Supplementary Material

Ultrasound assisted Synthesis of Thiazolidine Thiones Containing1,2,3-triazoles Using Cu/TiO_2

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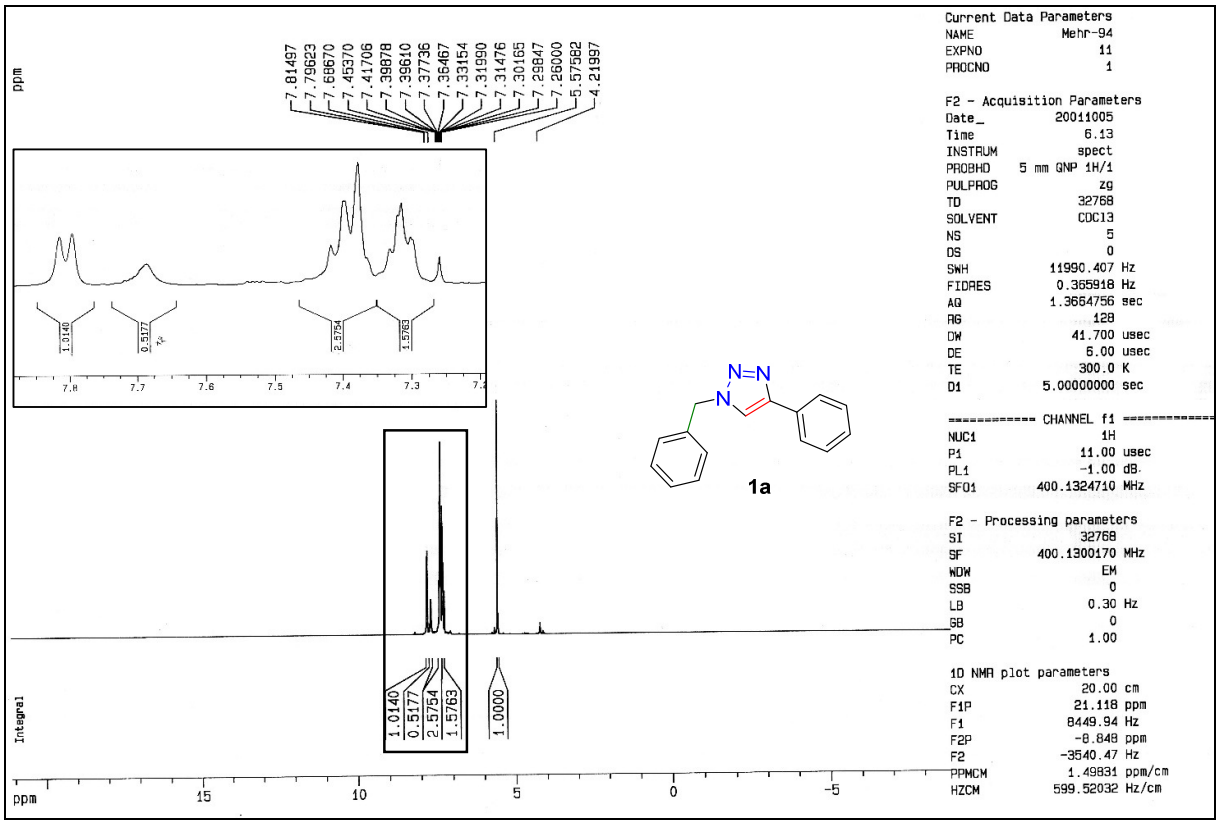

