

Supporting Information

Synthesis and evaluation of sulfonyl-substituted Ruthenium-complex as potential antibacterial activity against *Staphylococcus aureus*

ChunYan. Zhang,^a RuJian. Yu,^a LiQiang. Wang,^a HaiYan. Huang,^a MengQi. Xiao,^a XueMin. Duan,^a JinTao.
Wang,^{a*} Xiang Wen. Liao,^{a*} YanShi. Xiong^{a*}

^a School of Pharmacy, Jiangxi Science & Technology Normal University, Nanchang,
330013, China

CONTENTS

1. Characterizations	1
2. Supporting Results	8

1. Characterizations

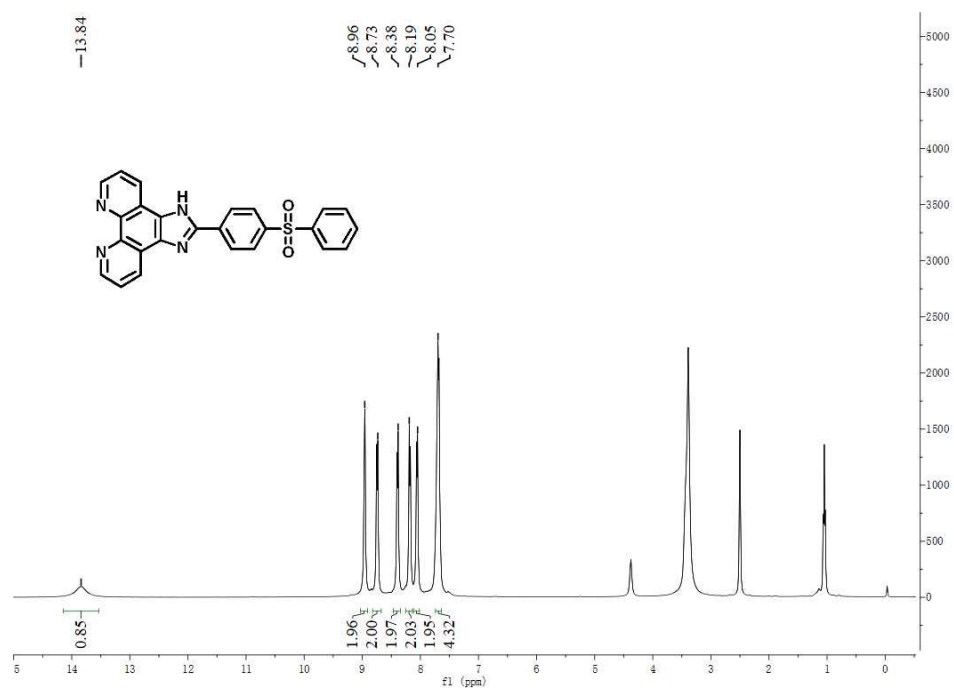


Figure 1. ^1H NMR spectrum of the ligand PSPIP.

