Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Microwave-assisted synthesis of polypyridyl ruthenium(II) complexes as potential tumor-targeting inhibitors against the migration and invasion of Hela cells through G2/M phase arrest

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Main contents

1. Microwave-assisted synthesis of polypyridyl Ru(II) complexes

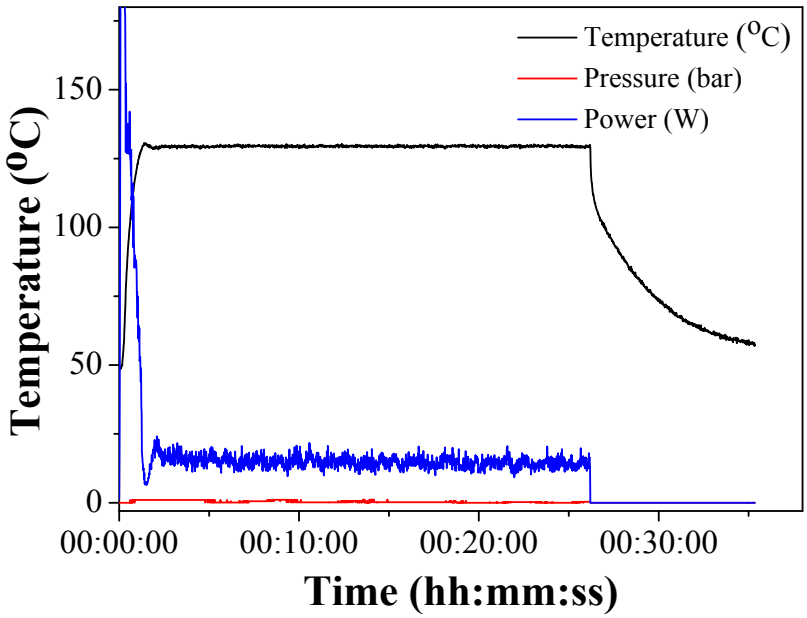

Figure S1. Reaction profile of polypyridyl ruthenium(II) in EtOH/H_2O solutions irradiated by microwave for 30 min at 130 °C in Pyrex vessel Temperature (1), Power (2), Pressure (3).

Table S1. Yield of microwave-assisted synthesis of polypyridyl ruthenium(II) complex.

Complex	Microwave		
	Temp./℃	Time/h	Yield/%
1	130	0.5	53.2
2	130	0.5	68.4
3	130	0.5	91.2
4	130	0.5	89.9

Table S2. Results of orthogonal experiments for microwave-assisted synthesis of polypyridyl ruthenium(II) complex **4**

No.	Factor				Producty	Yield
	A	B	C	D		
1	1(115℃)	1(10min)	1(1:1)	1	37.4	0.761711
2	1(115℃)	2(20min)	2(1:1.2)	2	40.6	0.826884
3	1(115℃)	3(30min)	3(1:1.5)	3	41.4	0.843177
4	2(120℃)	1(10min)	2(1:1.2)	3	33.8	0.688391
5	2(120℃)	2(20min)	3(1:1.5)	1	44.4	0.904277
6	2(120℃)	3(30min)	1(1:1)	2	45.7	0.930754
7	3(125℃)	1(10min)	3(1:1.5)	2	38.1	0.775967
8	3(125℃)	2(20min)	1(1:1)	3	39.1	0.796334
9	3(125℃)	3(30min)	2(1:1.2)	1	41.5	0.845214
Kj1	2.431772	2.226069	2.488798	2.511202		
Kj2	2.523422	2.527495	2.576375	2.533605		
Kj3	2.417515	2.619145	2.576375	2.327902		
Rj	0.105906	0.393075	0.087576	0.205703		
Optimum	A2B3C2D2					