Figure S1. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1a.**

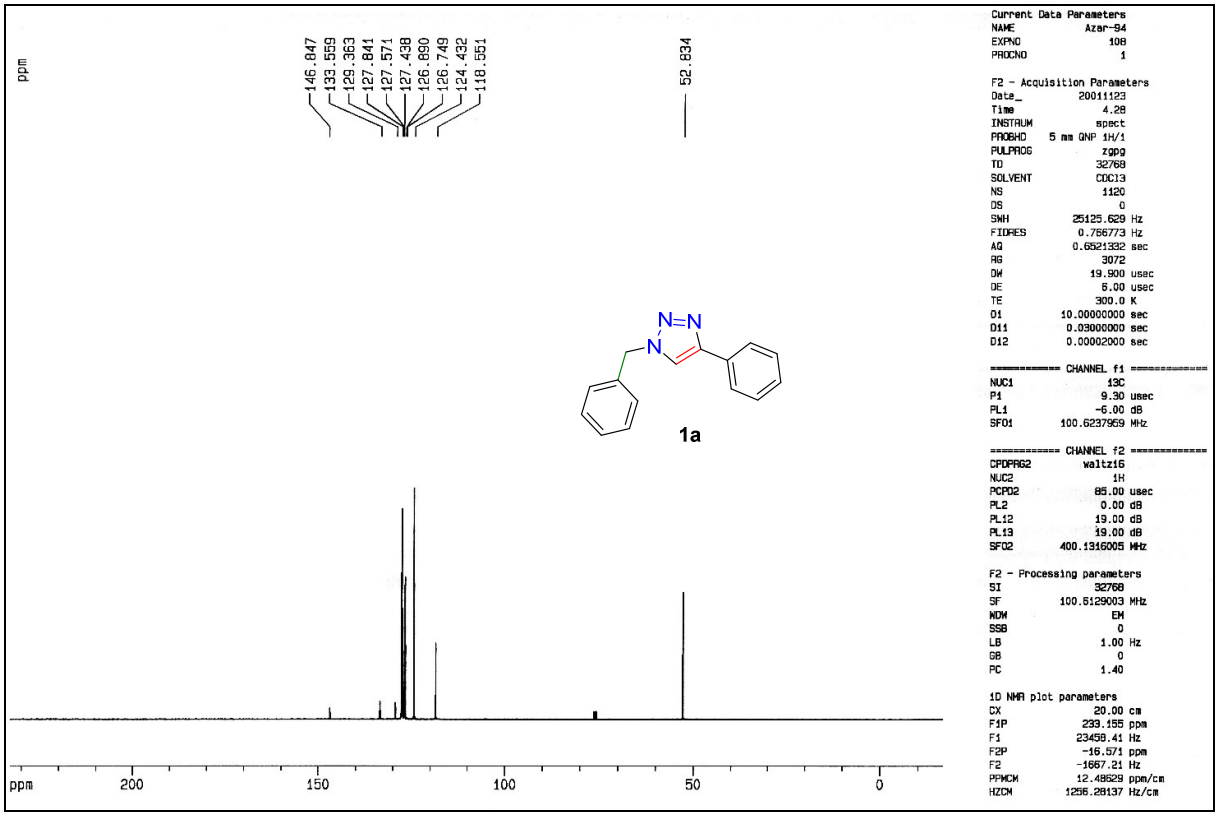

Figure S2. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1a.**

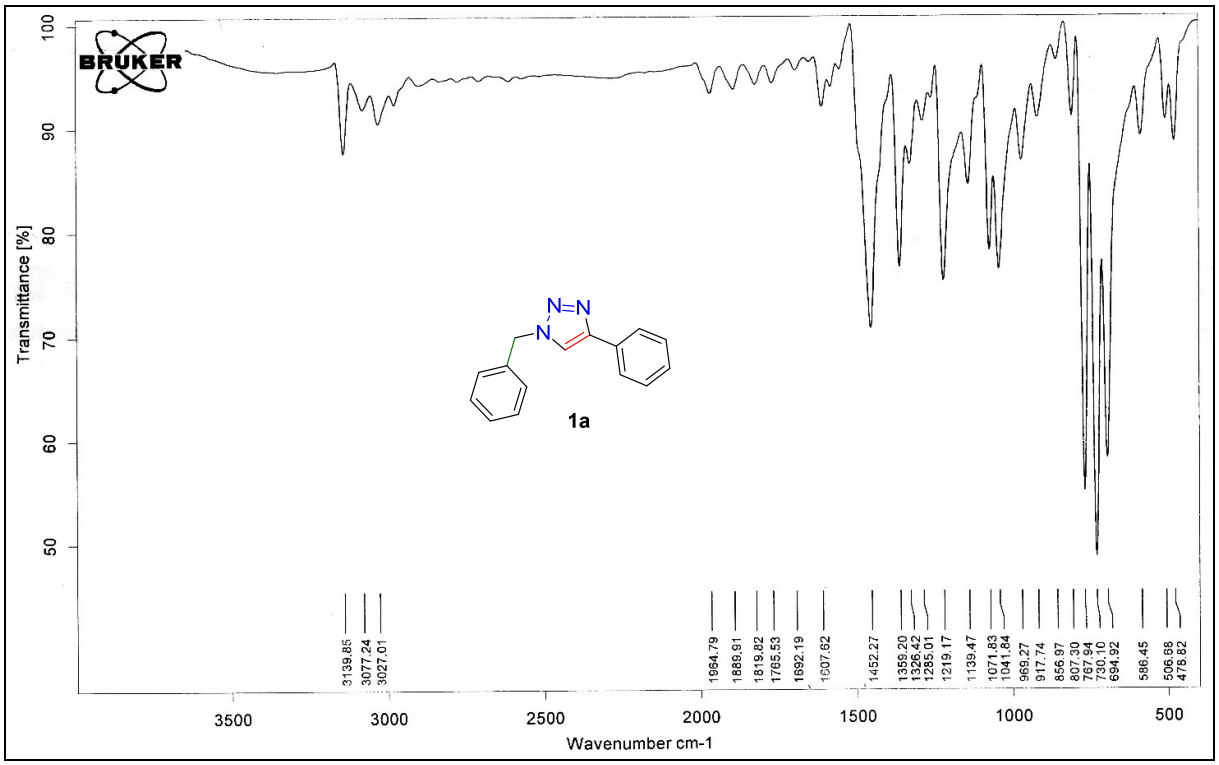

Figure S3. FTIR (KBr) spectrum of compound **1a.**

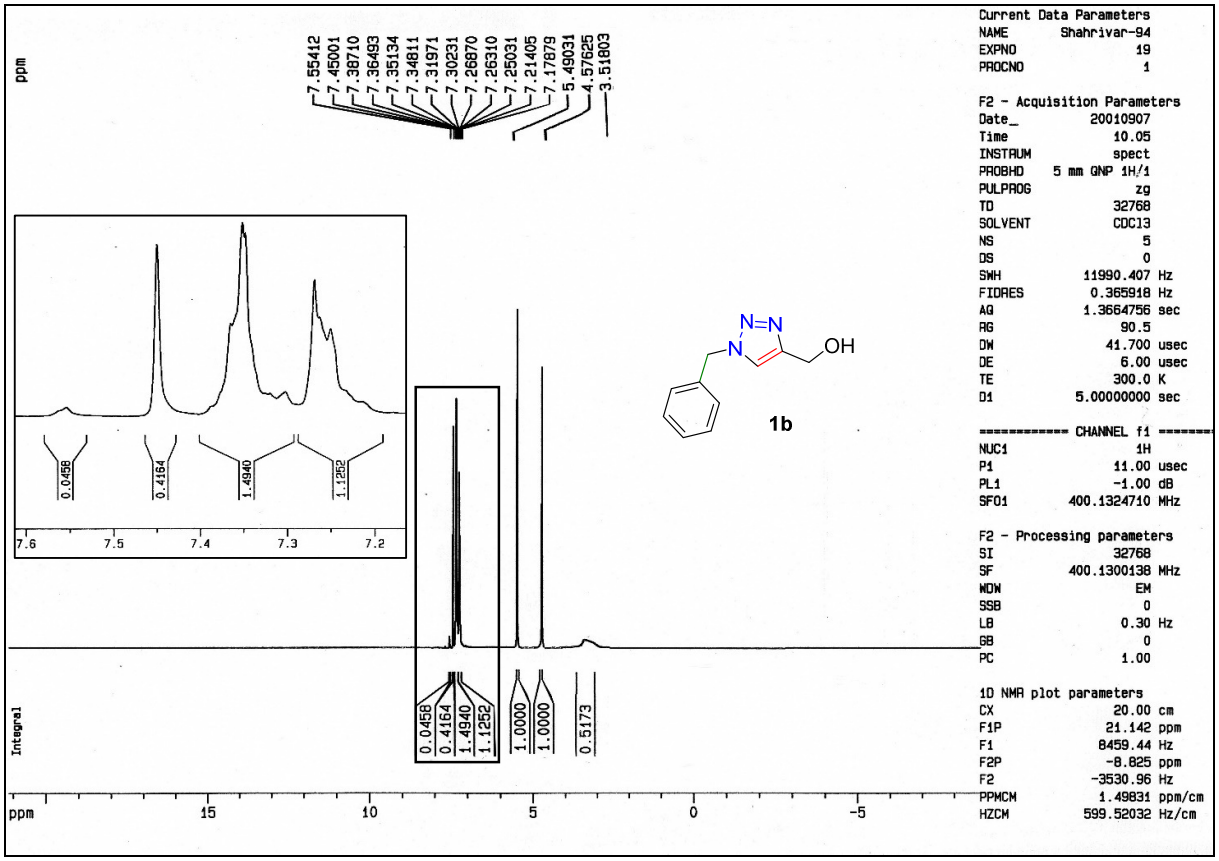

Figure S4. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1b.**

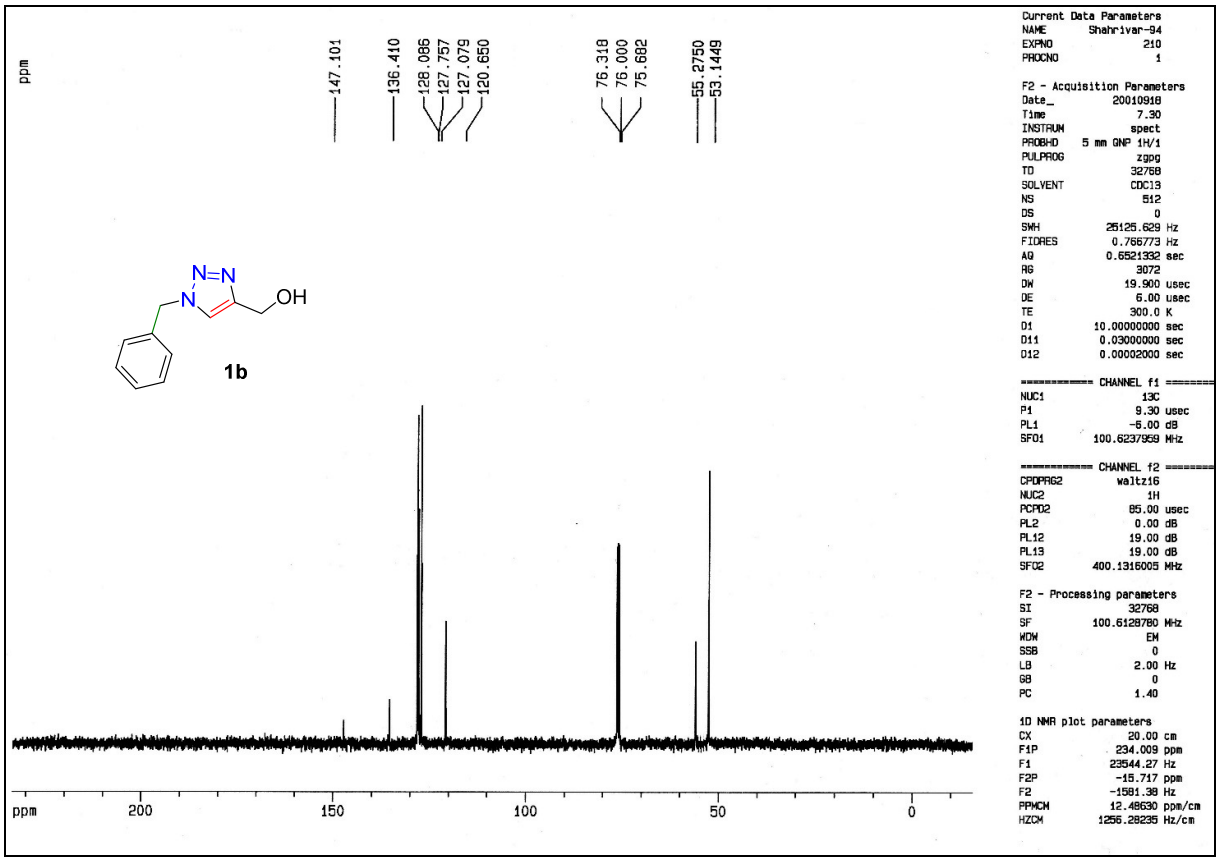

Figure S5. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1b.**

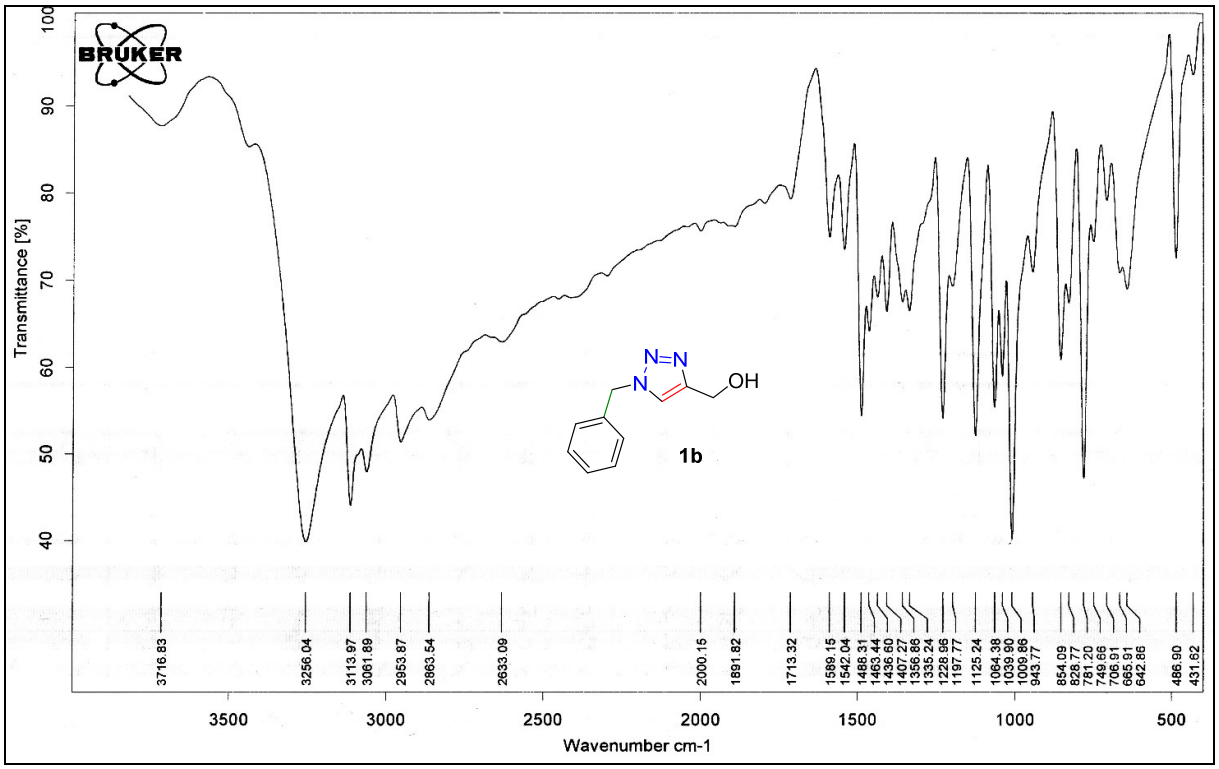

Figure S6. FTIR (KBr) spectrum of compound **1b.**

