

# **Nanomagnetic Macrocyclic Schiff-base-Mn(II) Complex: An Efficient Heterogeneous Catalyst for Click Approach Synthesis of Novel $\beta$ -Substituted-1,2,3-Triazoles**

Saade Abdalkareem Jasim<sup>a</sup>, Yassine Riadi<sup>b,\*</sup>, Hasan Sh. Majdi<sup>c</sup>, Usama S. Altimari<sup>d</sup>

<sup>a</sup> Medical Laboratory Techniques Department, Al-maarif University College, Al-anbar-Ramadi, Iraq.

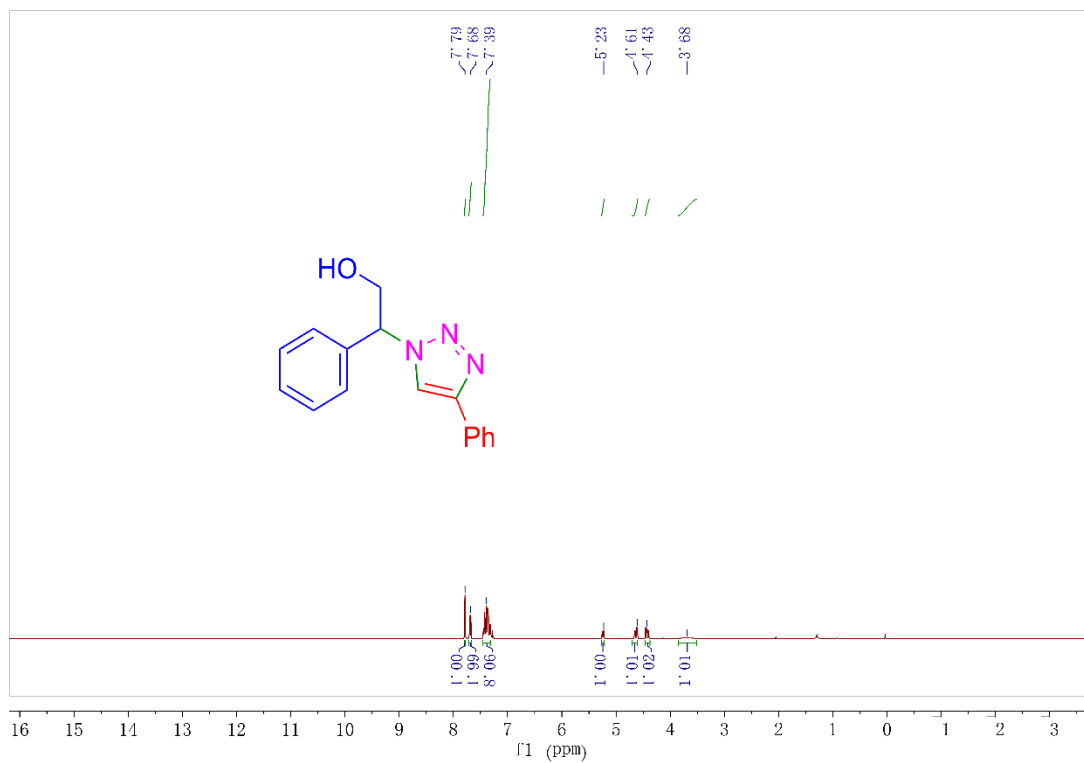
<sup>b</sup> Department of Pharmaceutics, College of Pharmacy, Prince Sattam Bin Abdulaziz University, Al-kharj, 11942, Saudi Arabia.

<sup>c</sup> Department Chemical Engineering and Petroleum Industries, Al- Mustaqbal University College 51001, Iraq.

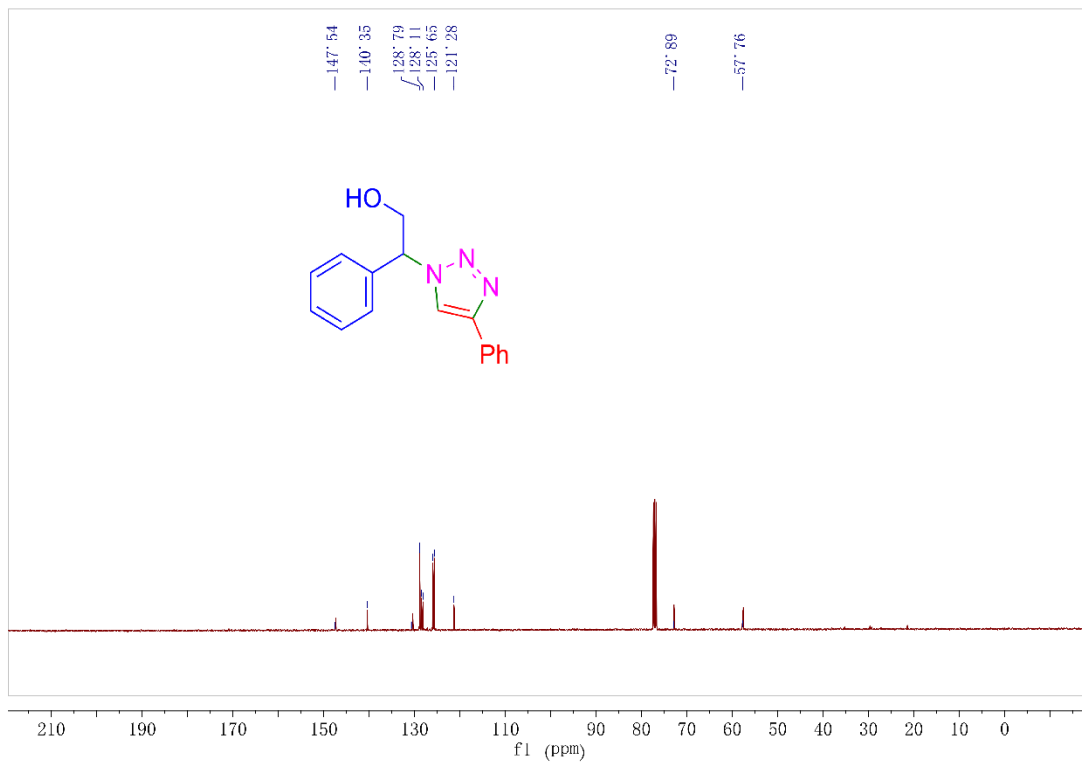
<sup>d</sup> Department of Pharmaceutics, Al-Nisour University College, Baghdad, Iraq.

