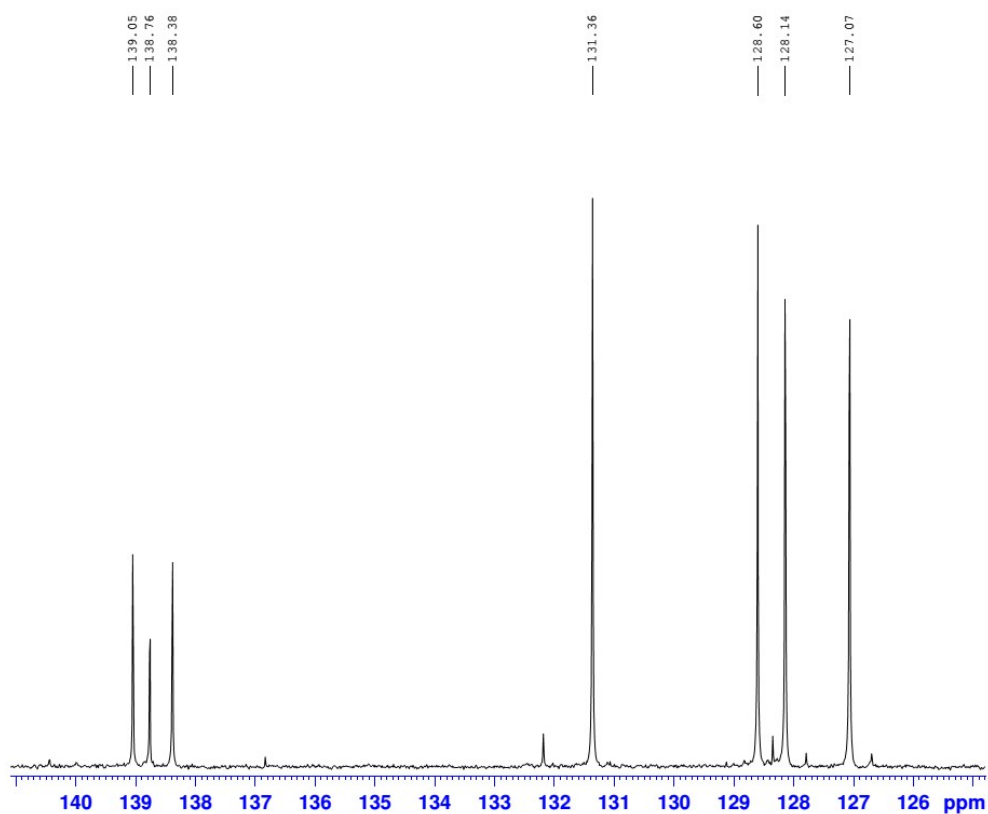


Figure 3: ^{13}C NMR spectrum of **3**

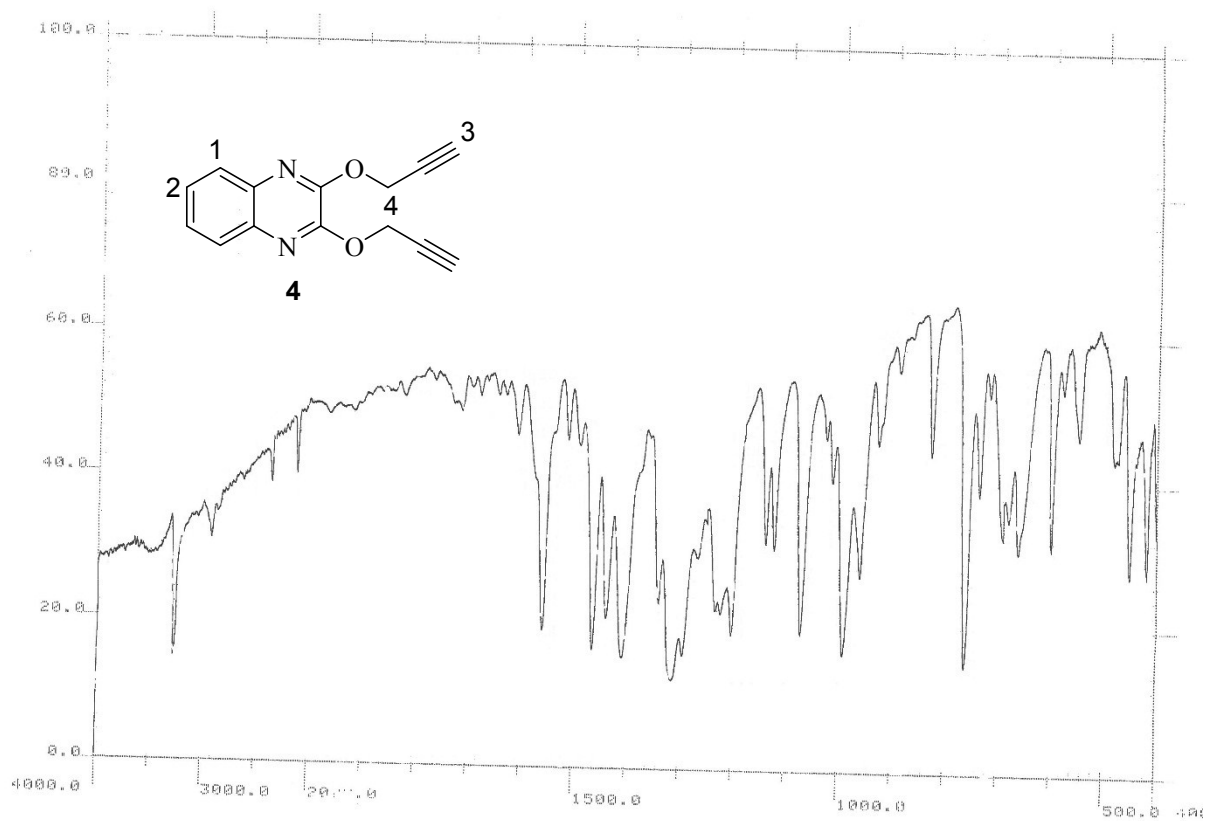


Figure 4: IR spectrum of **4**

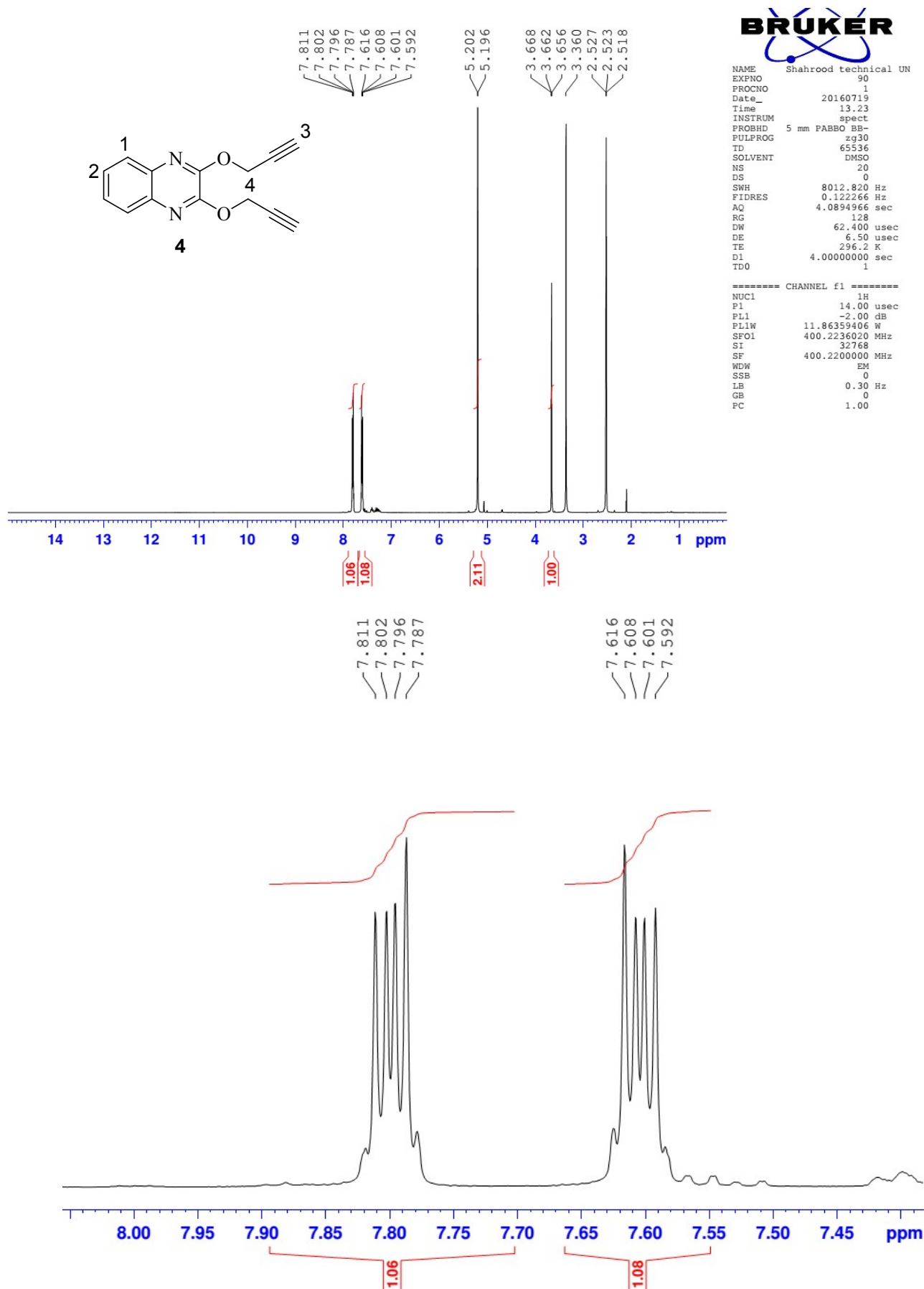


Figure 5: ^1H NMR spectrum of **4**

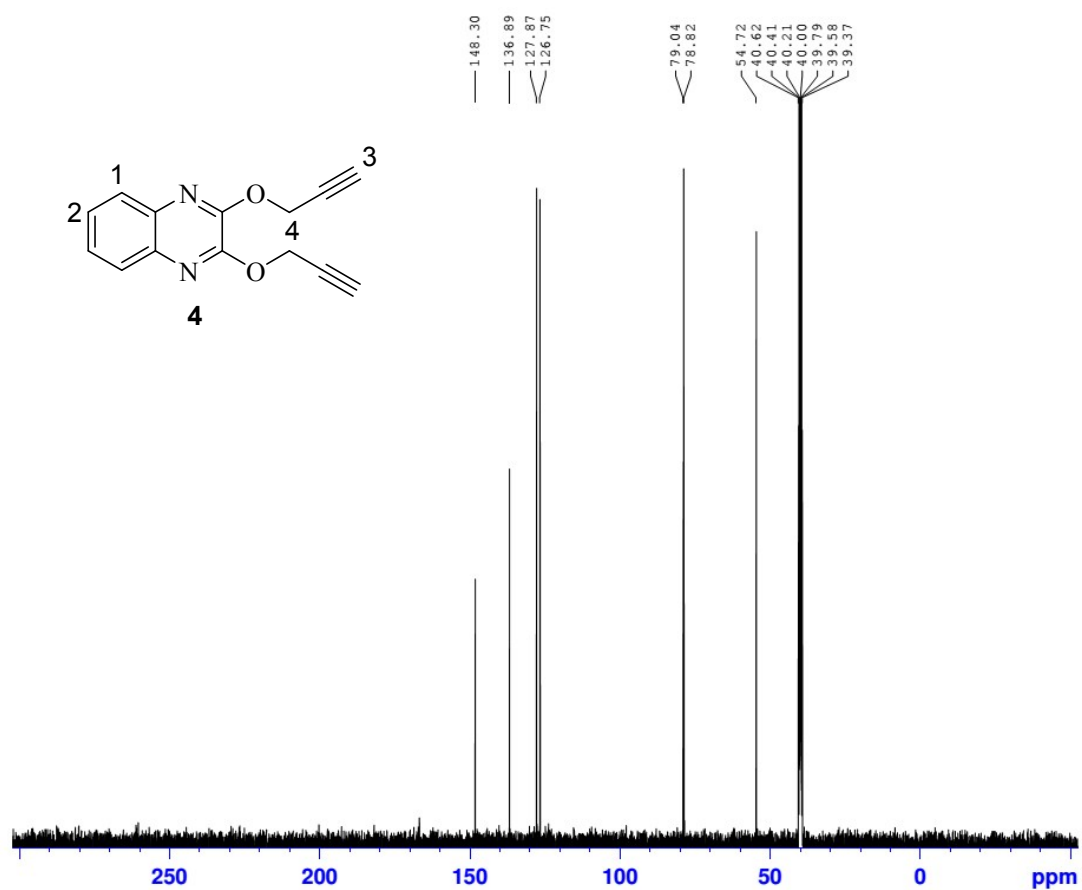


Figure 6: ^{13}C NMR spectrum of **4**

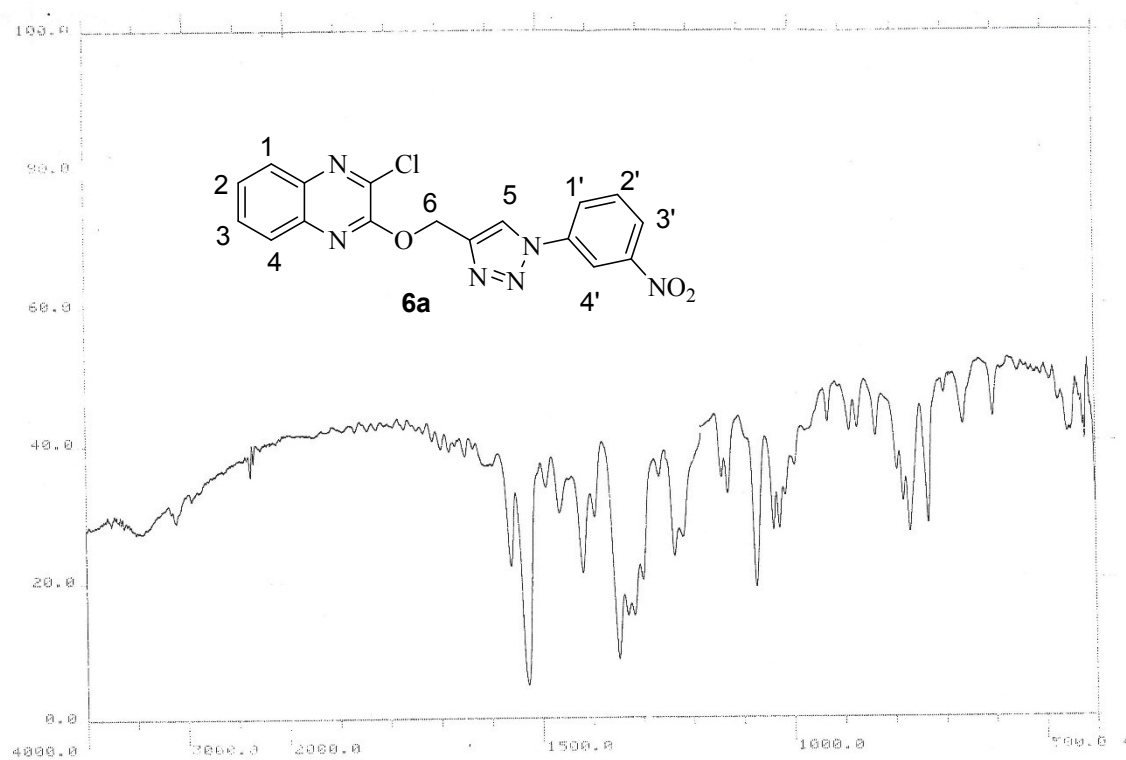
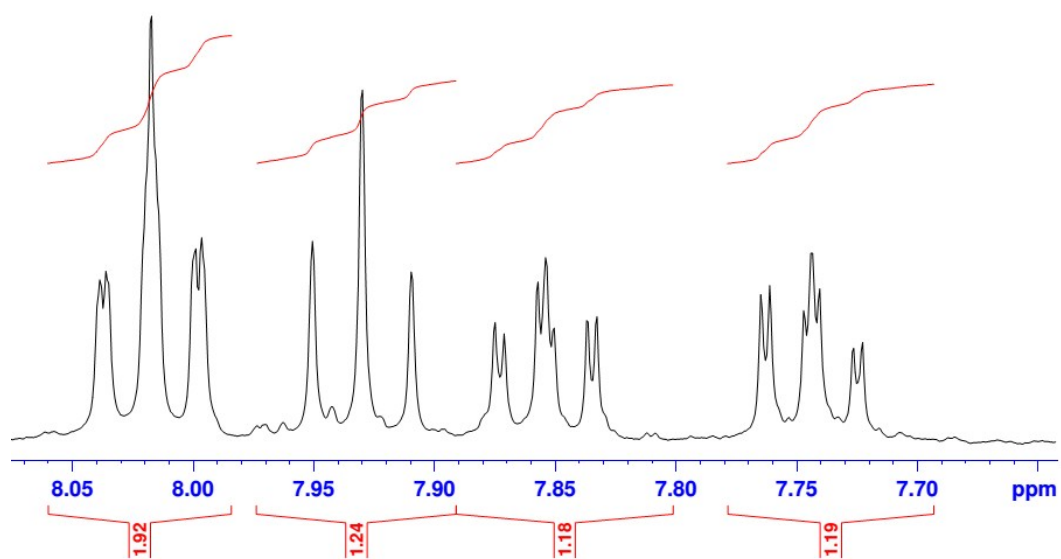
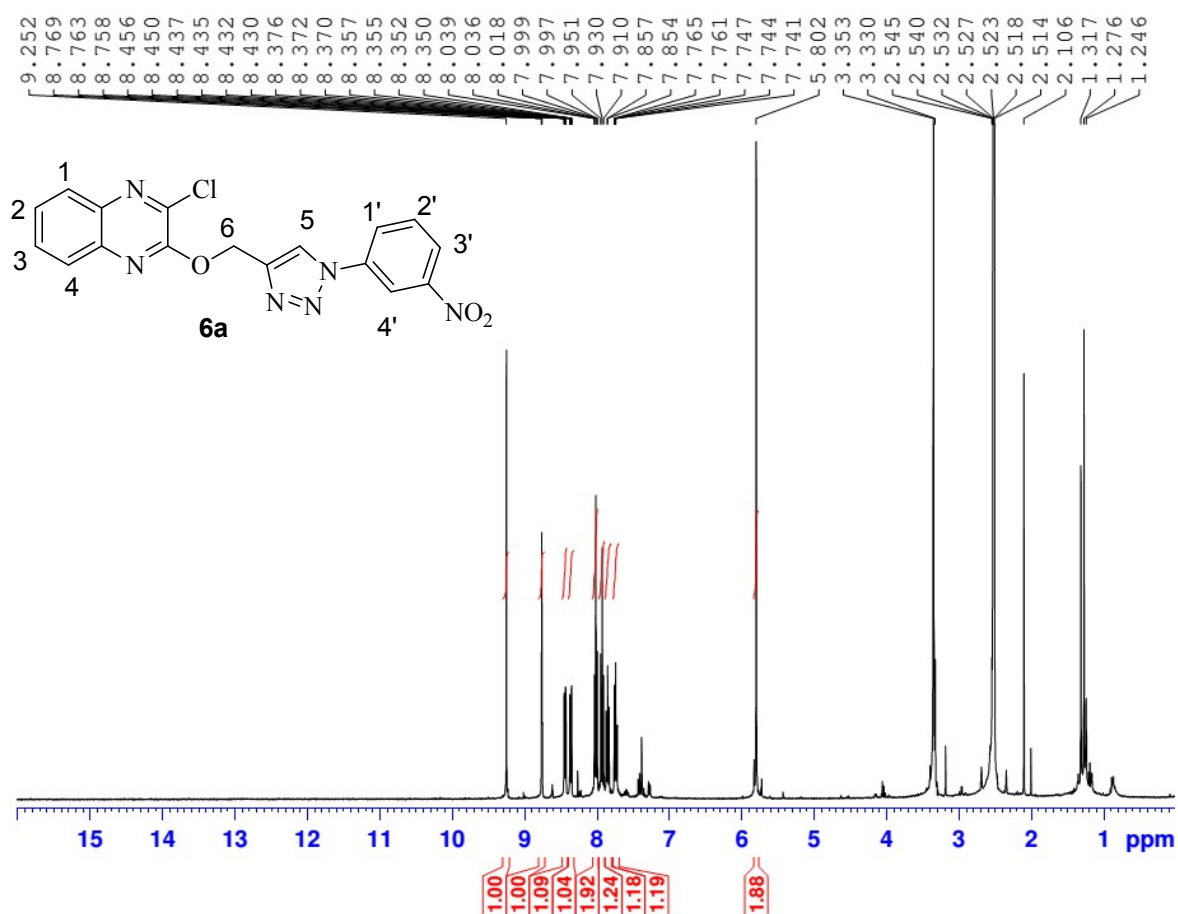