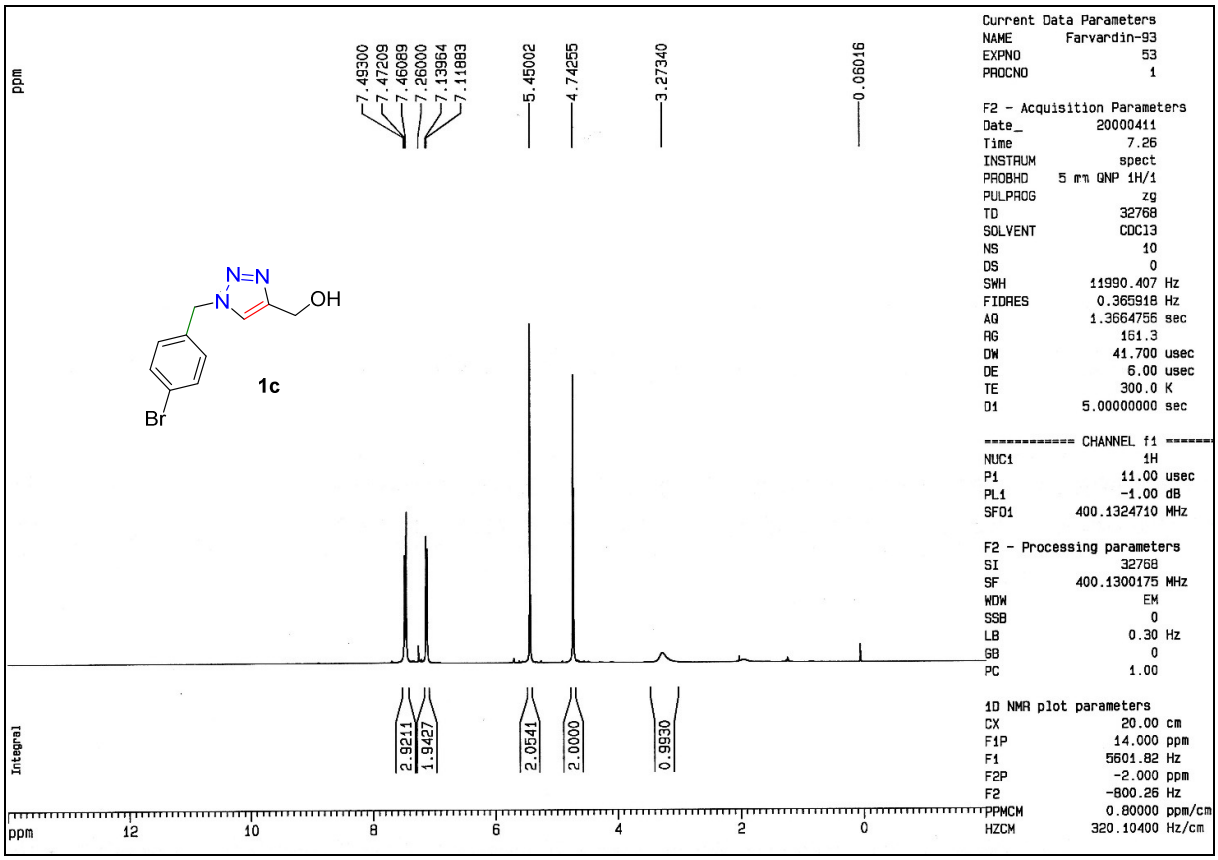

Figure S7. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1c.**

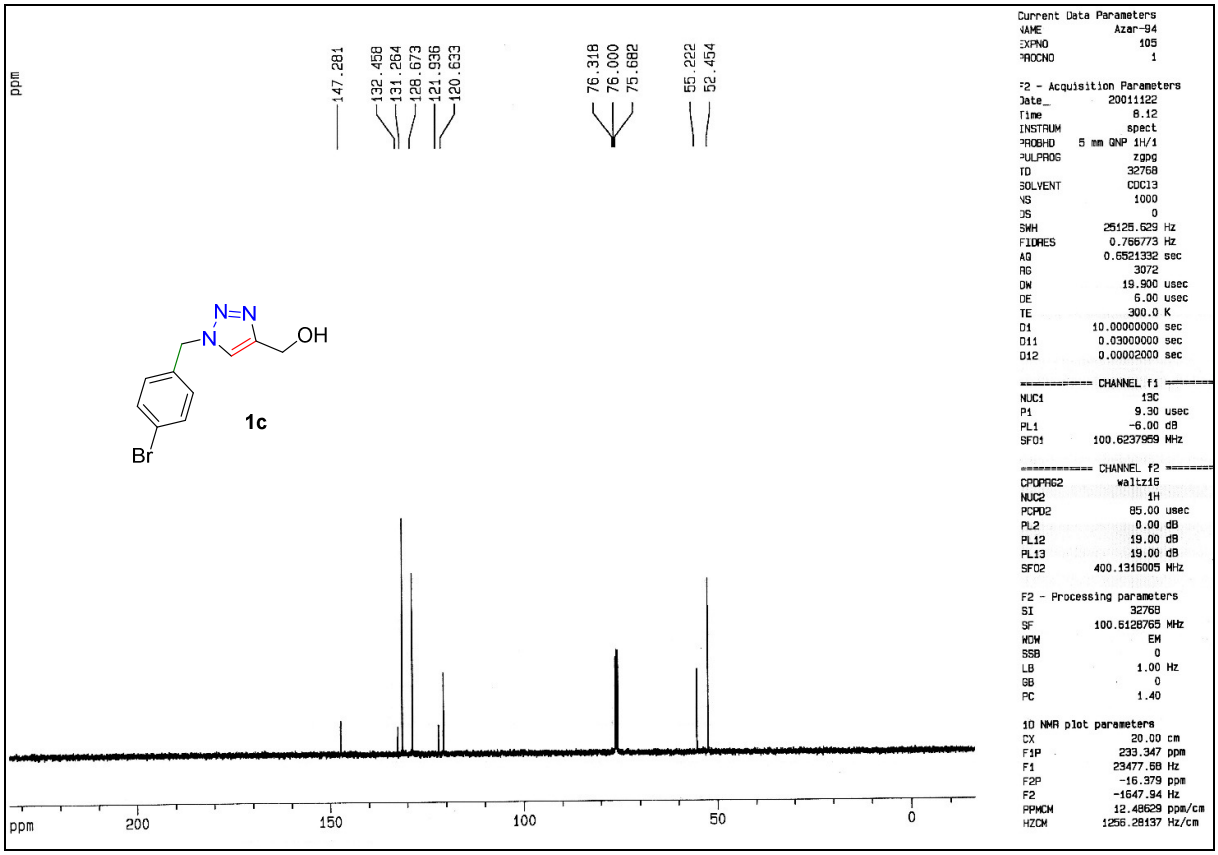

Figure S8. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1c.**

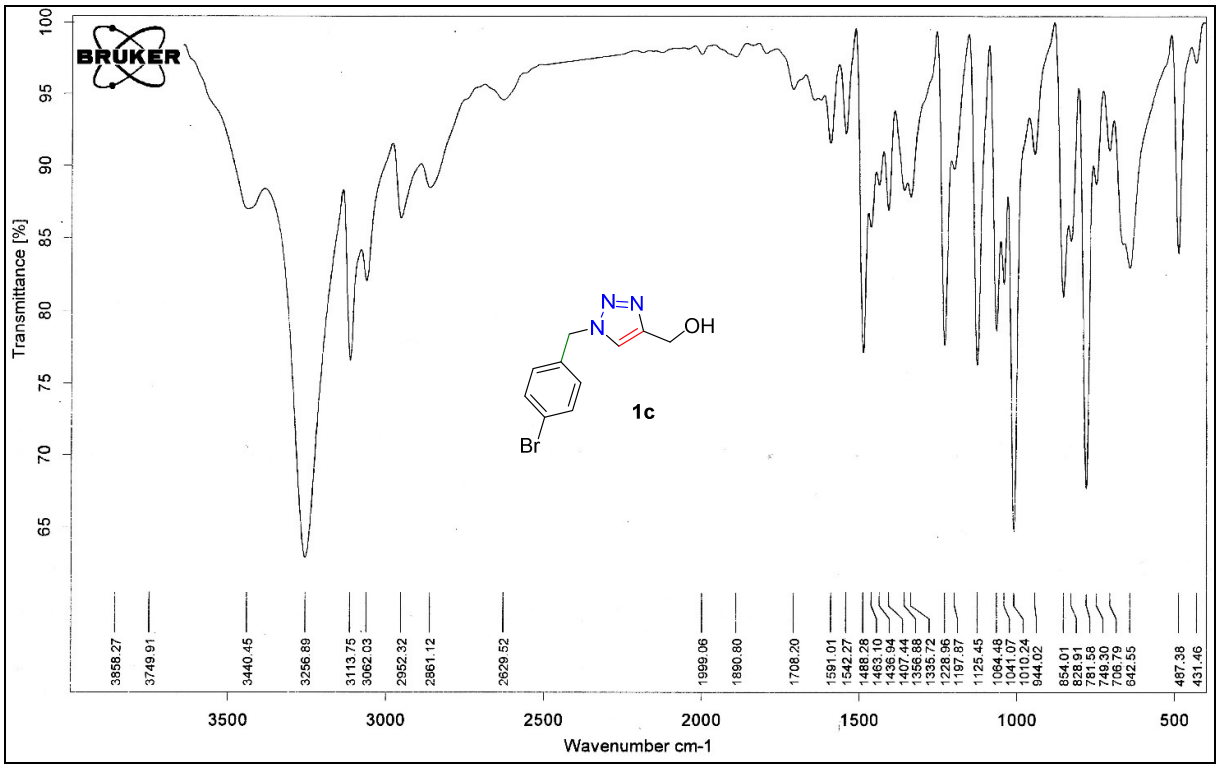

Figure S9. FTIR (KBr) spectrum of compound **1c**

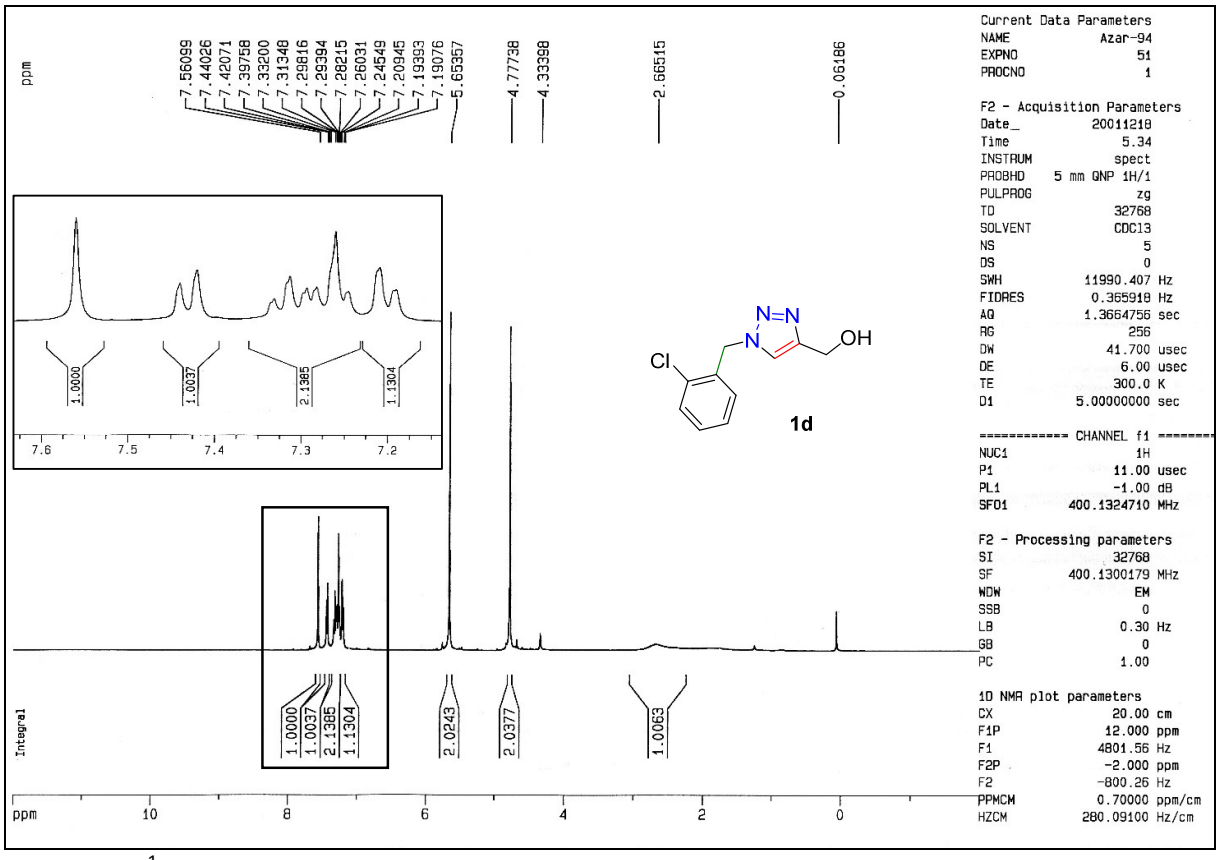

Figure S10. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1d**

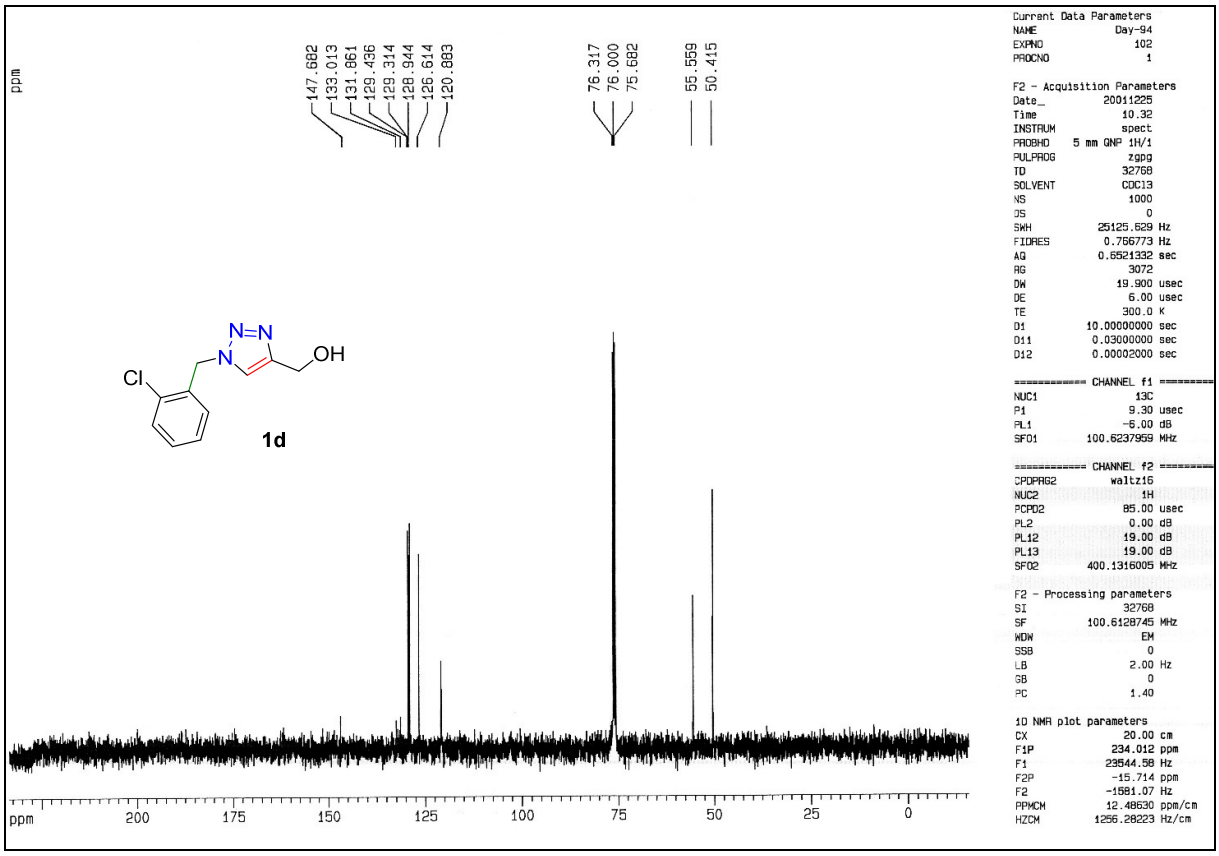

Figure S11. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1d**

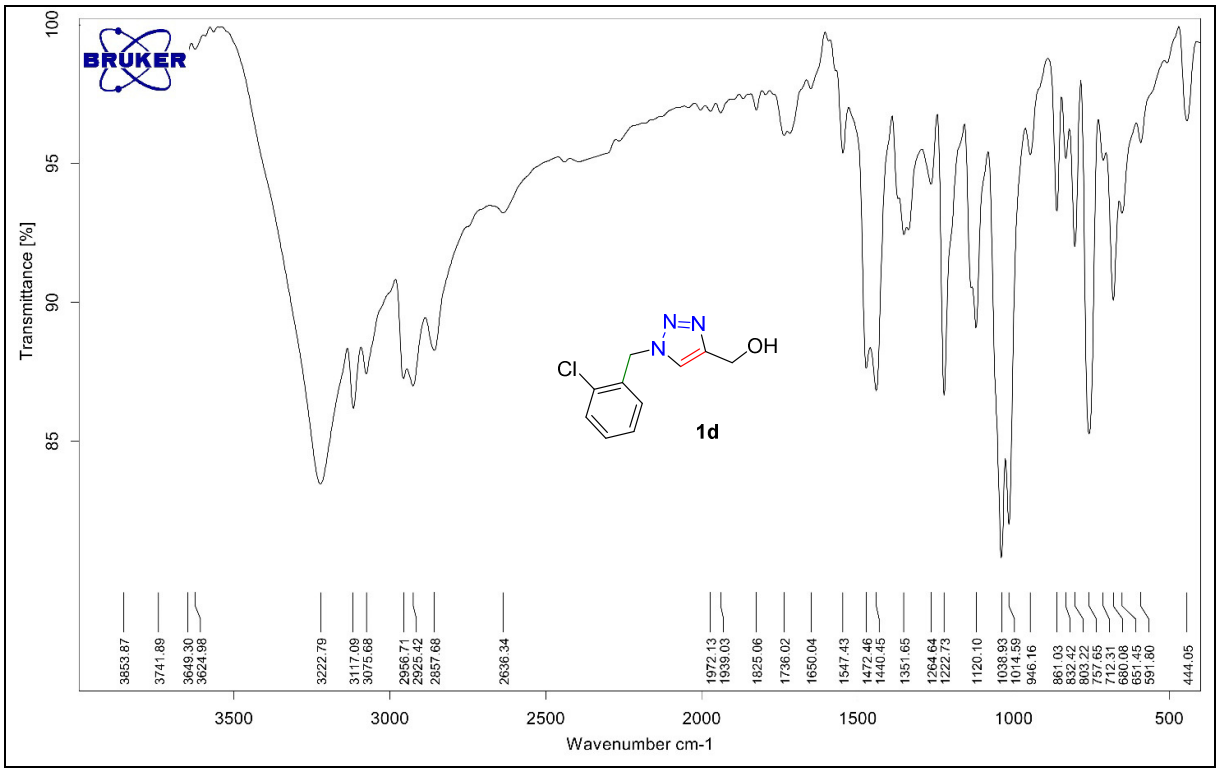

Figure S12. FTIR (KBr) spectrum of compound **1d**