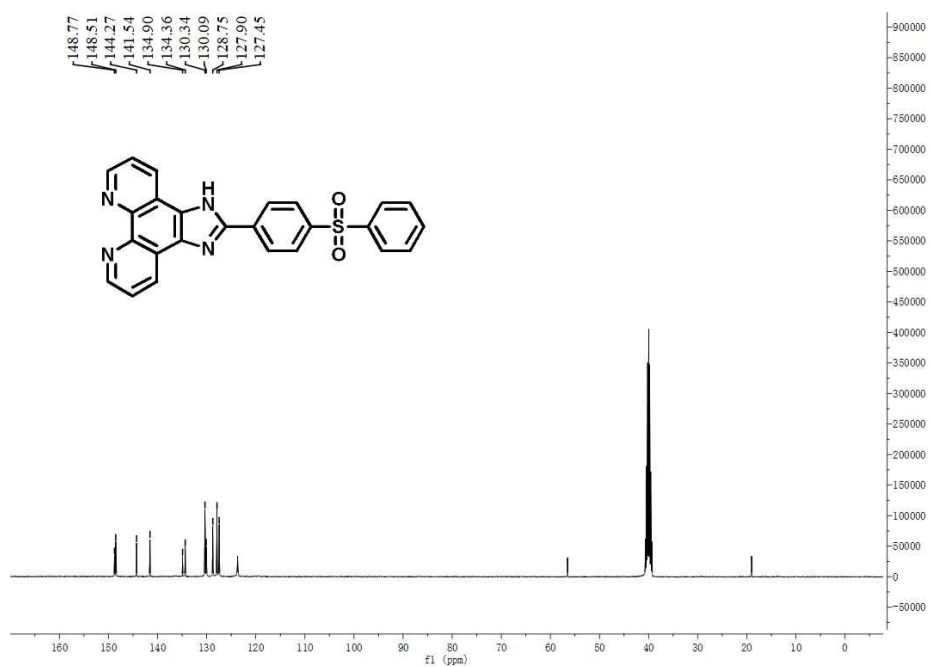


Figure 2. ^{13}C NMR spectrum of the ligand PSPIP.

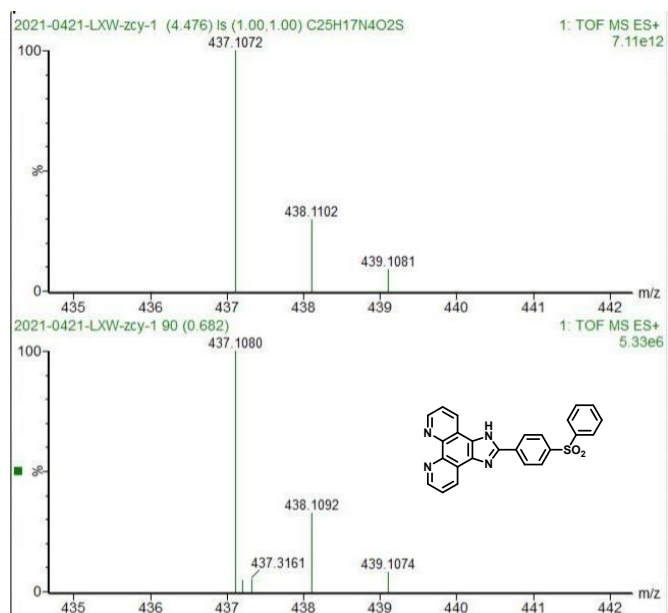


Figure 3. HRESI-MS spectrum of the ligand PSPIP.

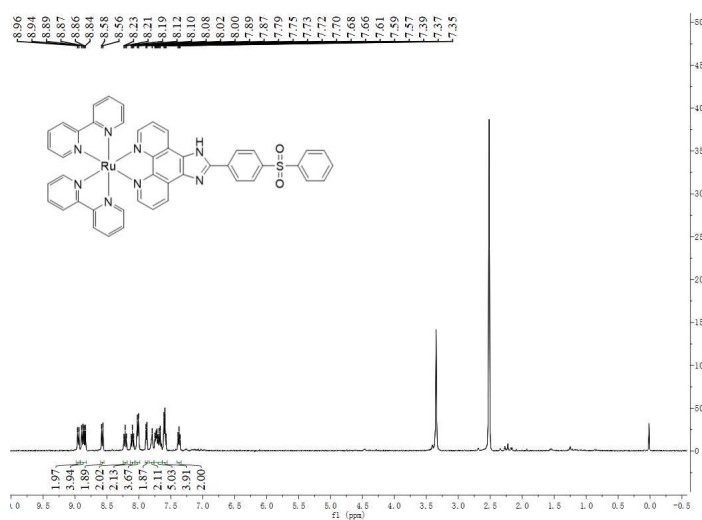


Figure 4. ¹H NMR spectrum of the Ru(II)-1.