\*correspondence to: Yassine Riadi

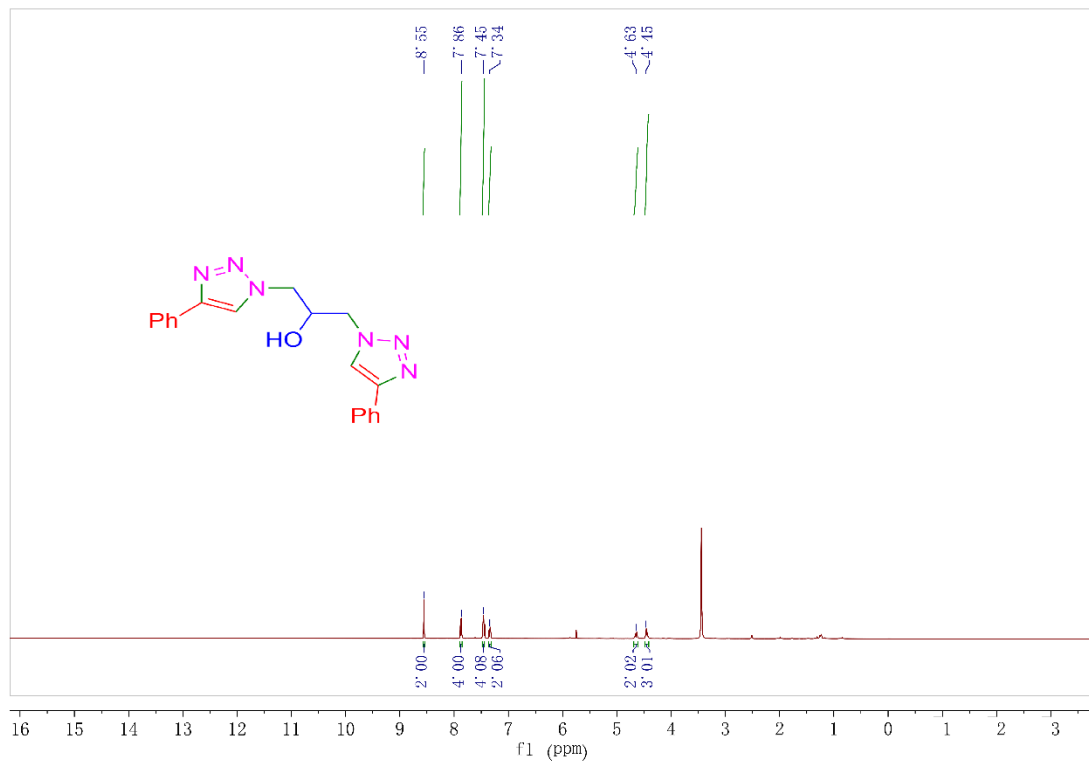
Email: [yassine.riadi2022@gmail.com](mailto:yassine.riadi2022@gmail.com) & [y.riadi2@psau.edu.sa](mailto:y.riadi2@psau.edu.sa)



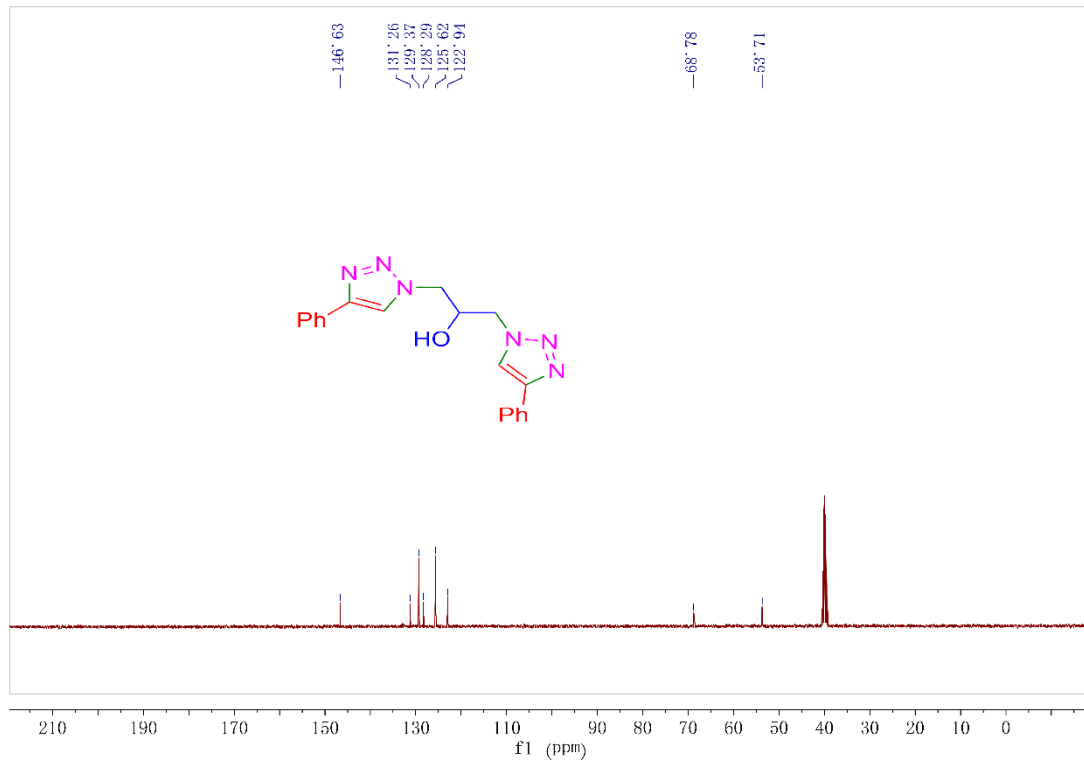
S1. <sup>1</sup>H NMR of 1a.



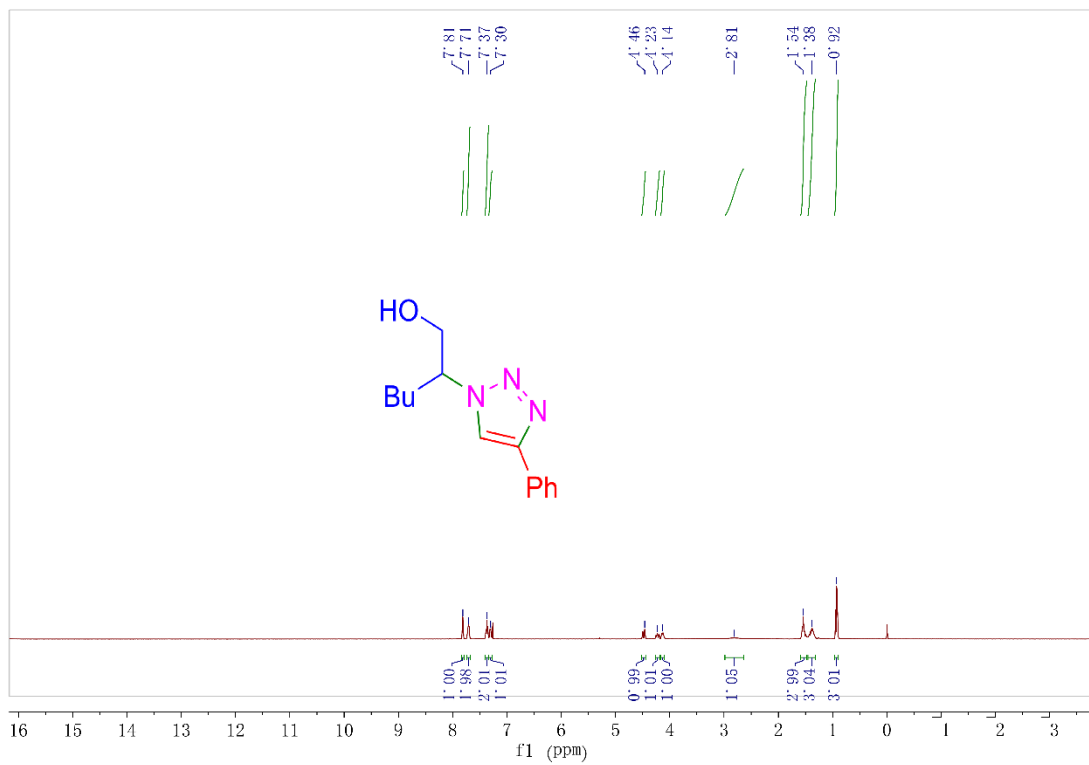
S2. <sup>13</sup>C NMR of 1a.