Figure 7: IR spectrum of **6a**



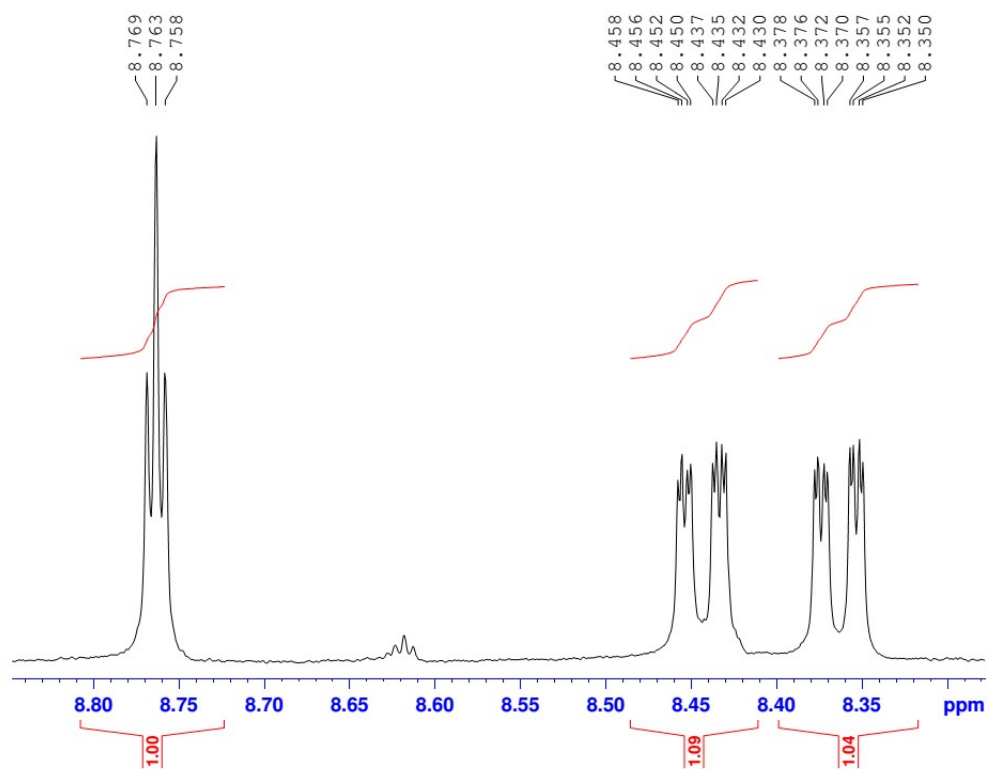
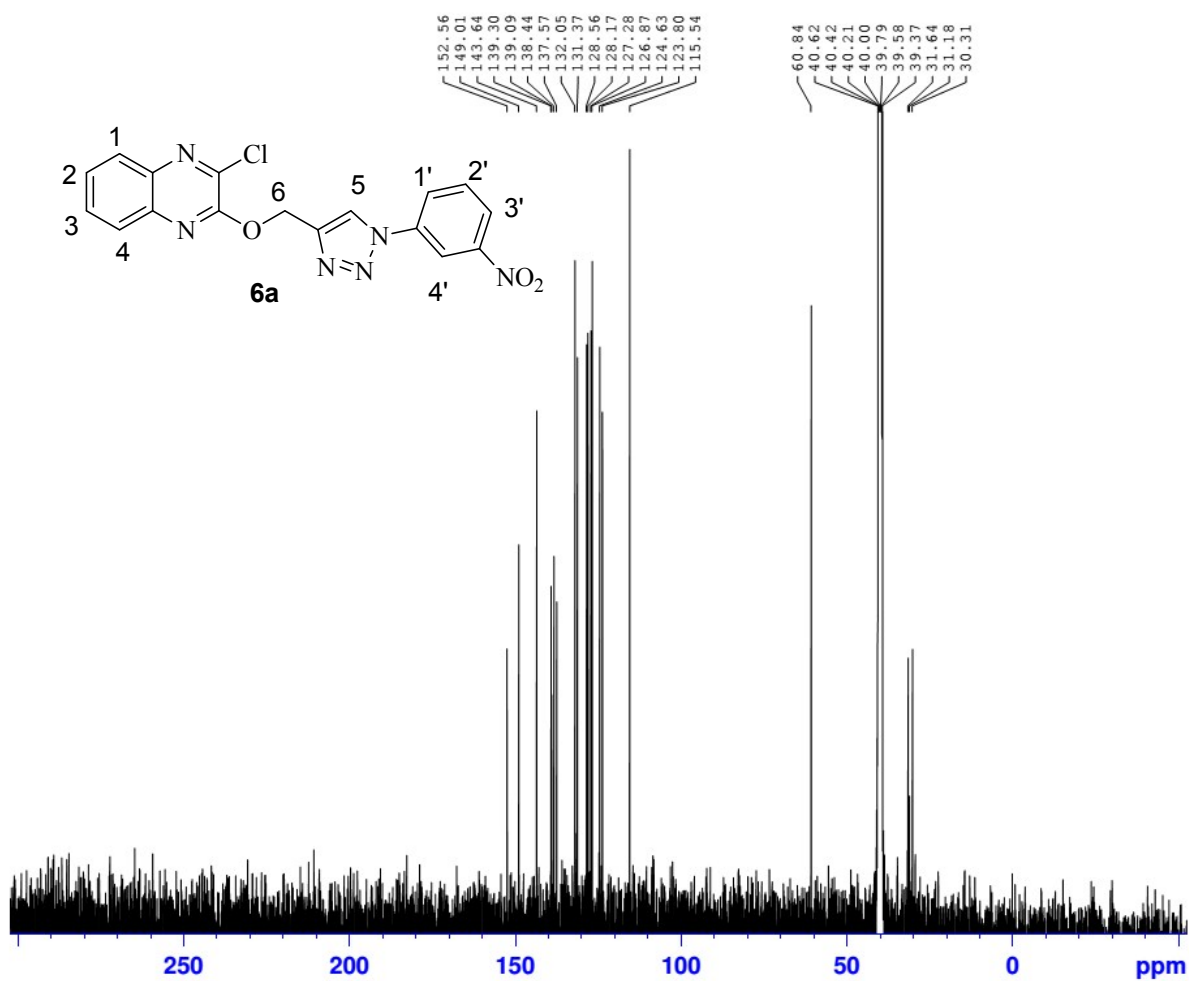