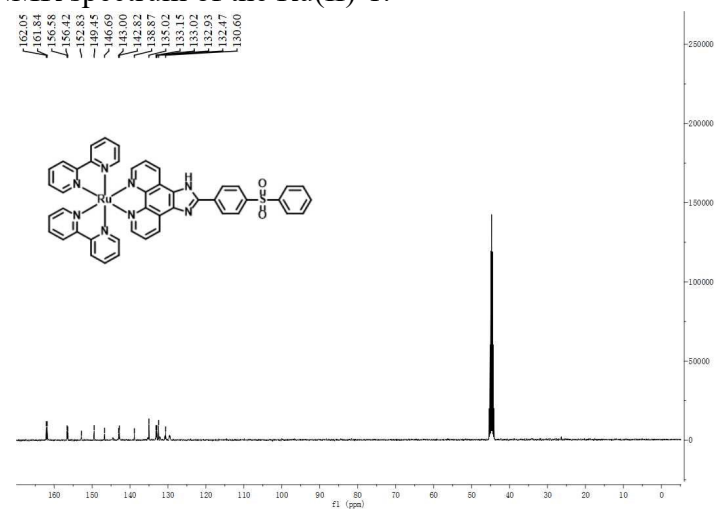


Figure 5. ¹³C NMR spectrum of the Ru(II)-1.

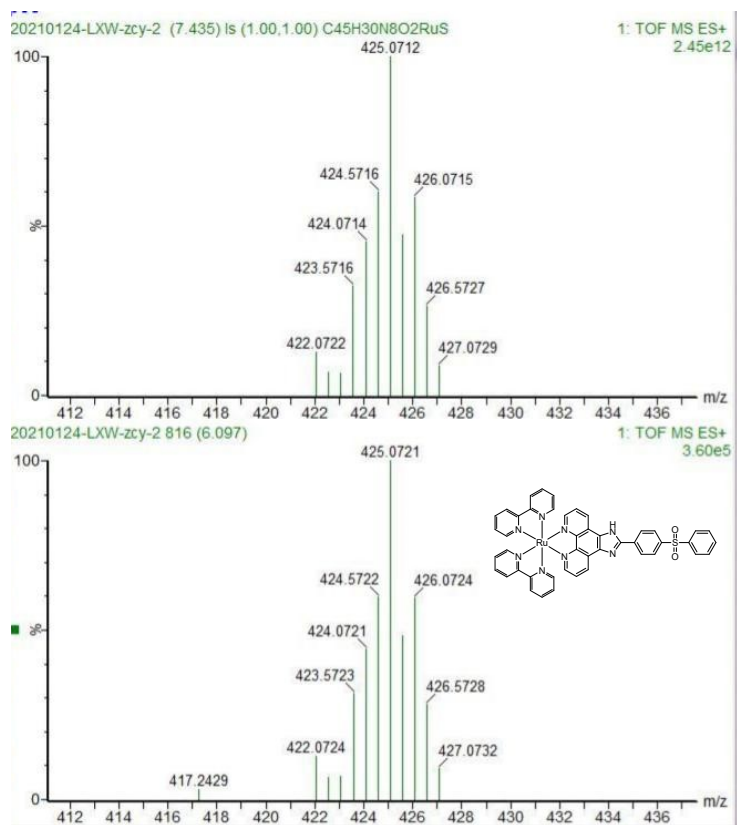


Figure 6. HRESI-MS spectrum of the Ru(II)-1.