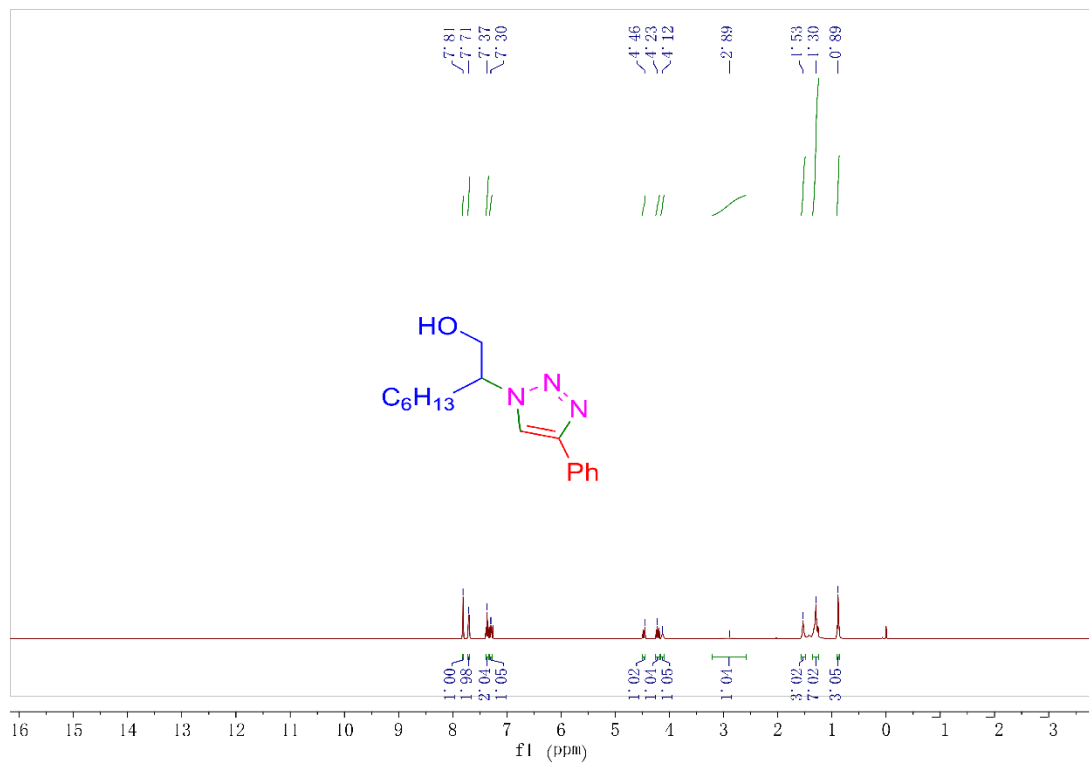
S3.  $^1\text{H}$  NMR of 2a.



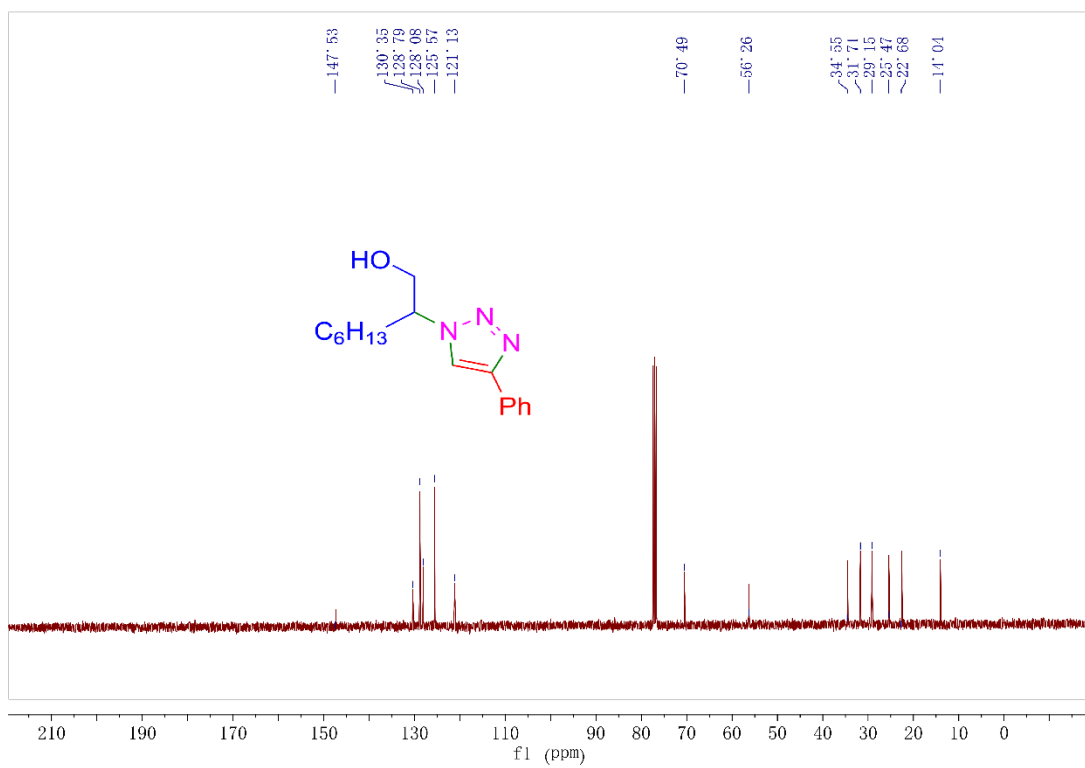
S4.  $^{13}\text{C}$  NMR of 2a.



S5. <sup>1</sup>H NMR of 3a.

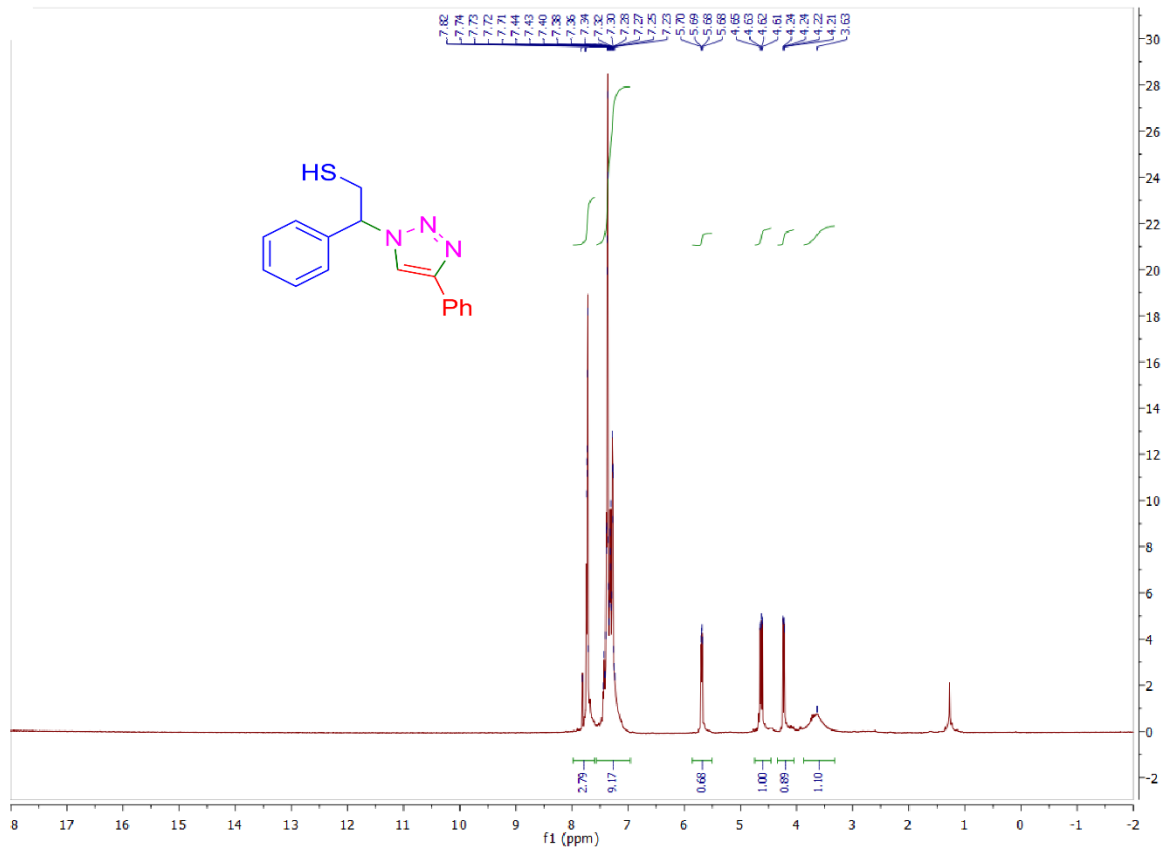


S6.  $^1\text{H}$  NMR of 4a.