2. ESI-MS spectra

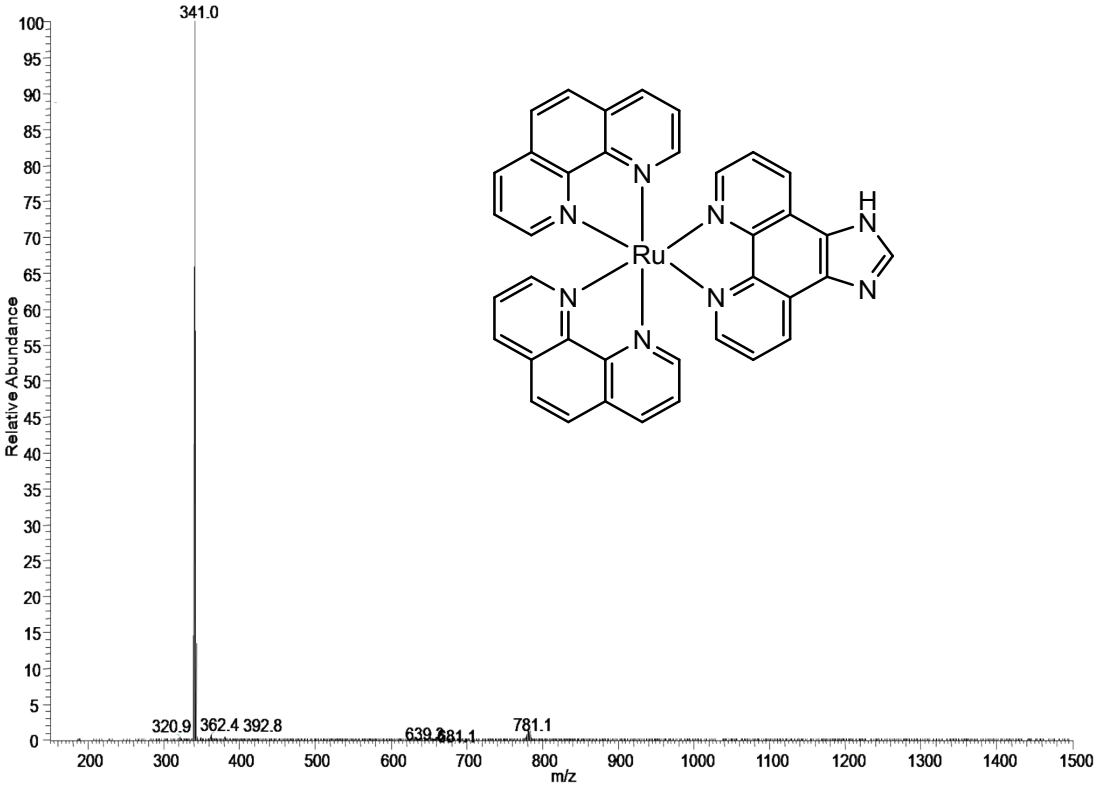

Figure S2. The ESI-MS spectra of **1**

Figure S3. The ESI-MS spectra of **2**

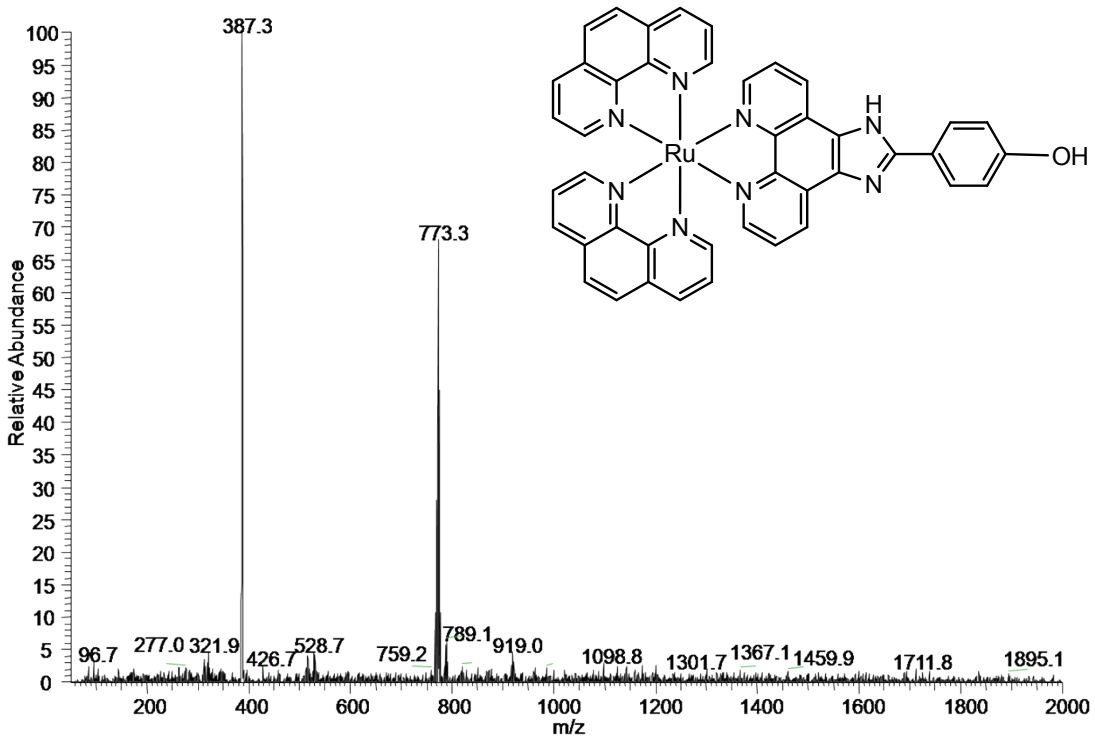

Figure S4. The ESI-MS spectra of **3**