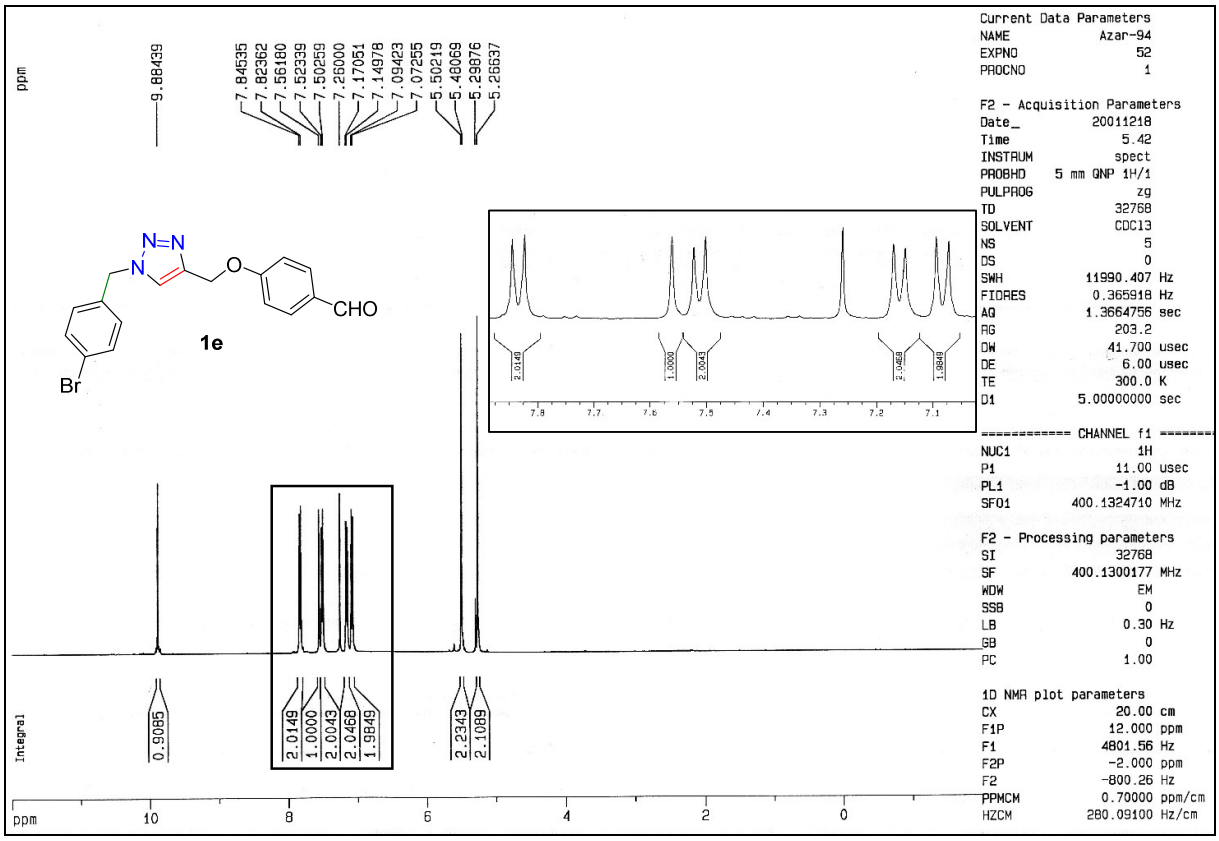

Figure S13. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1e**

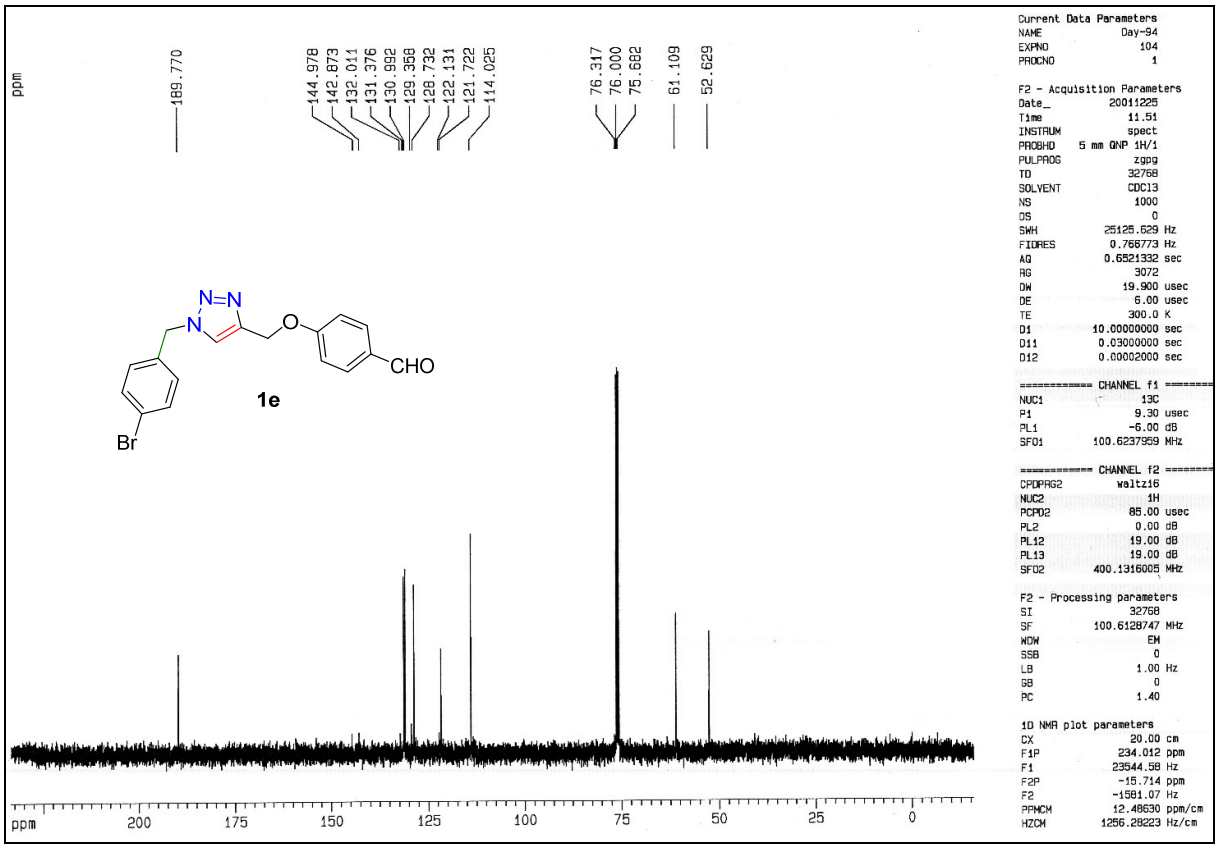

Figure S14. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1e**

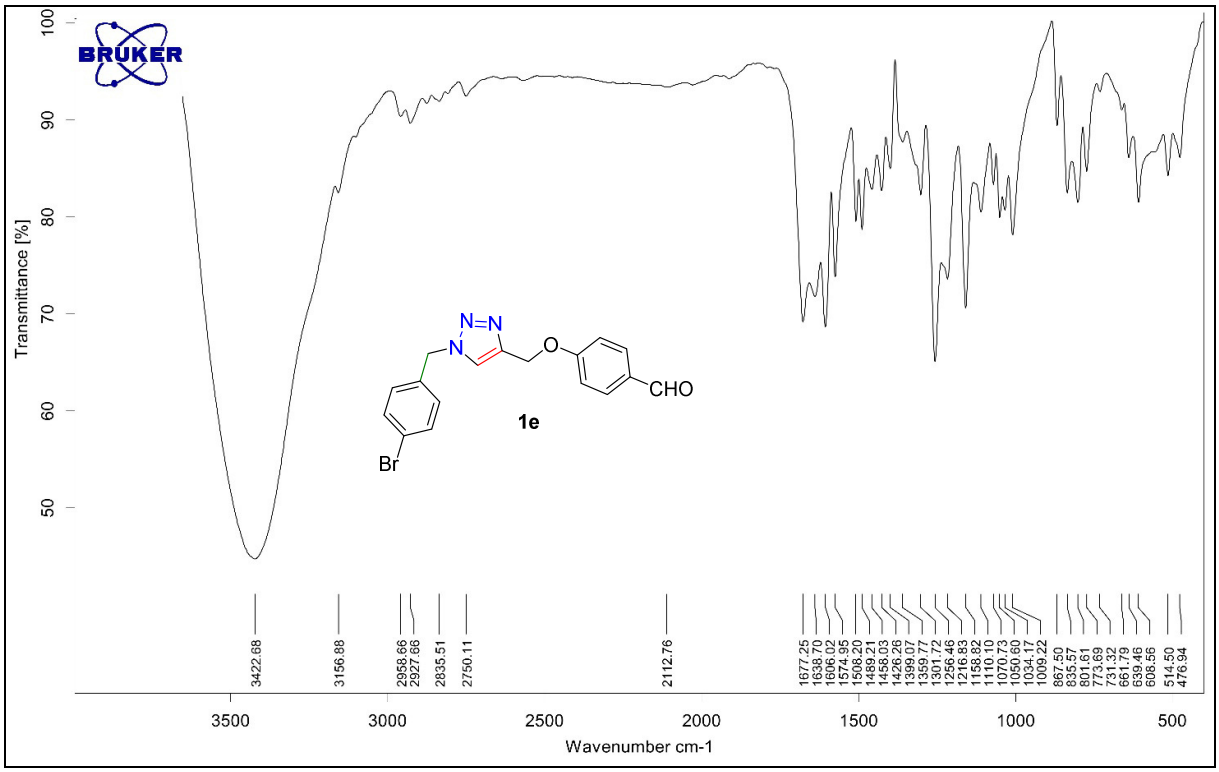

Figure S15. FTIR (KBr) spectrum of compound **1e.**

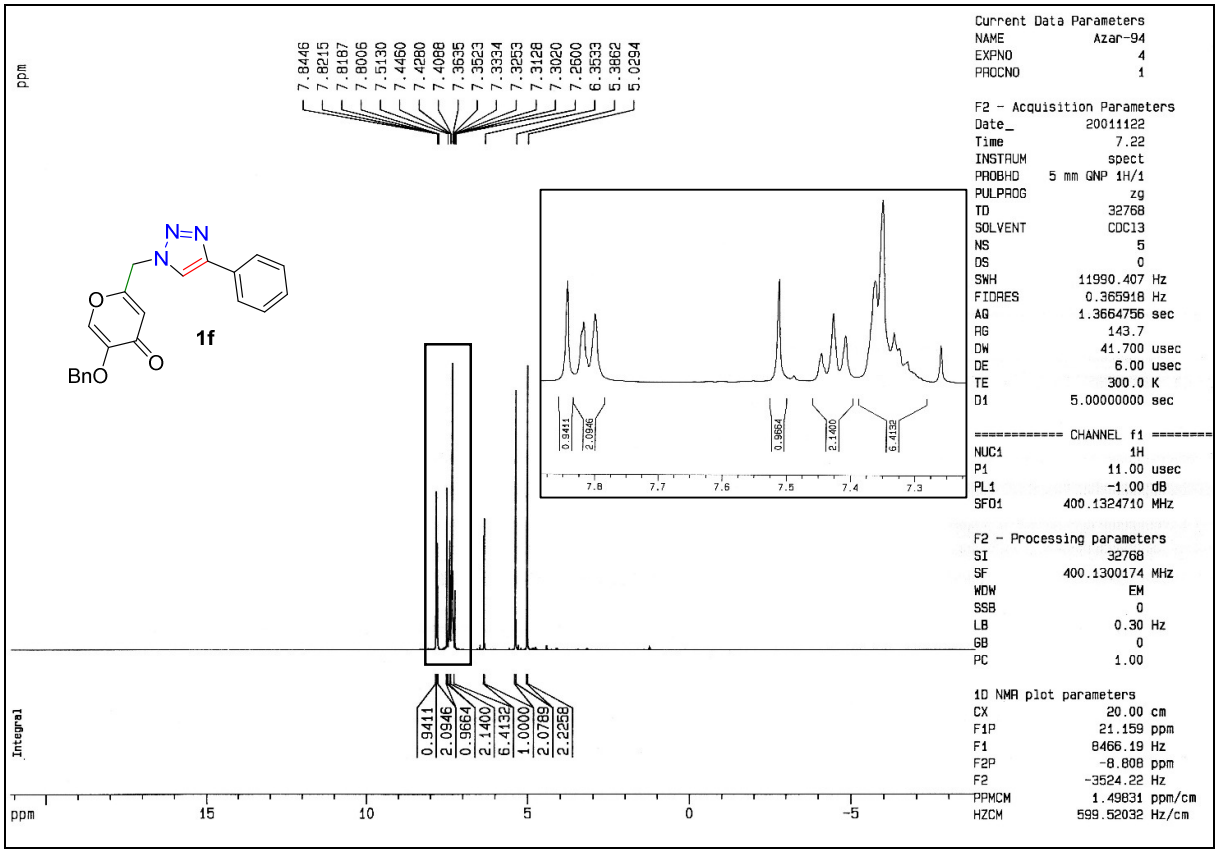

Figure S16. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **1f.**

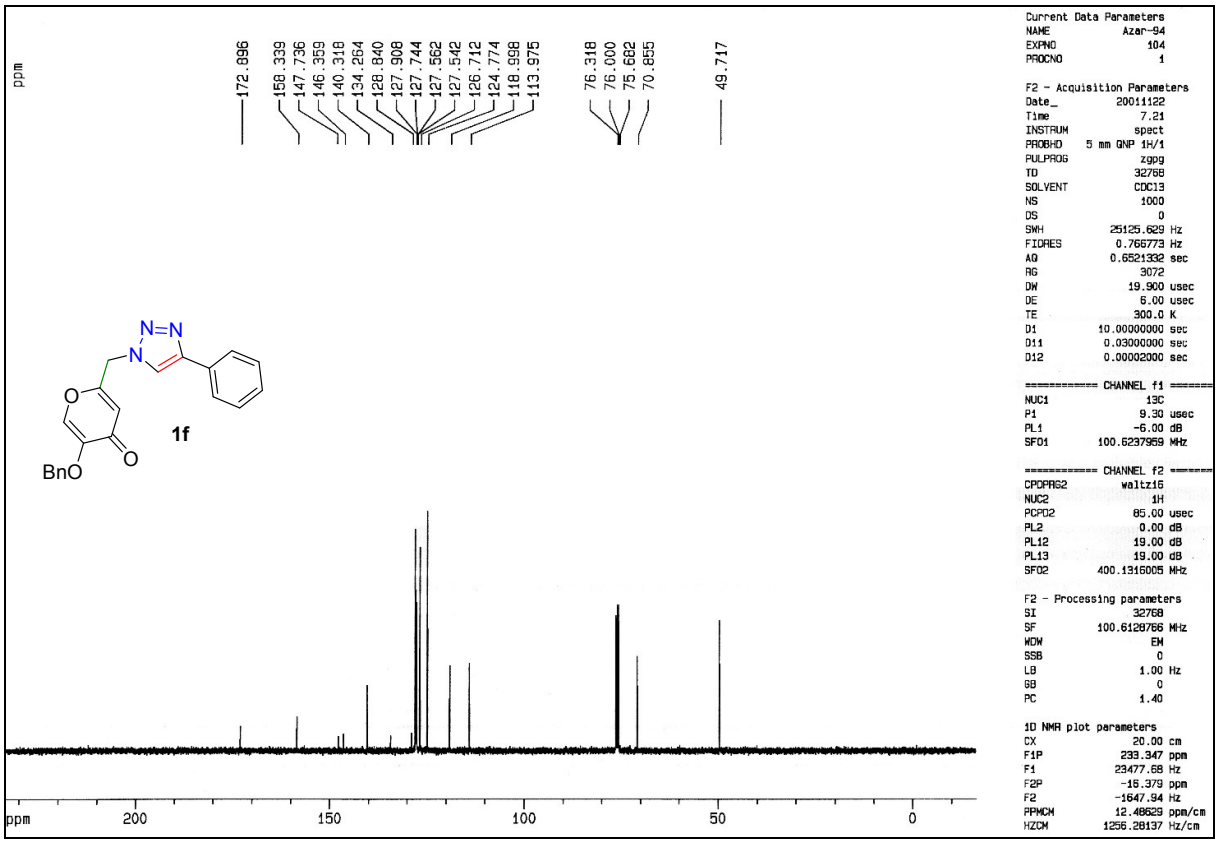

Figure S17. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **1f**

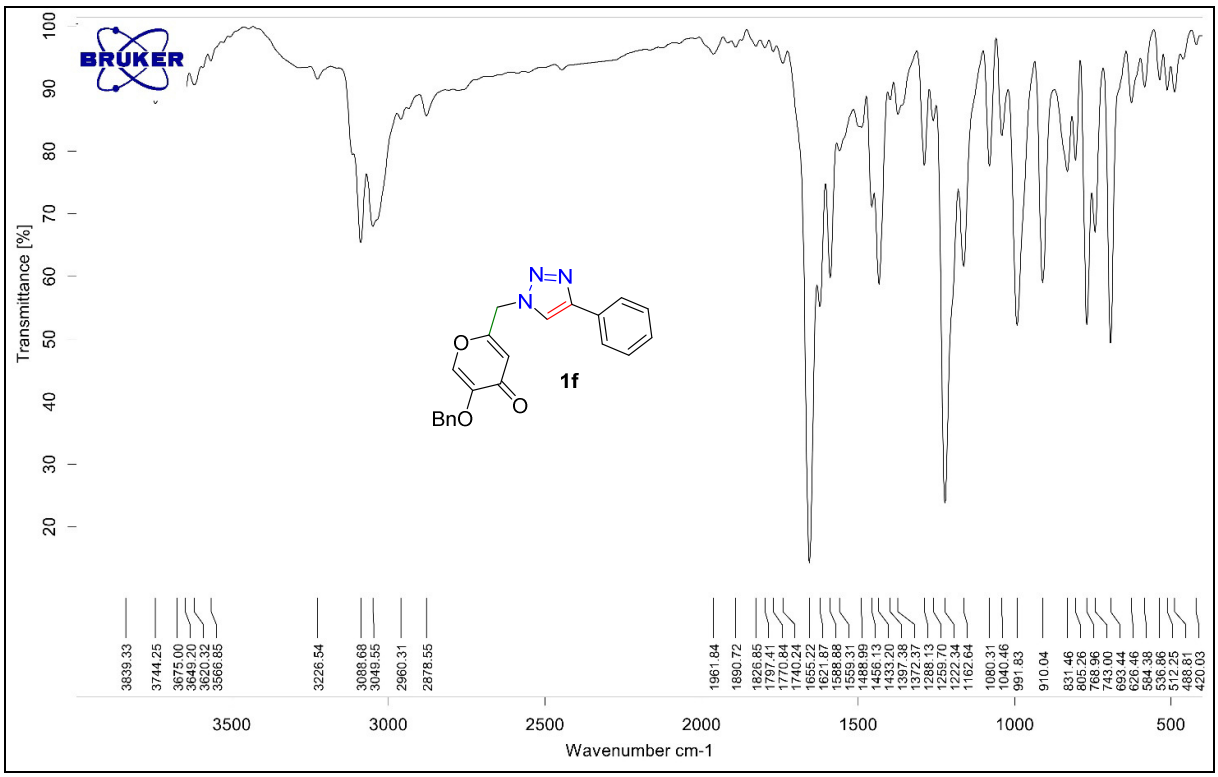

