

Supporting Information

Rational design of multi-functional Thermally Activated Delayed Fluorescence emitter for both sensor and OLED applications

Aiyun Zhu ^{a†}, Jianmin Yu ^{a†}, Tao Zhou ^a, Kaizhi Zhang ^a, Suyu Qiu ^a, Xinxin Ban ^{a,c*}, Yuanchu Wang, Zhouzhou Shen, Shiji Da, Xuzhu Gao ^{b*}

^a School of Environmental and Chemical Engineering, Jiangsu Ocean University, Lianyungang, Jiangsu, 222005, China

^b Department of Central Laboratory, The Second People's Hospital of Lianyungang City (Cancer Hospital of Lianyungang)

^c Jiangsu Key Laboratory of Function Control Technology for Advanced Materials, Lianyungang, Jiangsu, 222005, China

[†] Aiyun Zhu and Jianmin Yu contributed equally to this work.

*Corresponding Authors Email: banxx@jou.edu.cn (Xinxin Ban); alexgwan@163.com (Xuzhu Gao)

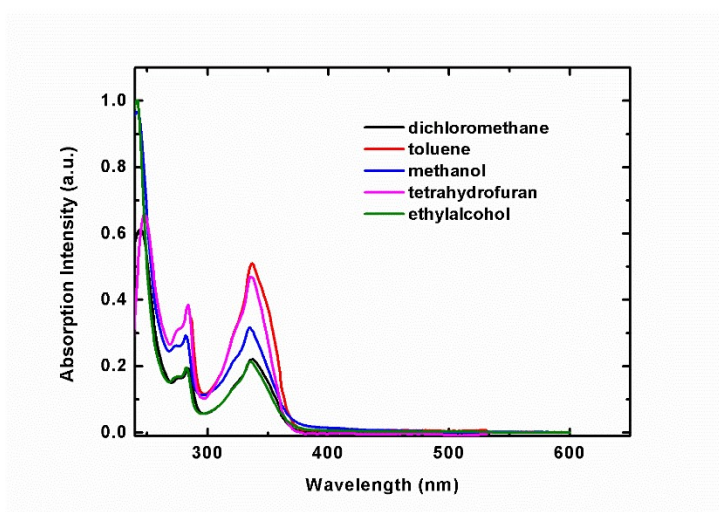


Figure S1. UV-vis absorption of CzSO-2CO at different solvents and with different ions.

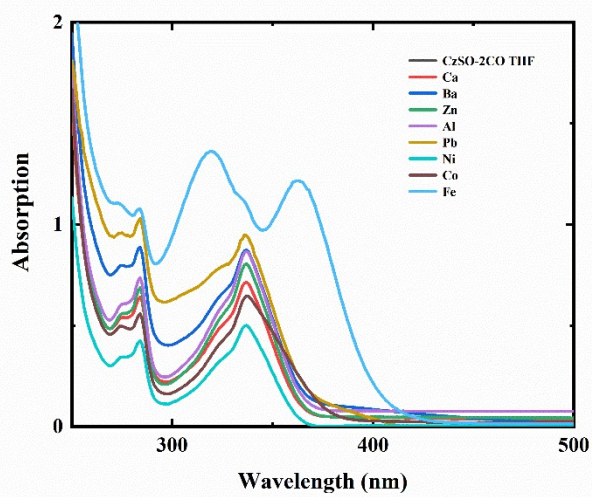
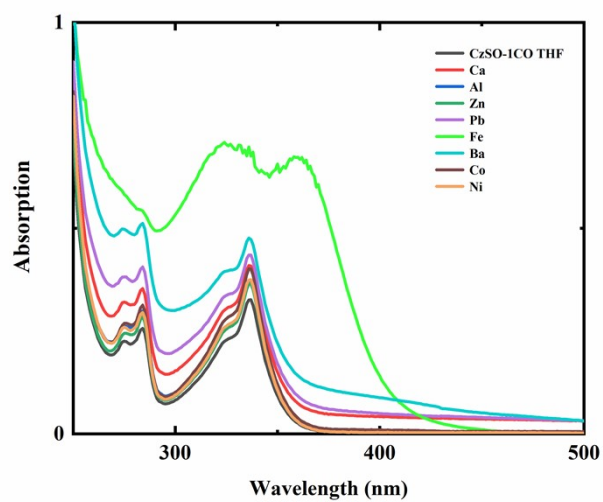
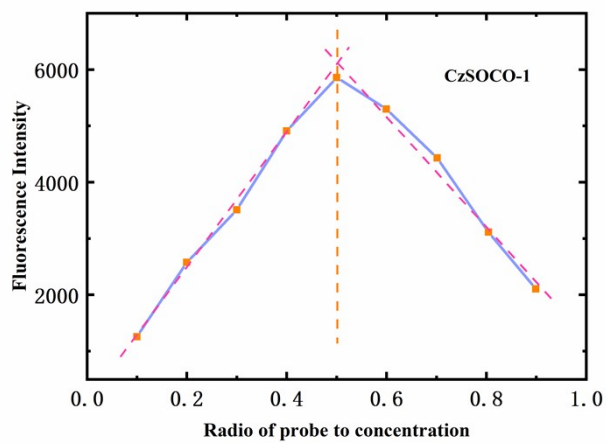