Figure 8: ¹H NMR spectrum of **6a**



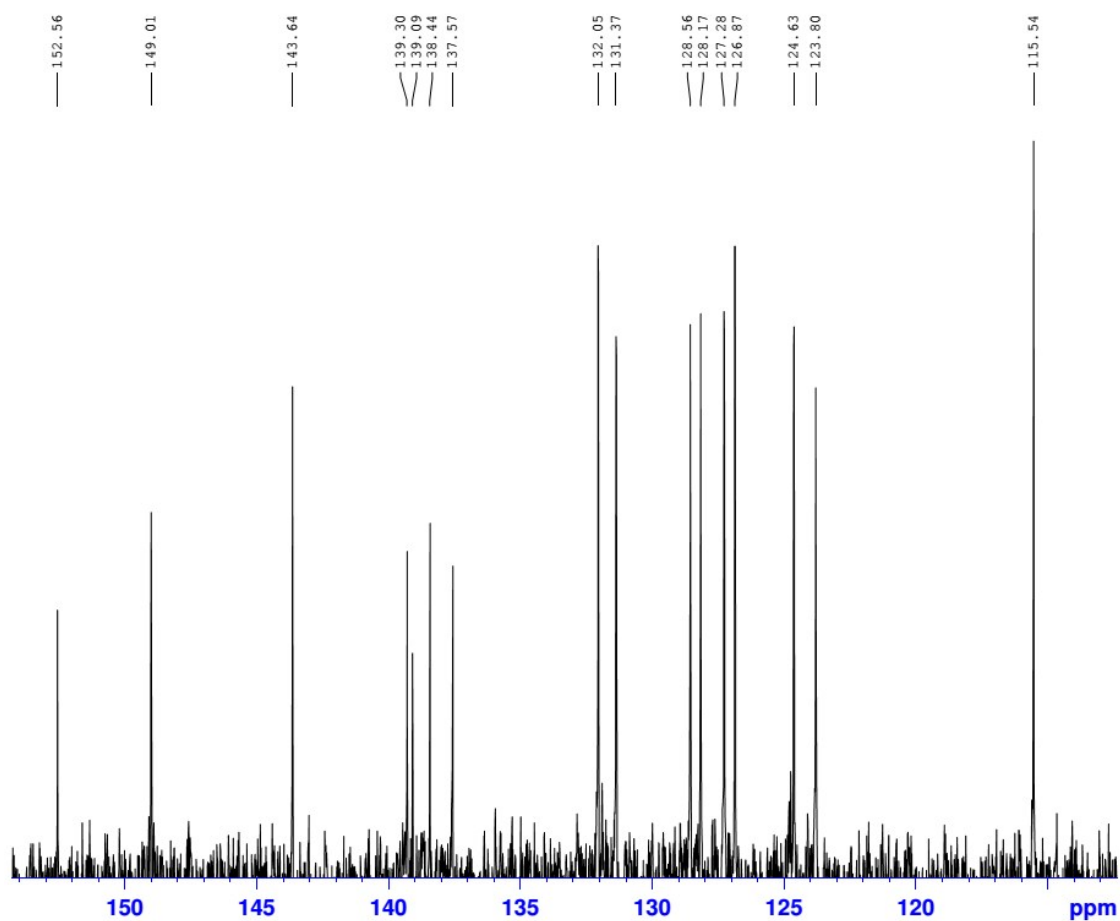


Figure 9: ^{13}C NMR spectrum of 6a

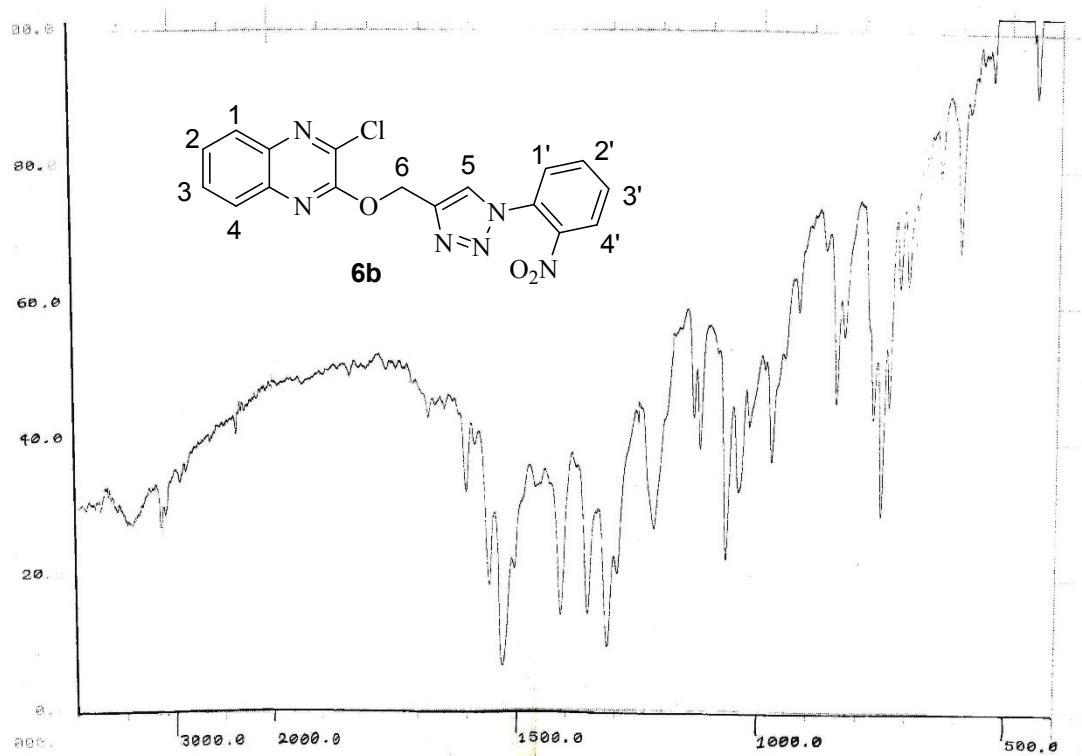


Figure 10: IR spectrum of 6b

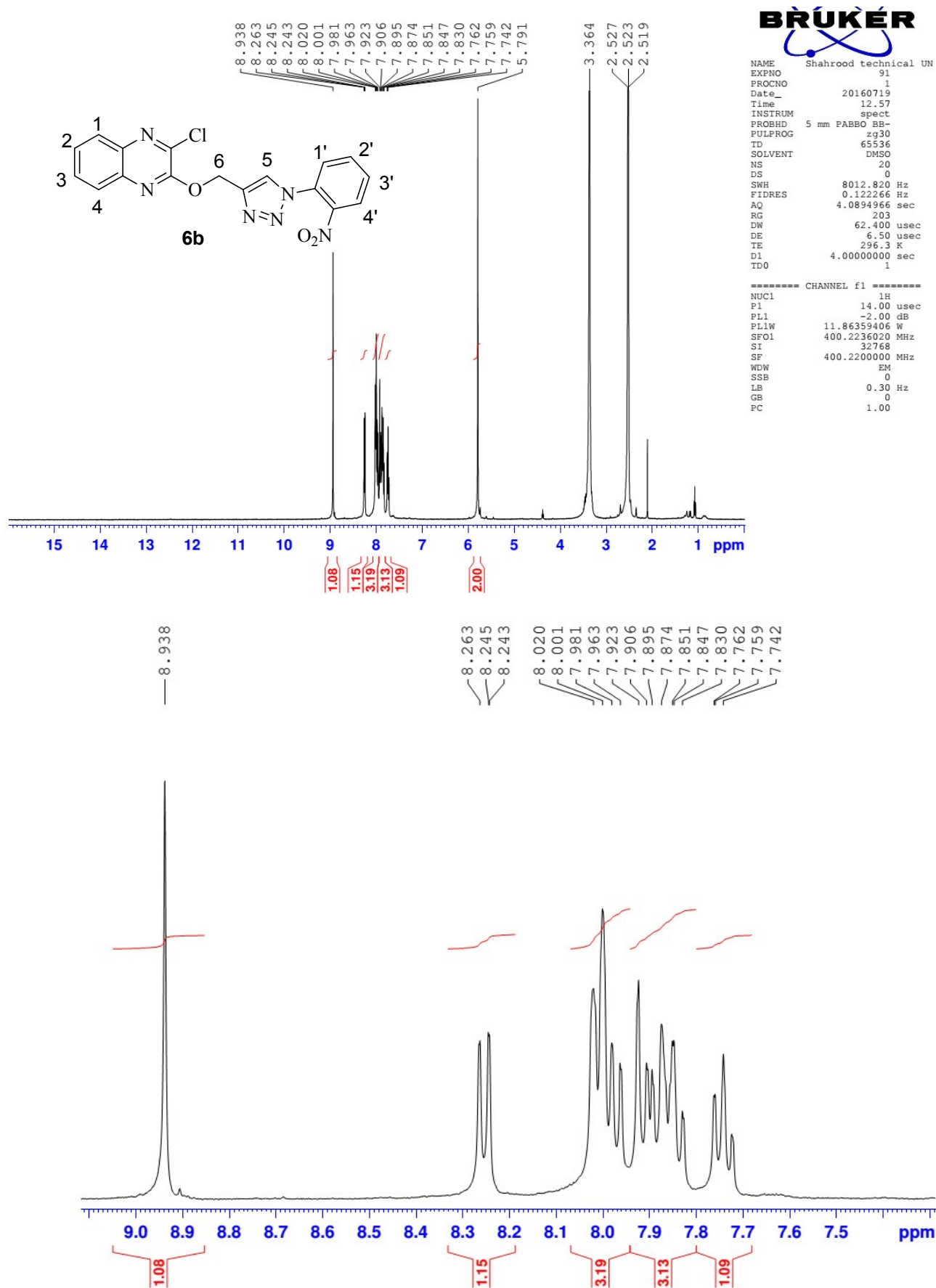


Figure 11: ¹H NMR spectrum of **6b**

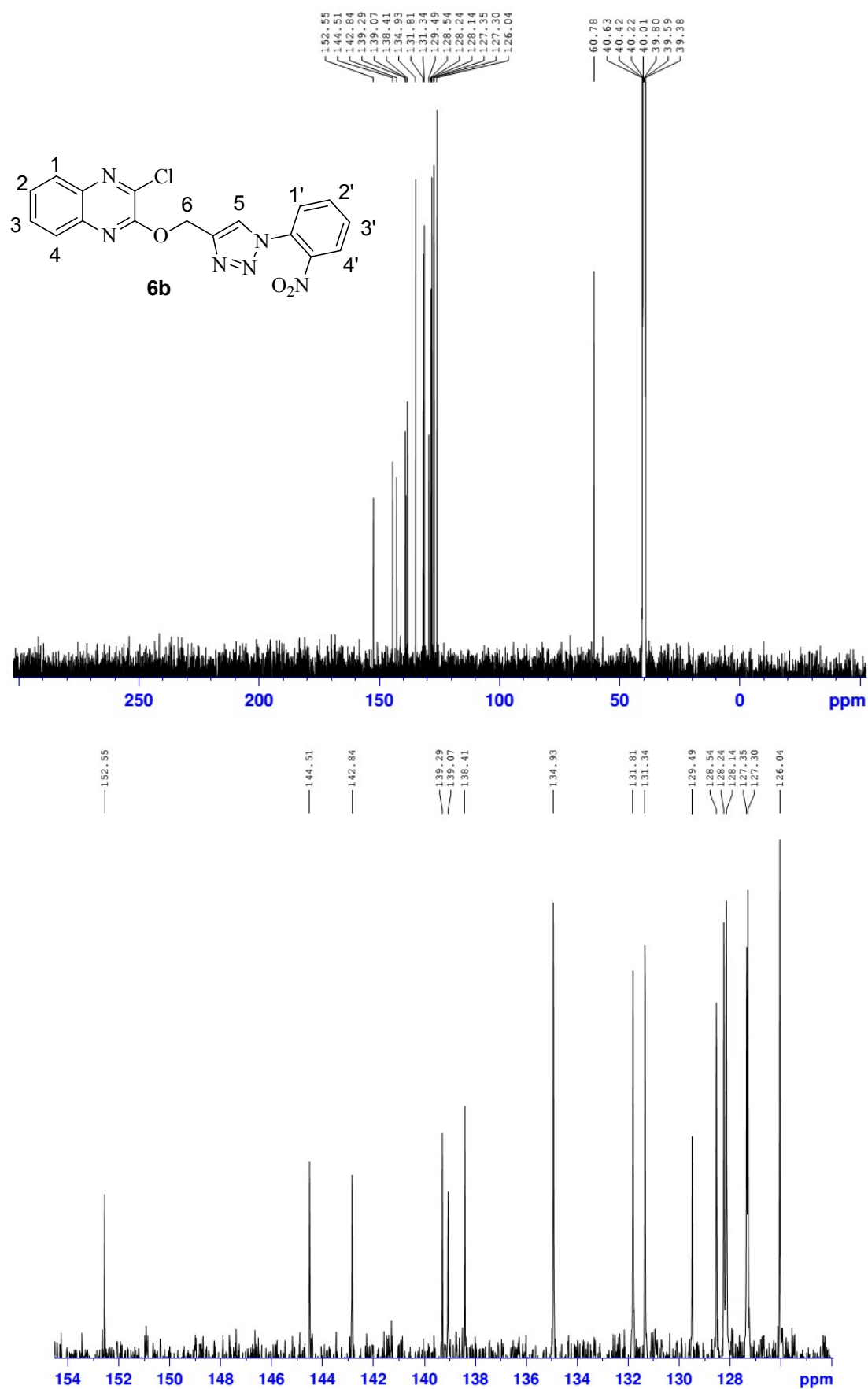


Figure 12: ^{13}C NMR spectrum of **6b**

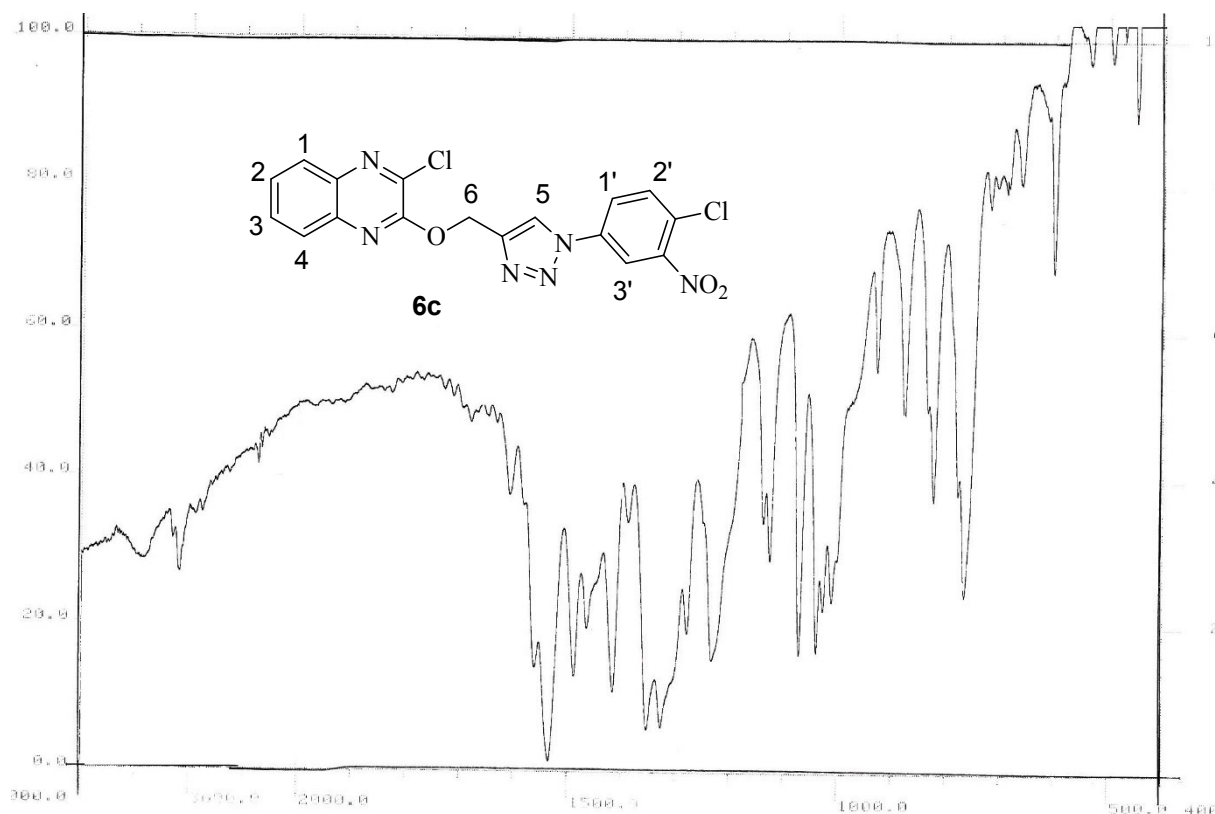
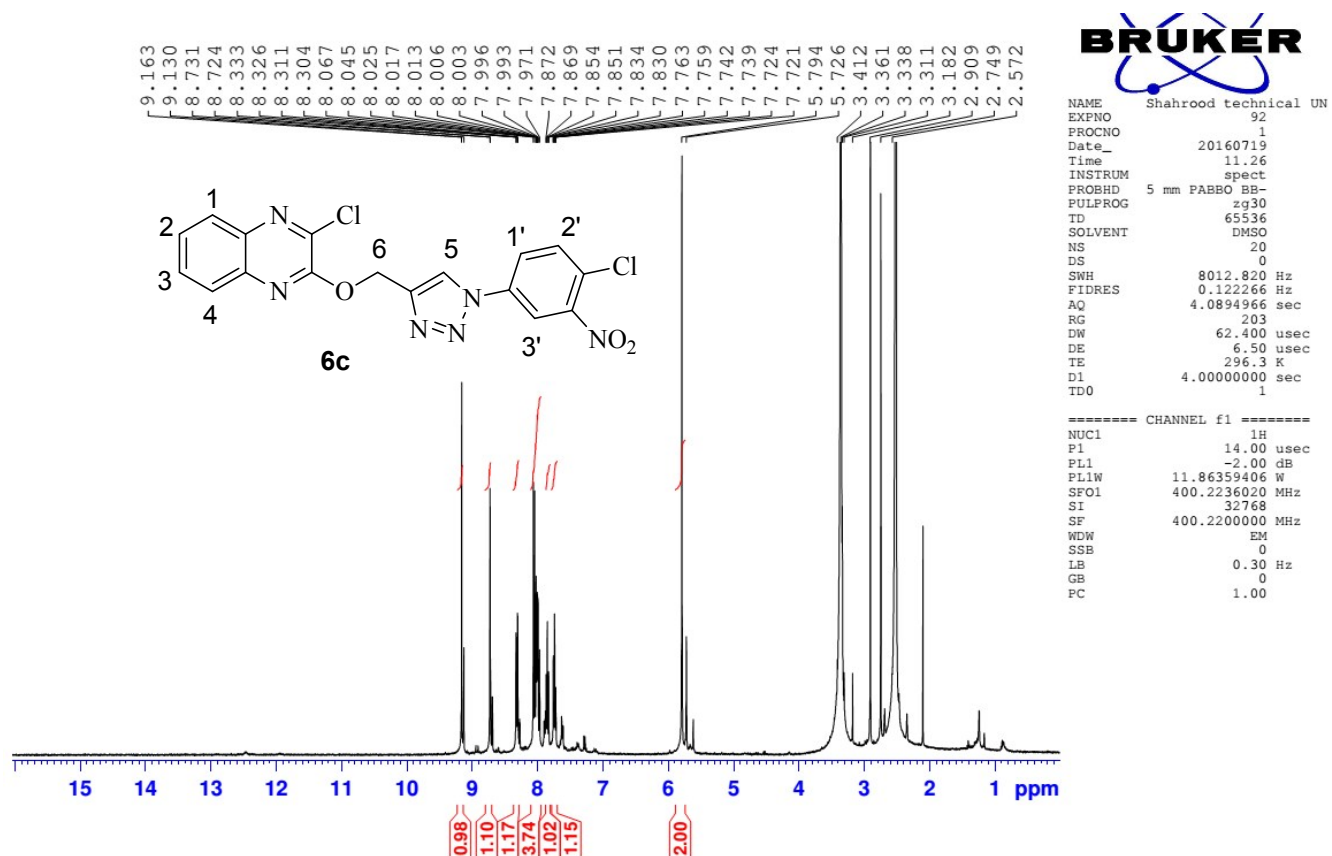


Figure 13: IR spectrum of **6c**



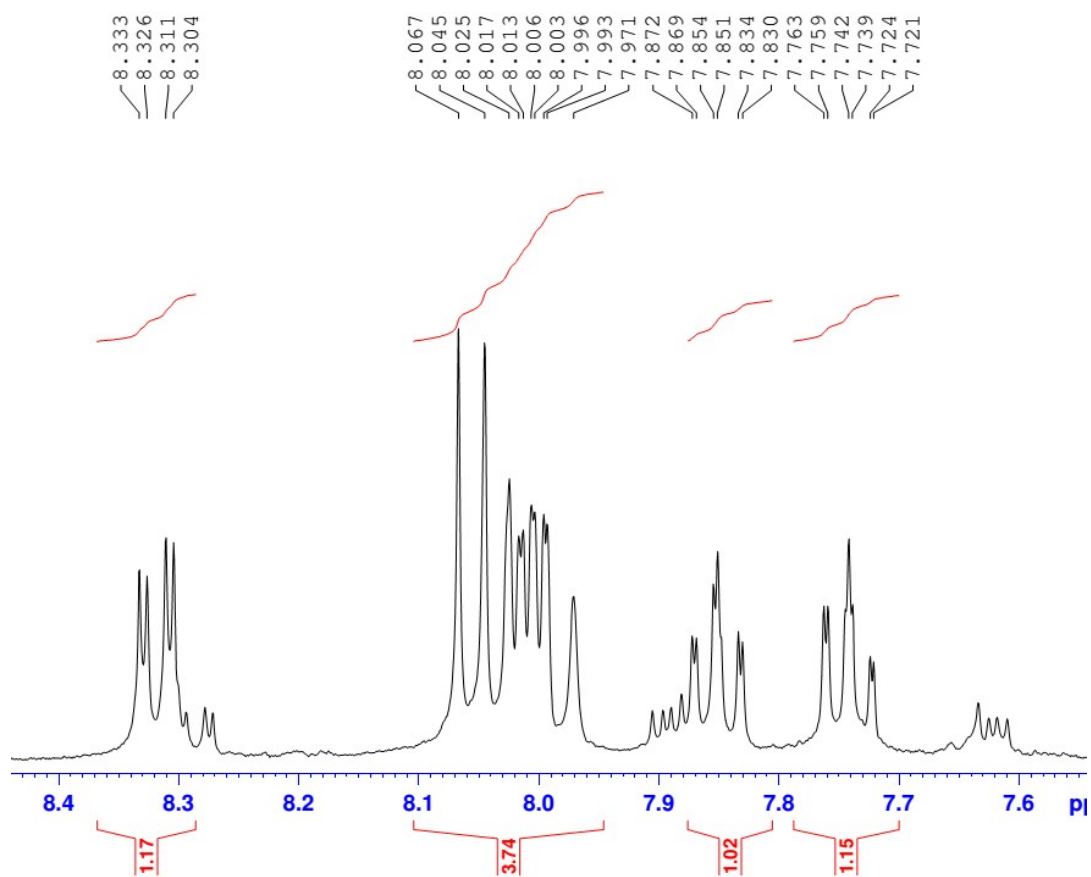
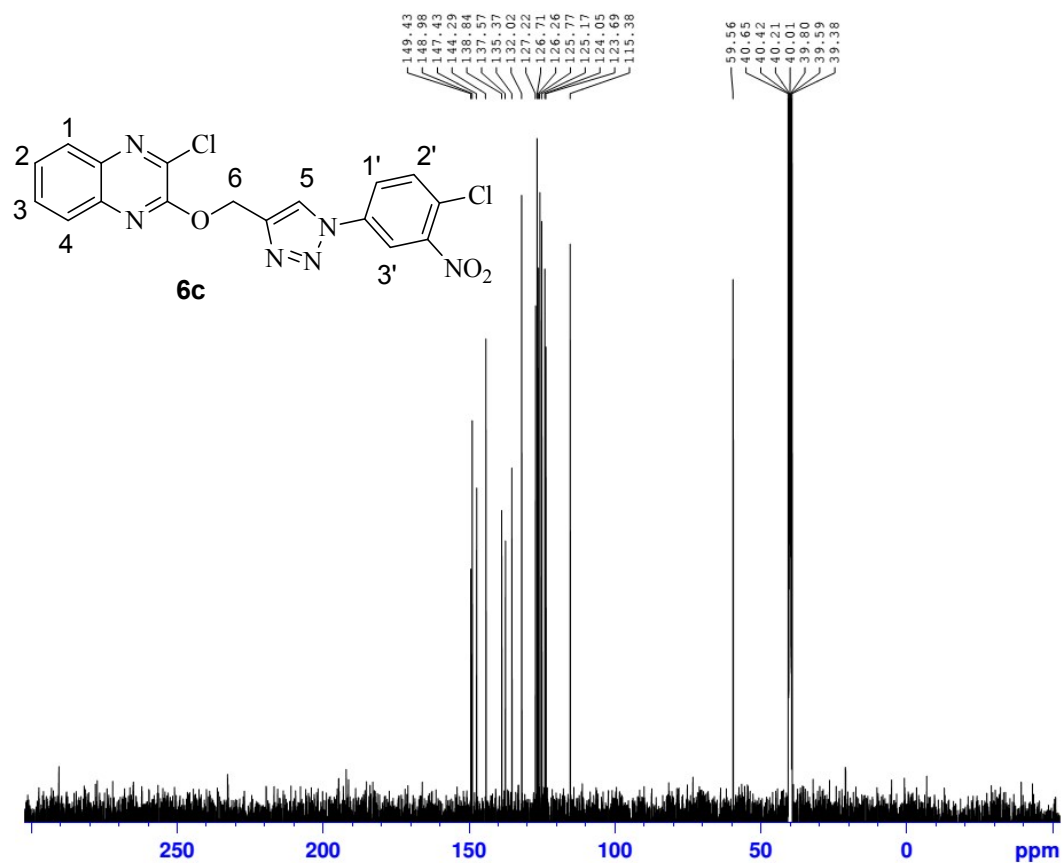


