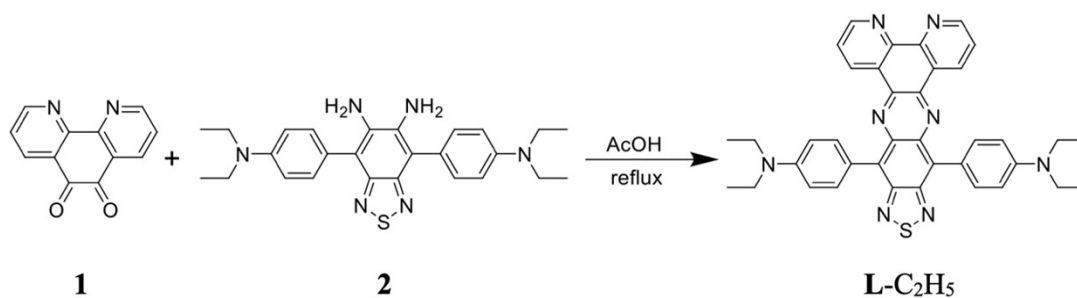


## Charge Transfer-Triggered Reversible Spin-State Switching

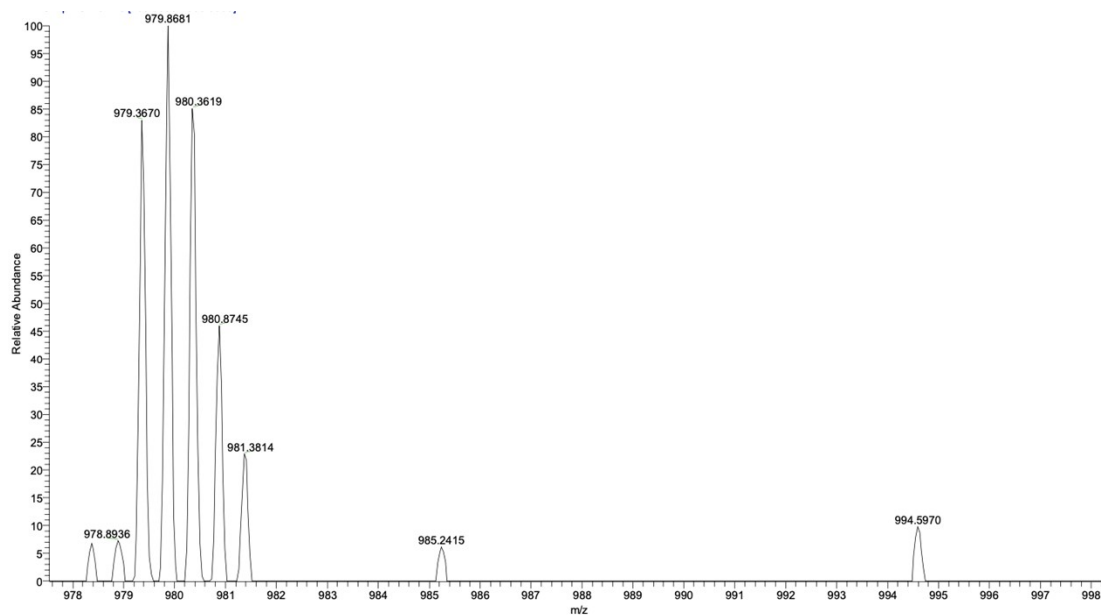
Yang-Hui Luo, \* Cheng Xue, Shu-Xin Zhang, Jie Zhao, Xue-Ting Jin, Min Liu