Figure S2. UV-vis absorption of CzSO-1CO and CzSO-2CO with different ions.



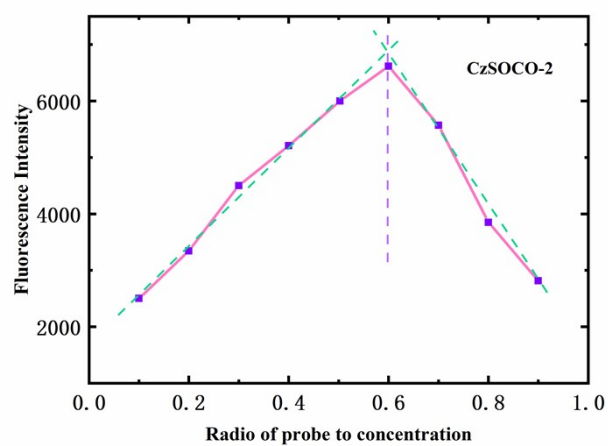


Figure S3. Job's plot curve of CzSO-1CO (a) and CzSO-2CO (b).

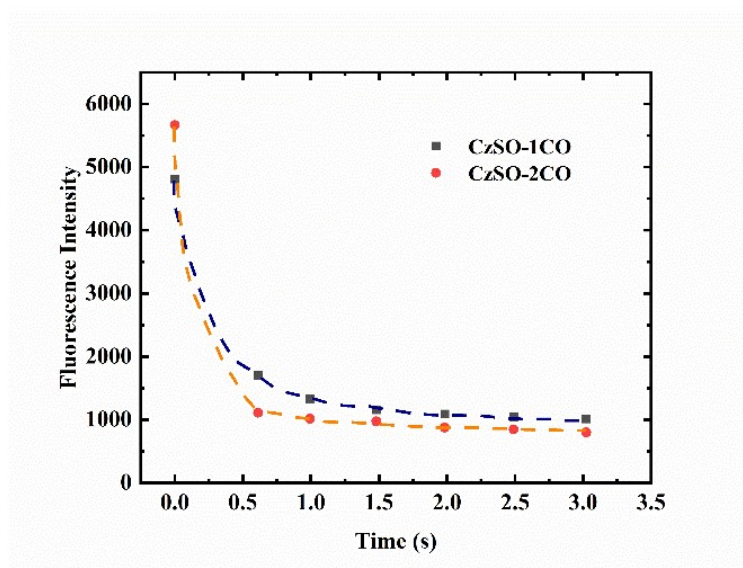


Figure S4. Response time fitting of fluorescence intensity at 488 nm.