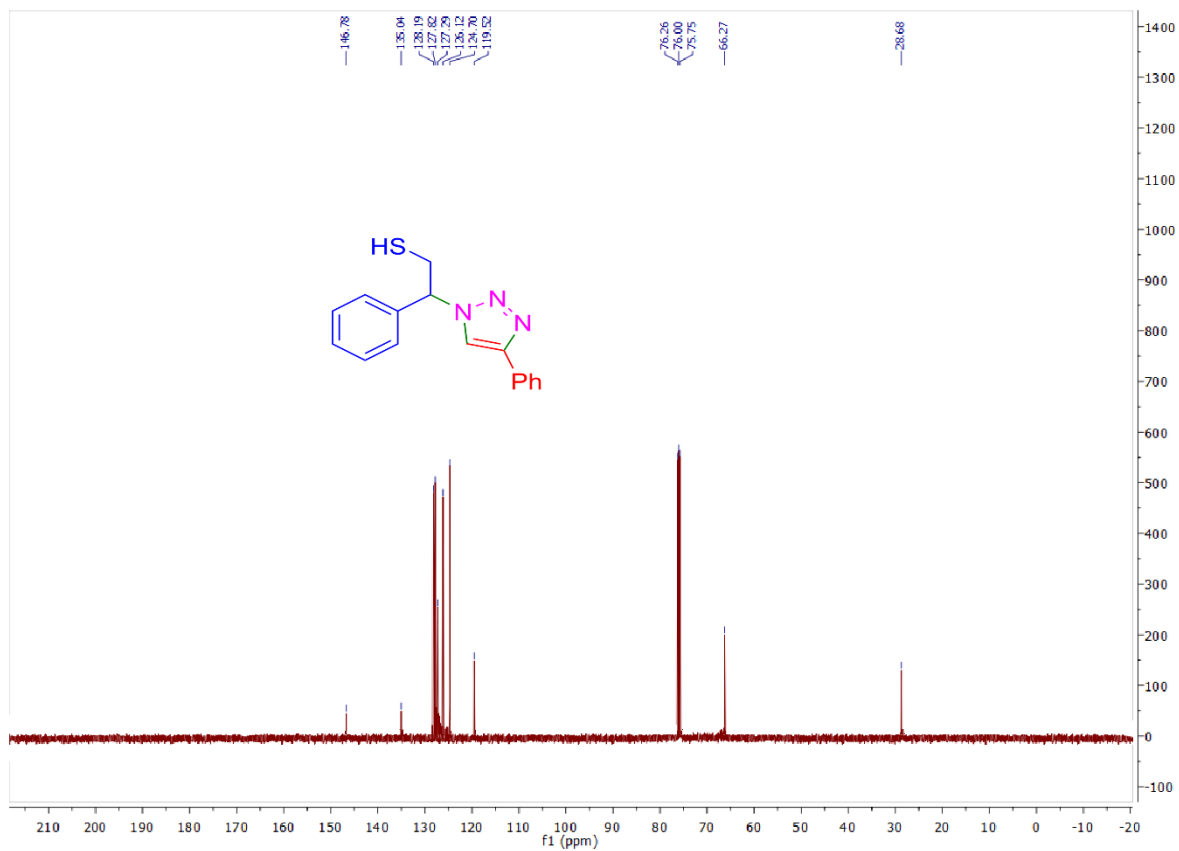


S7.  $^{13}\text{C}$  NMR of 4a.

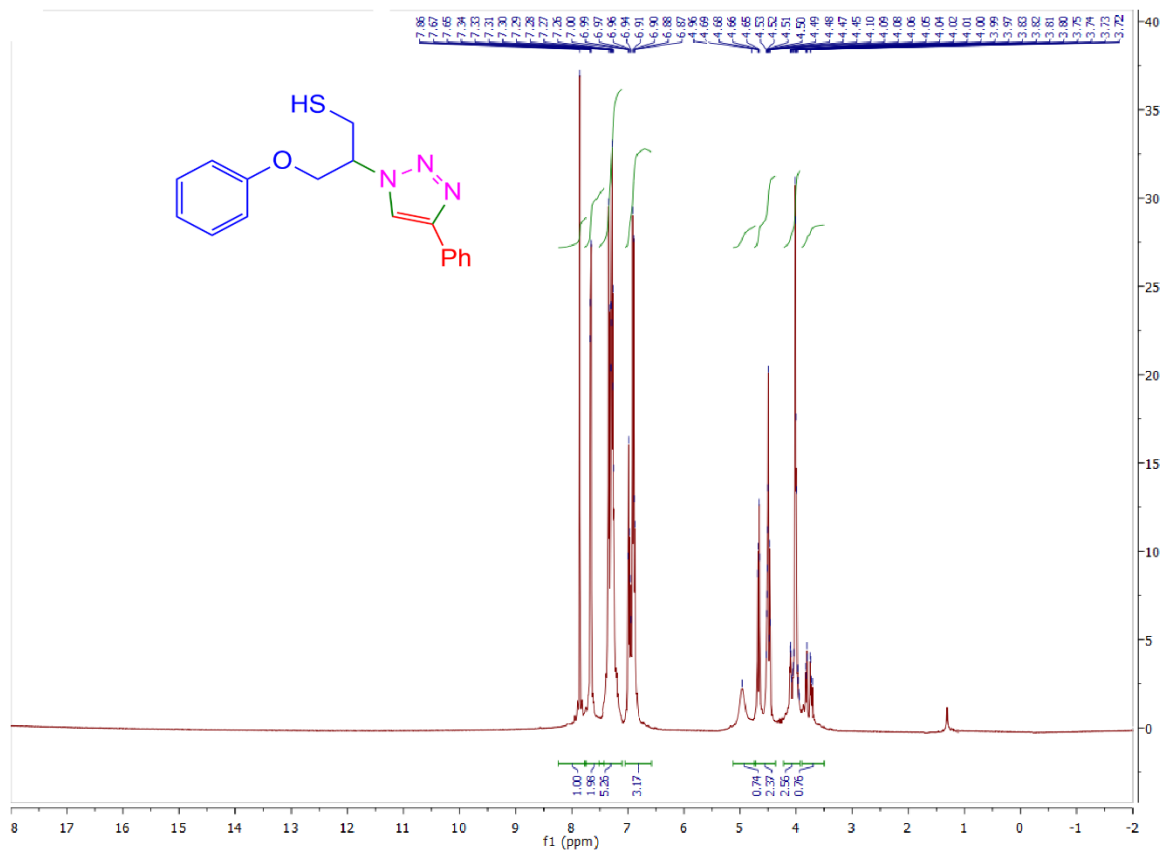




S8.  $^1\text{H}$  NMR of 5a.