Figure 14: ^1H NMR spectrum of **6c**



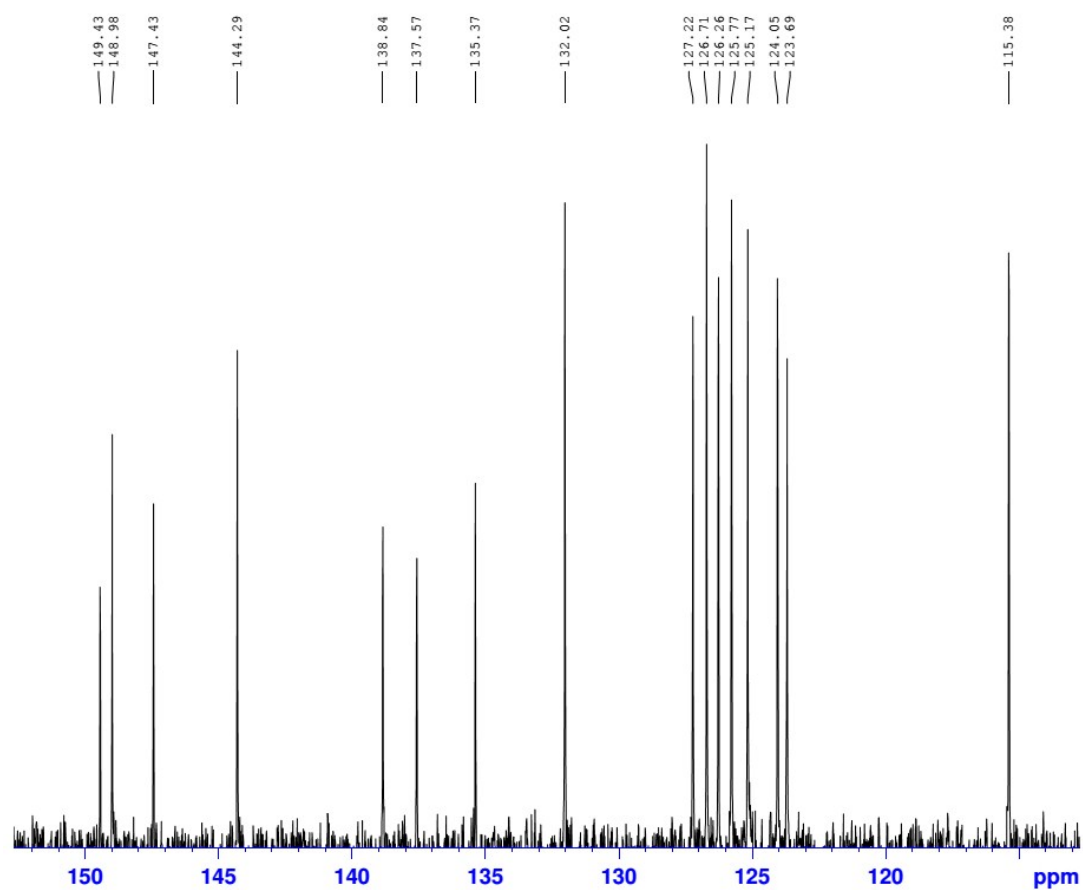


Figure 15: ^{13}C NMR spectrum of **6c**

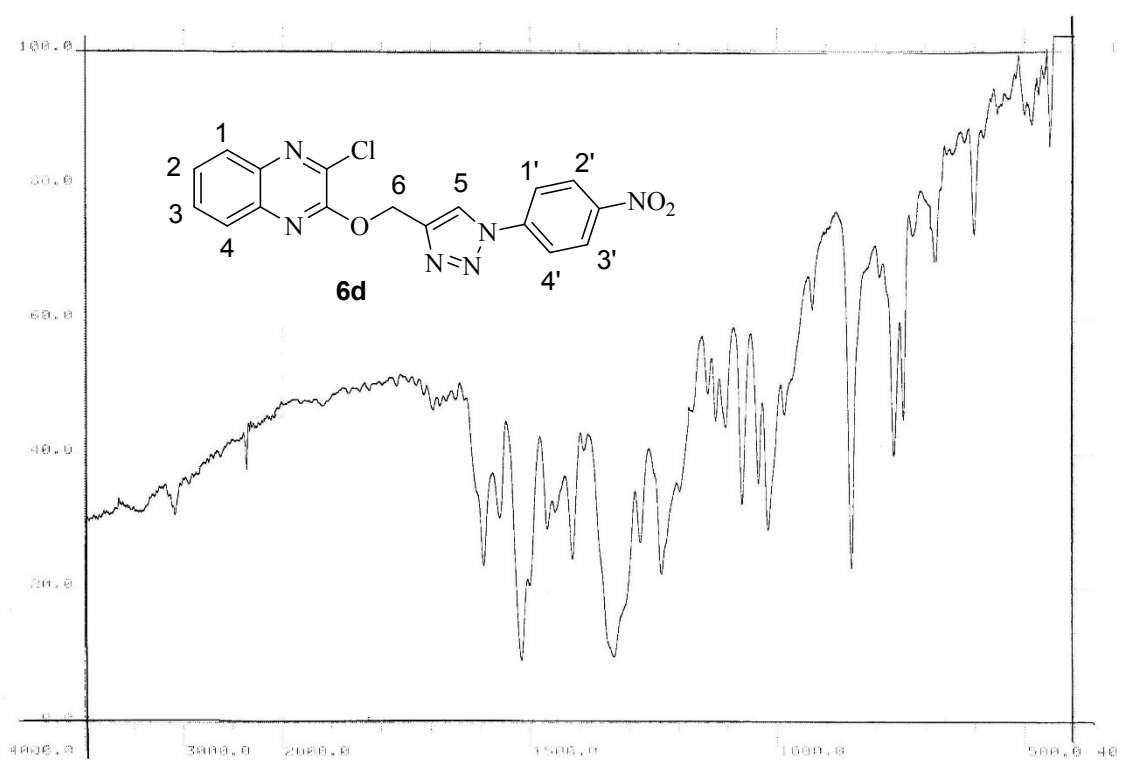


Figure 16: IR spectrum of **6d**

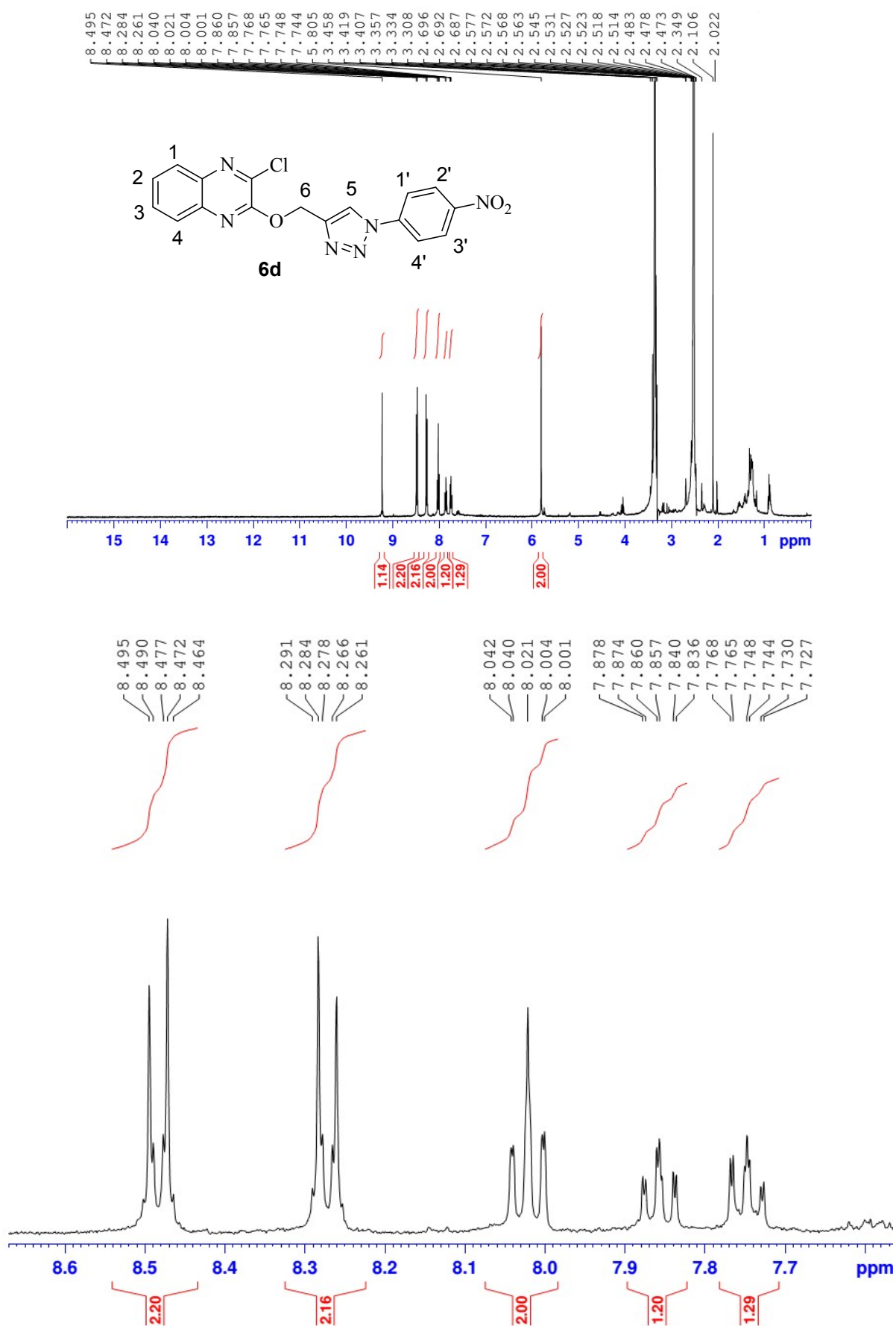


Figure 17: ^1H NMR spectrum of 6d

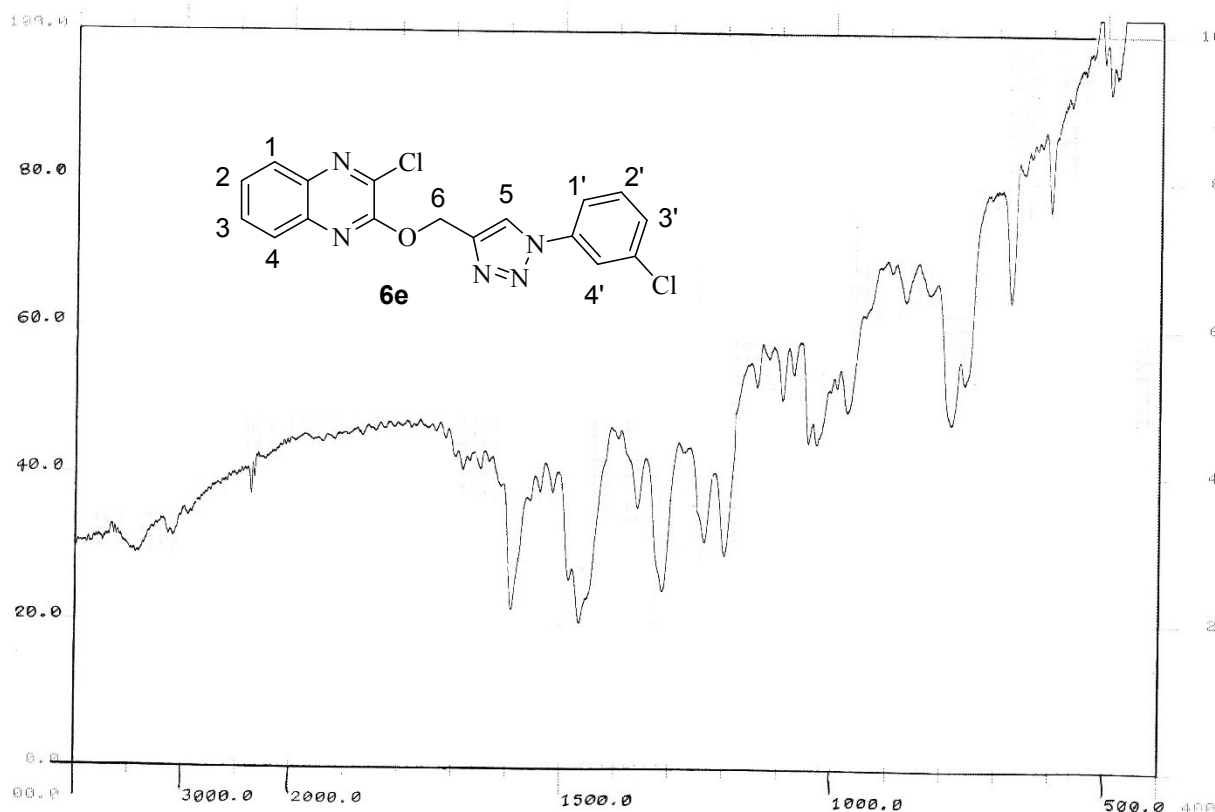
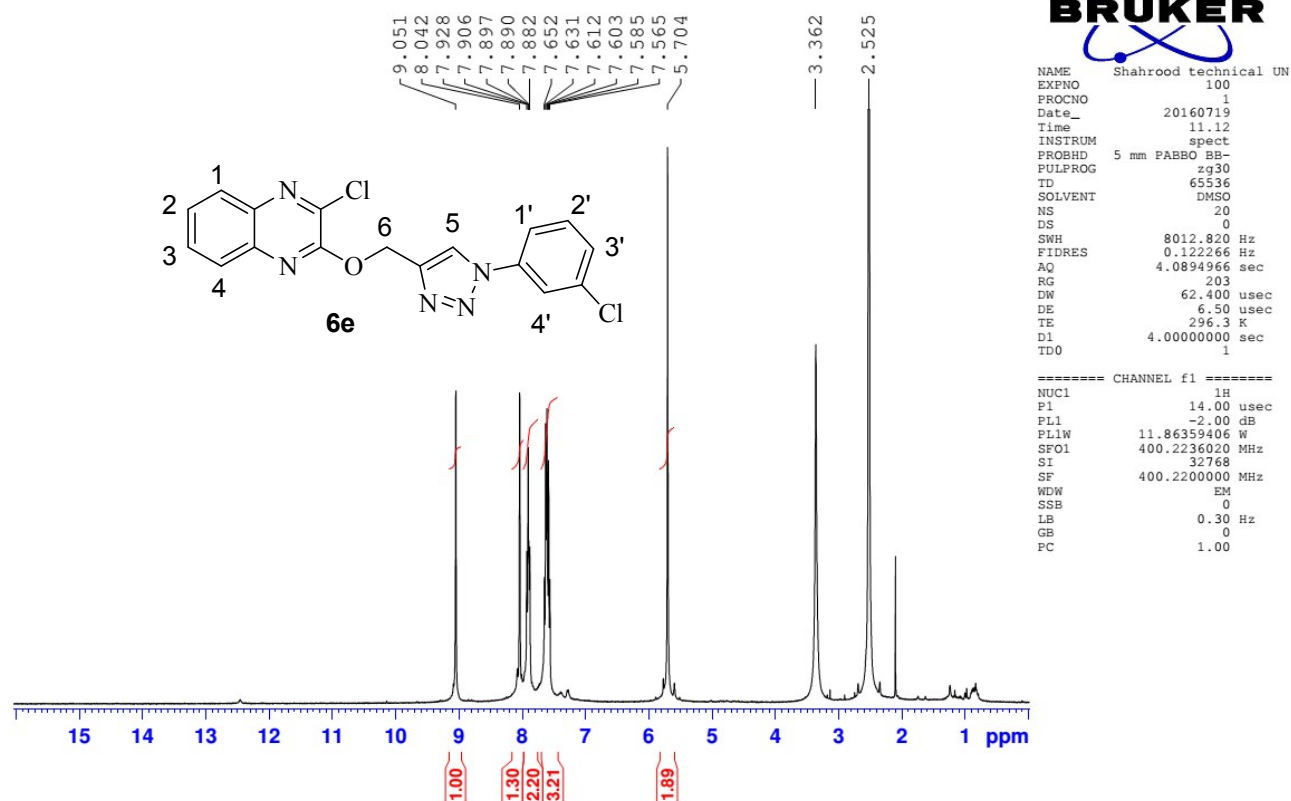


Figure 18: IR spectrum of **6e**



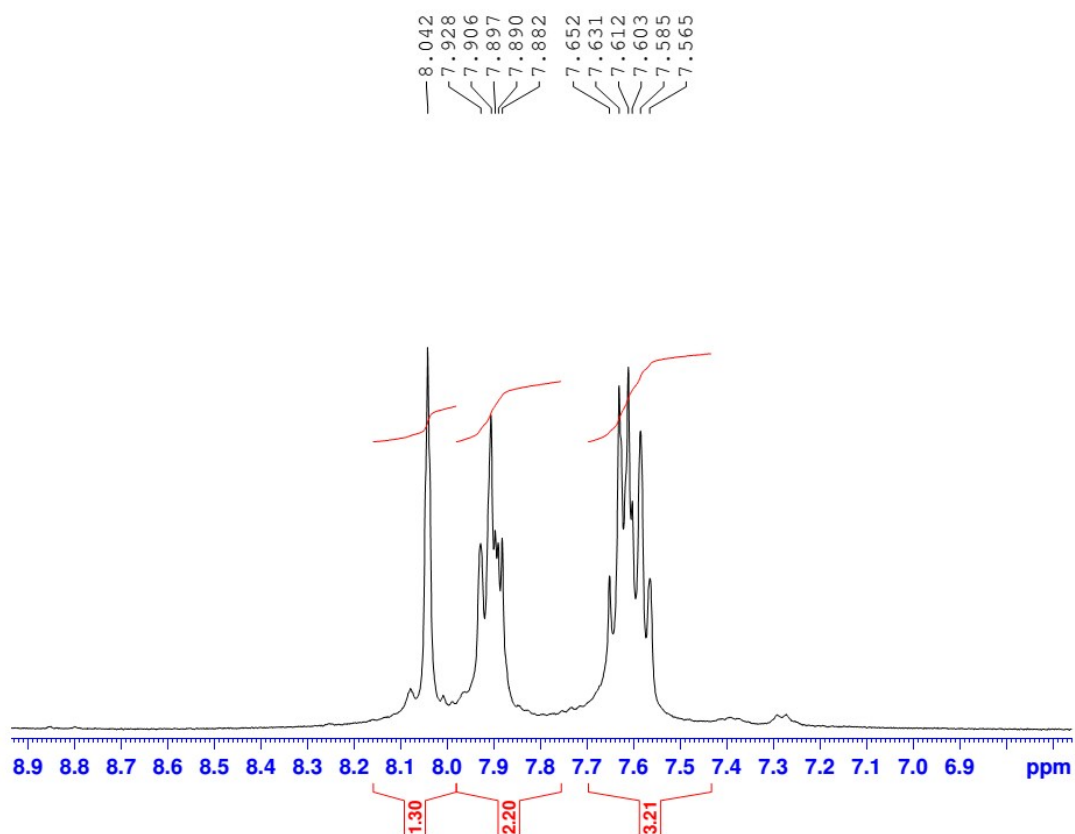
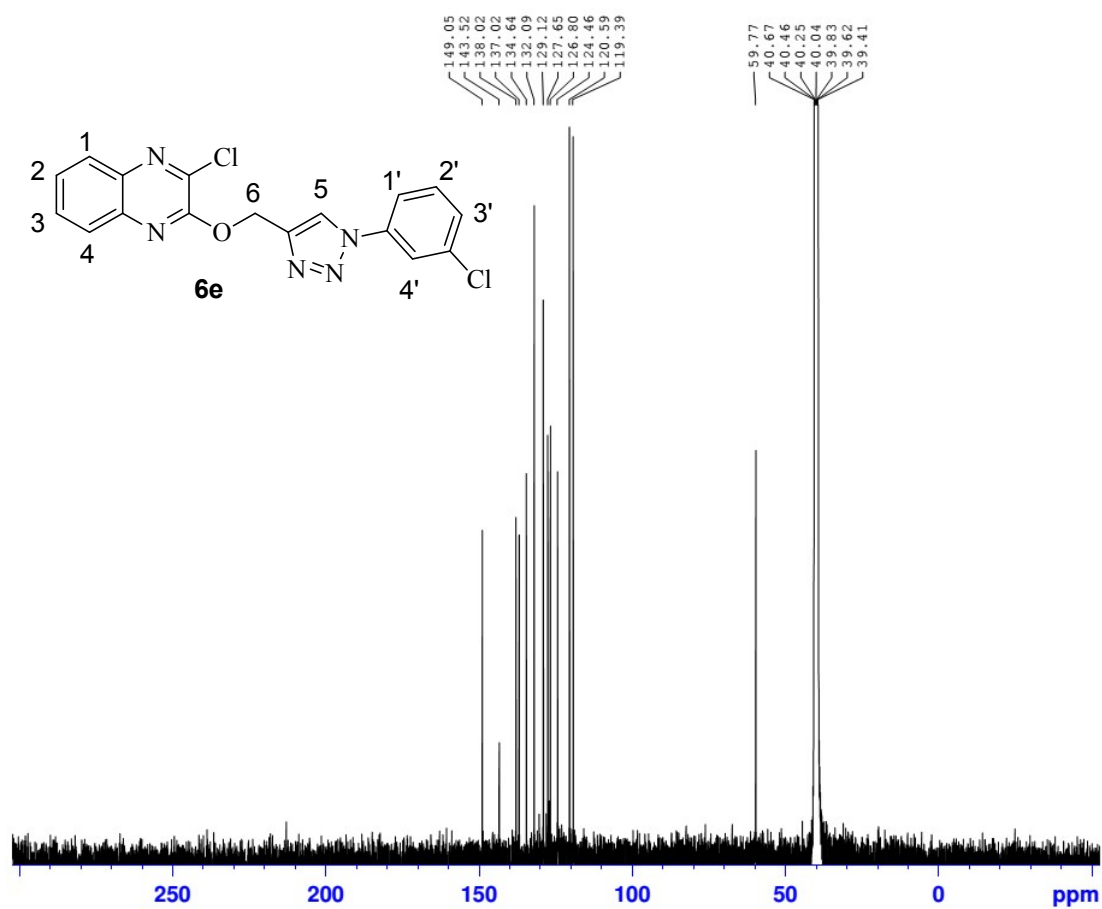