School of Chemistry and Chemical Engineering, Southeast University, Nanjing,

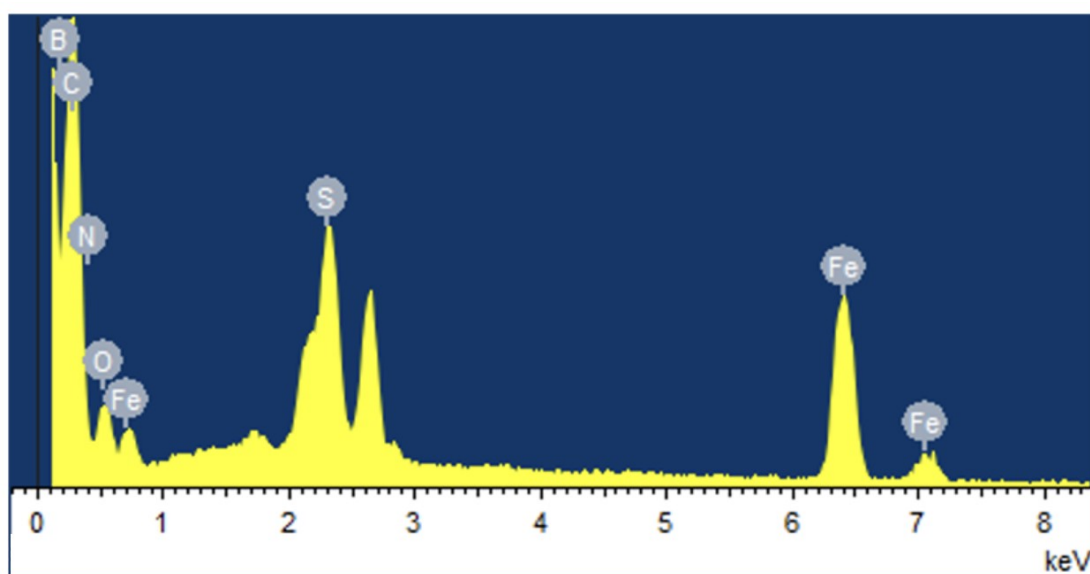
211189, P.R. China. E-mail: [luoyh2016@seu.edu.cn](mailto:luoyh2016@seu.edu.cn)



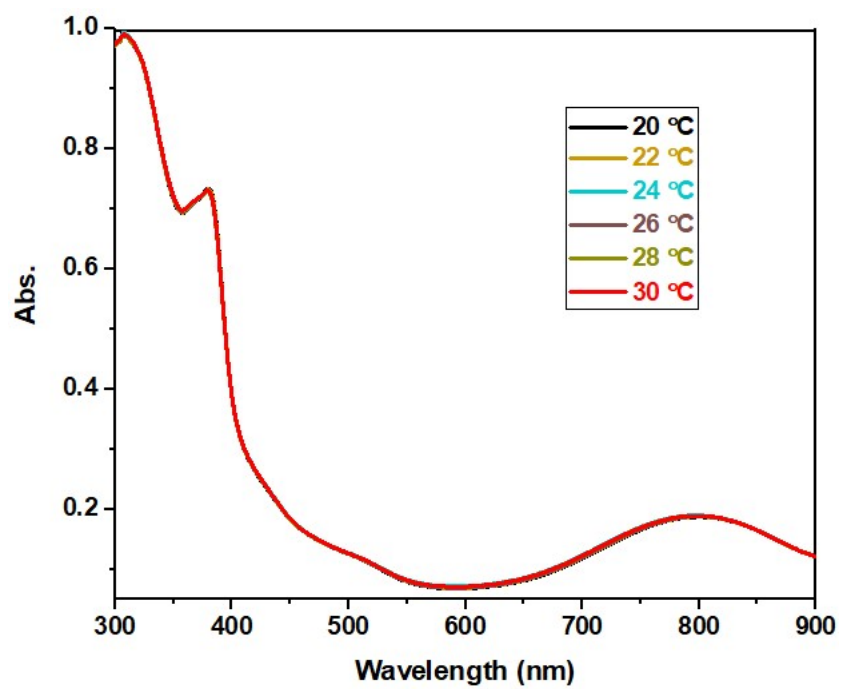
**Scheme S1.** The synthesis procedures for **L-C<sub>2</sub>H<sub>5</sub>**.