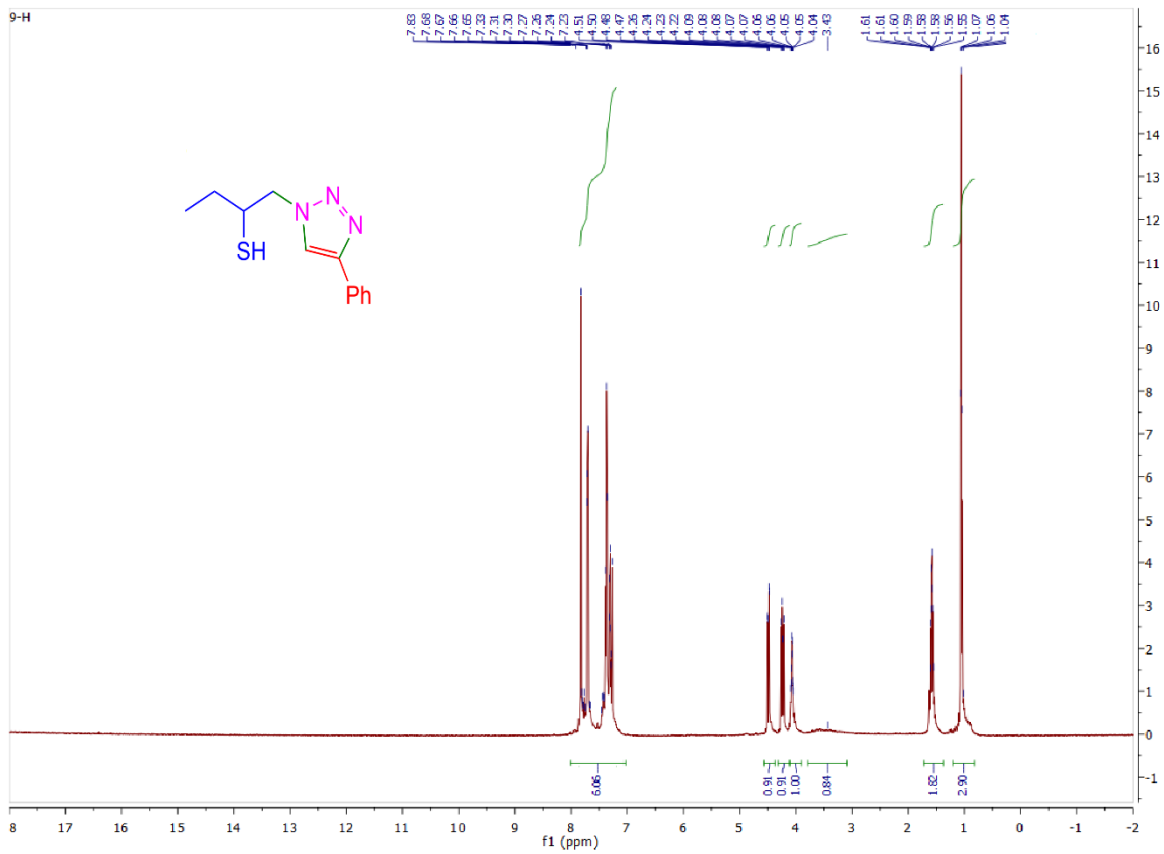


S8. <sup>13</sup>C NMR of 5a.

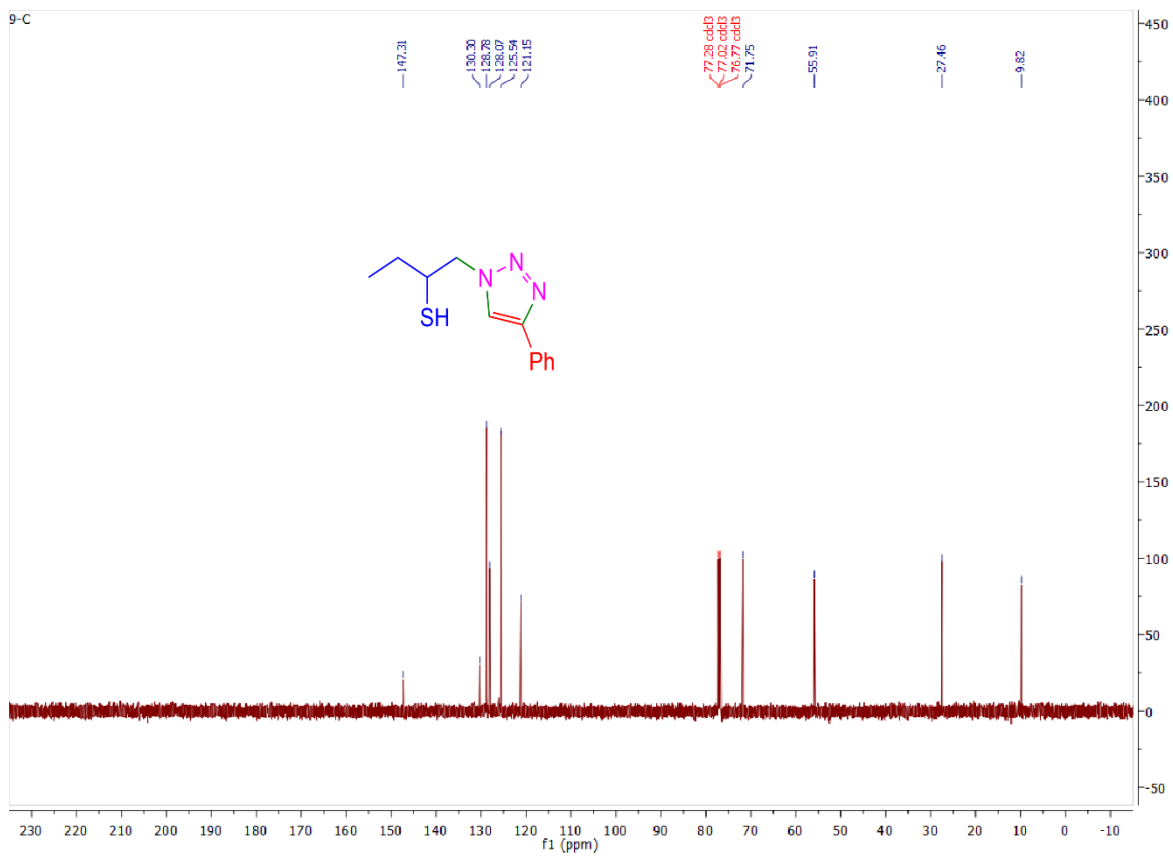


S9. <sup>1</sup>H NMR of 6a.