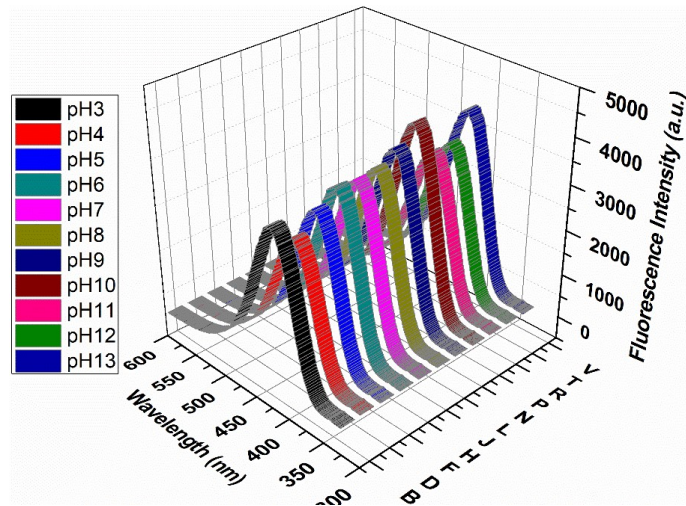
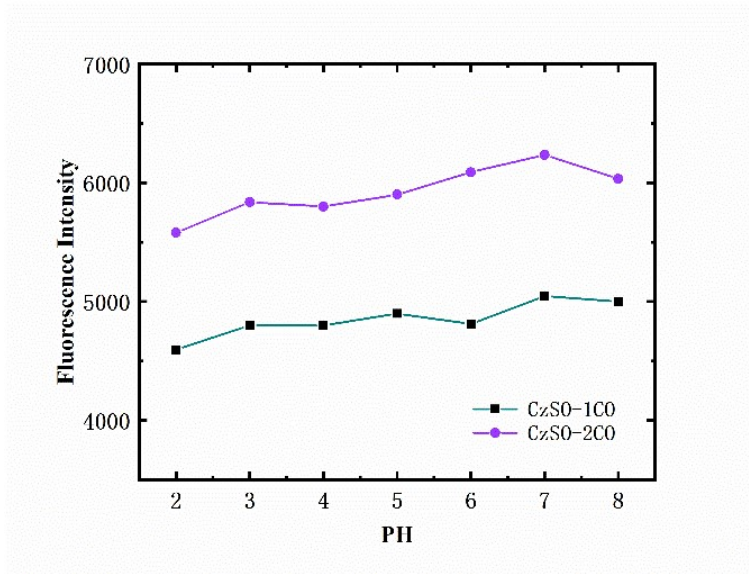
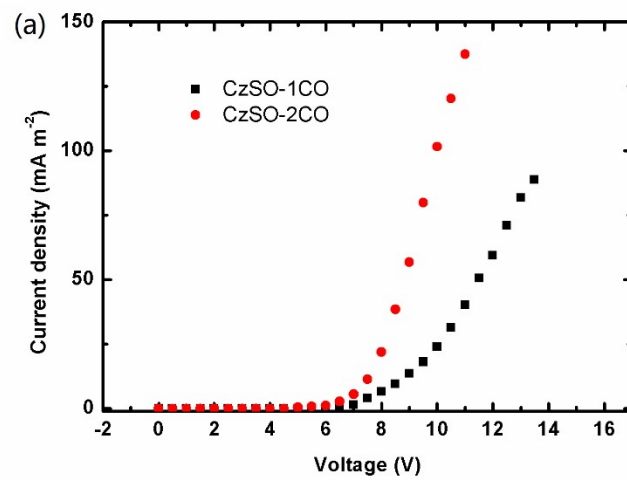


Figure S5. Fluorescence spectra changes with advancing pH values;



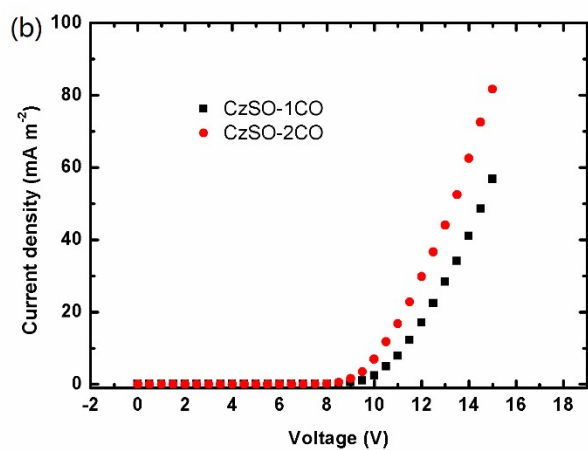


Figure S6. Current density–voltage (J–V) characteristics of hole-only (a) and electron-only (b) devices.