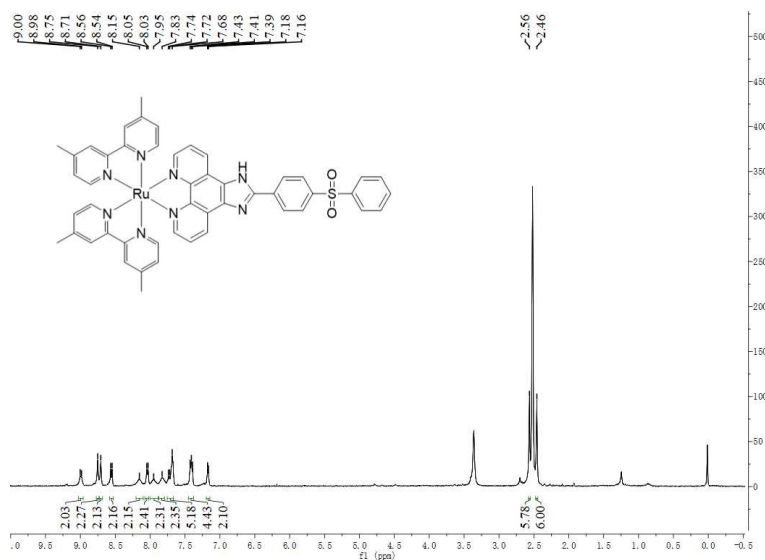


Figure 7. ¹H NMR spectrum of the Ru(II)-2.

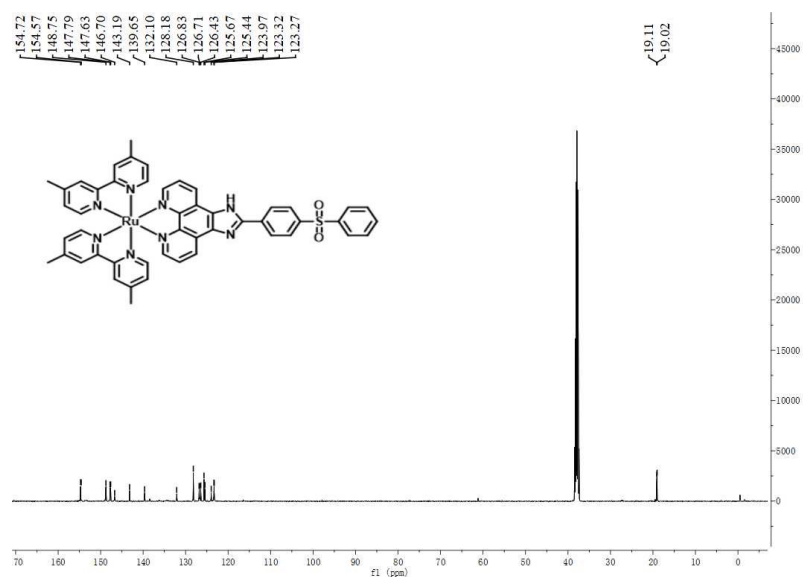


Figure 8. ^{13}C NMR spectrum of the Ru(II)-2.