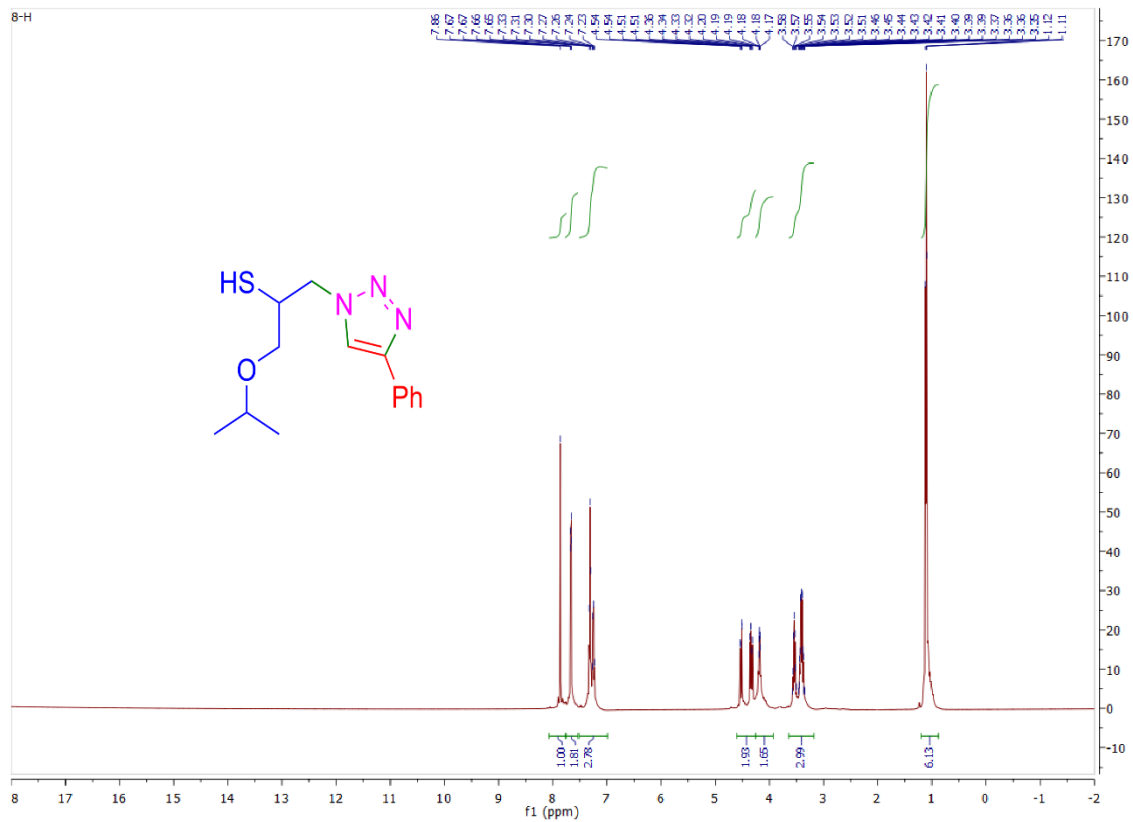




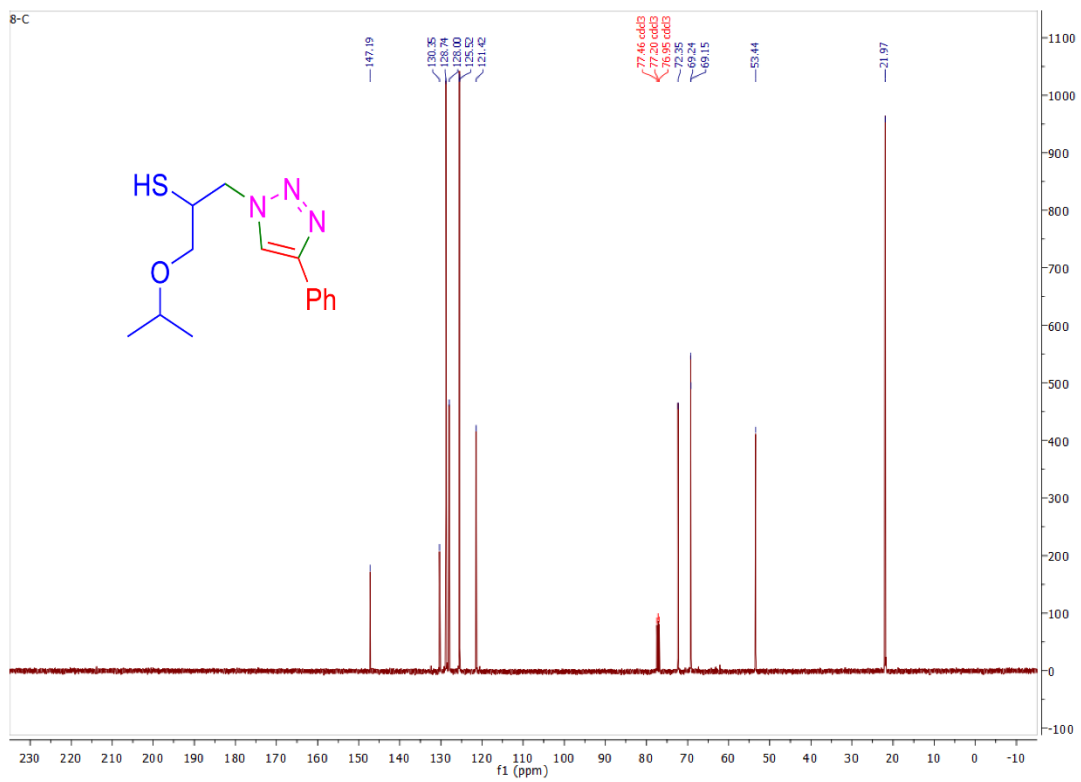
S11. <sup>1</sup>H NMR of 8a.



S12. <sup>13</sup>C NMR of 8a.

