

Supporting Information

Trifluoromethyl-pyridine carboxylic acid Zn(II) complexes: isomeric effects on coordination and biological activity

Xiaoshuang Zhu, Yanhong Yang, Bing Li*, Jiawei Liang, Shoufeng Fu,

Hongyan Wu, Jiaying He, Xiaoyan Chen

(Department of Chemistry & Chemical Engineering (State Key Laboratory of High-efficiency

Utilization of Coal and Green Chemical Engineering, Ningxia University, 750021)

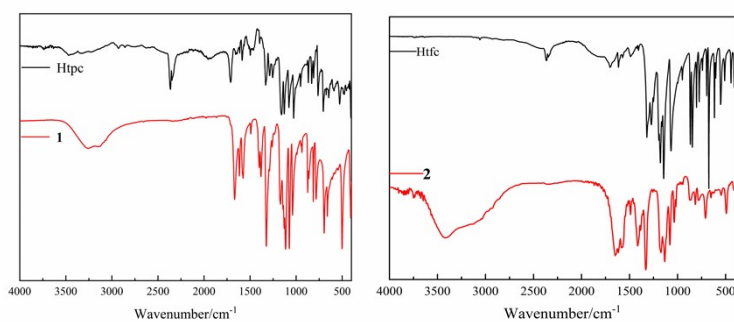


Fig S1. IR spectra of ligands and complexes

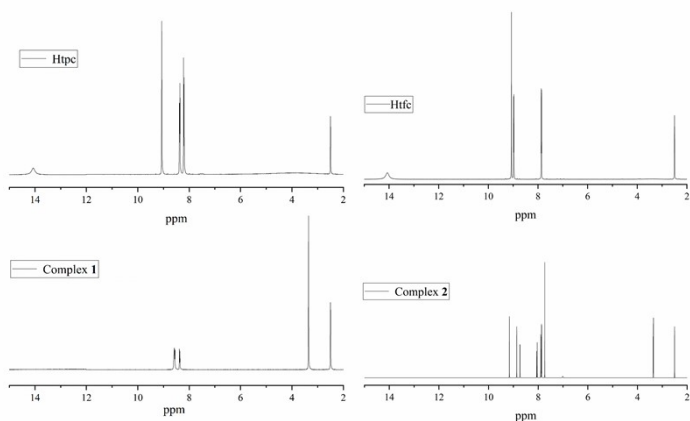


Fig S2. ¹H NMR (400 MHz, DMSO-*d*₆) spectra of ligands and complexes

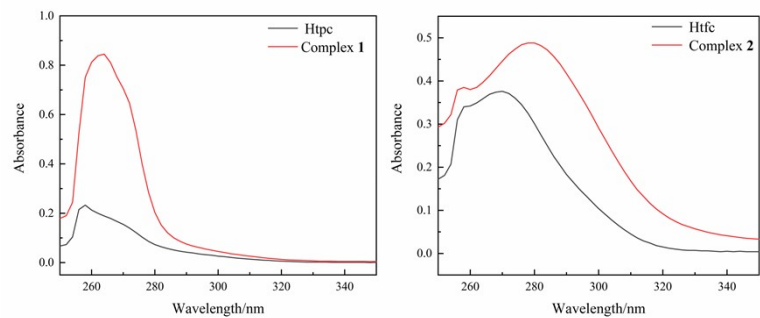


Fig S3. UV-Vis spectra of ligands and the corresponding complexes in DMSO

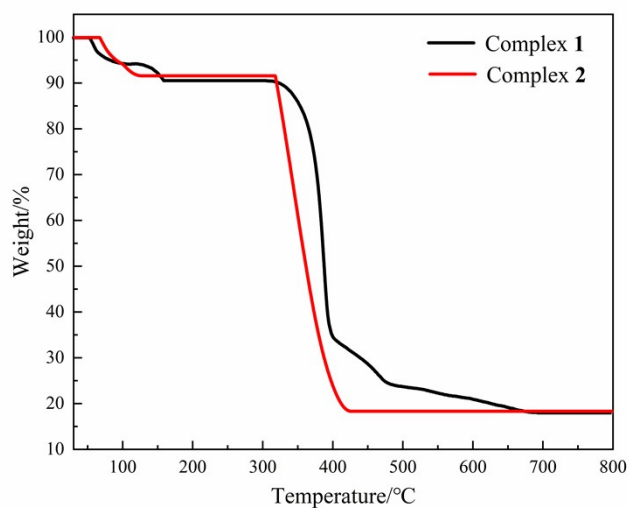


Fig S4. TG curves of complexes 1 and 2

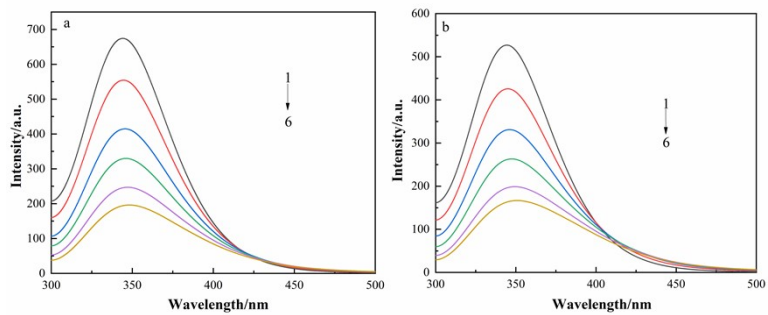


Fig S5. Fluorescence quenching of BSA by complexes 1 (a) and 2 (b) at 35 °C

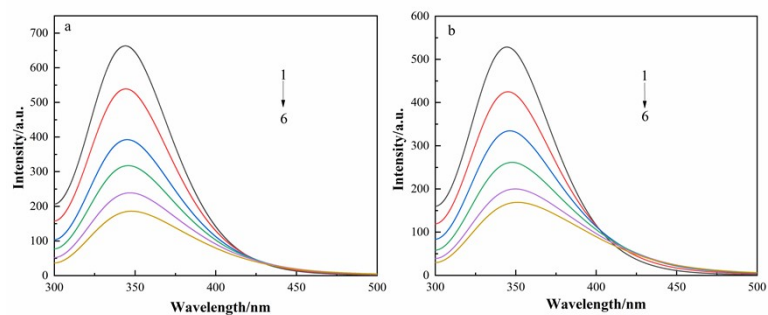


Fig S6. Fluorescence quenching of BSA by complexes **1** (a) and **2** (b) at 45 °C

Table S1. Partial Bond Lengths for complex **1**

| Bond | Dist. | Bond | Dist. |
|-------------------------|----------|-------------------------|----------|
| Zn(1)–O(2) | 2.070(4) | Zn(1)–O(3) | 2.122(4) |
| Zn(1)–O(2) ⁱ | 2.070(4) | Zn(1)–O(3) ⁱ | 2.122(4) |
| Zn(1)–N(1) | 2.138(3) | Zn(1)–N(2) ⁱ | 2.138(4) |

Table S2. Partial Bond Angles for complex **1**