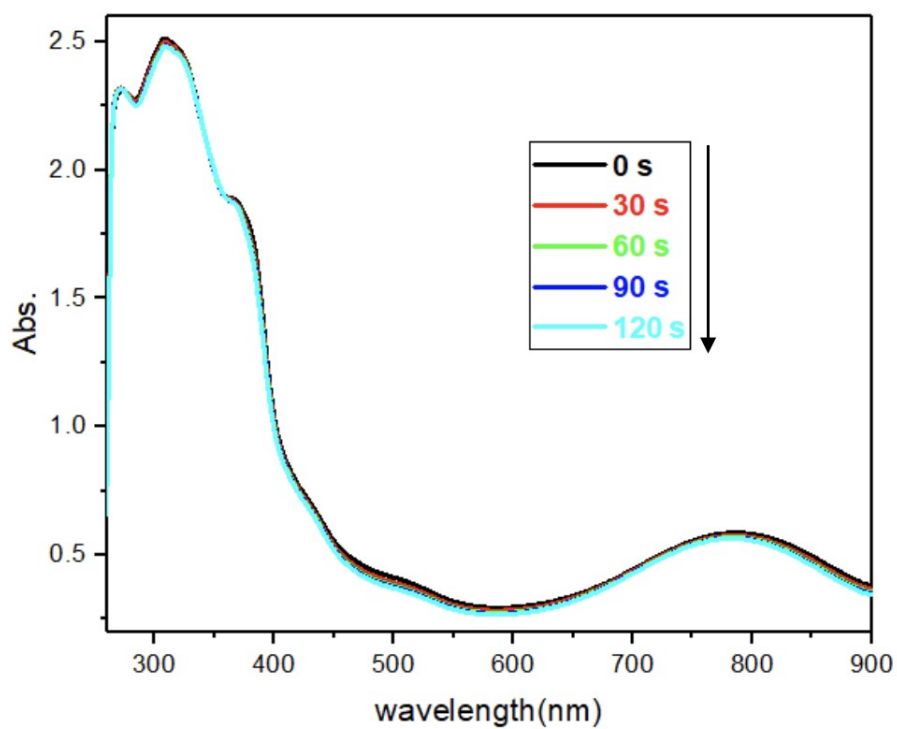
**Figure S1.** ESI-MS spectrum of  $\text{Fe}(\text{H}_2\text{Bpz}_2)_2(\text{L-C}_2\text{H}_5)$ .



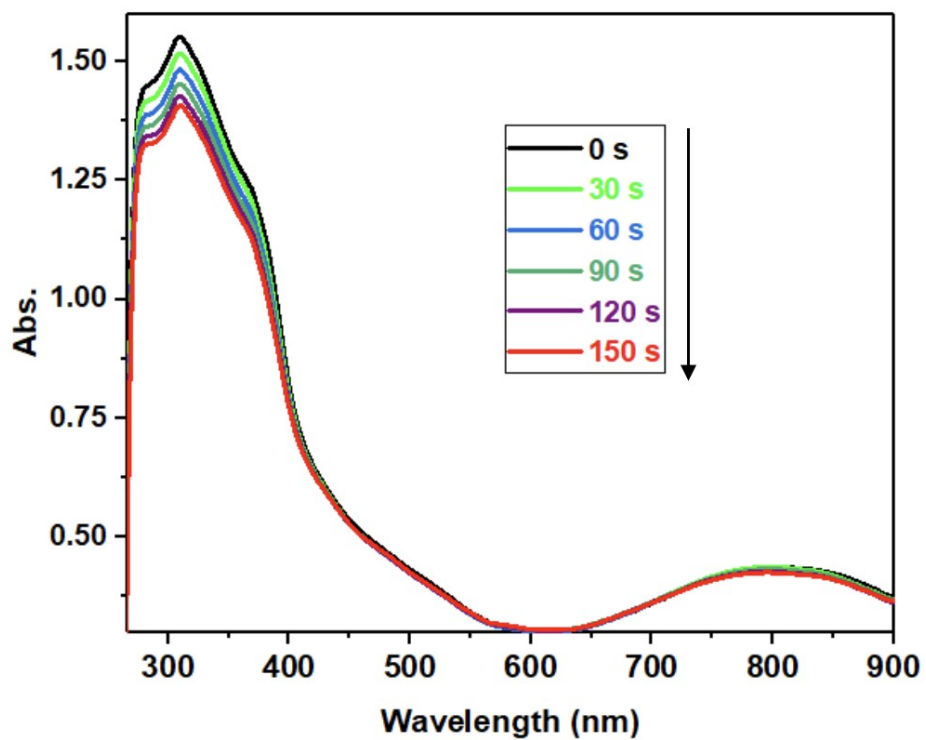
**Figure S2.** EDX analysis of ferrous complex  $\text{Fe}(\text{H}_2\text{Bpz}_2)_2(\text{L-C}_2\text{H}_5)$ .