Figure S18. FTIR (KBr) spectrum of compound **1f**

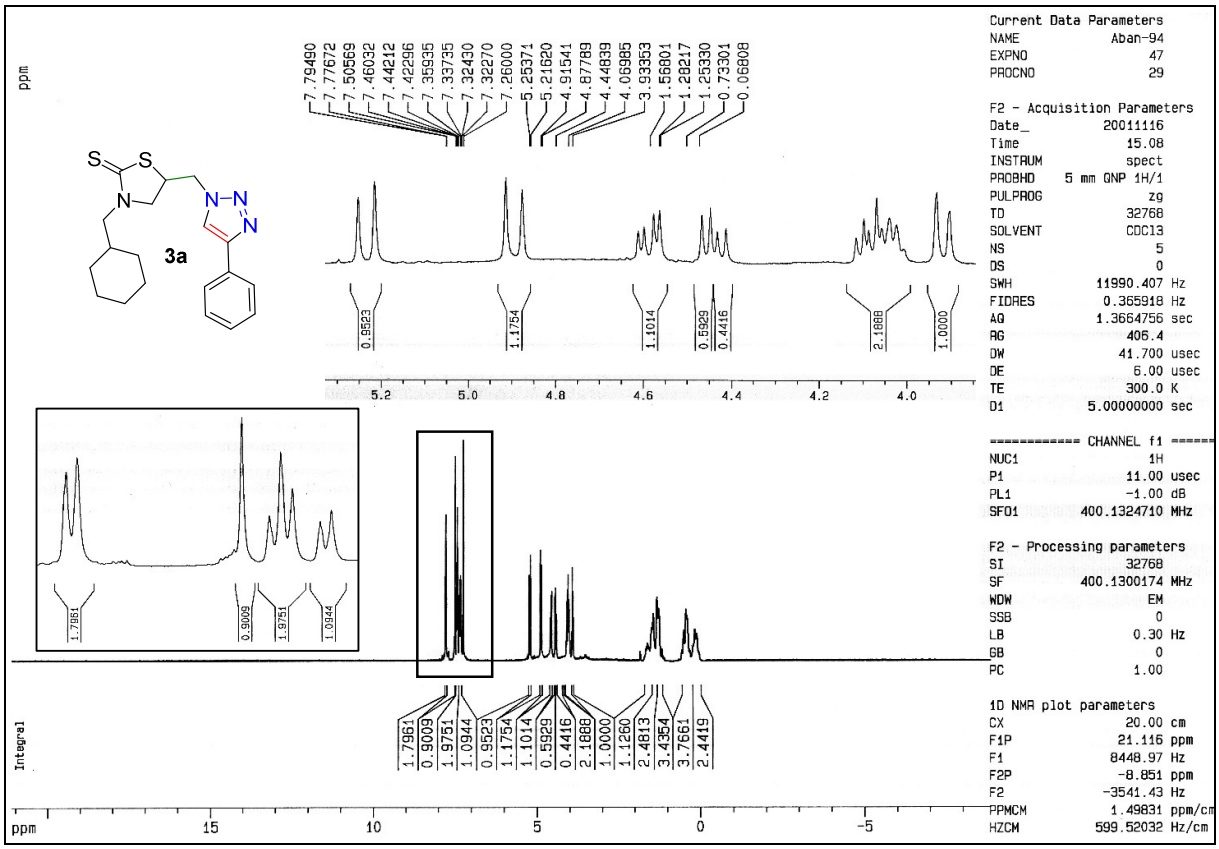

Figure S19. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3a**

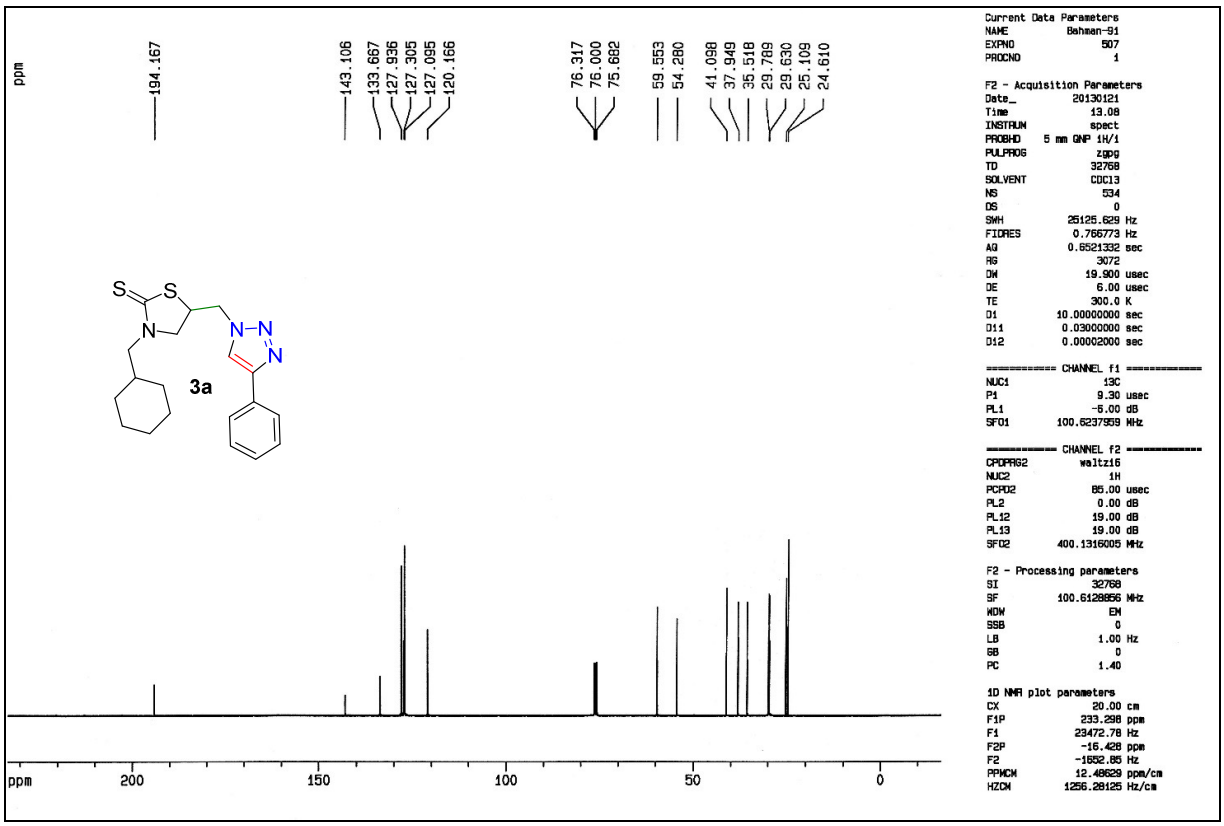

Figure S20. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3a**

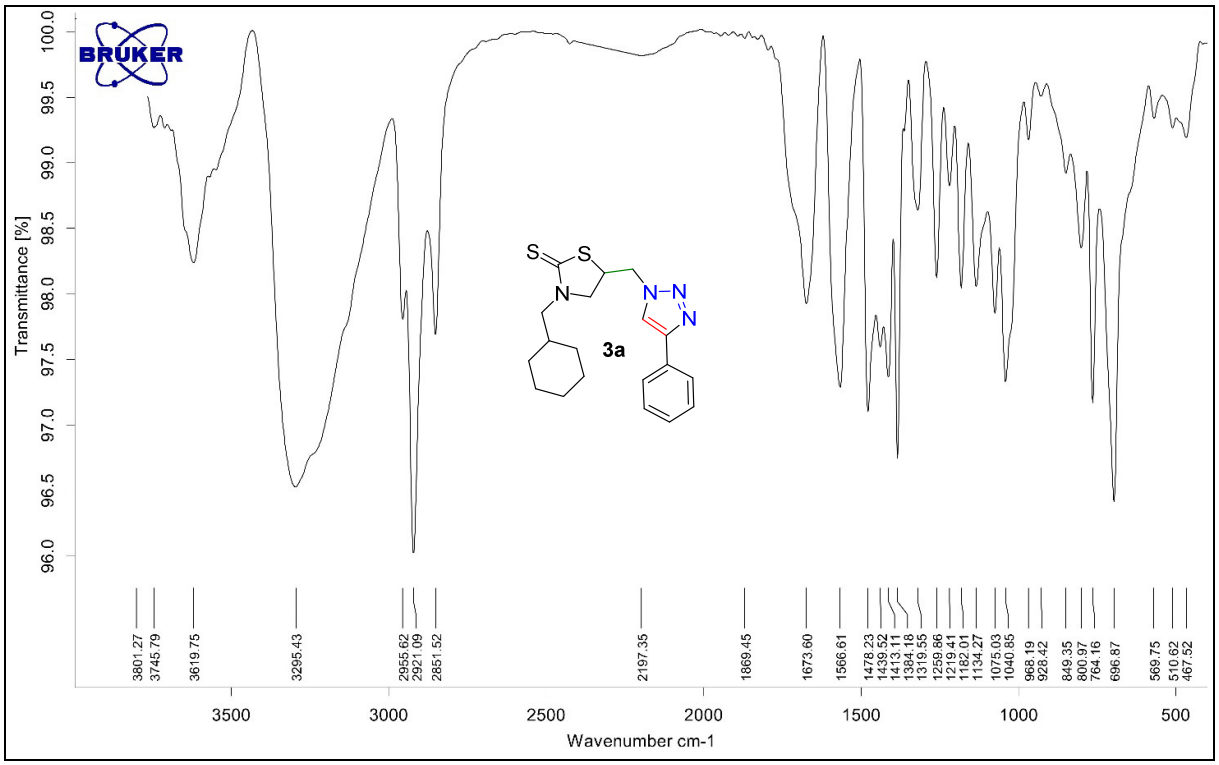

Figure S21. FTIR (KBr) spectrum of compound **3a**

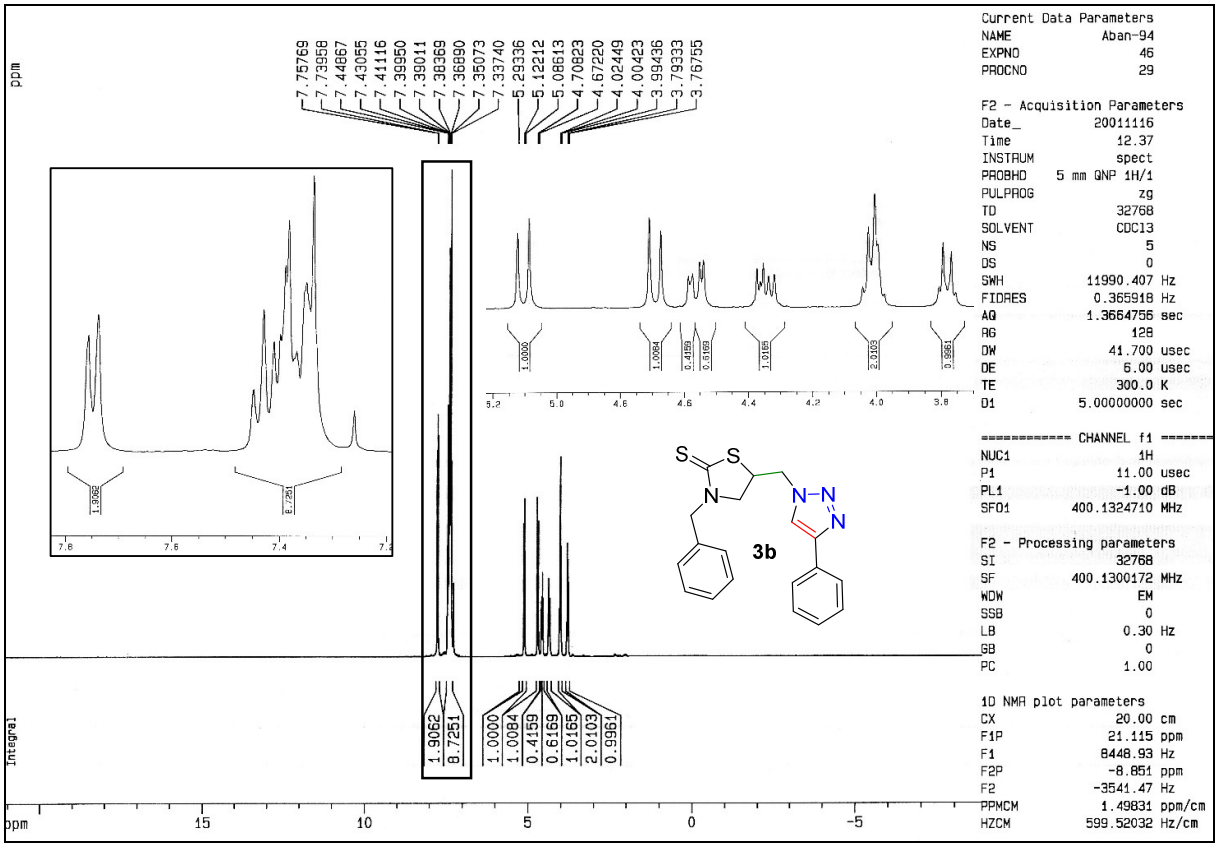

Figure S22. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3b**

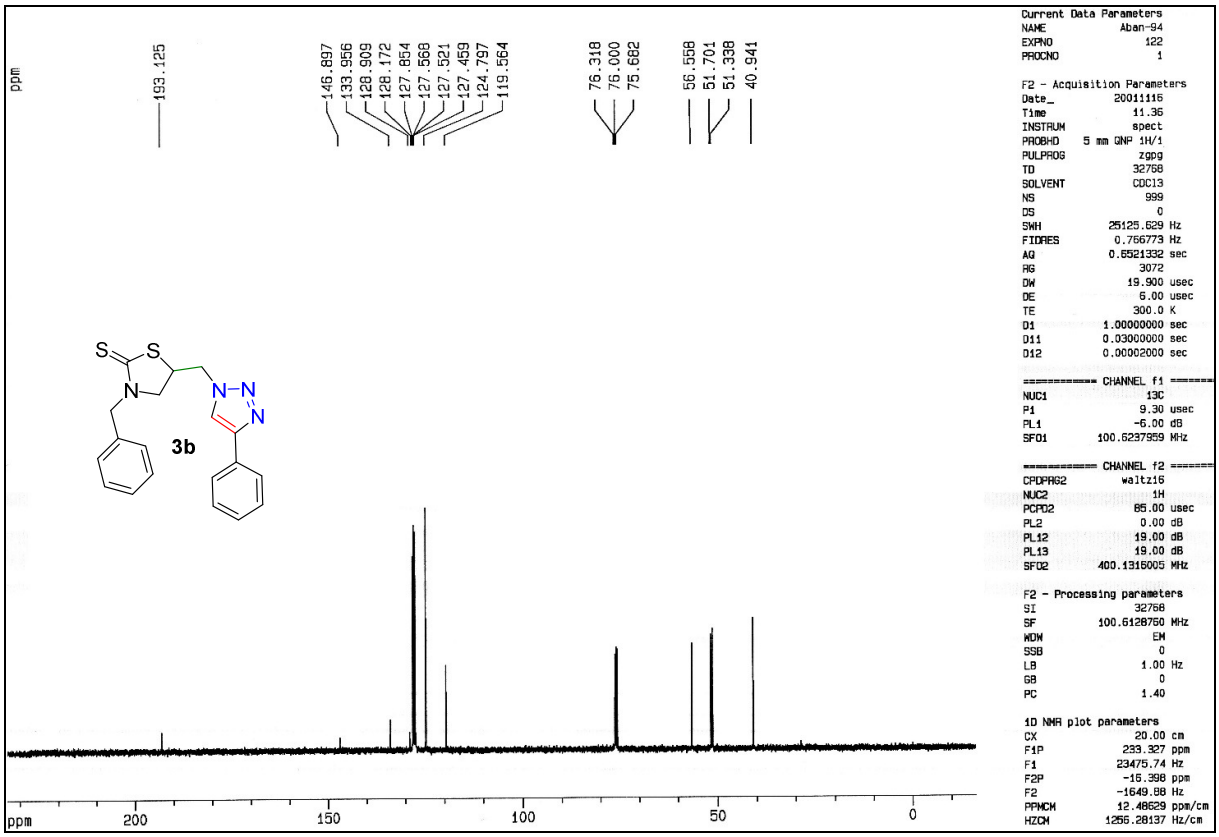

Figure S23. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3b**

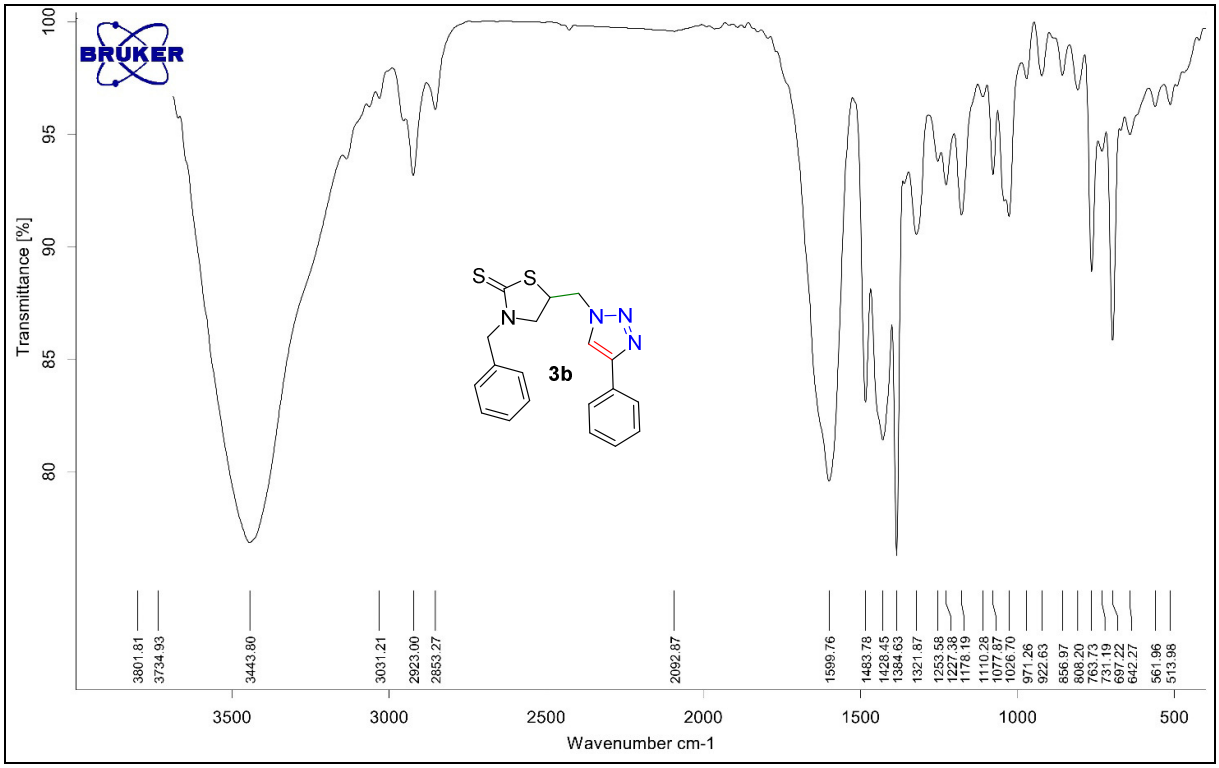