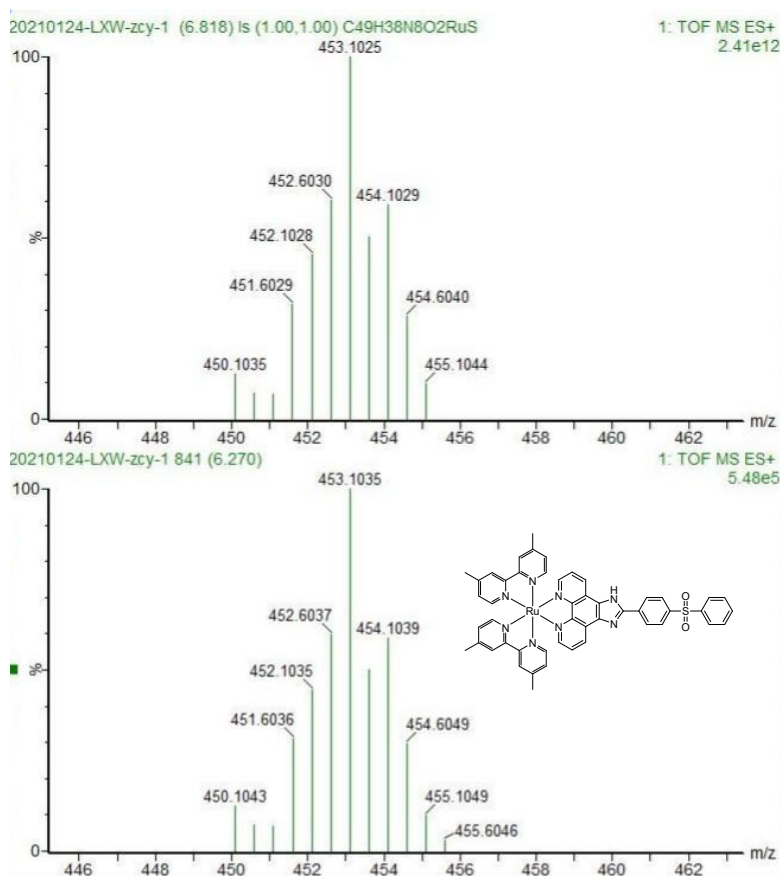


Figure 9. HRESI-MS spectrum of the Ru(II)-2.

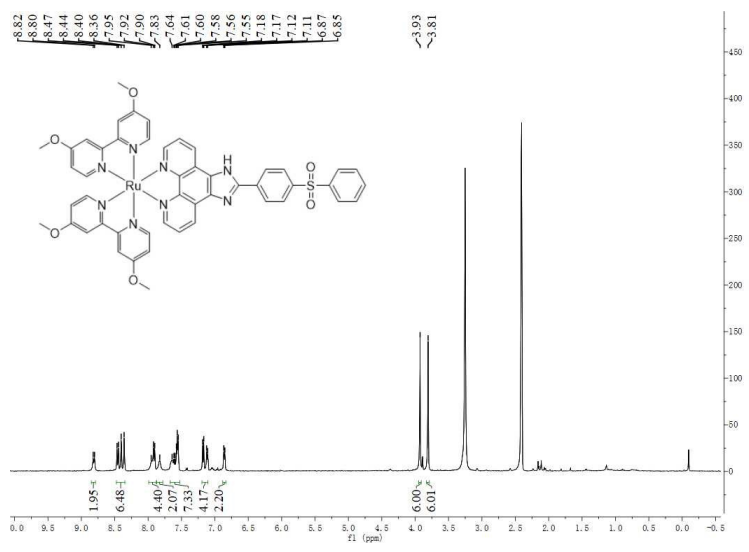


Figure 10. ^1H NMR spectrum of the Ru(II)-3.

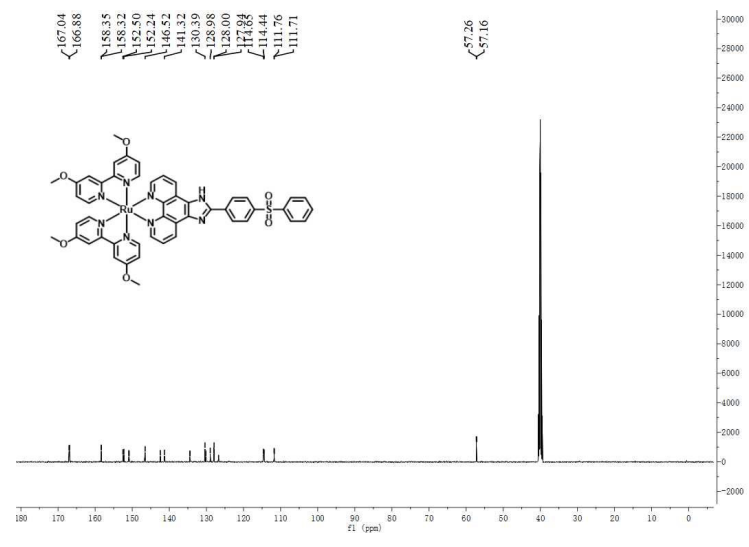


Figure 11. ^{13}C NMR spectrum of the Ru(II)-3.