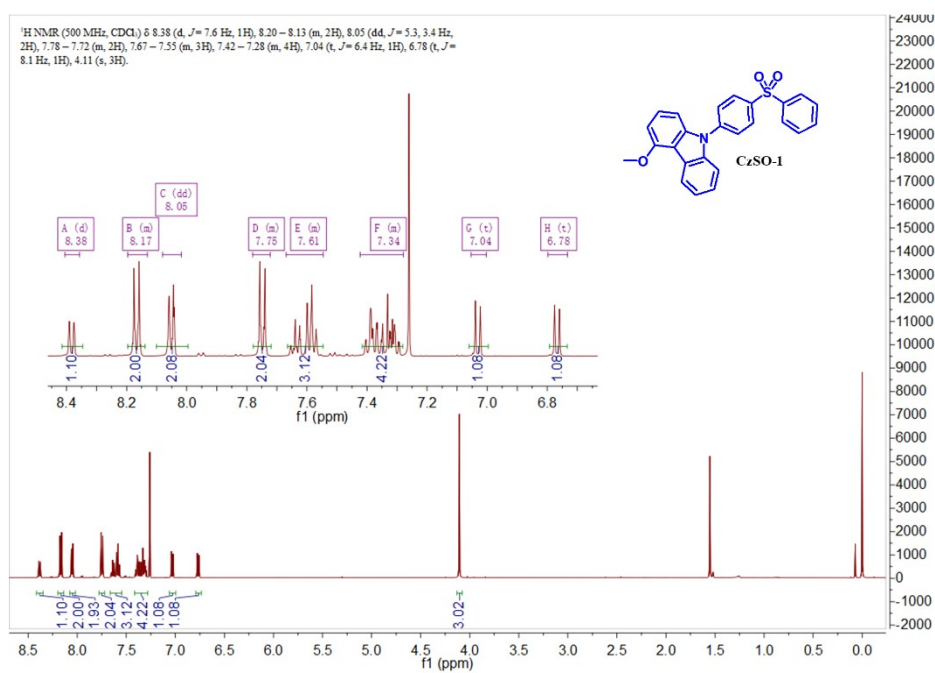


Figure S7. ¹H-NMR spectrum of CzSO-1.

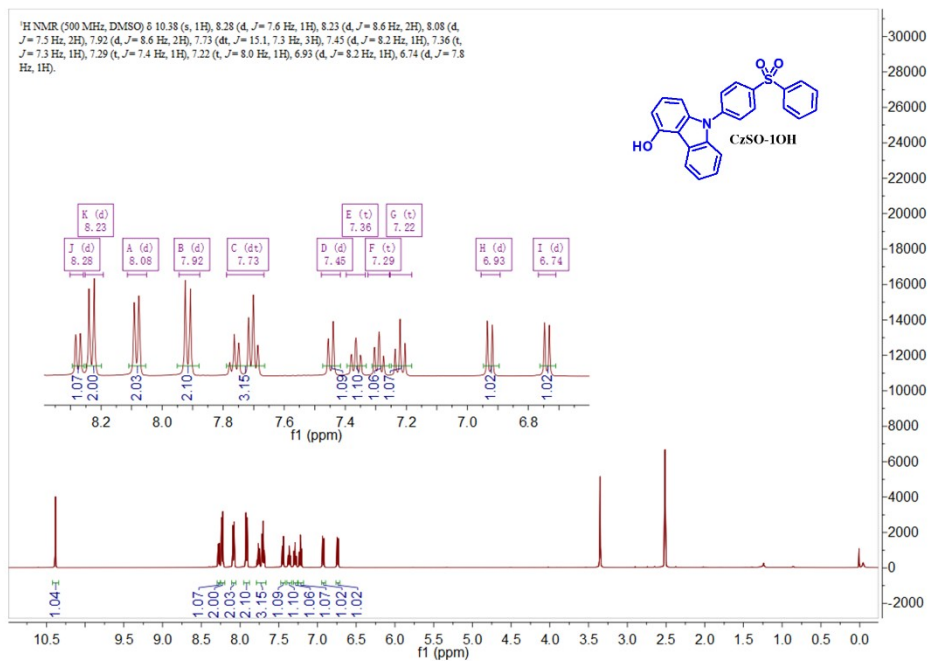


Figure S8. ¹H-NMR spectrum of CzSO-1OH.