Figure S24. FTIR (KBr) spectrum of compound **3b**

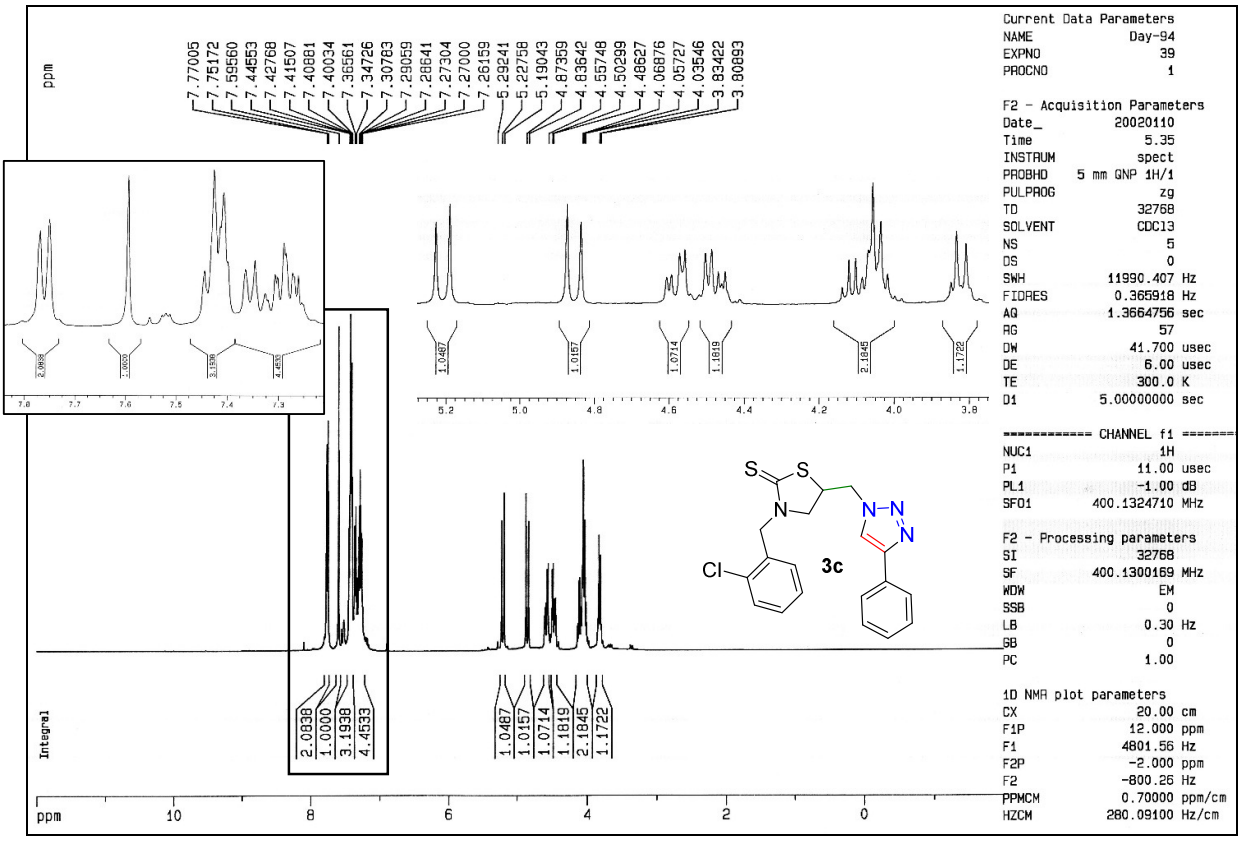

Figure S25. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3c**

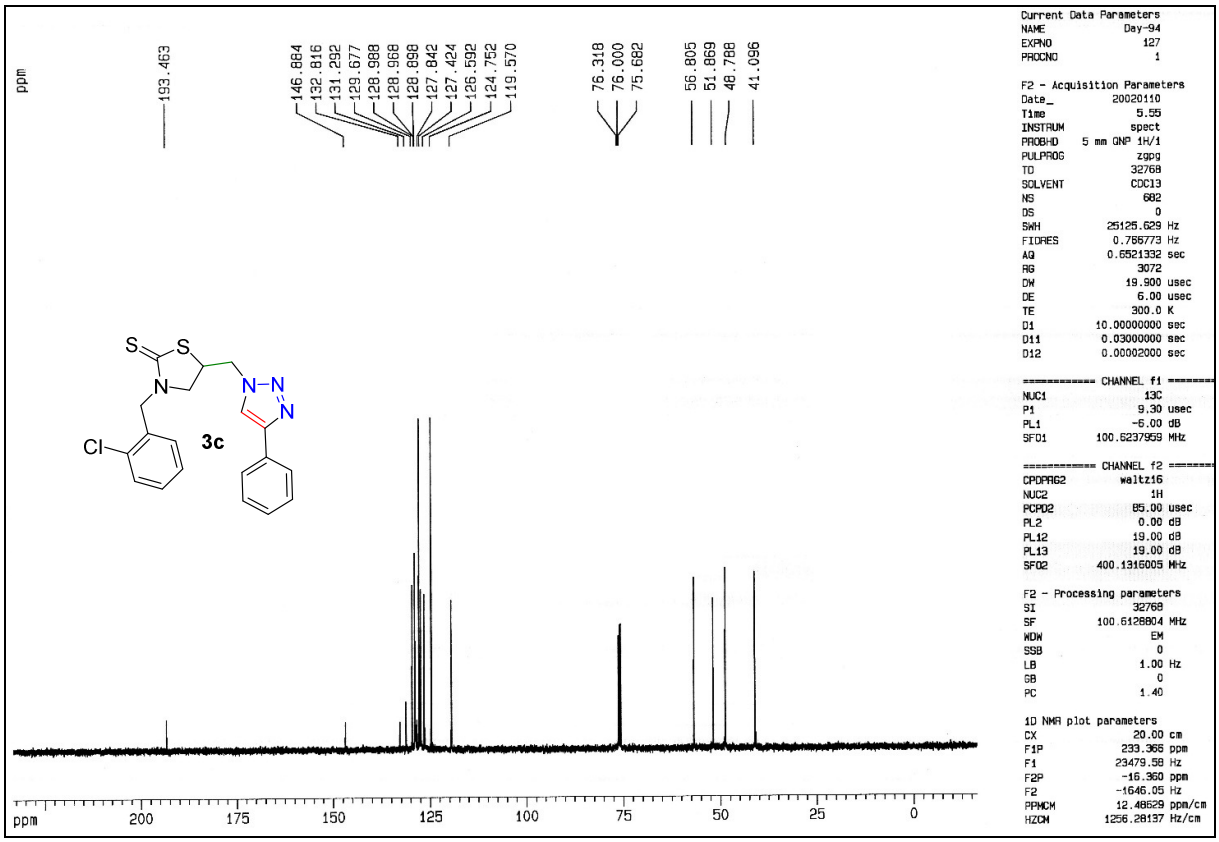

Figure S26. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3c**

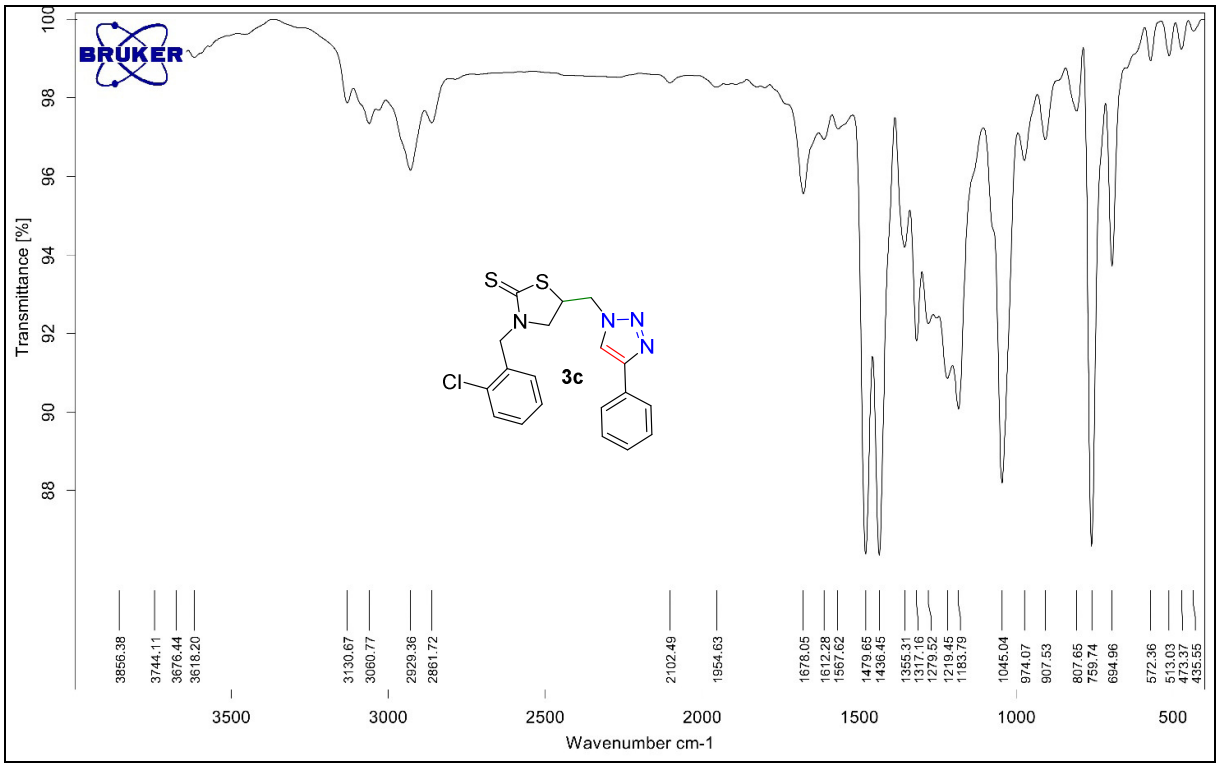

Figure S27. FTIR (KBr) spectrum of compound **3c**

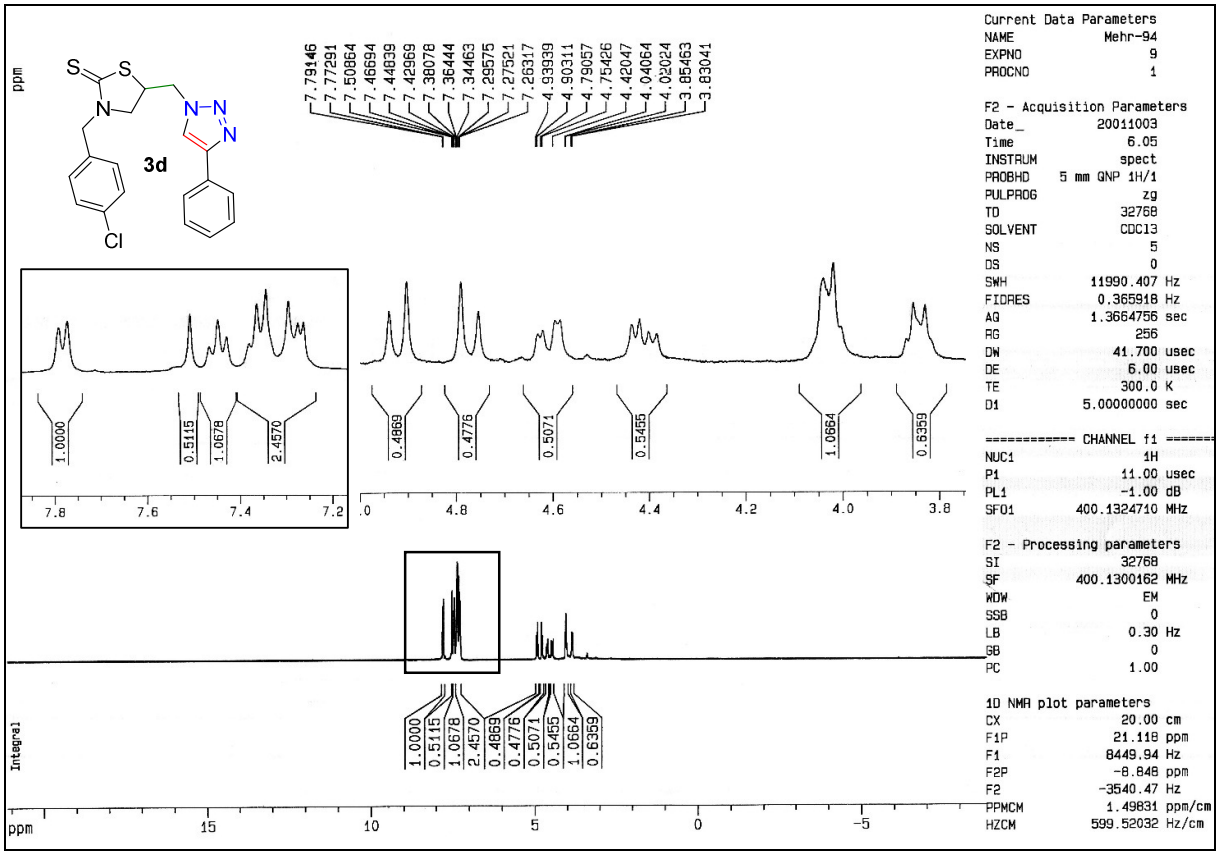

Figure S28. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3d**

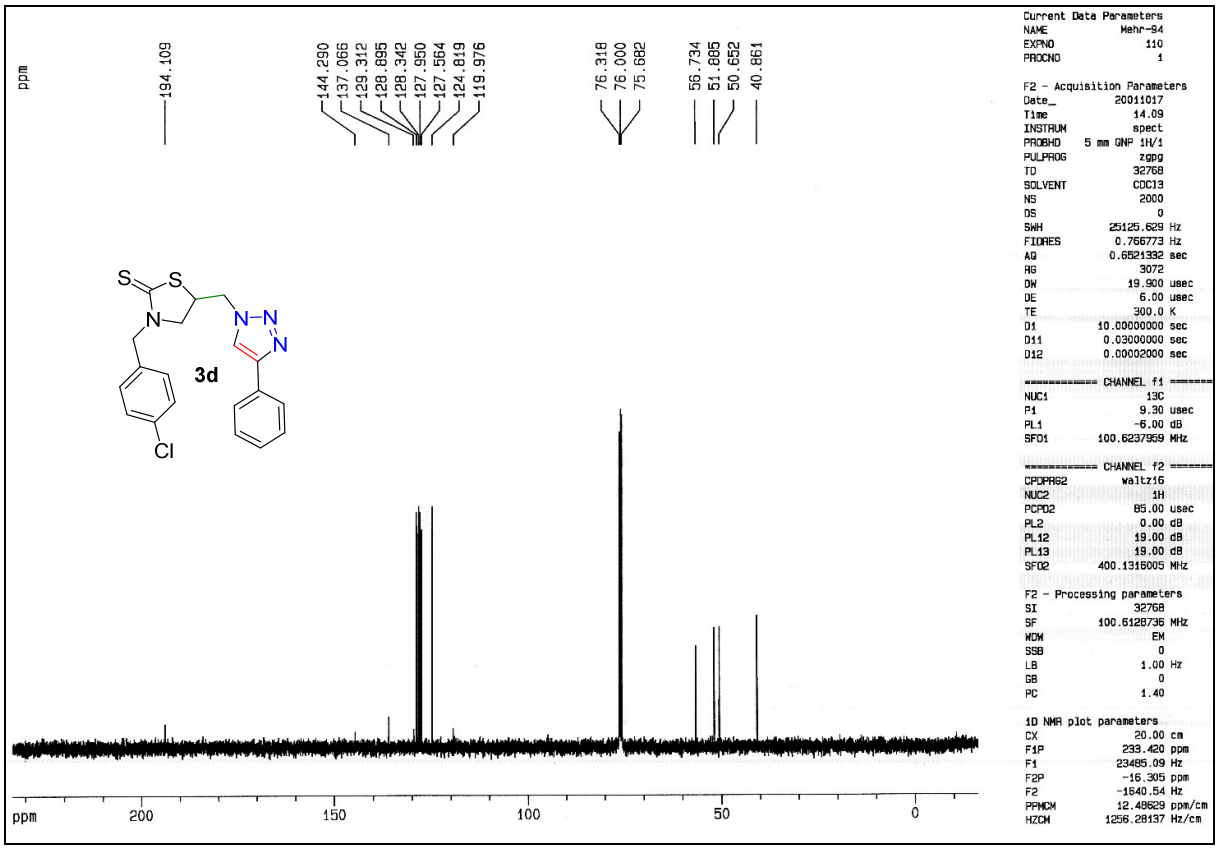

Figure S29. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3d**