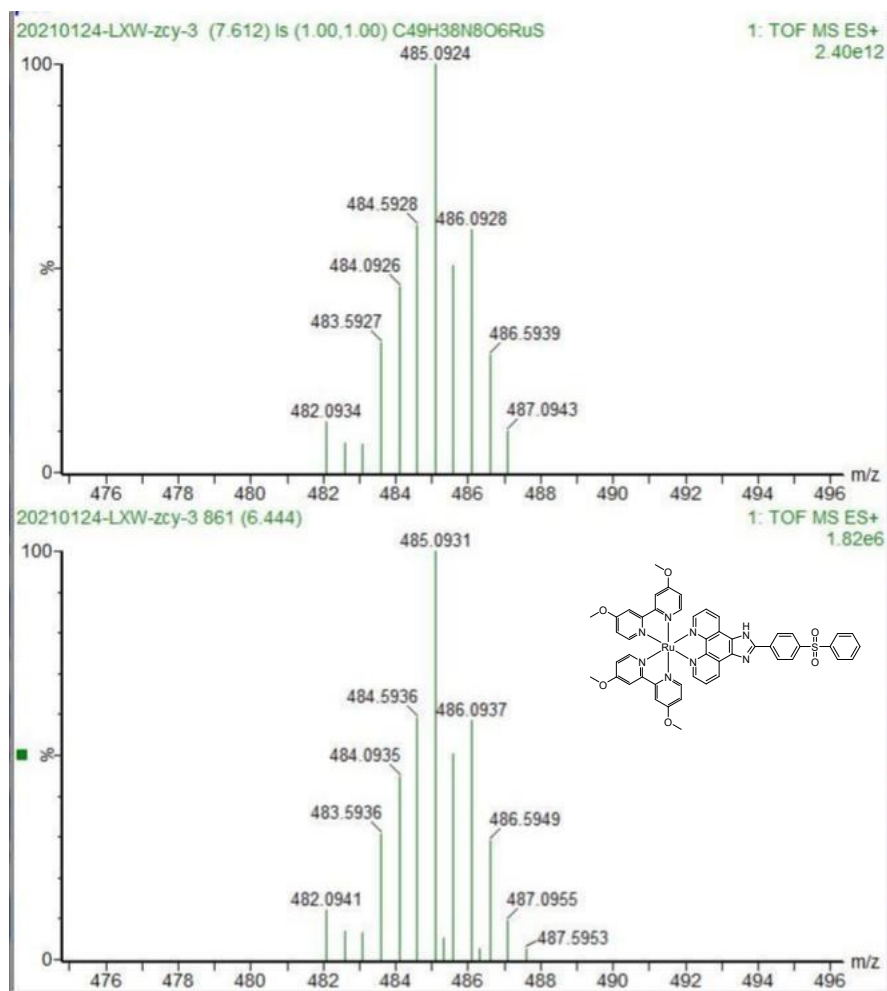


Figure 12. HRESI-MS spectrum of the Ru(II)-3.