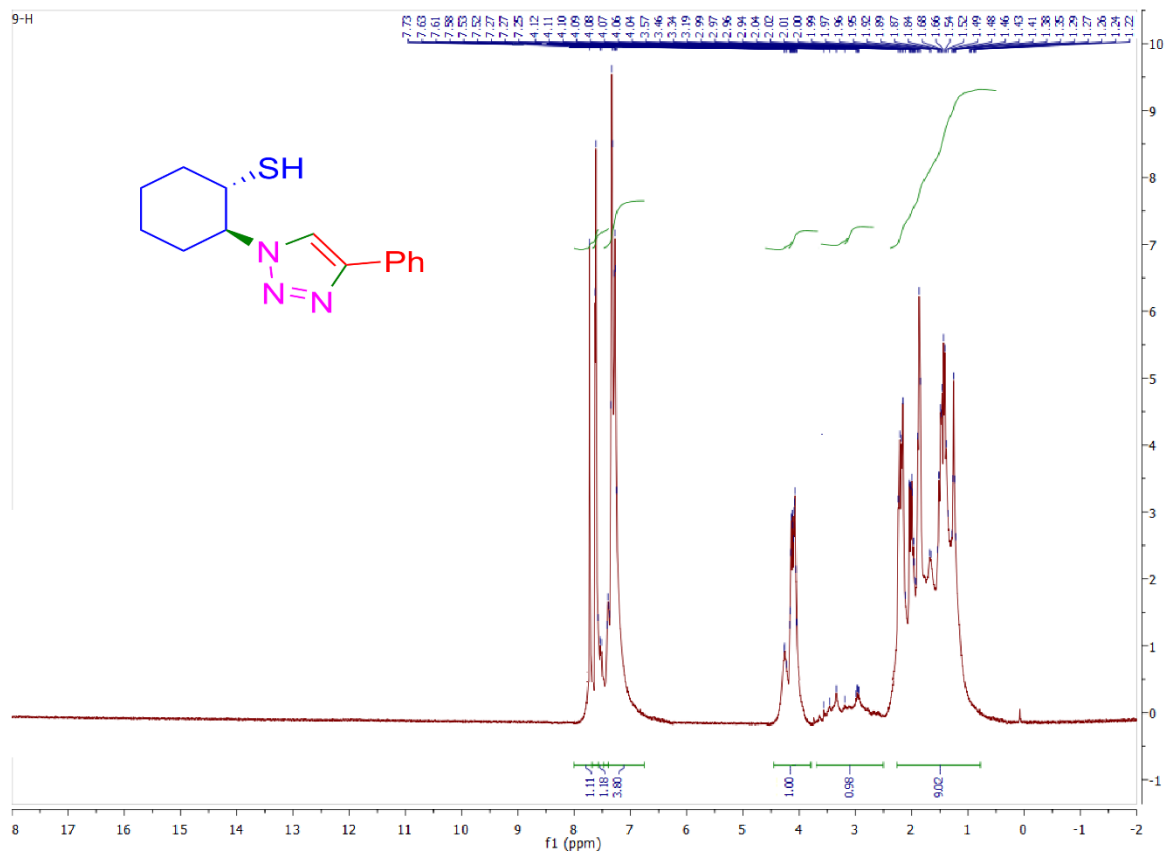


**S13.** <sup>1</sup>H NMR of 9a.

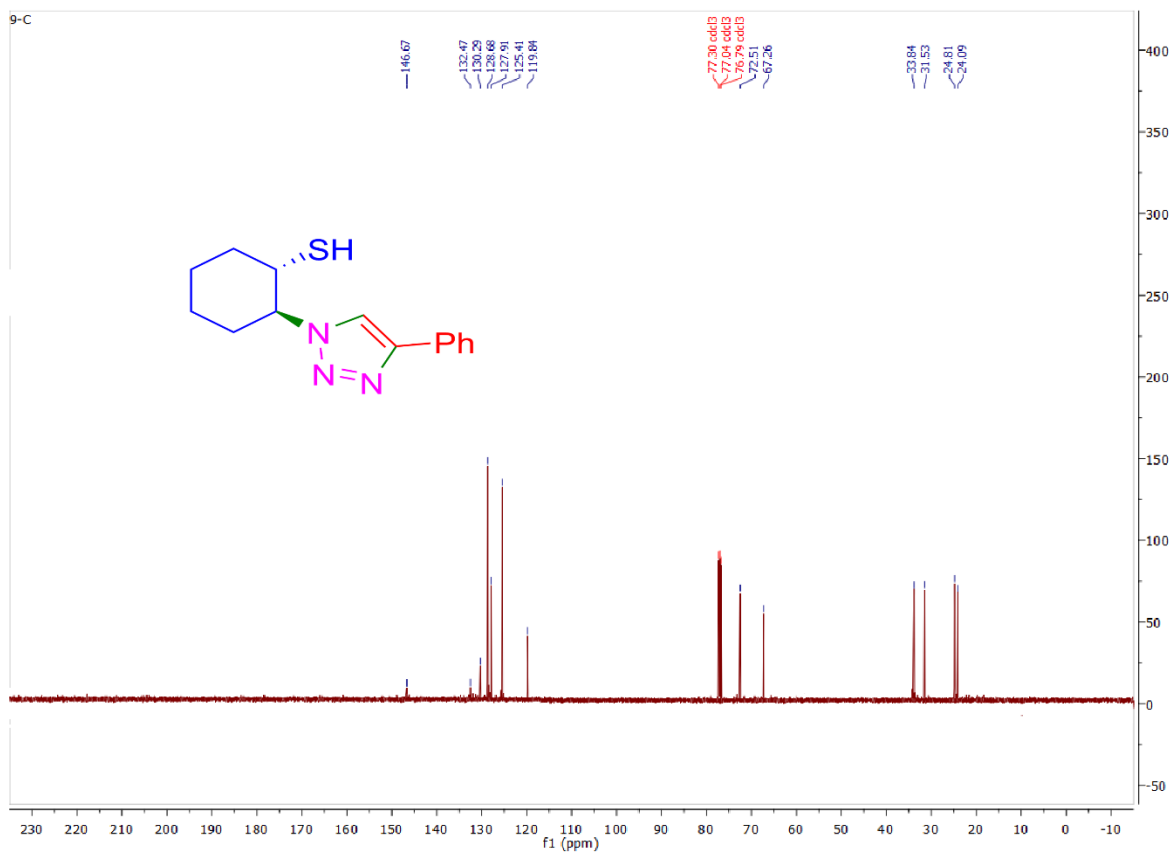


S14. <sup>13</sup>C NMR of 9a.

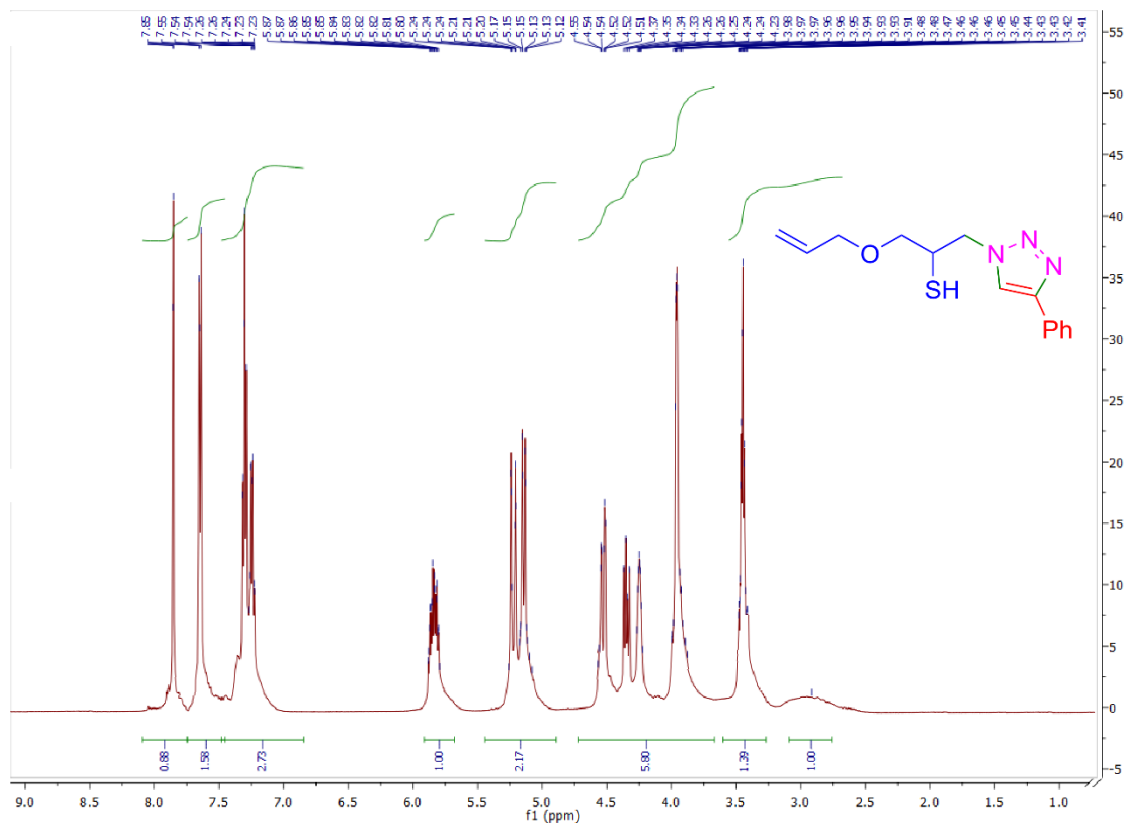




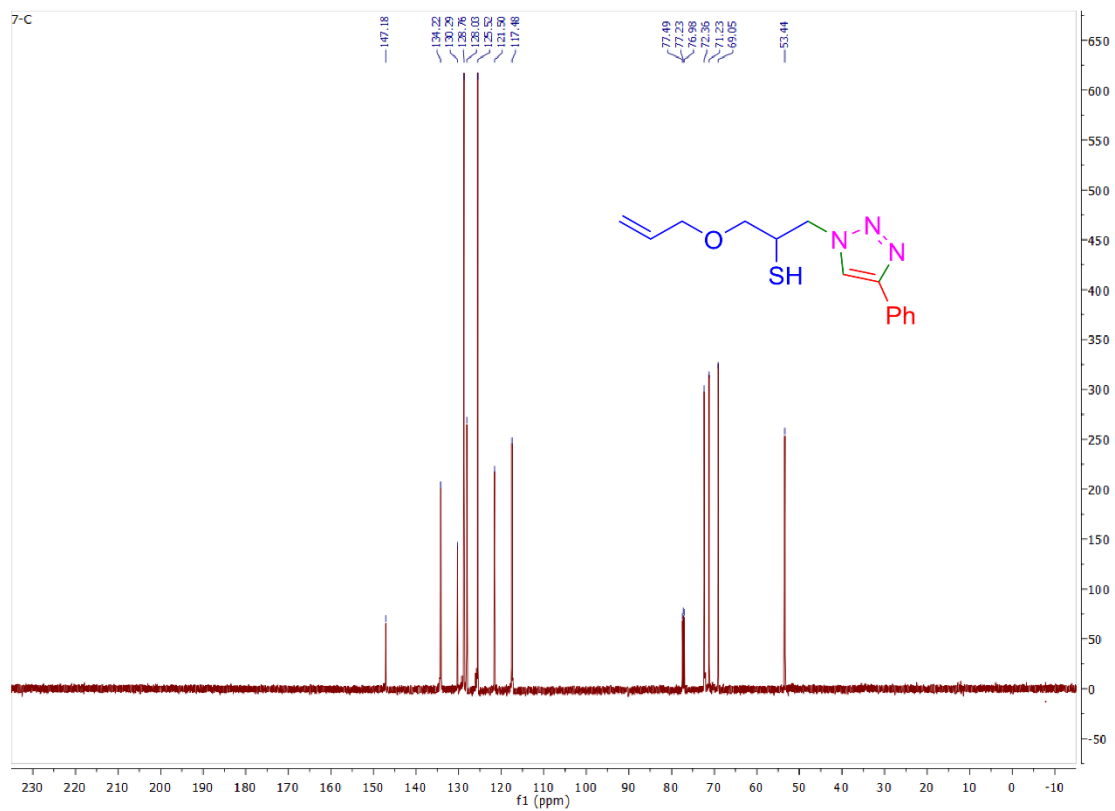
S15.  $^1\text{H}$  NMR of 10a.