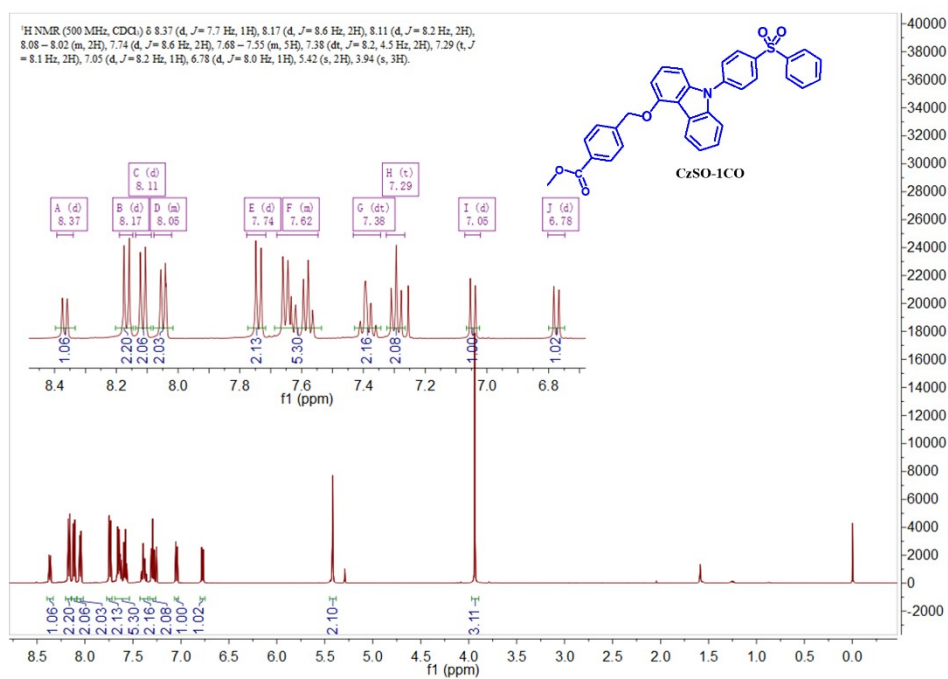


Figure S9. ¹H-NMR spectrum of CzSO-1CO.

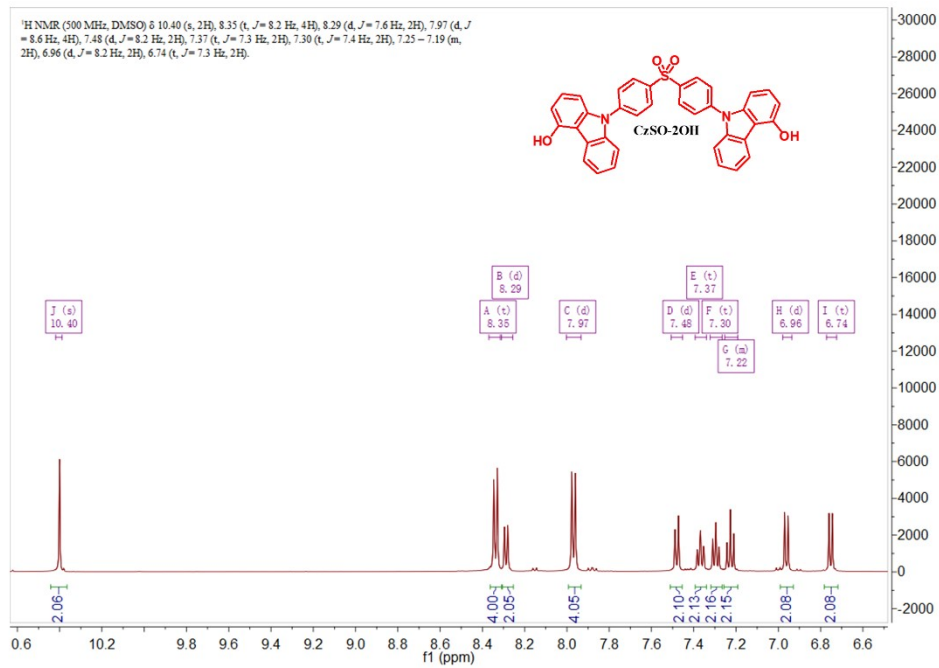


Figure S10. ¹H-NMR spectrum of CzSO-2OH.