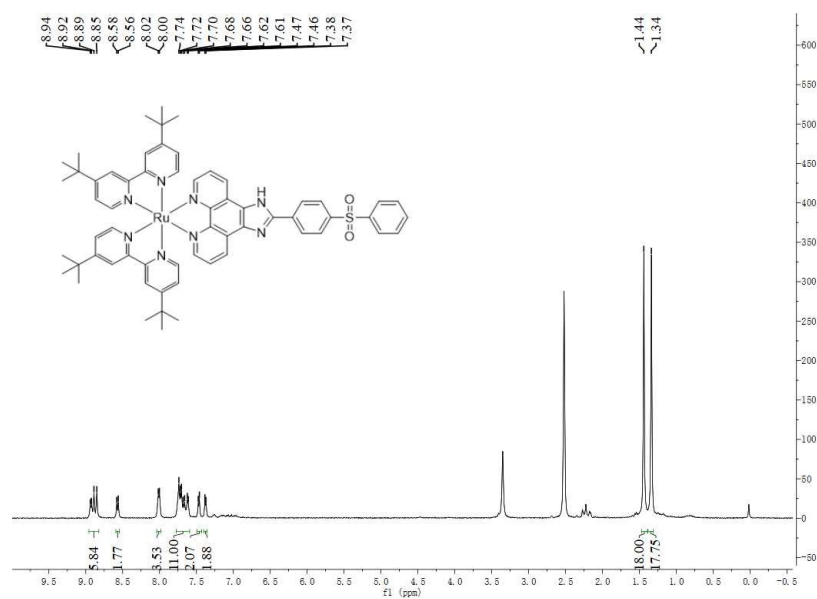


Figure 13. ¹H NMR spectrum of the Ru(II)-4.

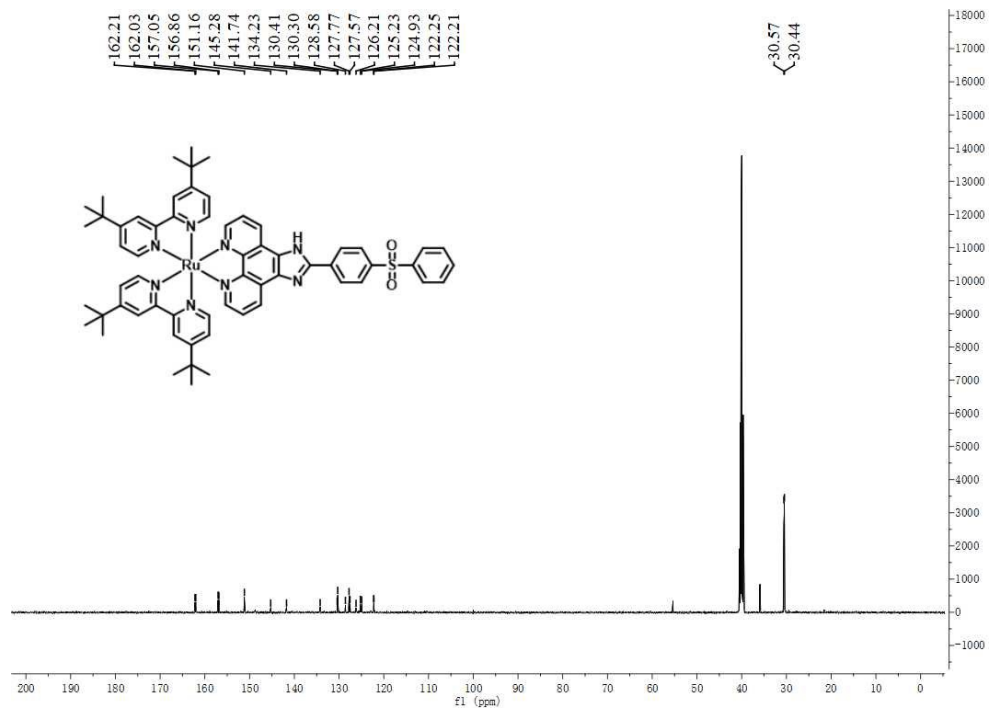


Figure 14. ^{13}C NMR spectrum of the Ru(II)-4.