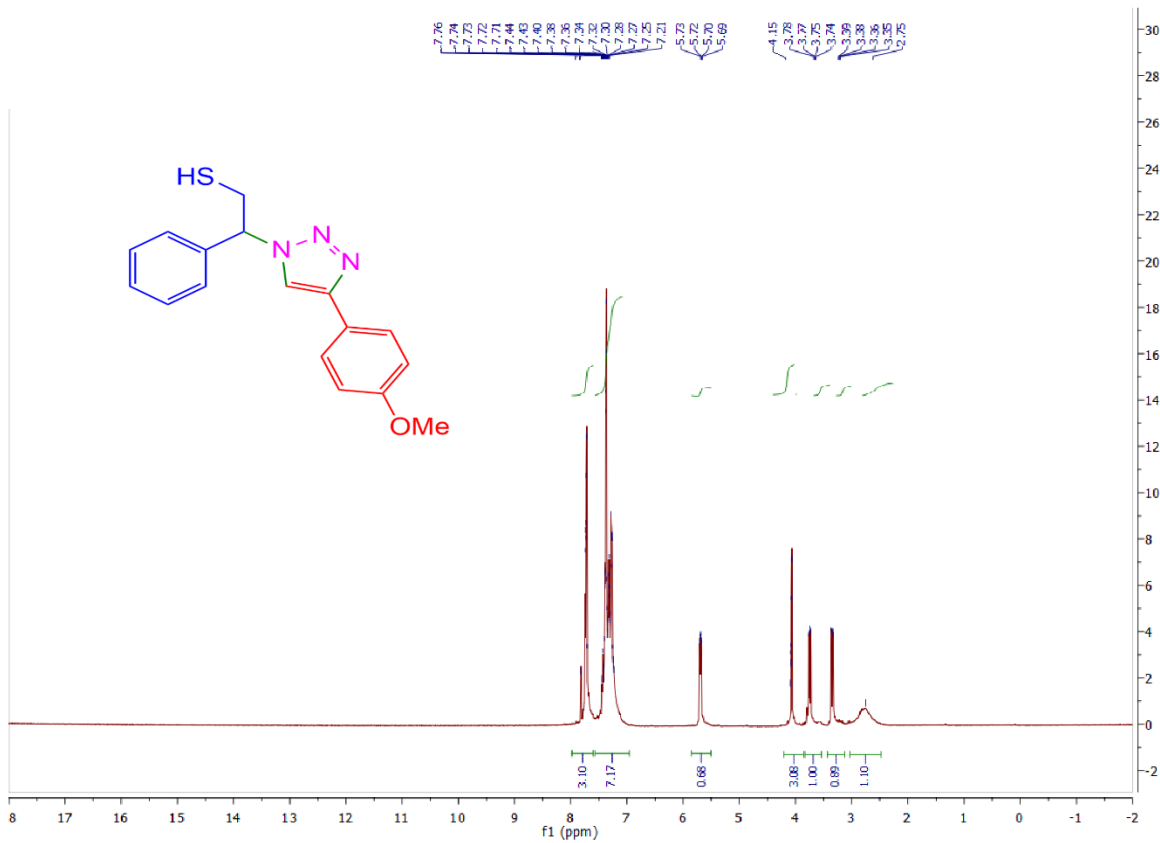
S16. <sup>13</sup>C NMR of 10a.



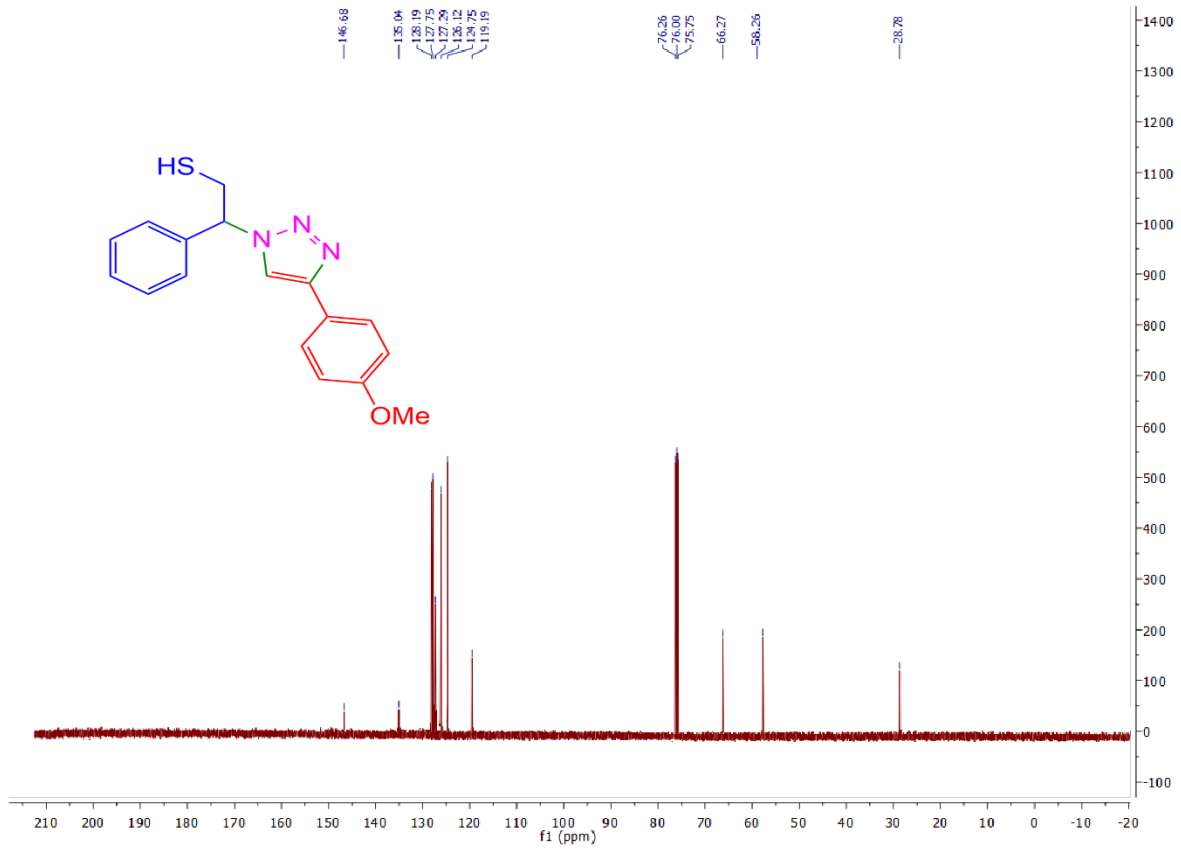
S17. <sup>1</sup>H NMR of 11a.



S18. <sup>13</sup>C NMR of 11a.



**S19.** <sup>1</sup>H NMR of 15a.



S20. <sup>13</sup>C NMR of 15a.