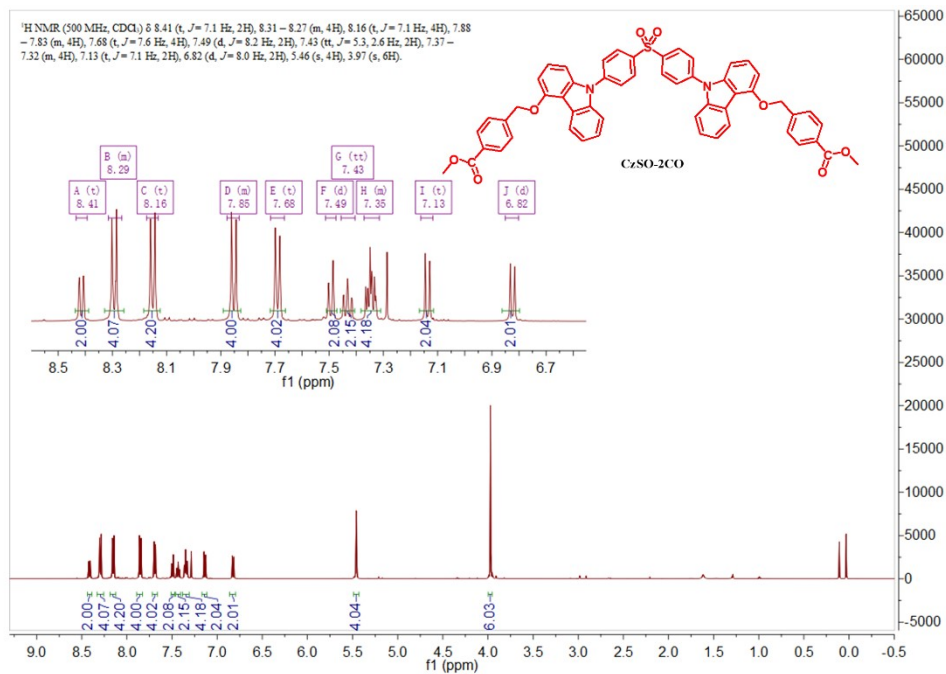


Figure S11. ¹H-NMR spectrum of CzSO-2CO.