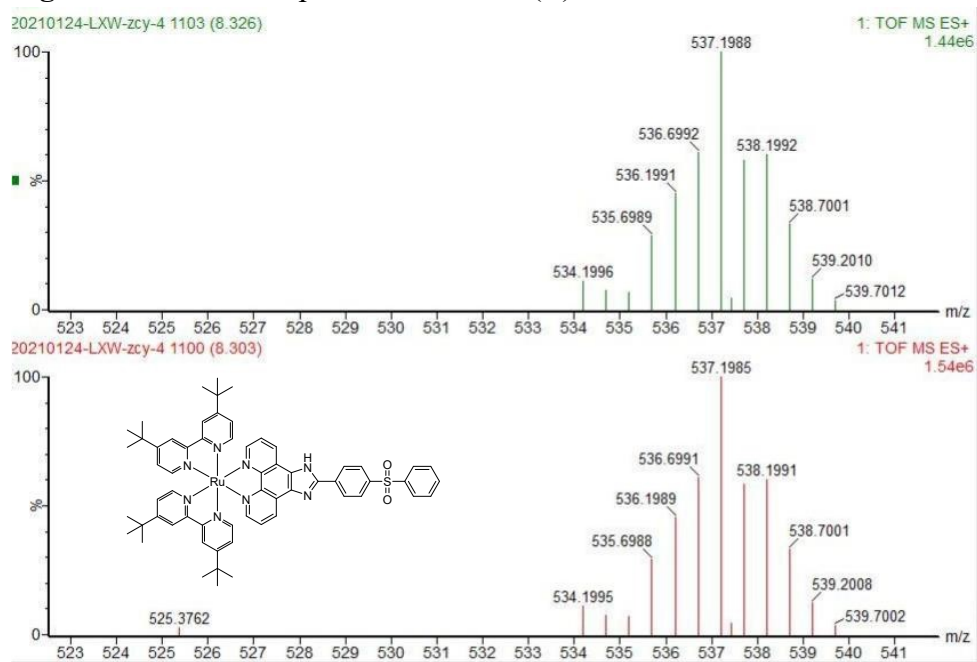


Figure 15. HRESI-MS spectrum of the Ru(II)-4.

2. Supporting Results

Table S1 Minimum inhibitory concentrations of the four auxiliary ligands

Compound	MIC against <i>S. aureus</i> ($\mu\text{g/mL}$)
$[\text{Ru}(\text{bpy})_2\text{Cl}_2] \cdot 2\text{H}_2\text{O}$	>200
$[\text{Ru}(\text{dmb})_2\text{Cl}_2] \cdot 2\text{H}_2\text{O}$	>200
$[\text{Ru}(\text{dmob})_2\text{Cl}_2] \cdot 2\text{H}_2\text{O}$	>200
$[\text{Ru}(\text{dtbp})_2\text{Cl}_2] \cdot 2\text{H}_2\text{O}$	>200
$\text{Ru}(\text{dmb})_2(\text{PIP})(\text{PF}_6)_2$	25

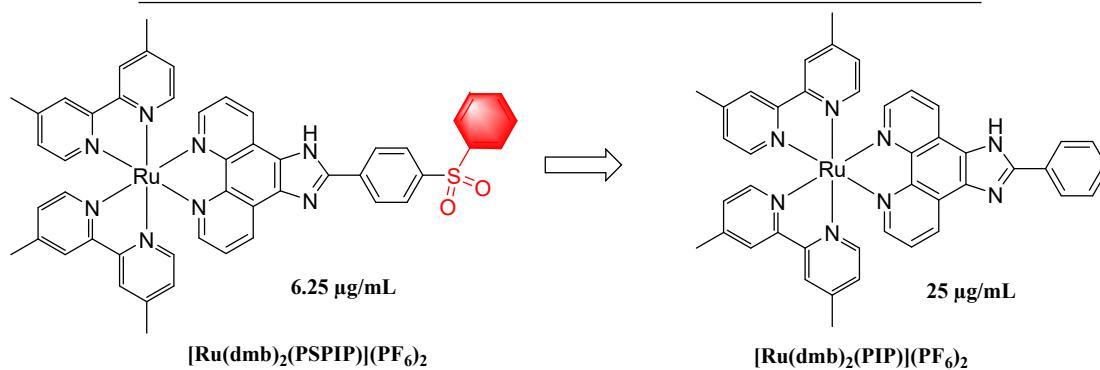


Figure S16 Antimicrobial activity of ruthenium complexes with or without sulfonyl groups