| Angle | (°) | Angle | (°) |
|-----------------|-----------|-----------------|------------|
| O(2)–Zn(1)–O(3) | 179.31(9) | O(2)–Zn(1)–N(2) | 100.55(9) |
| O(2)–Zn(1)–O(5) | 89.45(10) | O(3)–Zn(1)–O(5) | 91.16(10) |
| O(2)–Zn(1)–O(6) | 89.34(11) | O(3)–Zn(1)–O(6) | 90.05(10) |
| O(2)–Zn(1)–N(1) | 79.55(9) | N(1)–Zn(1)–N(2) | 179.73(11) |

Table S3. Partial Bond Lengths for complex **2**

| Bond | Dist. | Bond | Dist. |
|-------------------------|-----------|-------------------------|-----------|
| Zn(1)–O(1) | 2.123(14) | Zn(1)–N(1) | 2.175(17) |
| Zn(1)–O(1) ⁱ | 2.123(14) | Zn(1)–N(1) ⁱ | 2.175(17) |
| Zn(1)–O(3) | 2.075(15) | Zn(1)–O(3) ⁱ | 2.075(15) |

Symmetry code: ⁱ -x+1, -y, -z+1

Table S4. Partial Bond Angles for complex **2**

| Angle | (°) | Angle | (°) |
|------------------------------|-----------|------------------------------|-----------|
| O(1)–Zn(1)–O(1) ⁱ | 180.00(7) | O(3)–Zn(1)–N(1) | 94.47(6) |
| O(3)–Zn(1)–O(3) ⁱ | 180.00(7) | O(3)–Zn(1)–N(1) ⁱ | 94.47(6) |
| O(1)–Zn(1)–N(1) | 88.74(6) | O(1)–Zn(1)–O(3) | 88.15(6) |
| O(1)–Zn(1)–N(1) ⁱ | 91.26(6) | N(1)–Zn(1)–N(1) ⁱ | 180.00(6) |

Symmetry code: ⁱ -x+1, -y, -z+1Table S5. Hydrogen-bonded parameters for complex **1**

| D–H···A | d(D–H) | d(H···A) | d(D···A) | ∠DHA |
|-------------|--------|----------|----------|--------|
| O3–H3A···O5 | 0.93 | 1.87 | 2.767(6) | 160.51 |
| O6–H6B···O4 | 0.93 | 1.85 | 2.711(6) | 152.12 |