Figure 19: ^1H NMR spectrum of **6e**



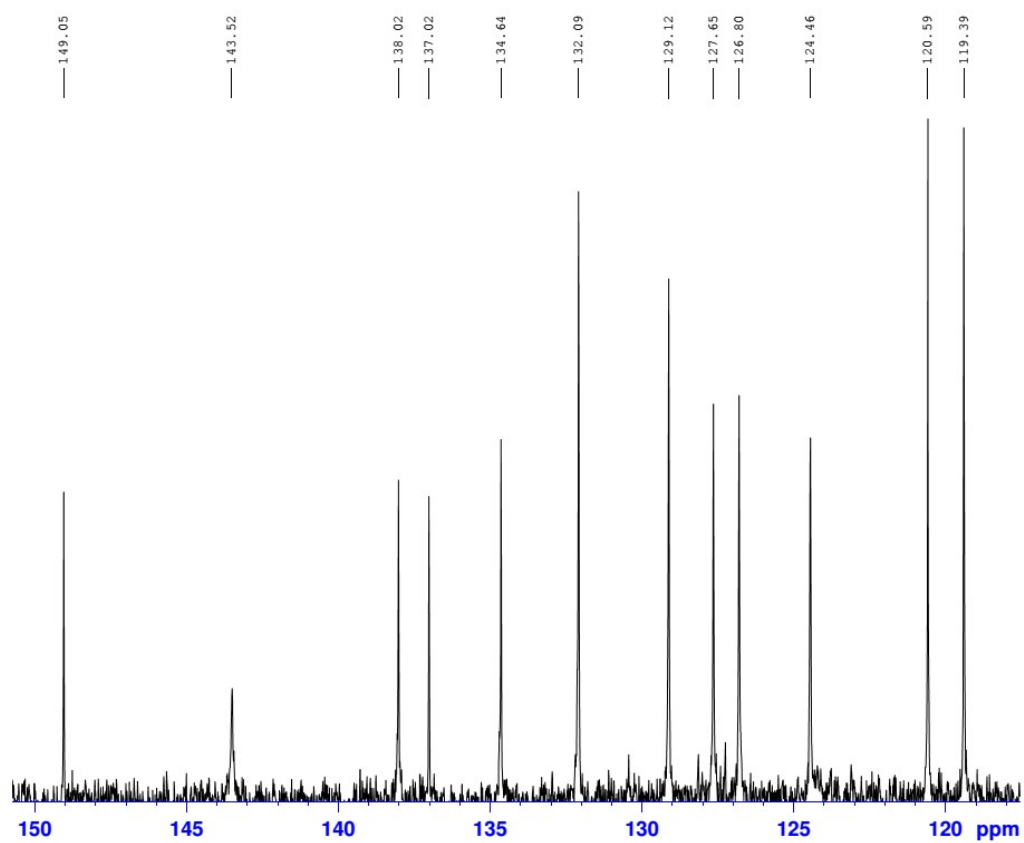


Figure 20: ^{13}C NMR spectrum of 6e

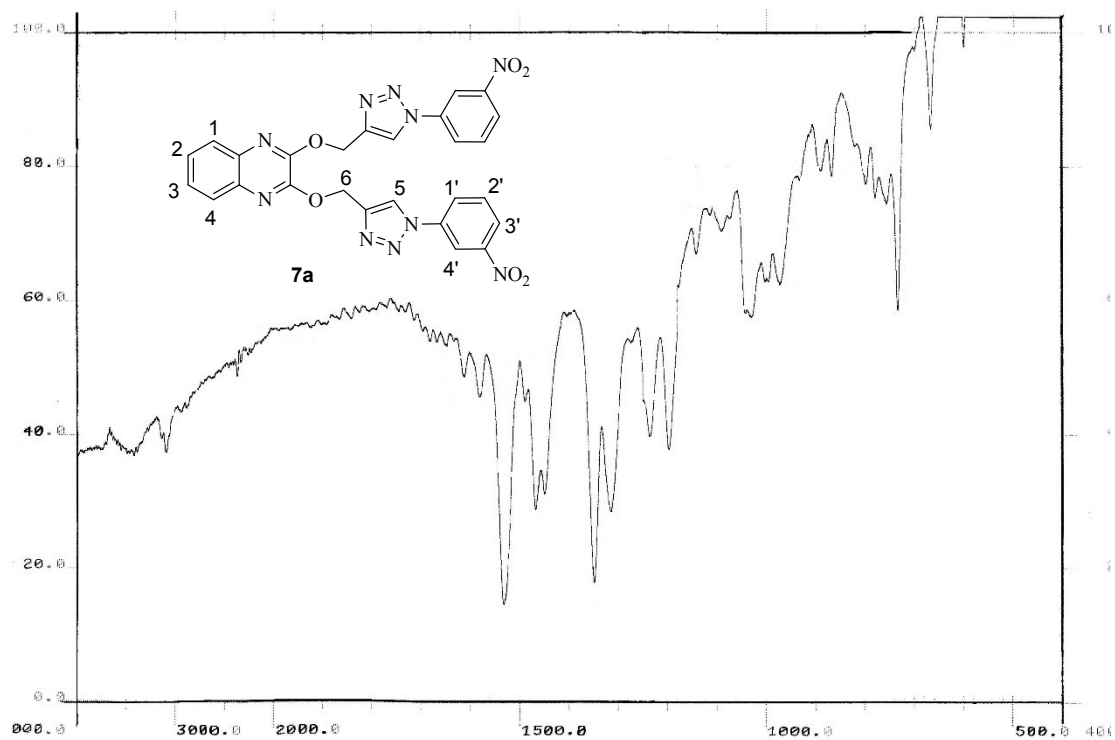


Figure 21: IR spectrum of 7a

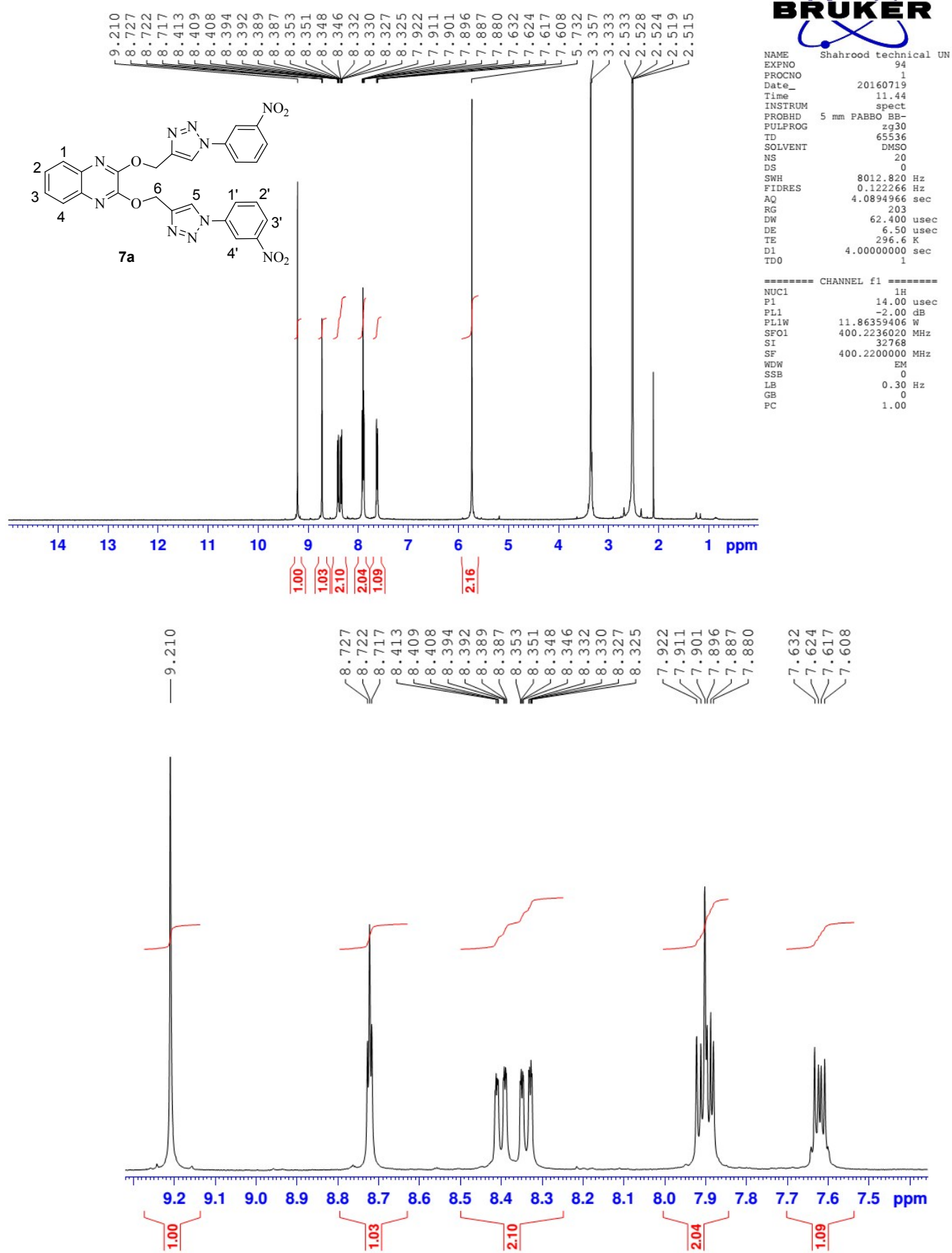


Figure 22: ¹H NMR spectrum of 7a

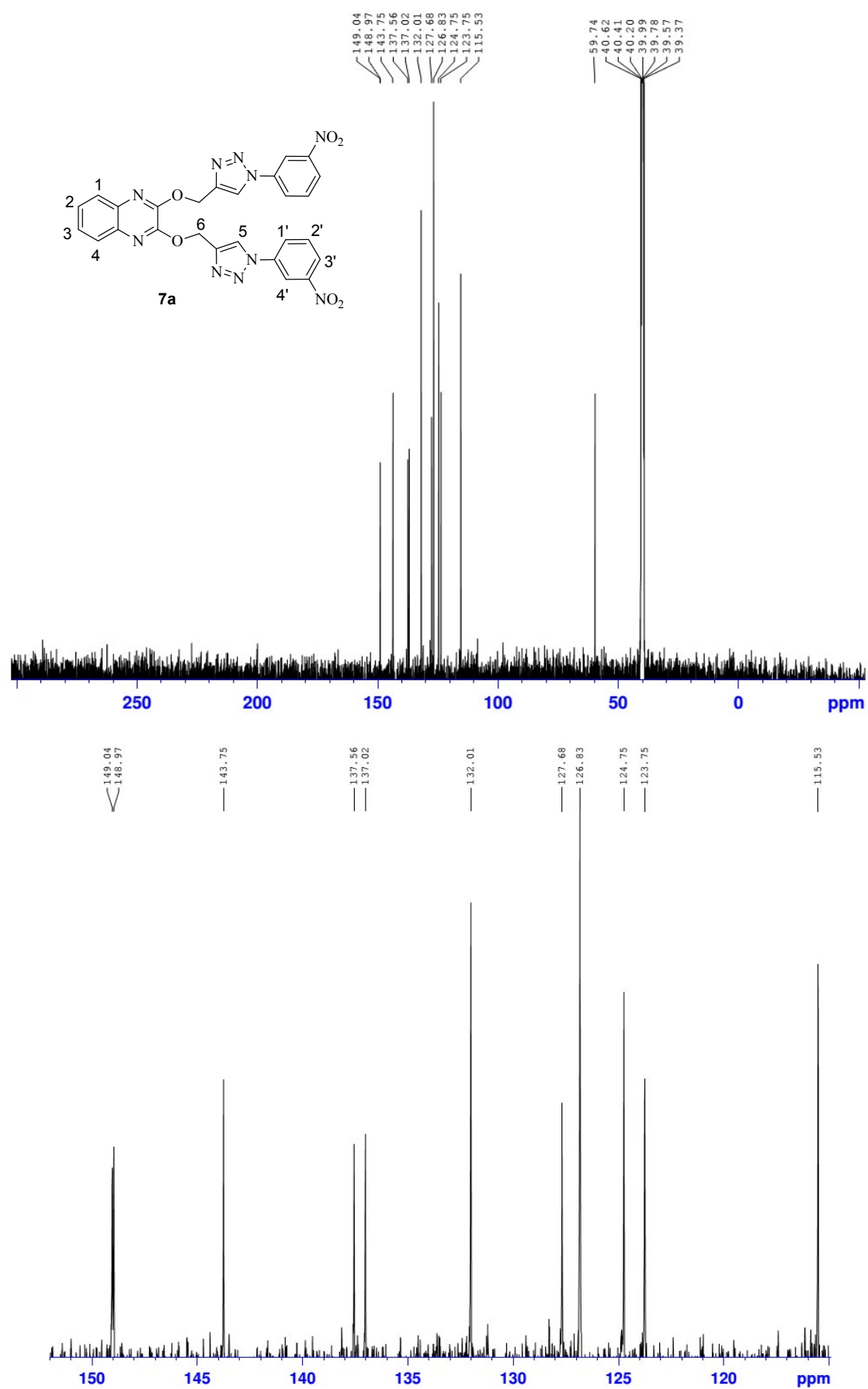


Figure 23: ^{13}C NMR spectrum of **7a**

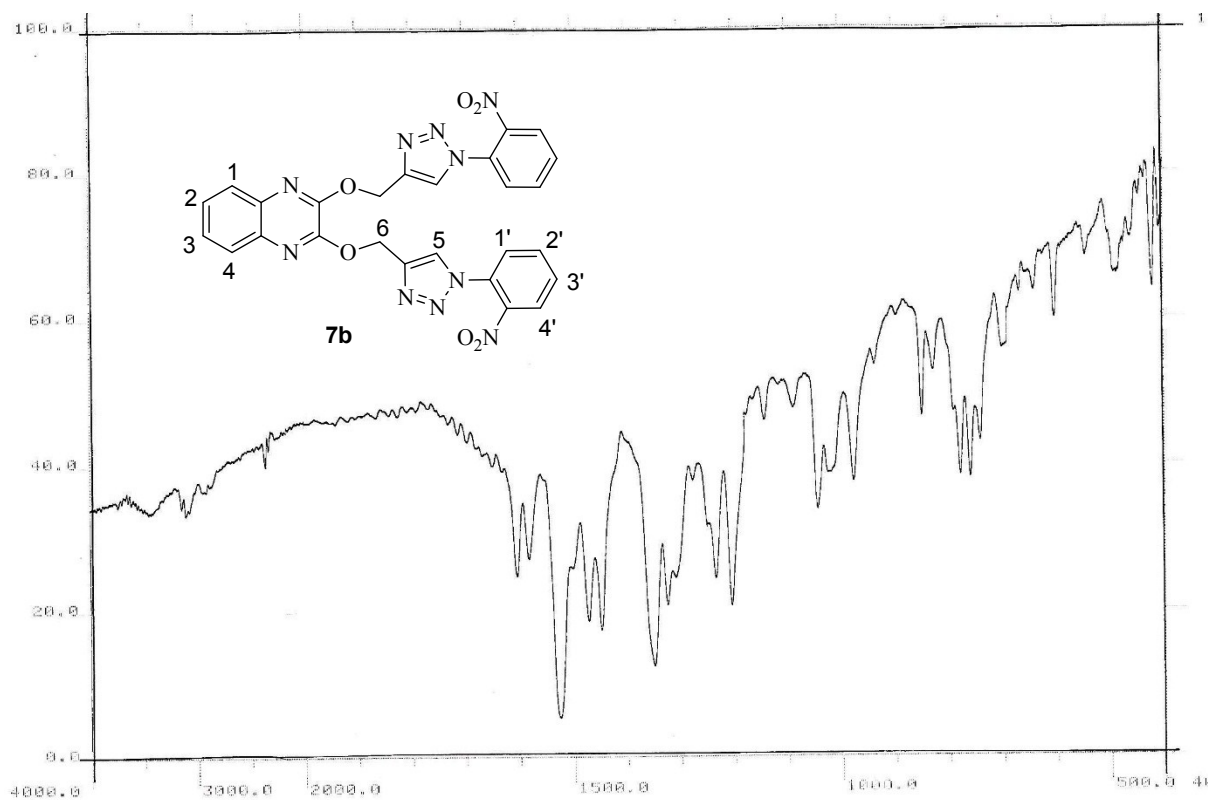
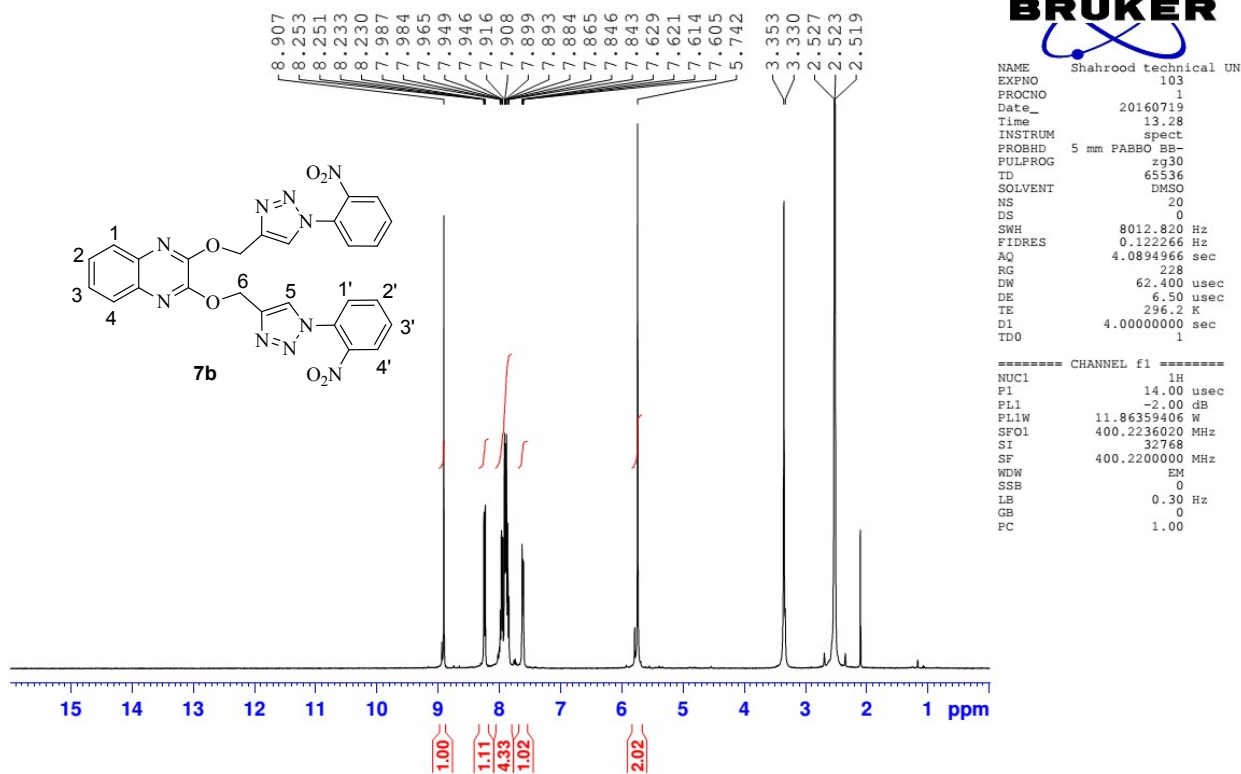


Figure 24: IR spectrum of 7b



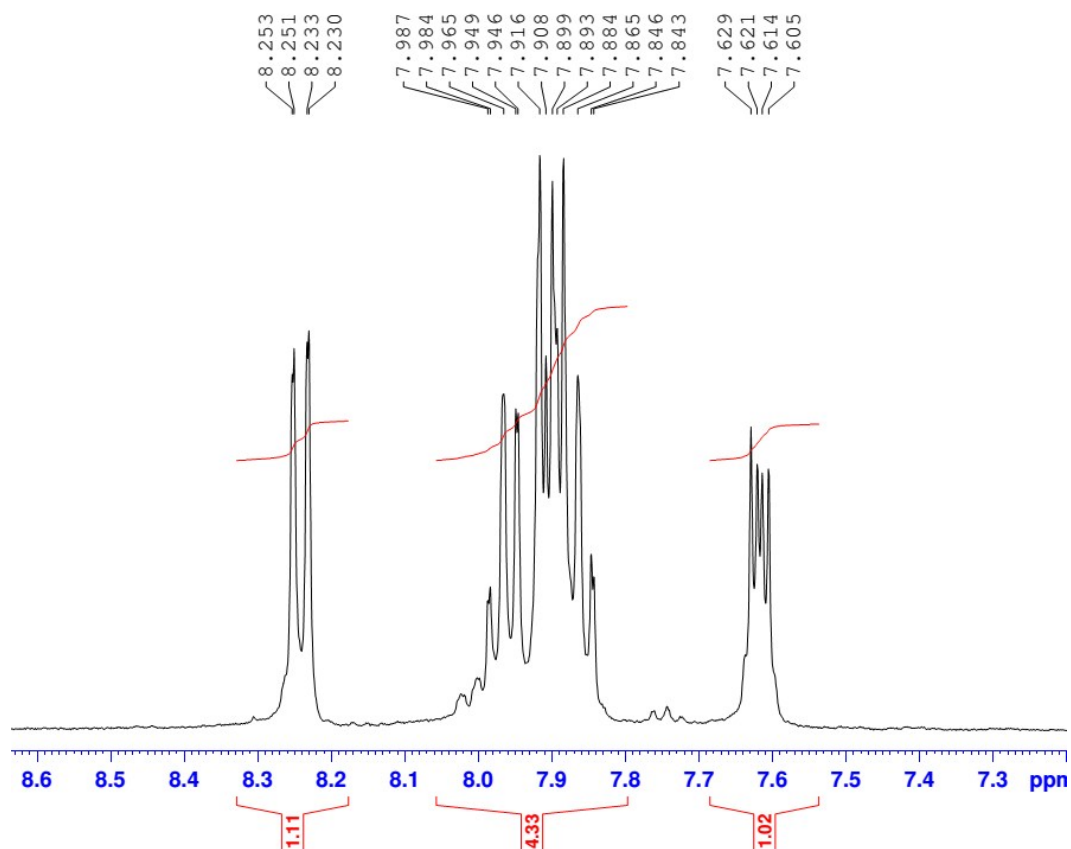
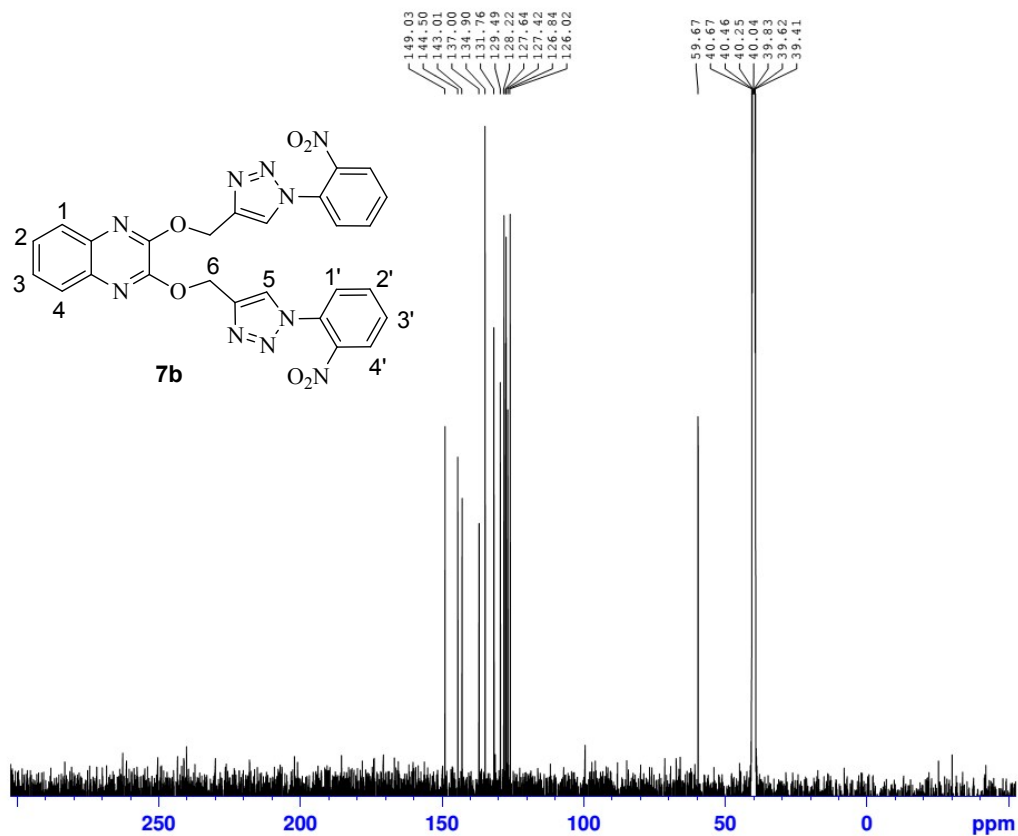