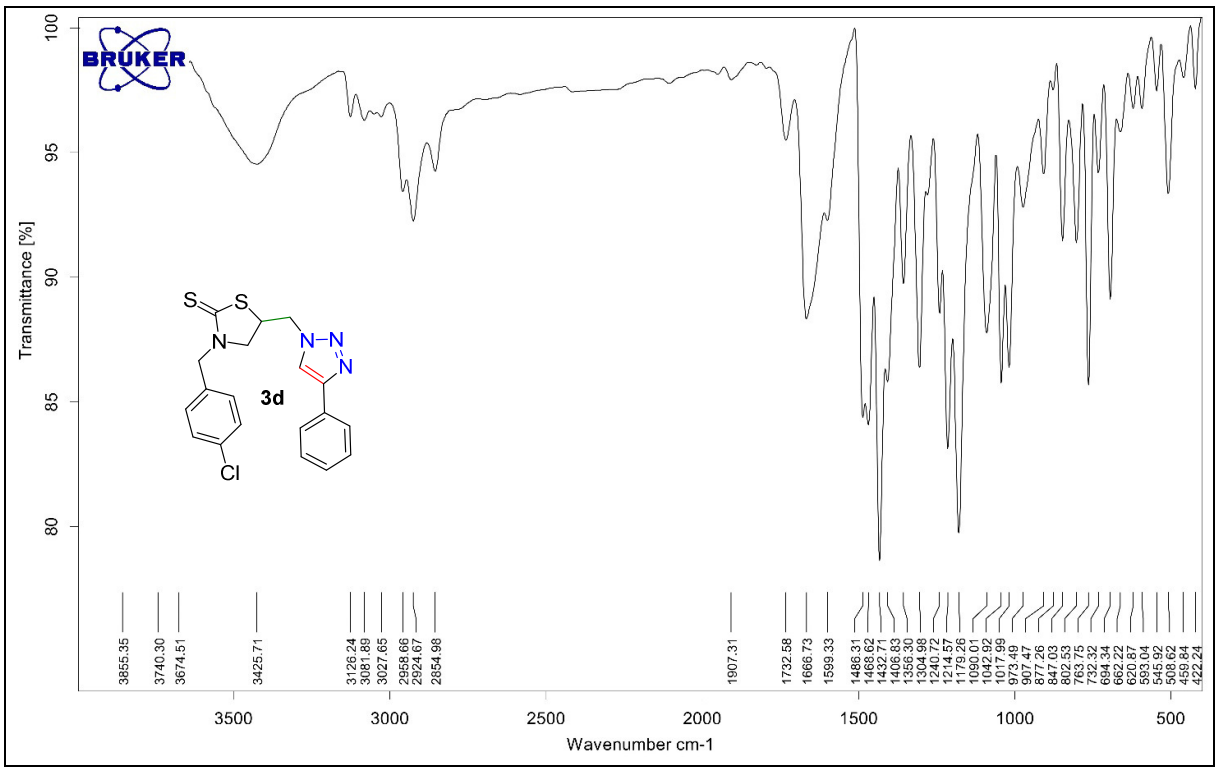

Figure S30. FTIR (KBr) spectrum of compound **3d**

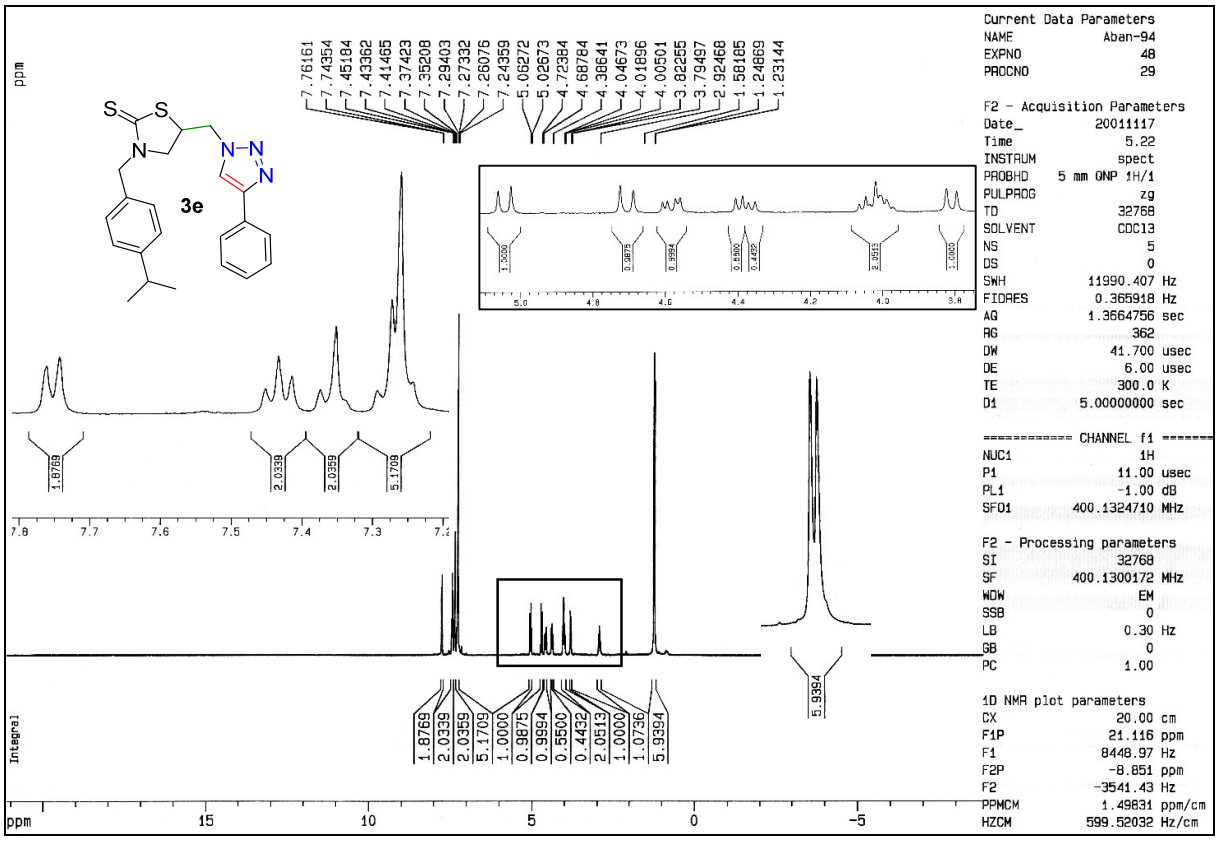

Figure S31. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3e**

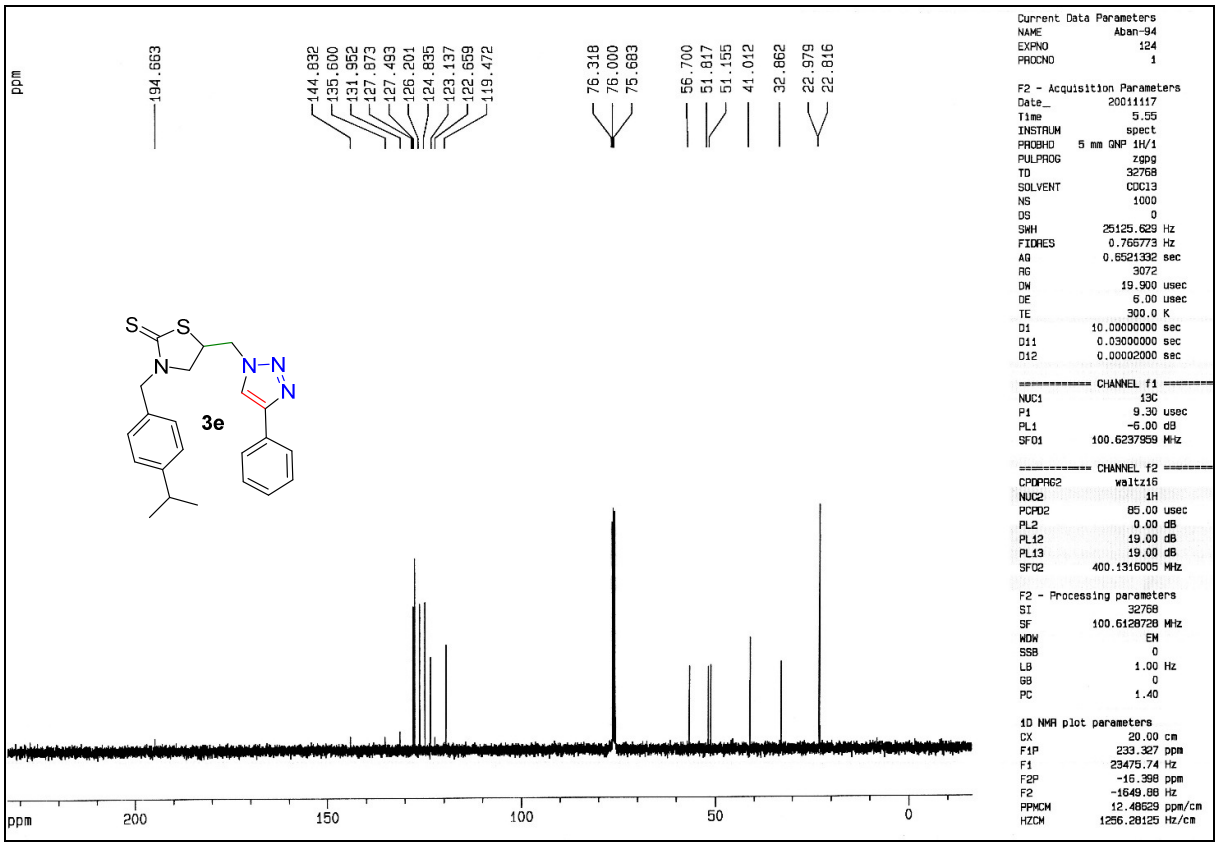

Figure S32. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3e**

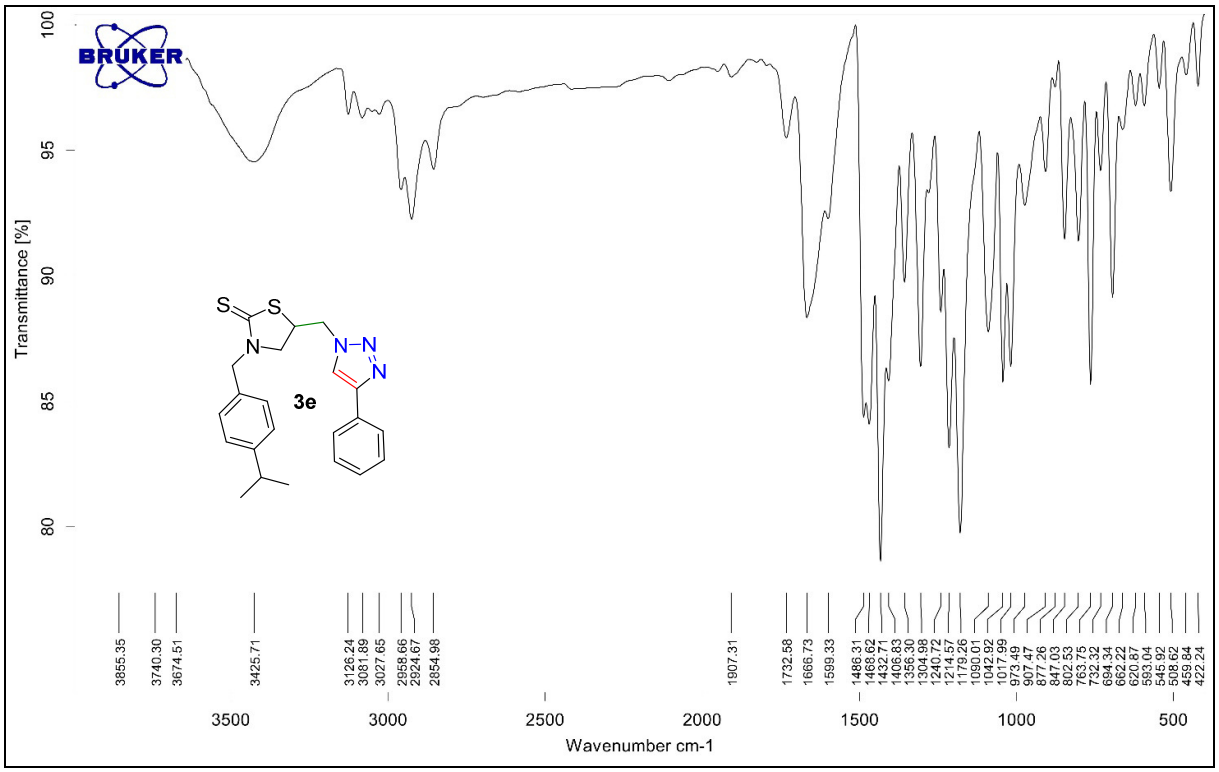

Figure S33. FTIR (KBr) spectrum of compound **3e**

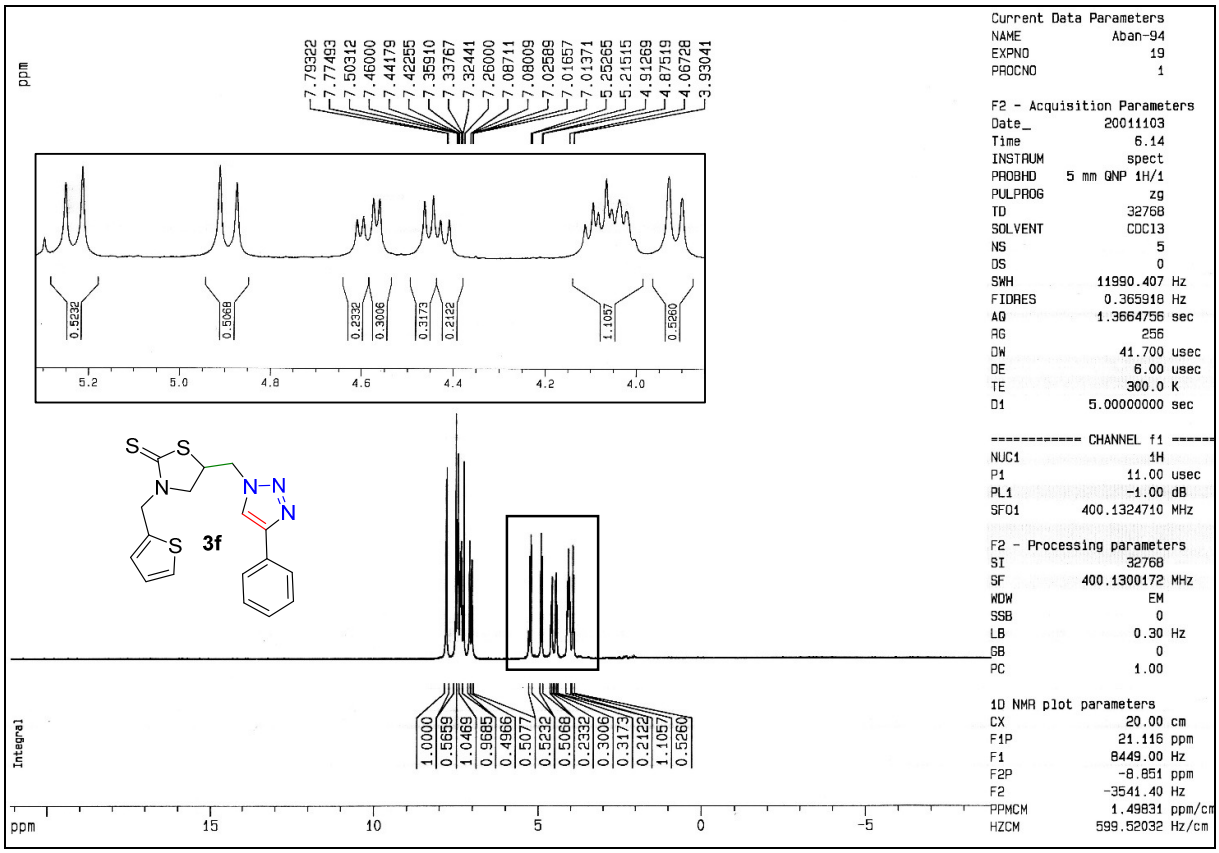

Figure S34. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3f**

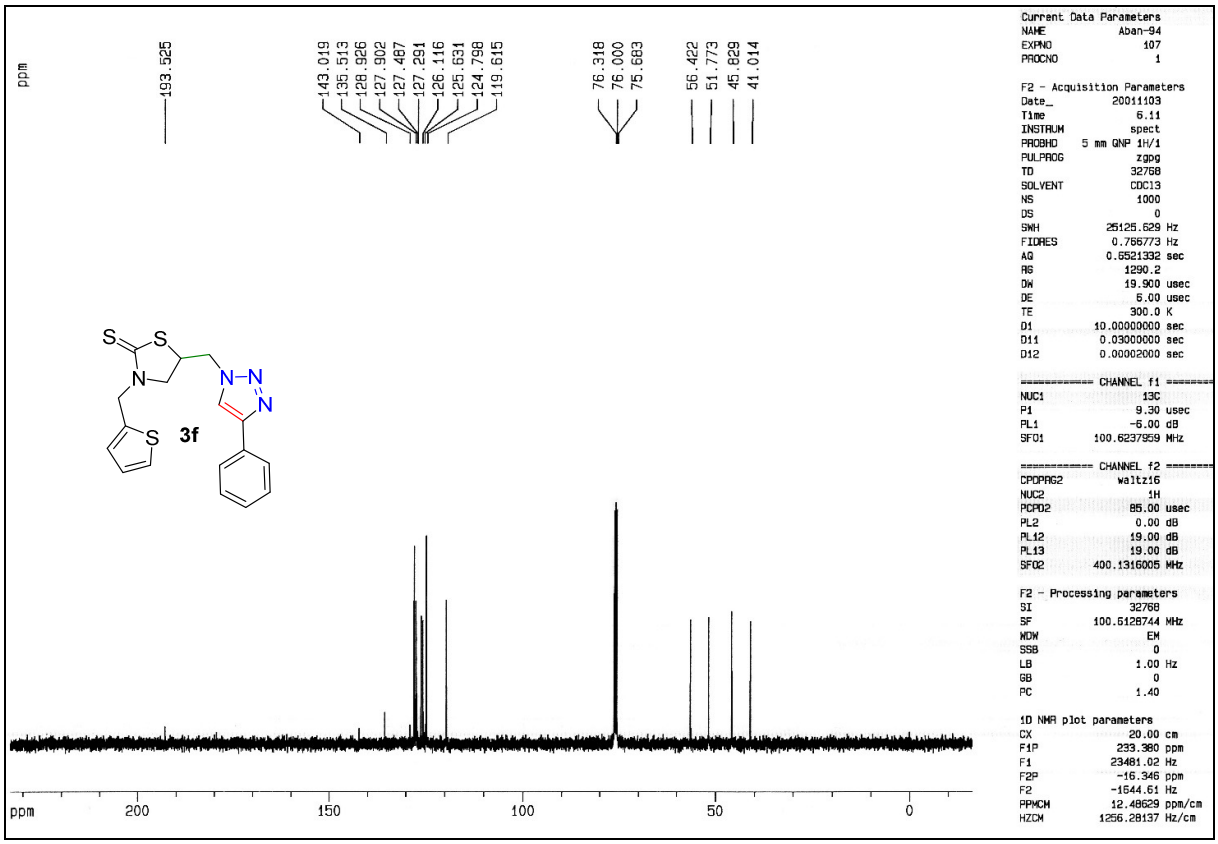

Figure S35. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3f**