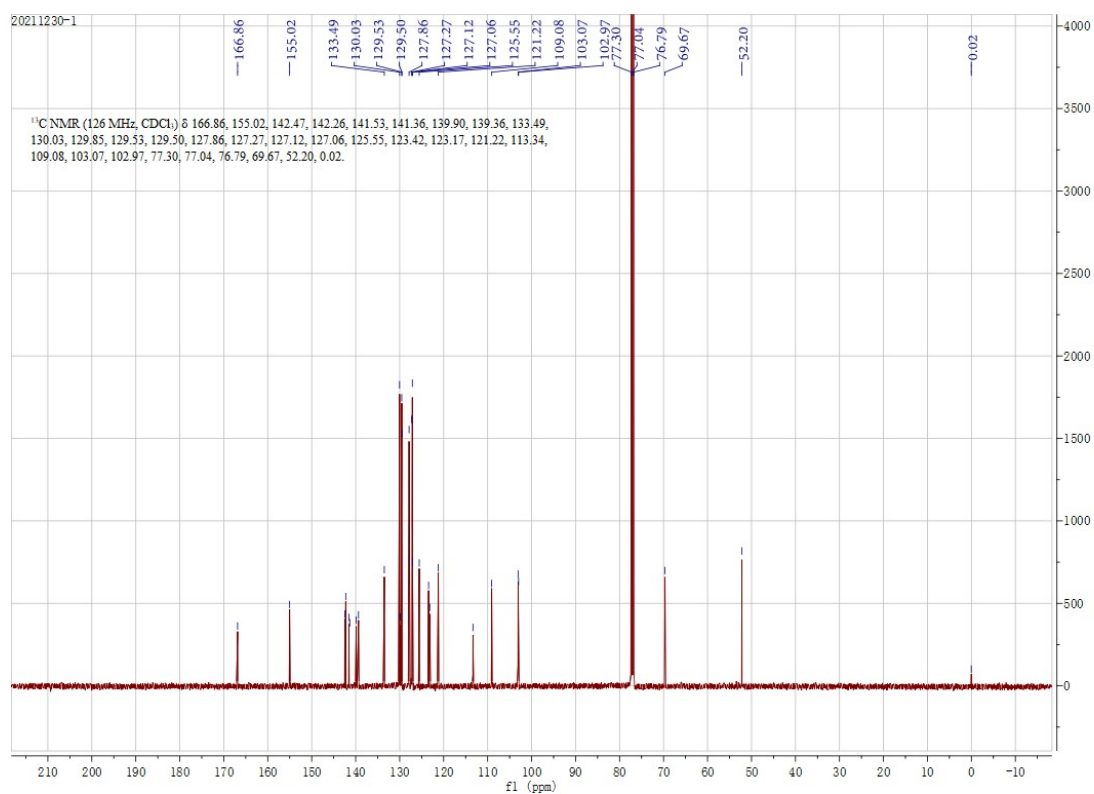


Figure S12. ^{13}C -NMR spectrum of CzSO-1CO.

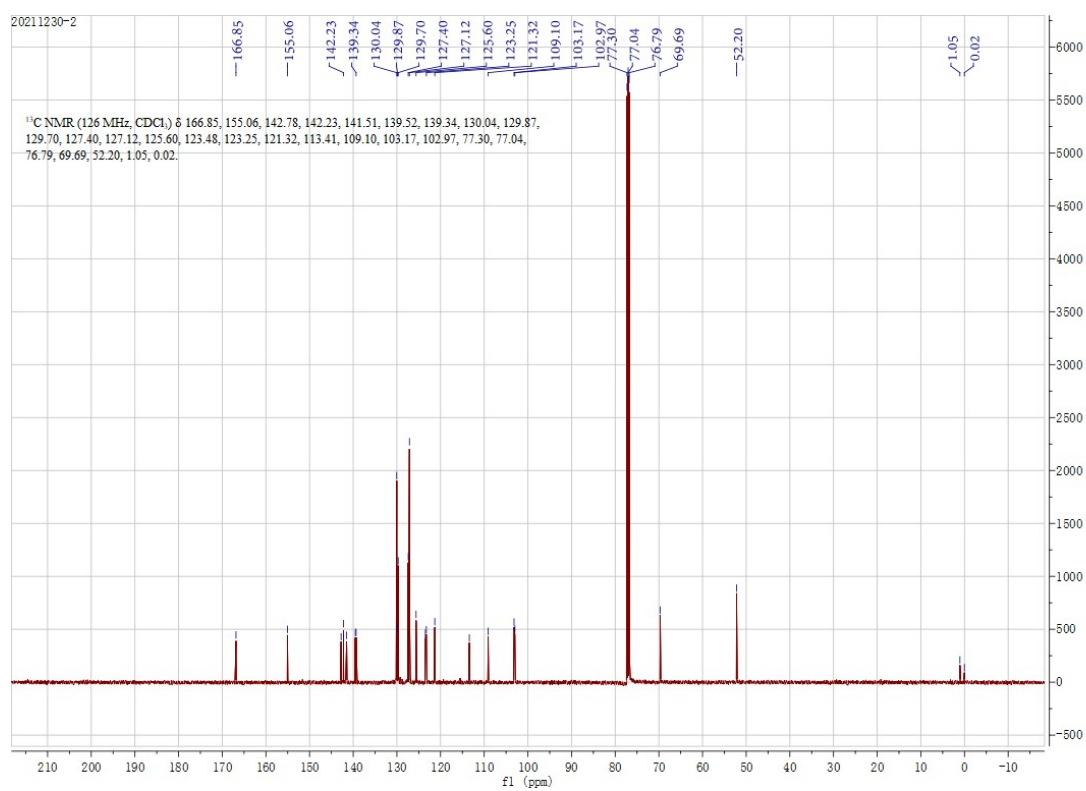


Figure S13. ^{13}C -NMR spectrum of CzSO-2CO.