Figure 25: ^1H NMR spectrum of **7b**



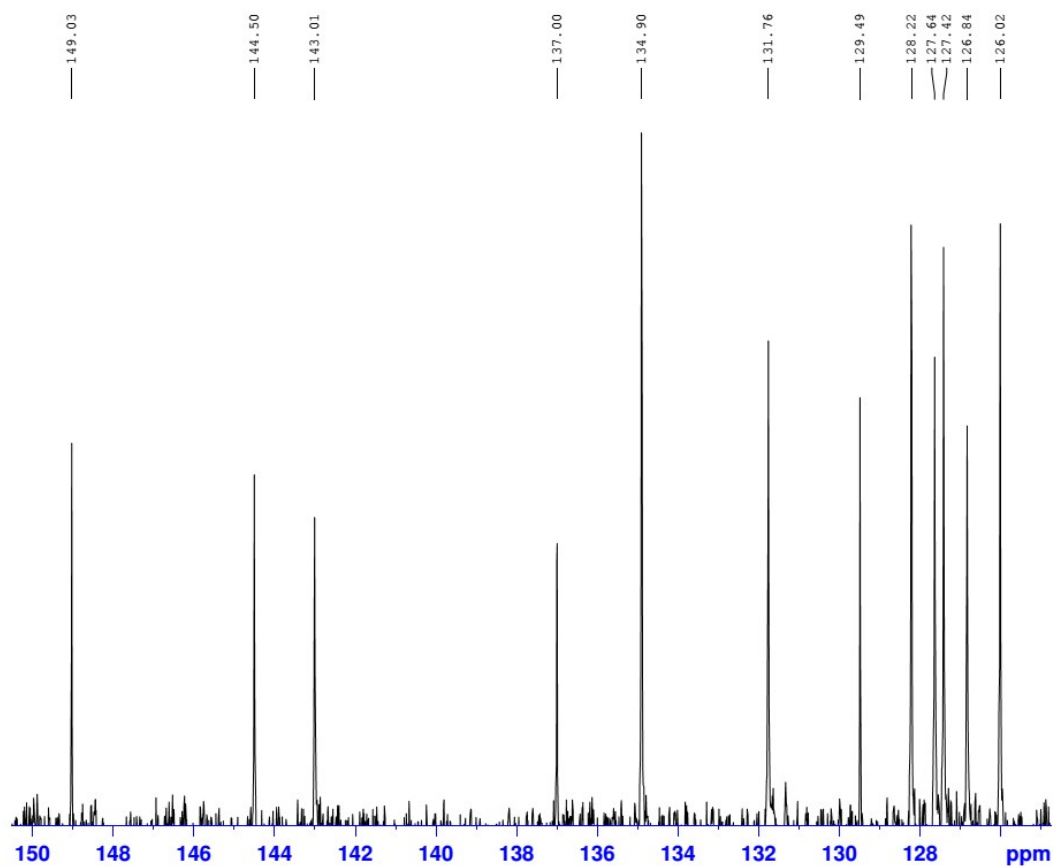


Figure 26: ^{13}C NMR spectrum of **7b**

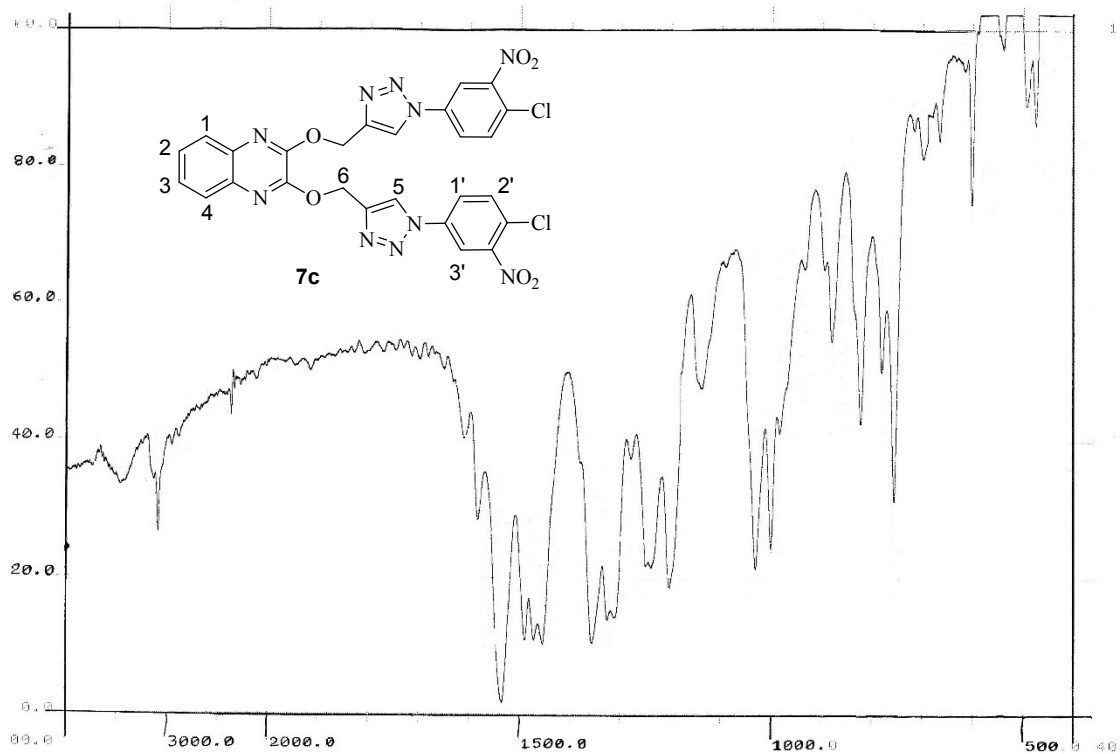


Figure 27: IR spectrum of **7c**

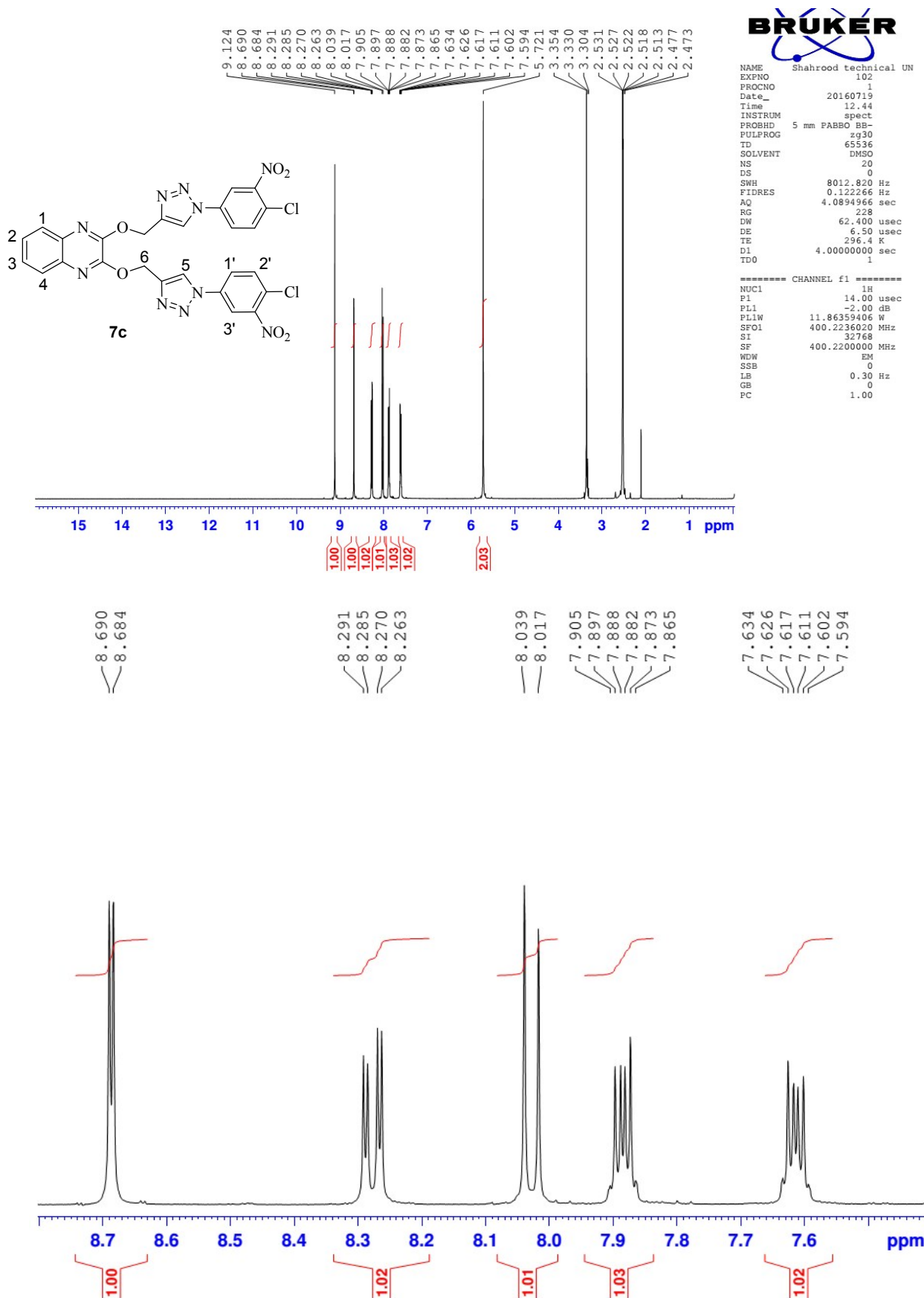


Figure 28: ¹H NMR spectrum of **7c**

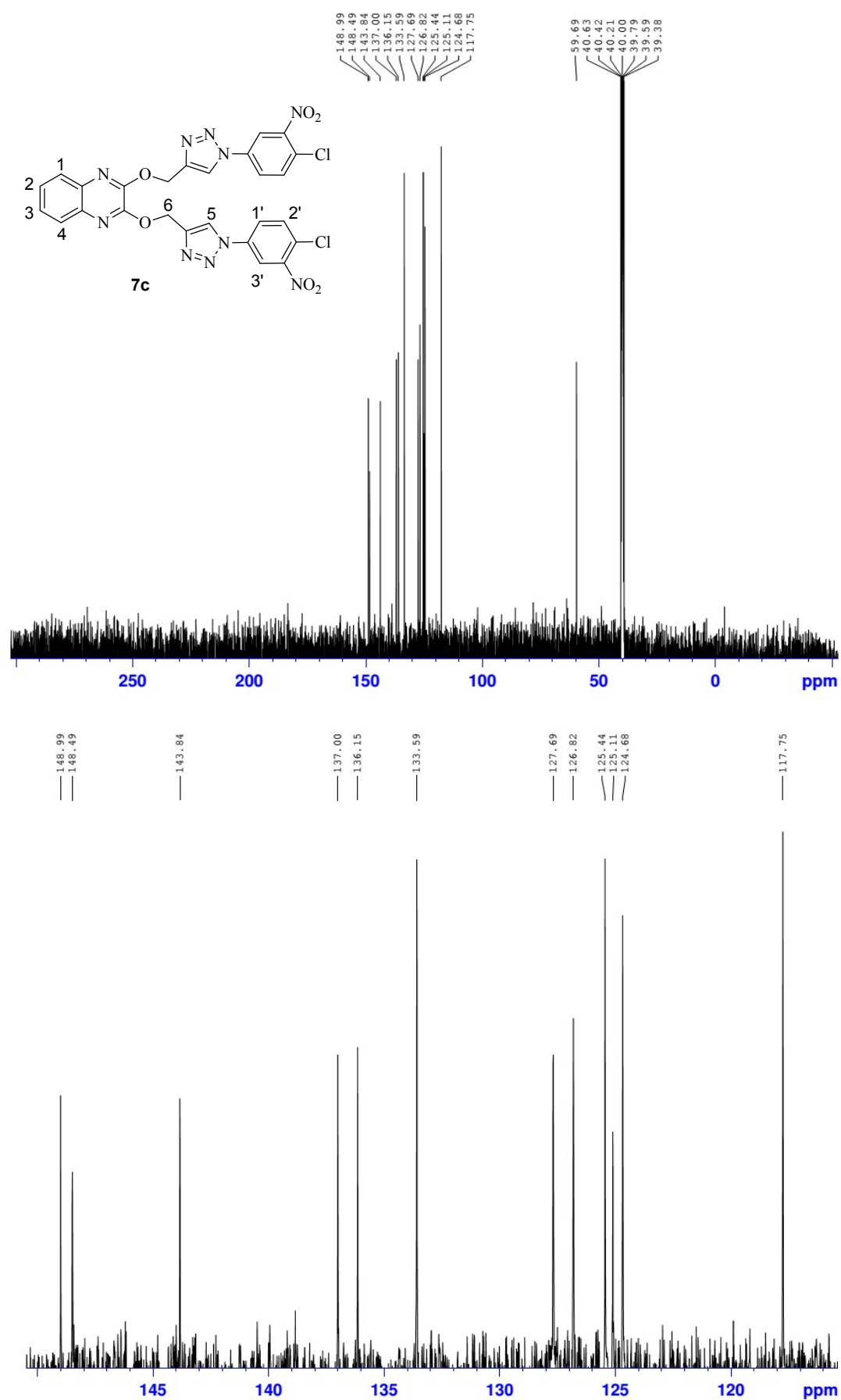


Figure 29: ^{13}C NMR spectrum of **7c**

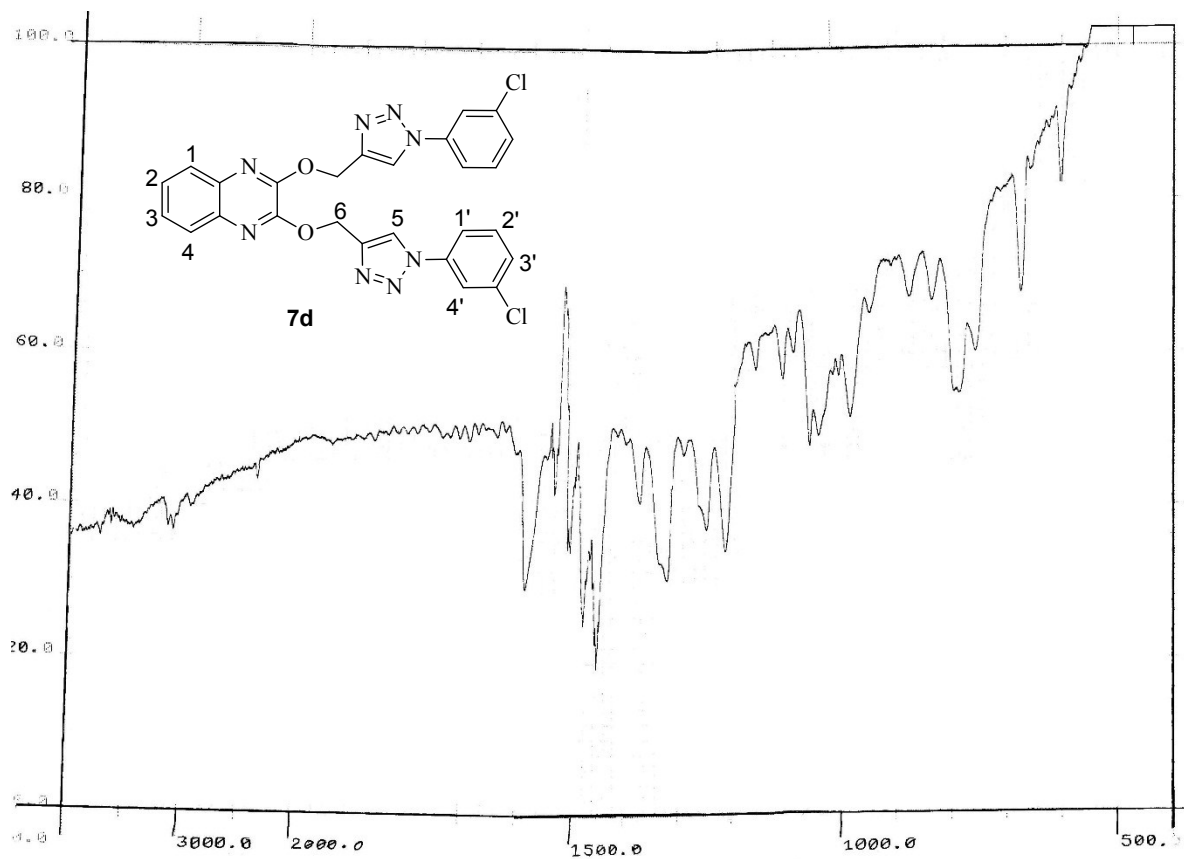
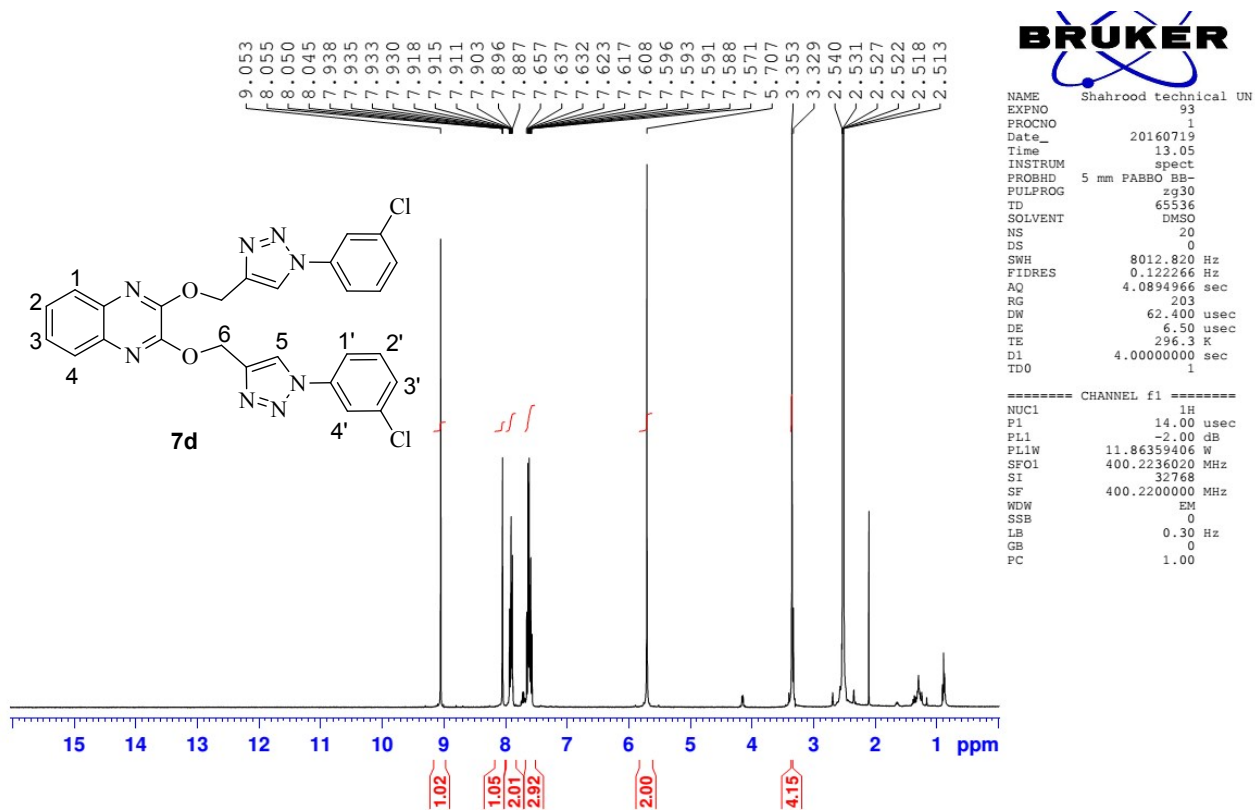


Figure 30: IR spectrum of 7d



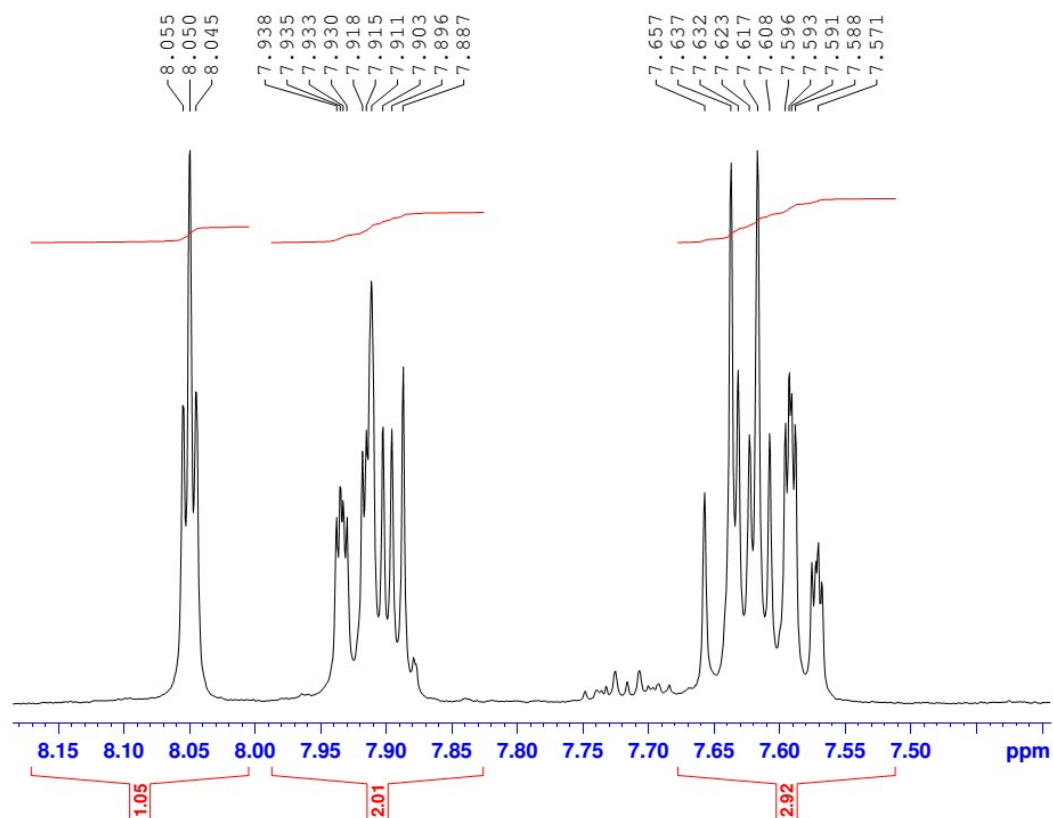
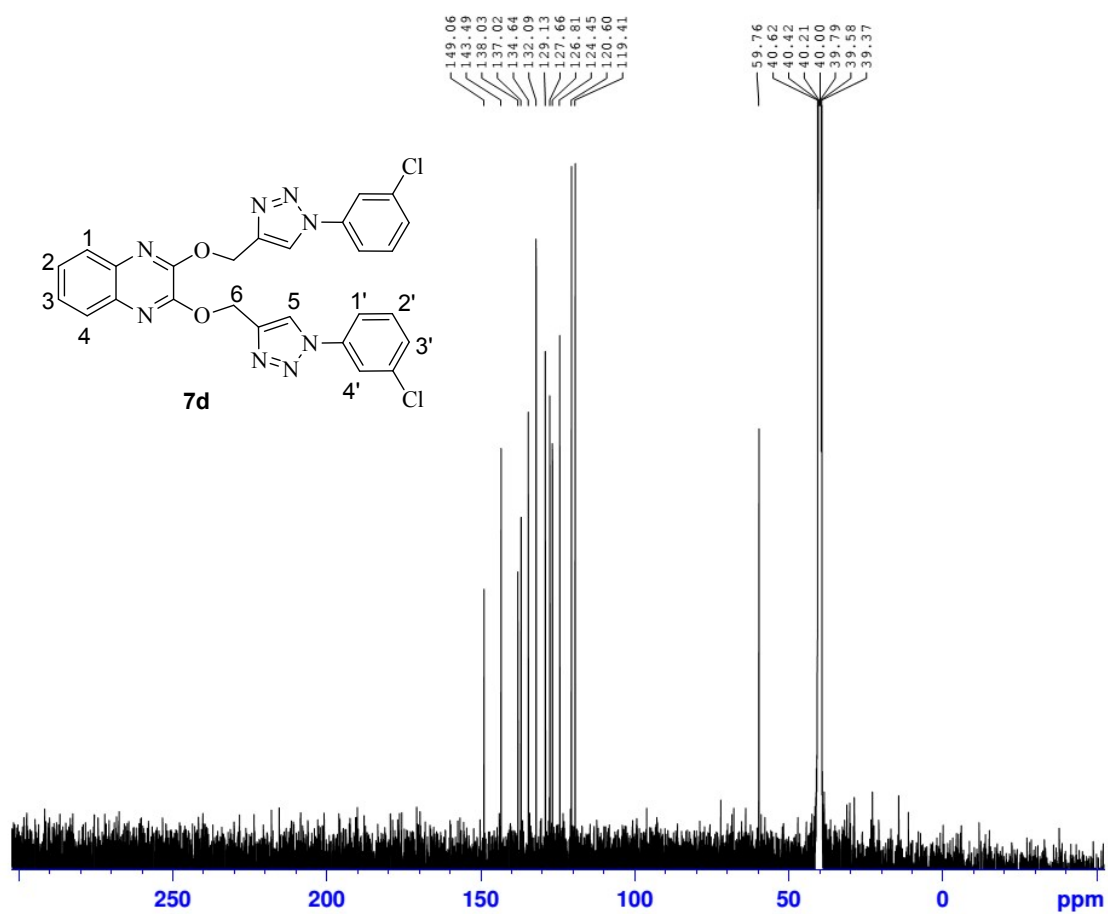