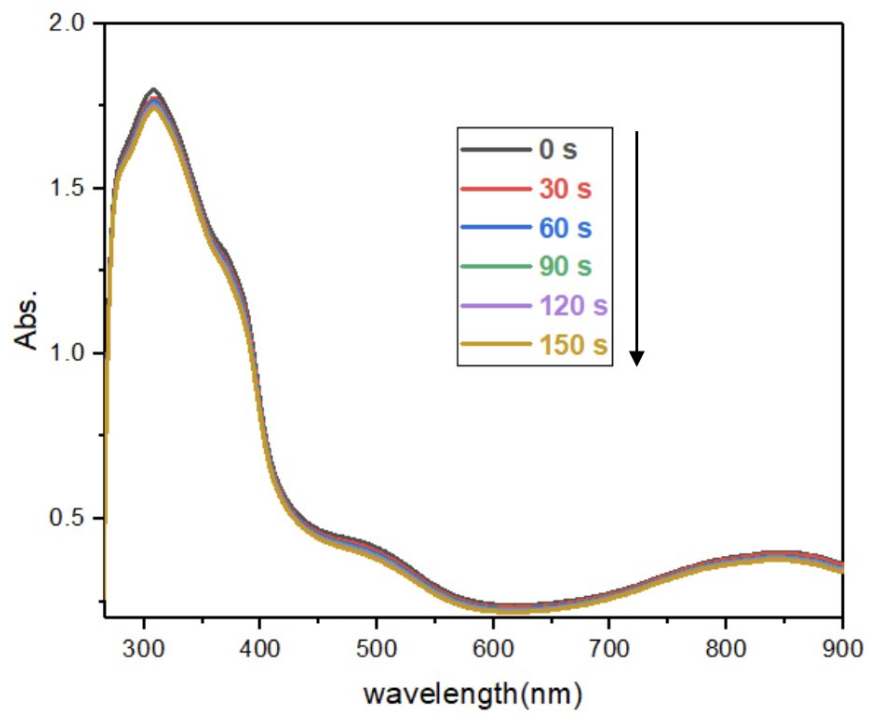
**Figure S3.** Temperature-dependent UV-vis absorption spectrum of the suspensions.