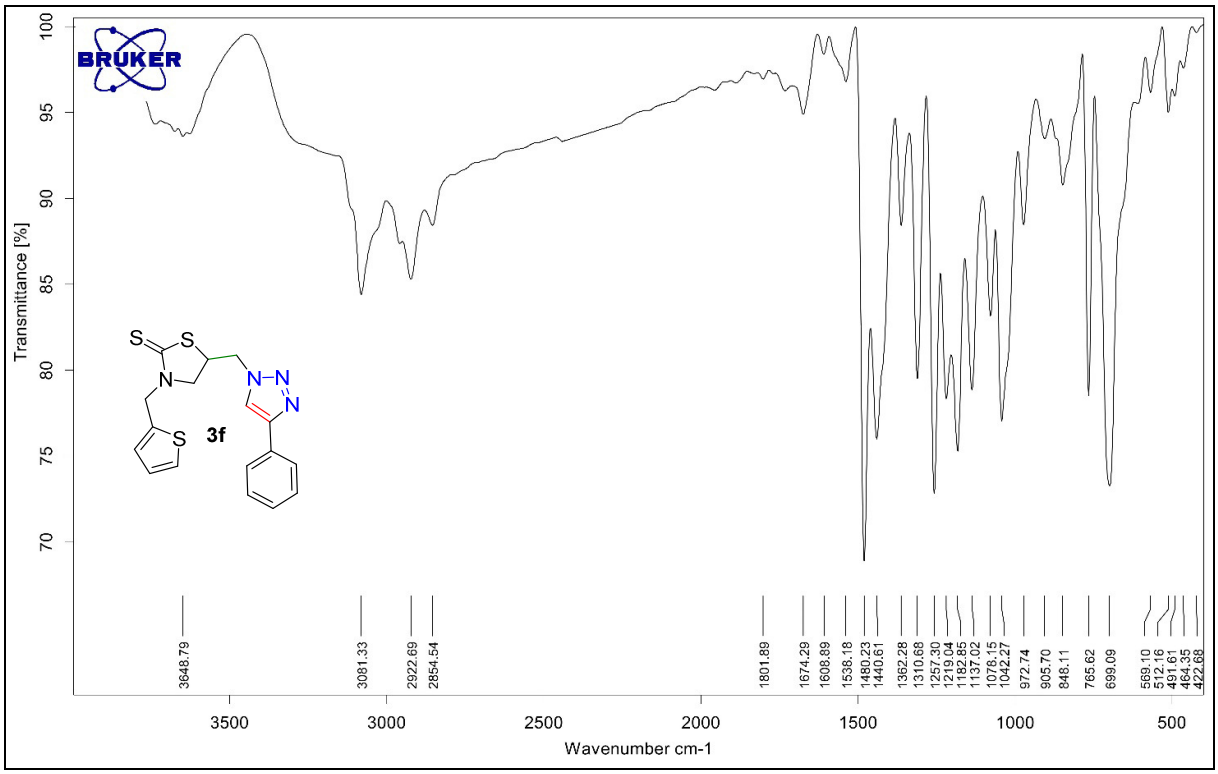

Figure S36. FTIR (KBr) spectrum of compound **3f**

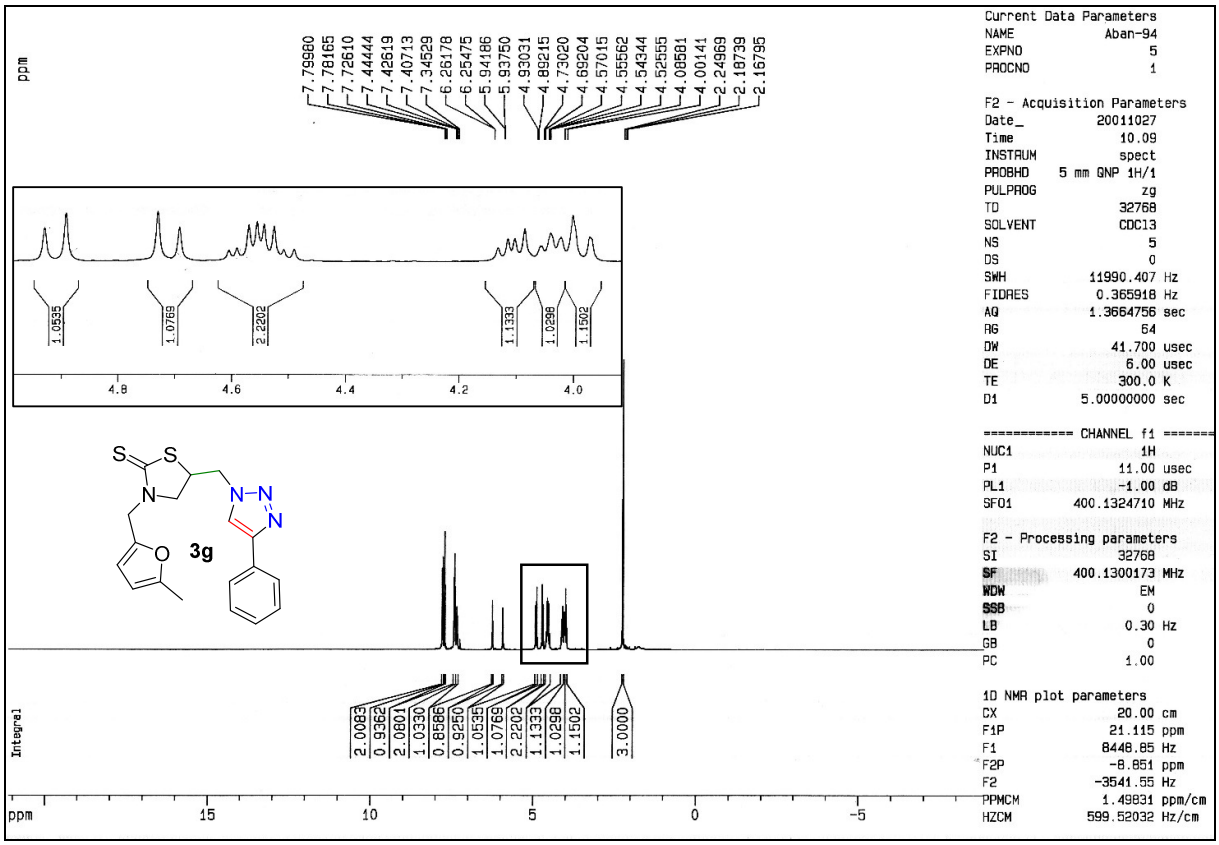

Figure S37. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **3g**

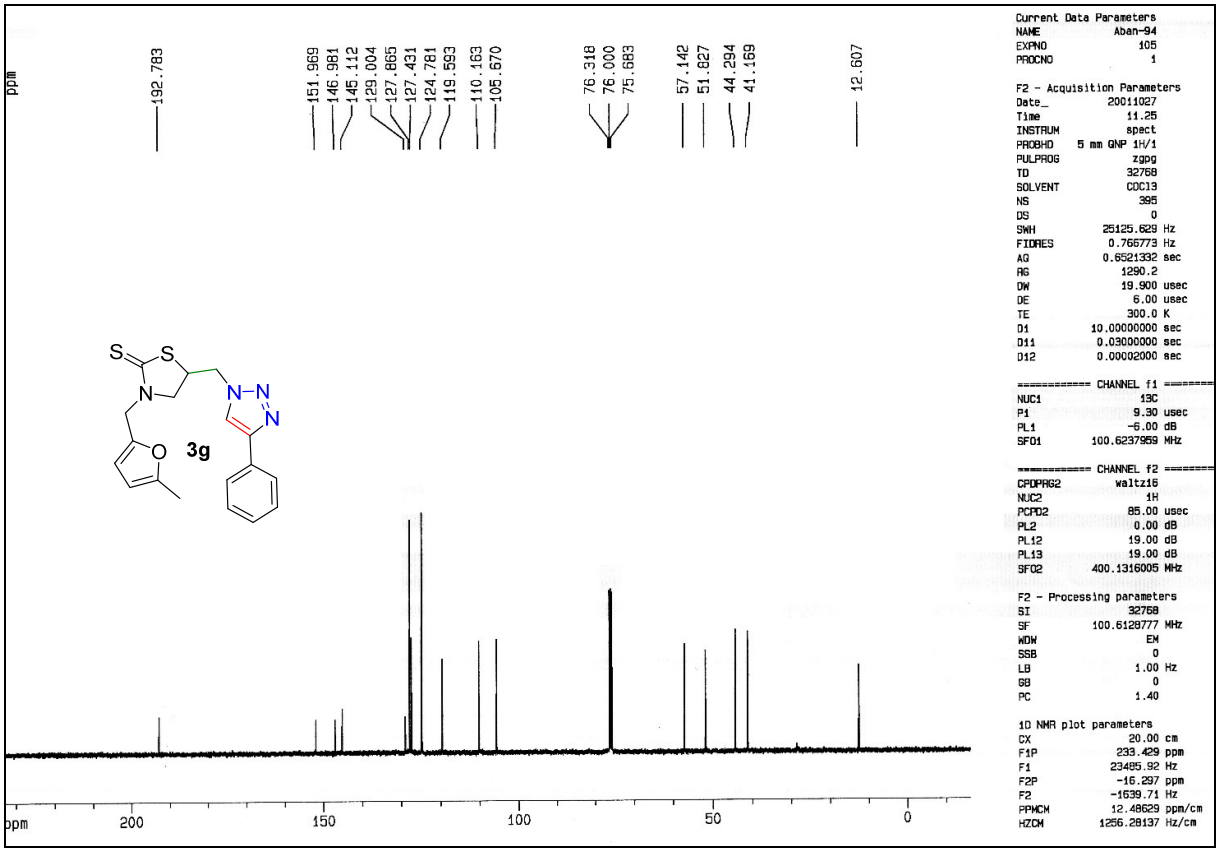

Figure S38. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of compound **3g**

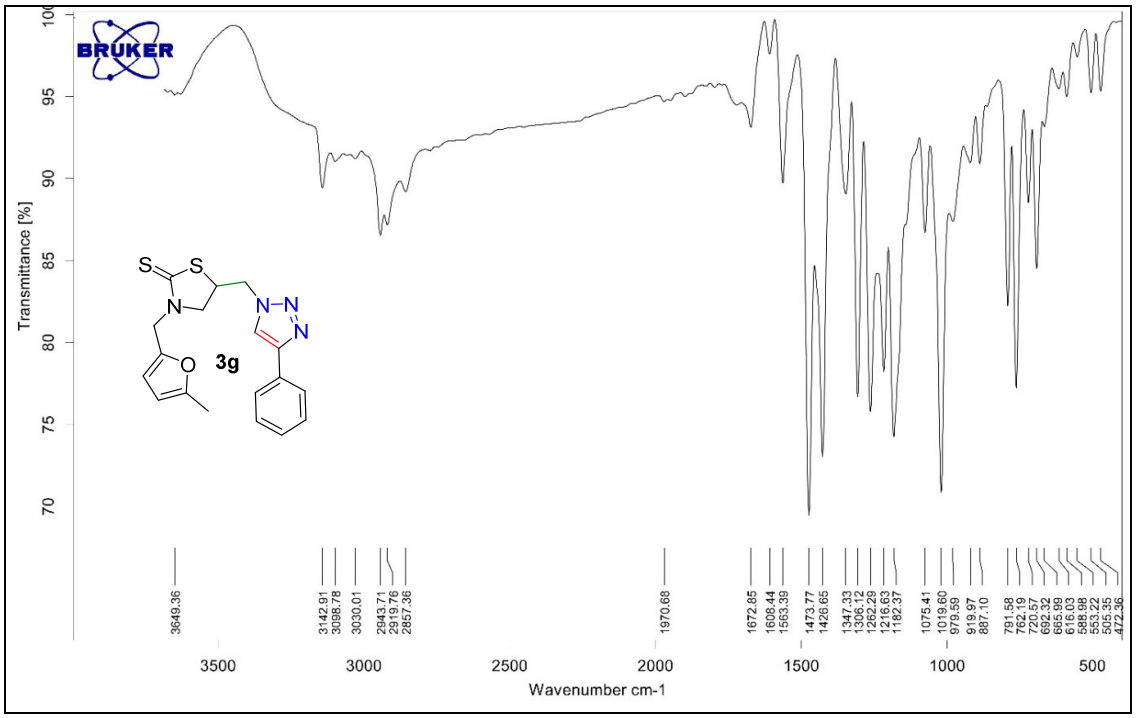

Figure S39. FTIR (KBr) spectrum of compound **3g**

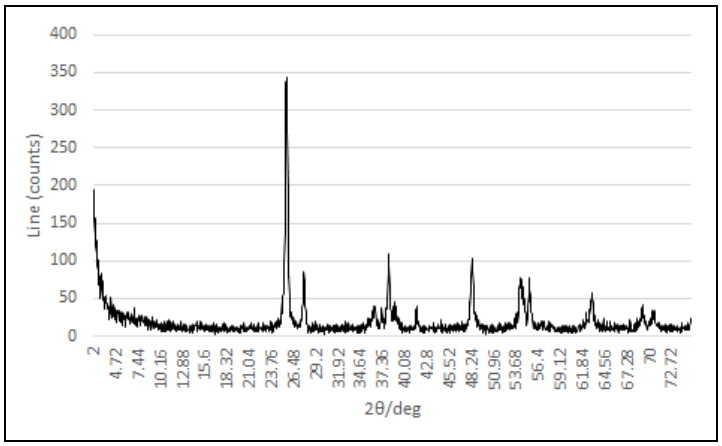

Figure S40. The XRD of Cu/TiO_2 nanocatalyst

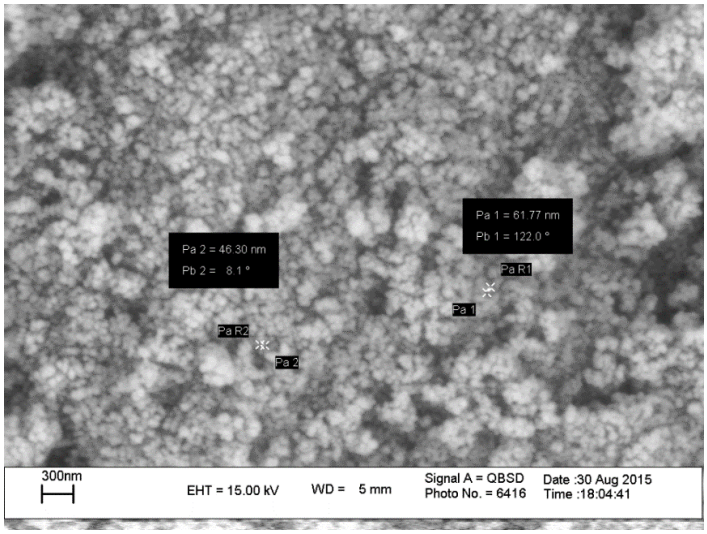

Figure S41. The SEM of Cu/TiO_2 nanocatalyst