Figure 31: ¹H NMR spectrum of 7d



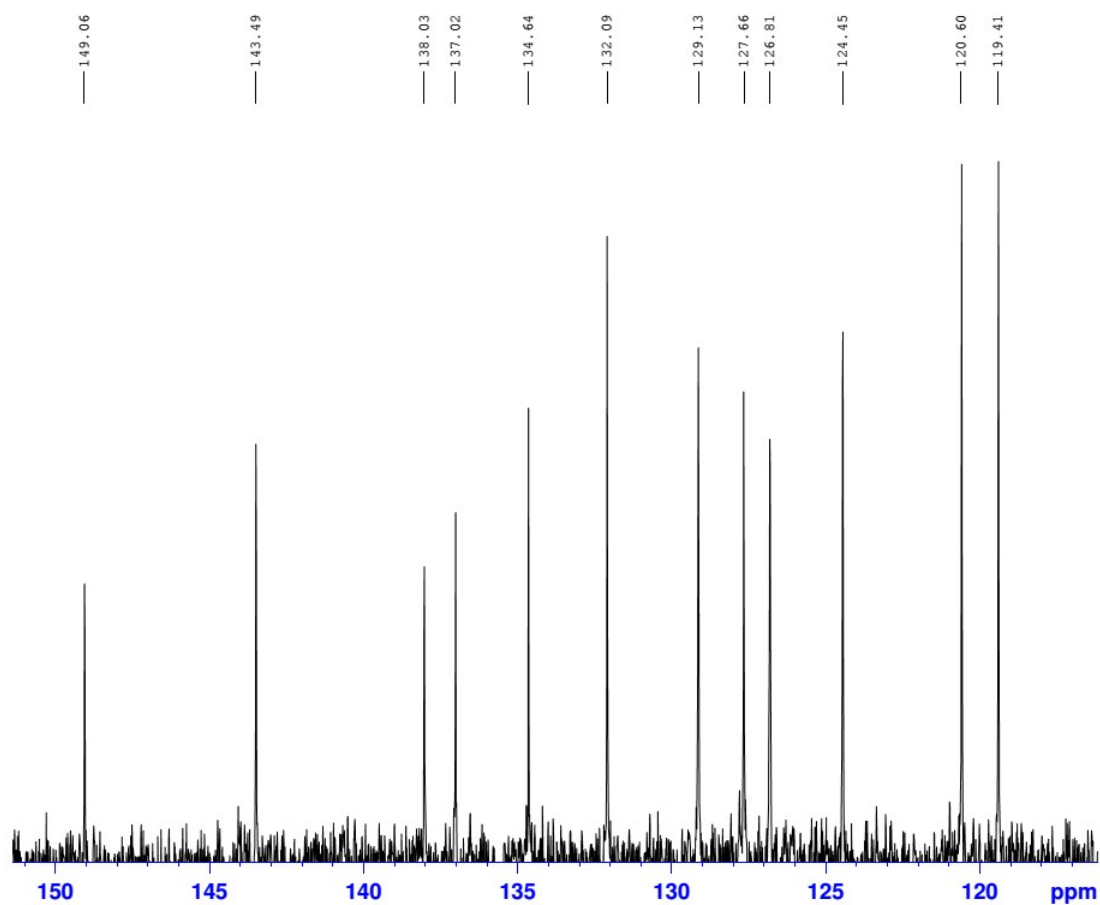


Figure 32: ^{13}C NMR spectrum of **7d**

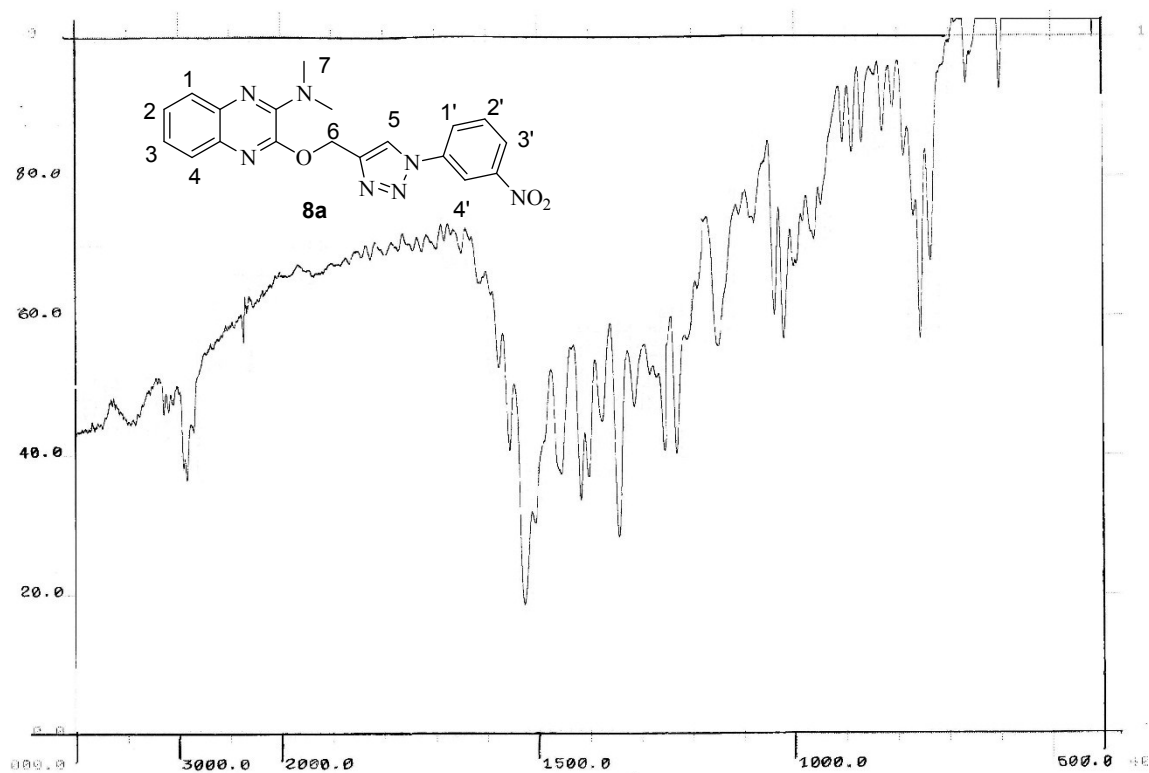


Figure 33: IR spectrum of **8a**

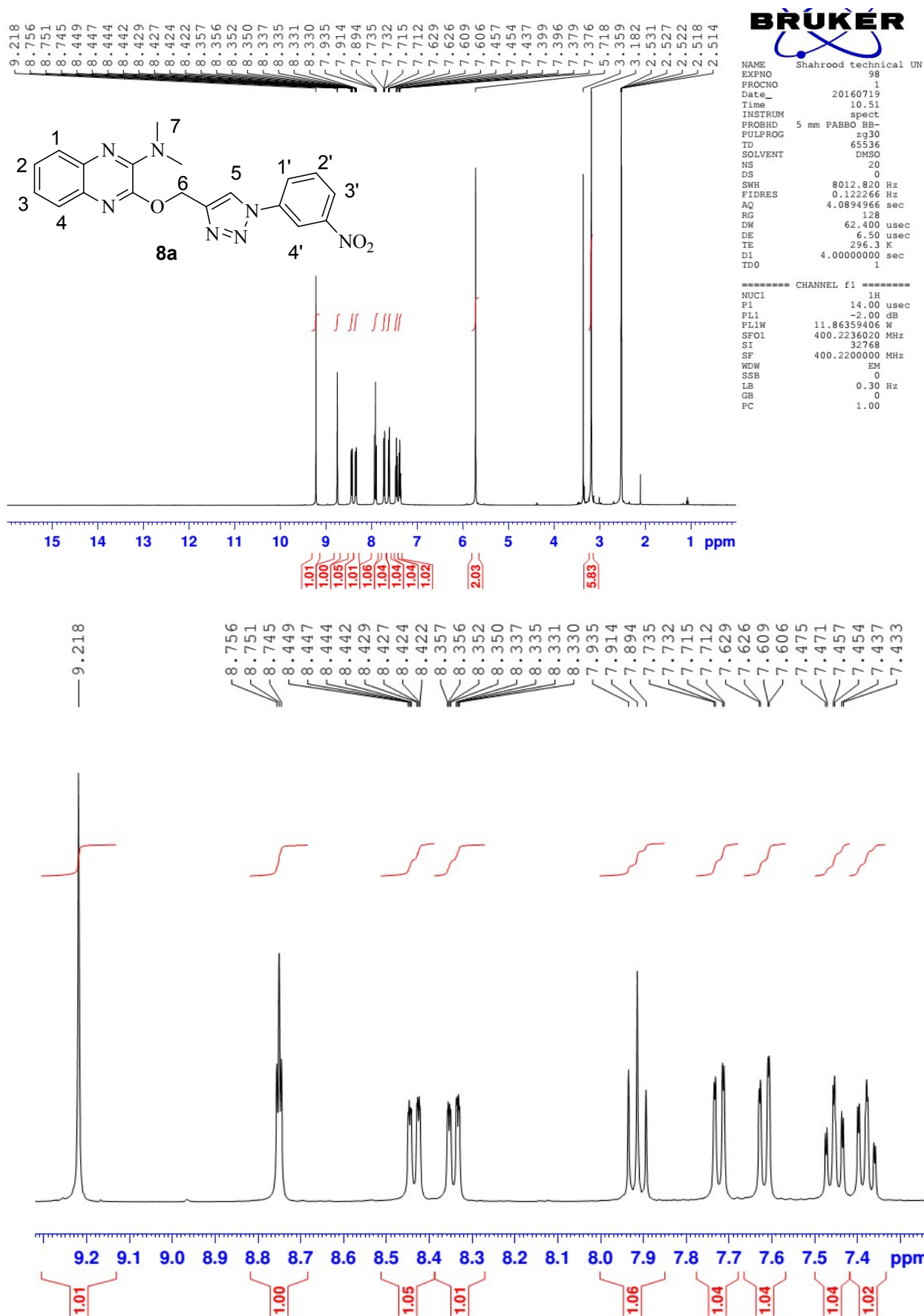


Figure 34: ¹H NMR spectrum of 8a

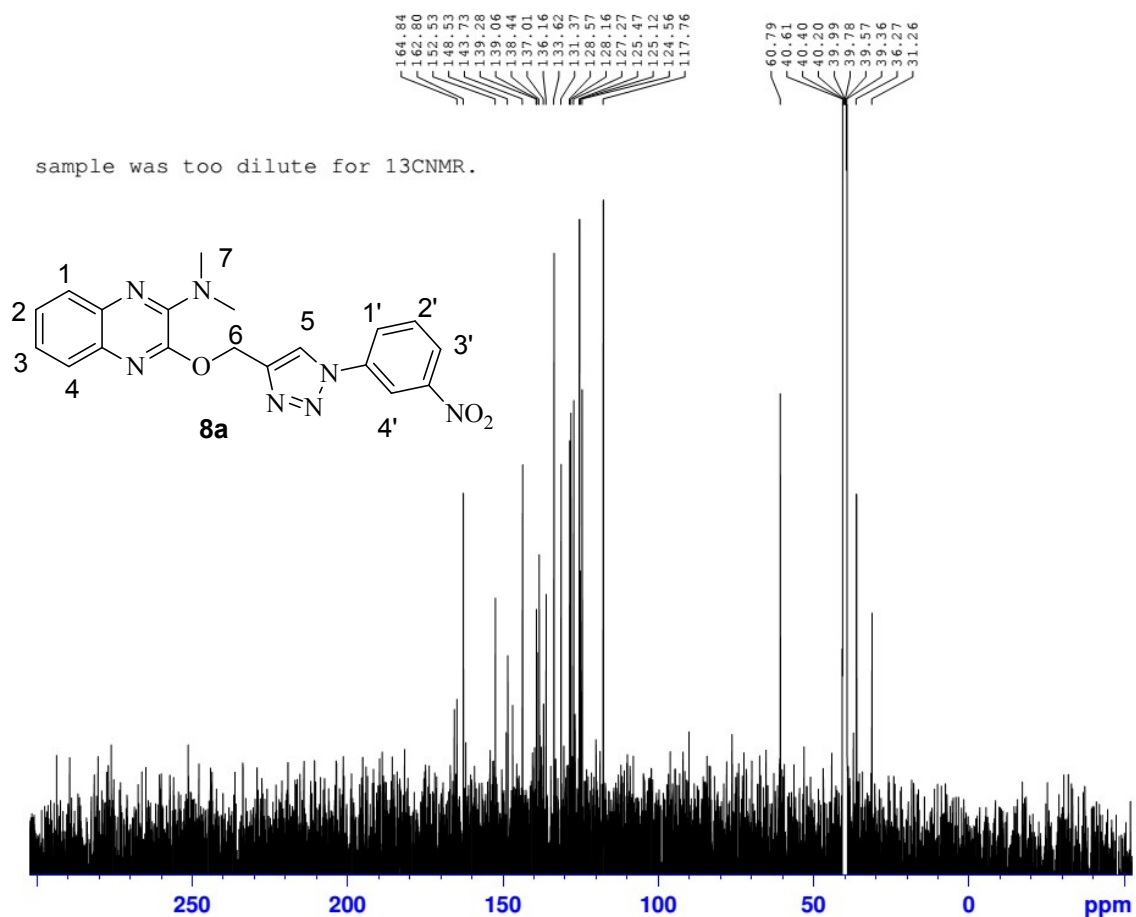


Figure 35: ^{13}C NMR spectrum of **8a**

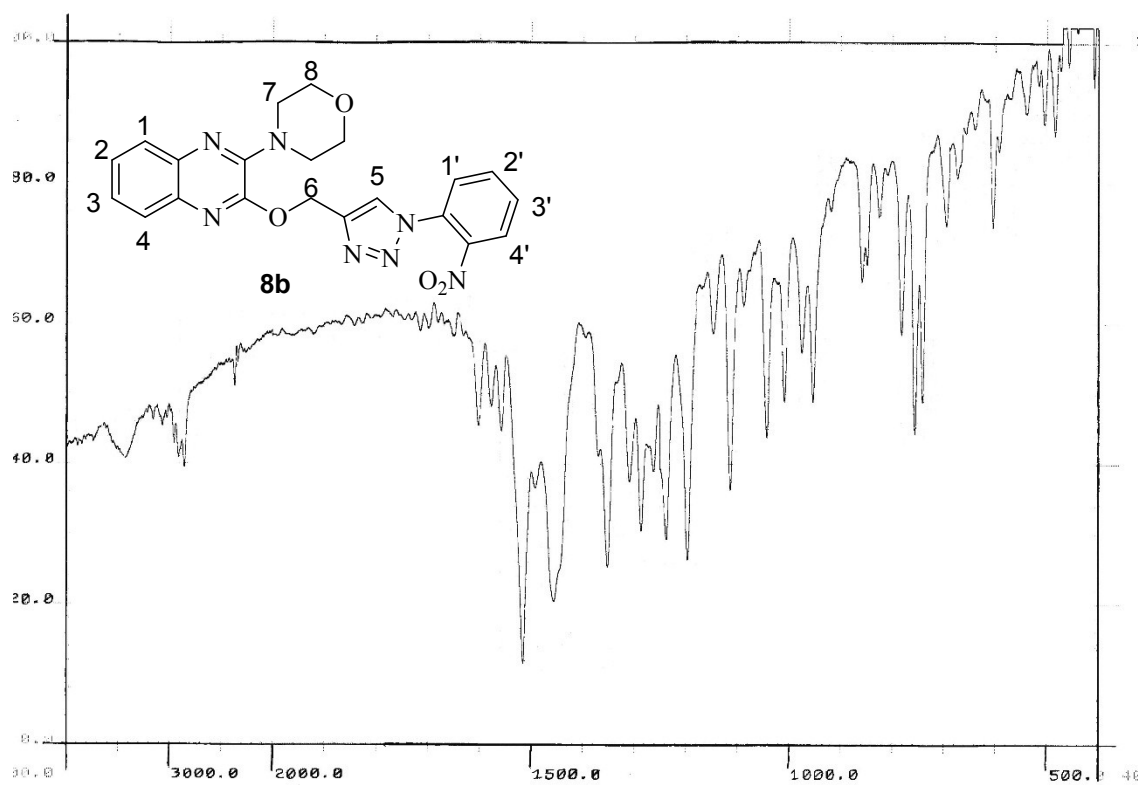


Figure 36: IR spectrum of **8b**

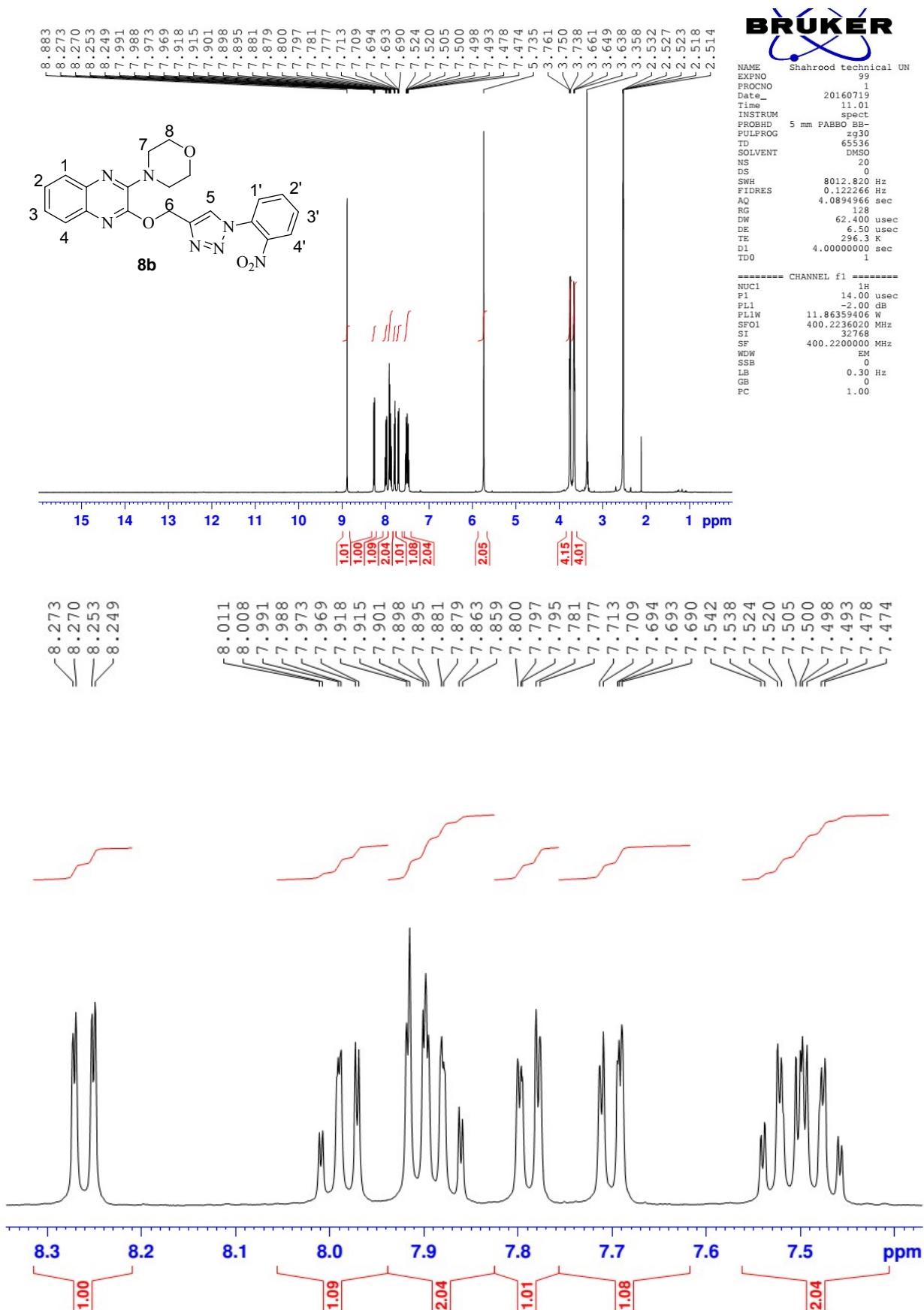