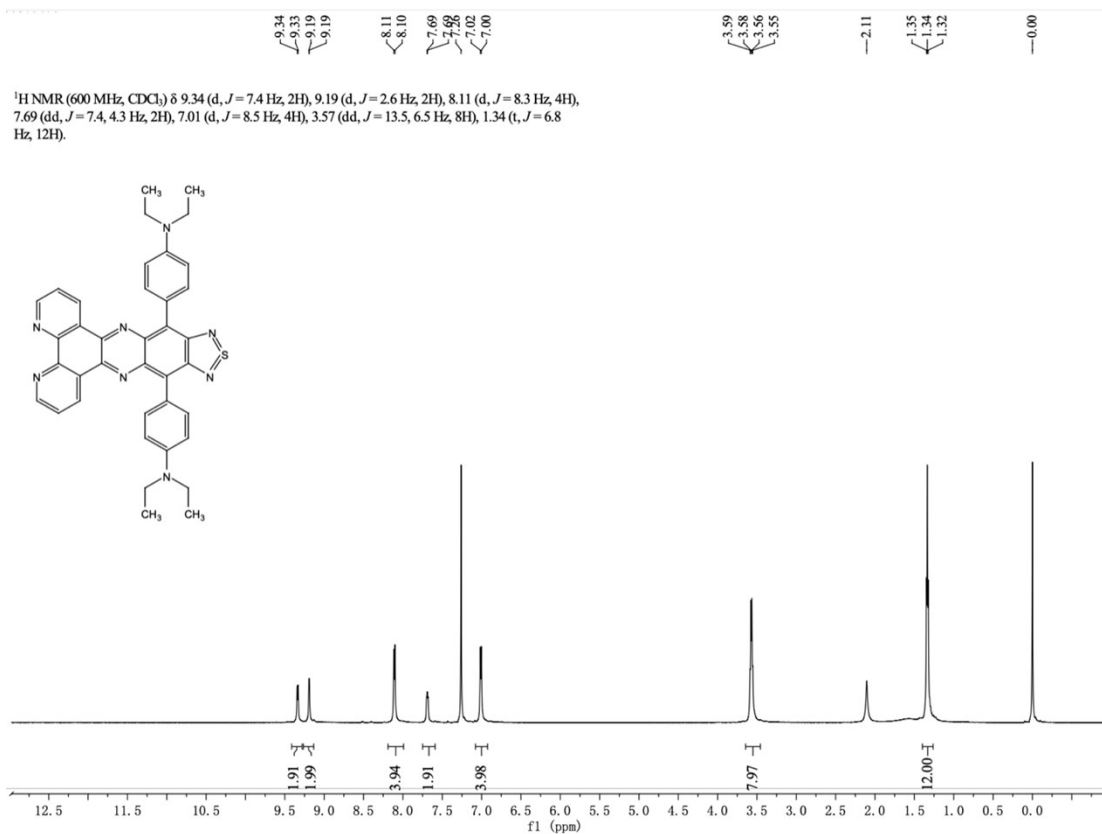
**Figure S4.** Time-dependent UV-vis absorption spectrum of the suspensions with water fraction of 10 % under 808 nm laser irradiation.



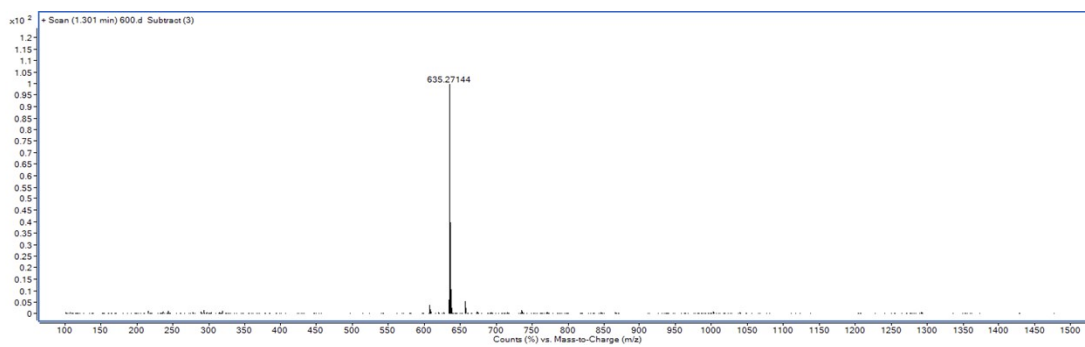
**Figure S5.** Time-dependent UV-vis absorption spectrum of the suspensions with water fraction of 50 % under 808 nm laser irradiation.



**Figure S6.** Time-dependent UV-vis absorption spectrum of the suspensions with water fraction of 90 % under 808 nm laser irradiation.



**Figure S7.** <sup>1</sup>H NMR spectrum of *L*-C<sub>2</sub>H<sub>5</sub>.



**Figure S8.** ESI-MS spectrum of *L*-C<sub>2</sub>H<sub>5</sub>.