Figure 37: ¹H NMR spectrum of **8b**

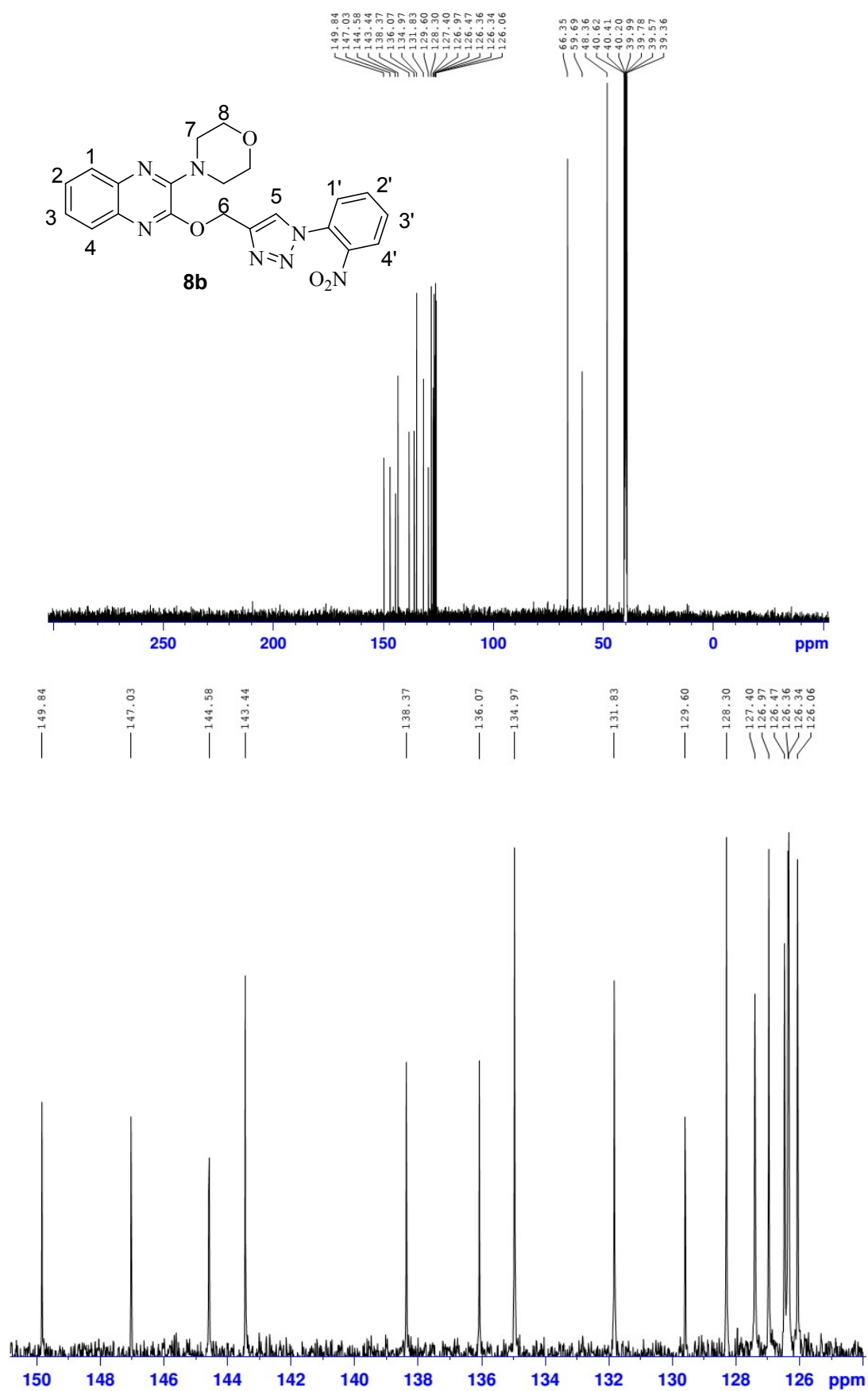


Figure 38: ^{13}C NMR spectrum of **8b**

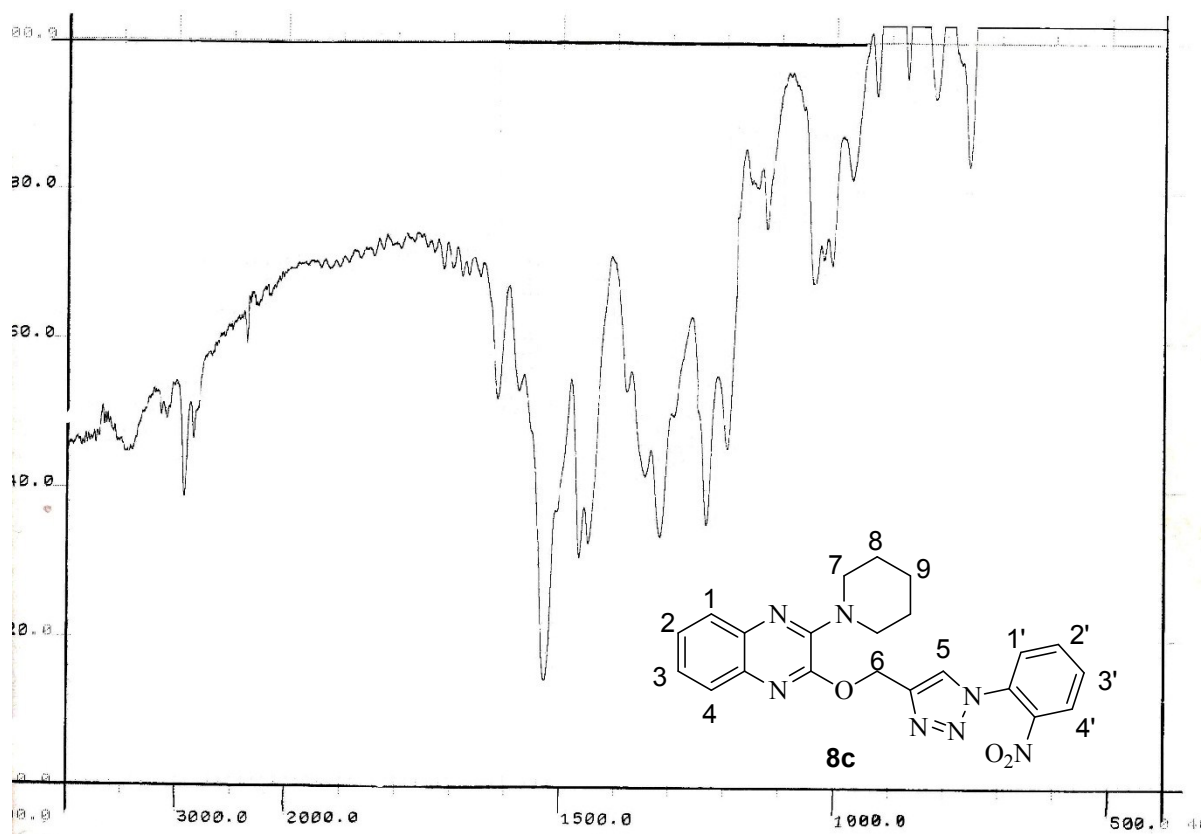
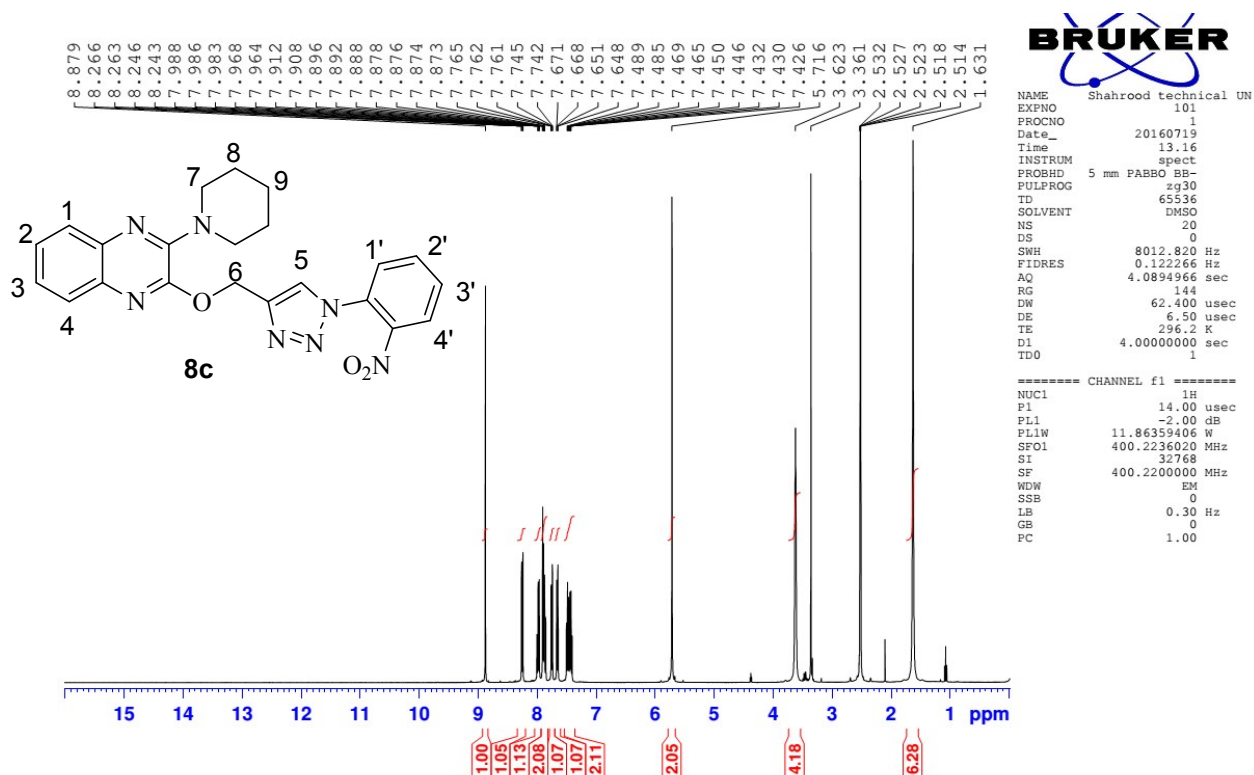


Figure 39: IR spectrum of 8c



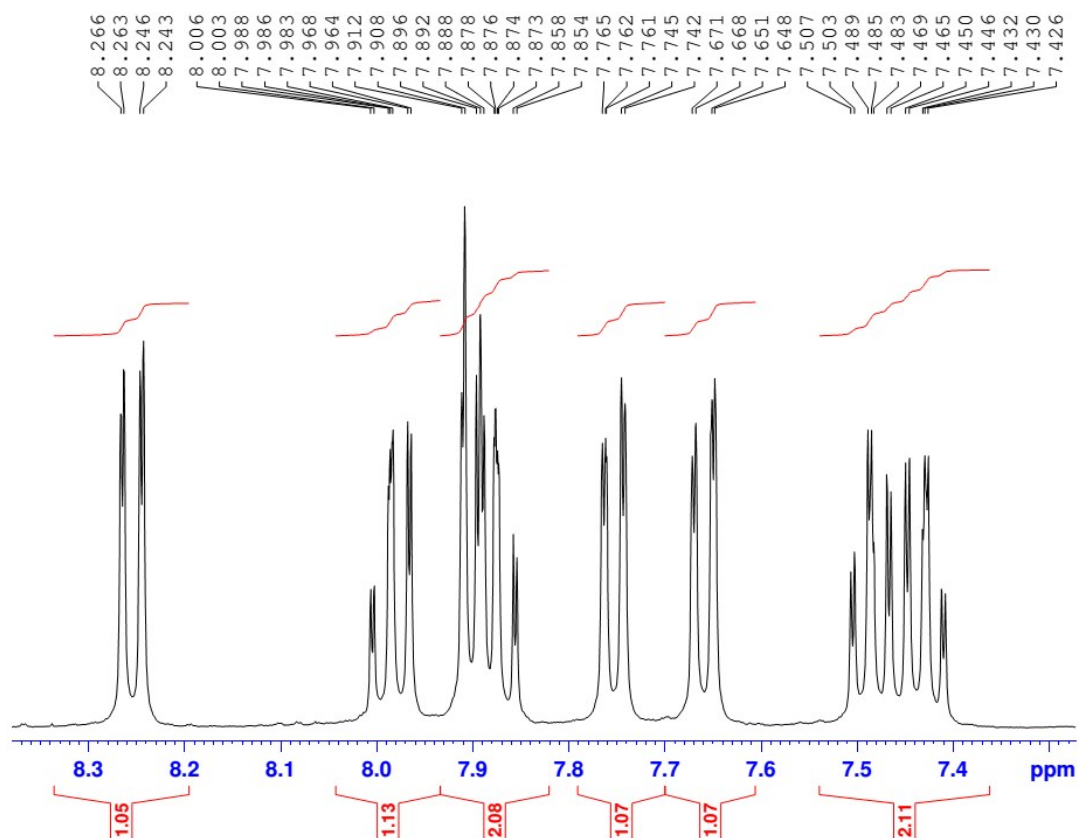
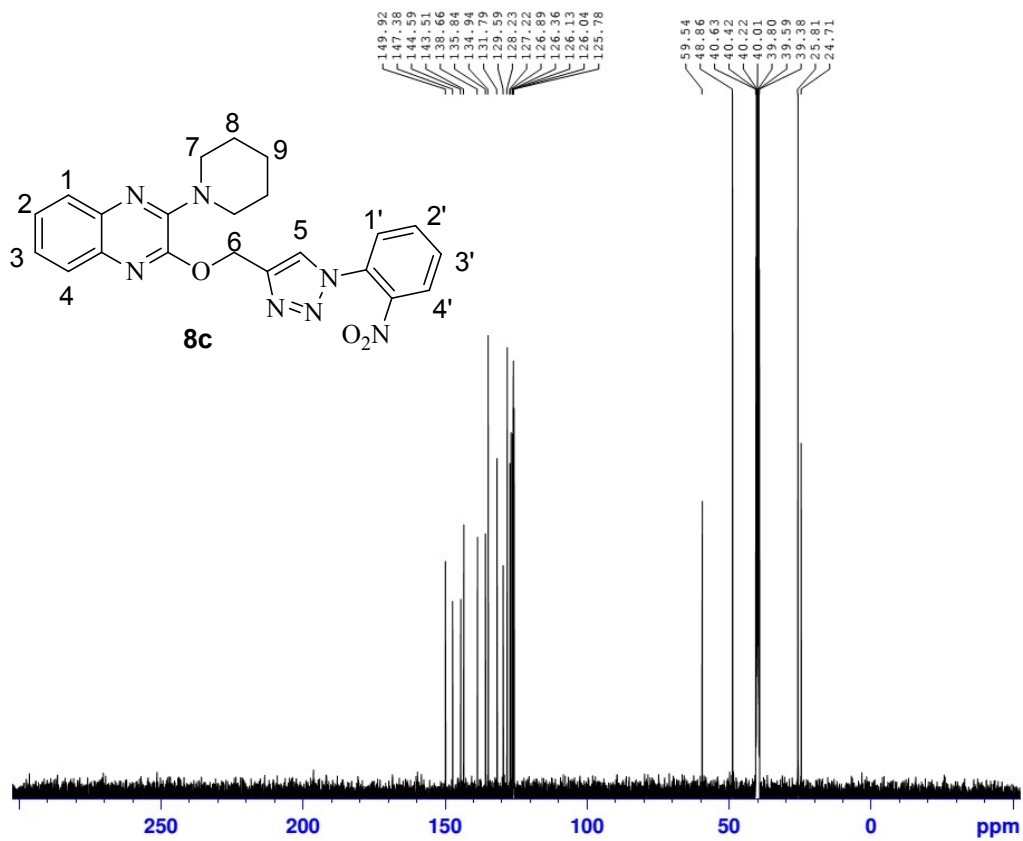


Figure 40: ^1H NMR spectrum of **8c**



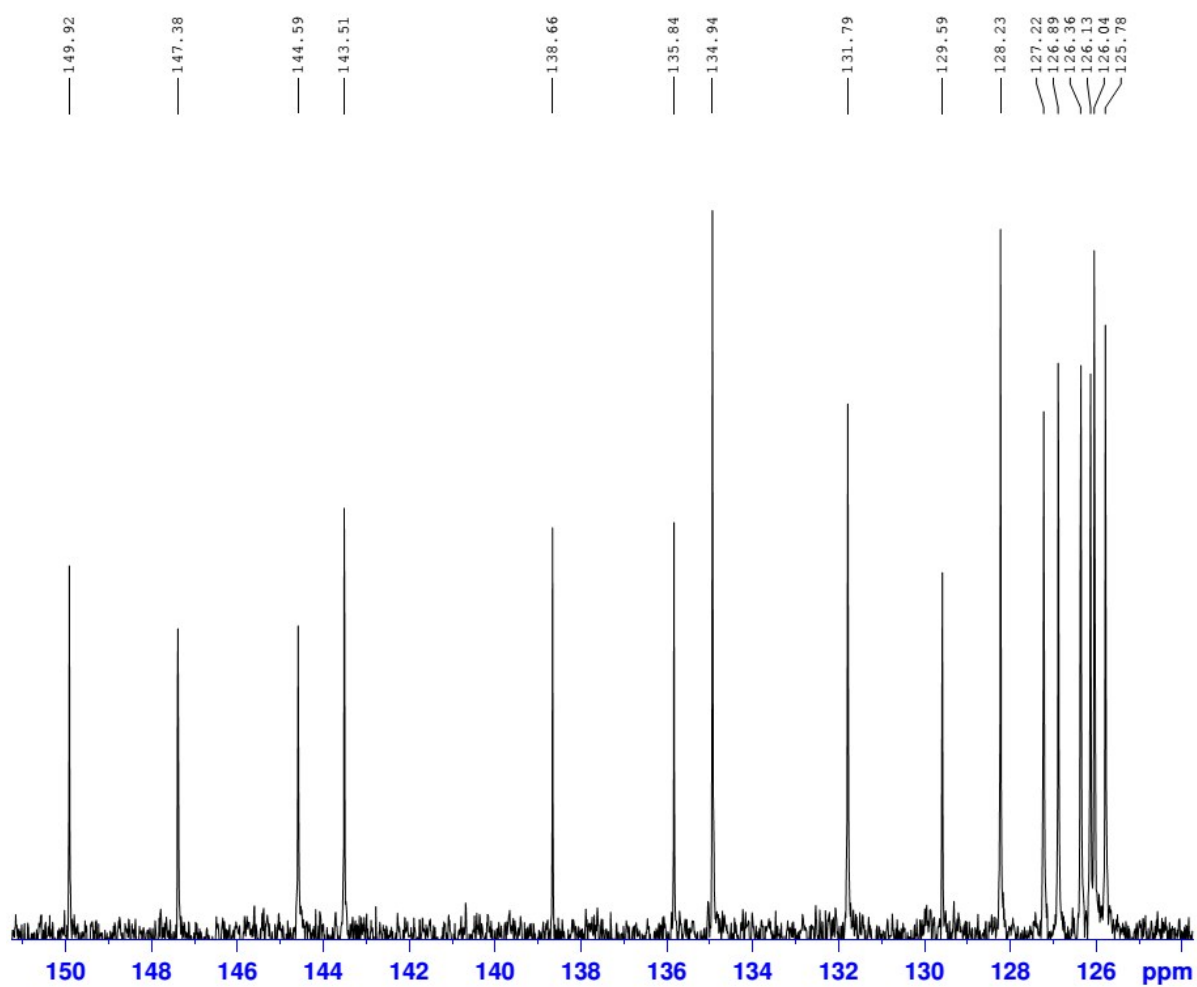


Figure 41: ^{13}C NMR spectrum of **8c**