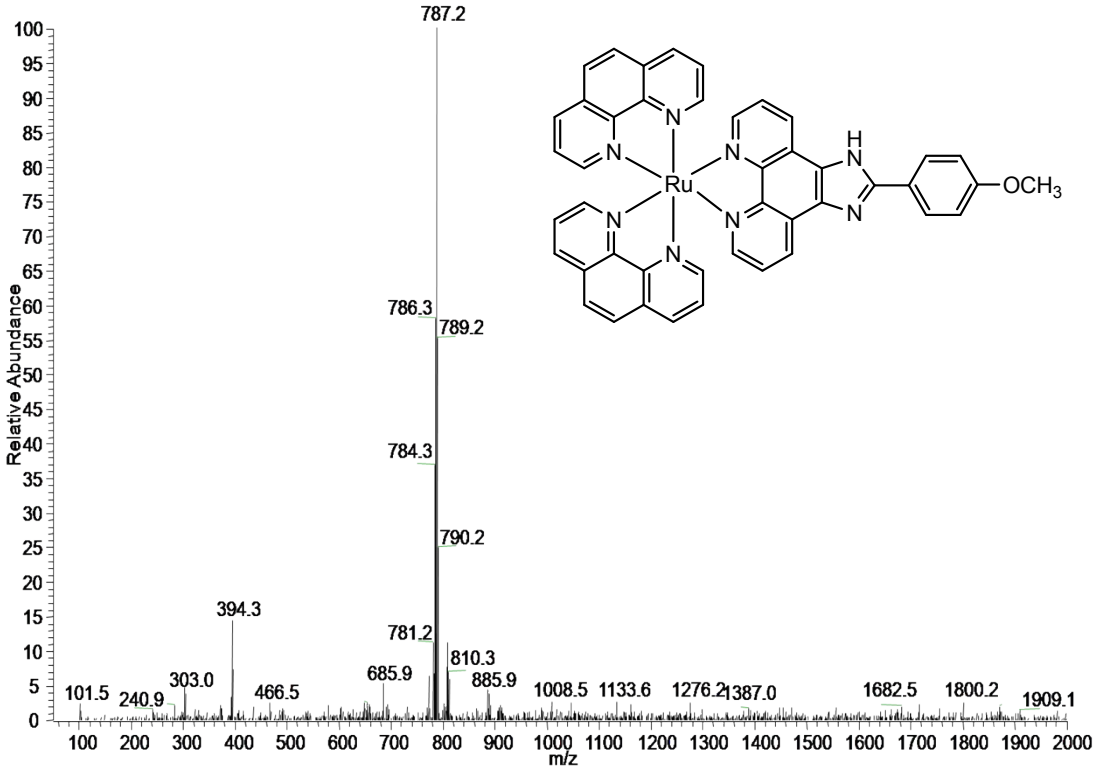

Figure S5. The ESI-MS spectra of **4**

3. ^{1}H NMR spectra

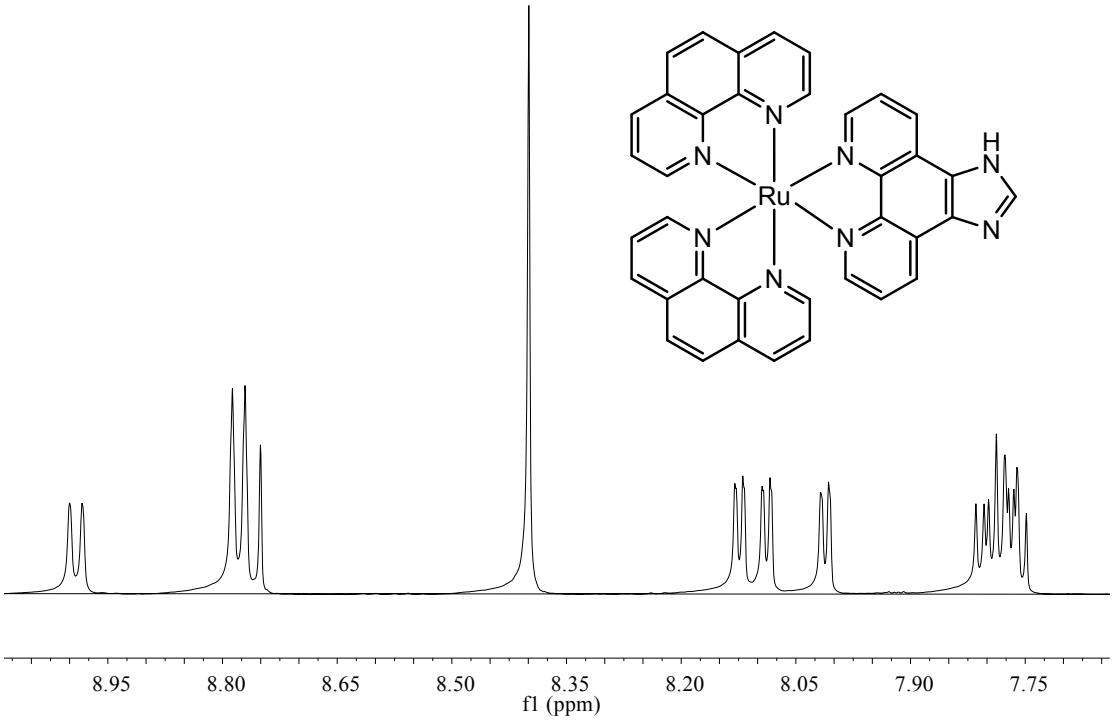

Figure S6. The ^{1}H NMR spectra of **1**

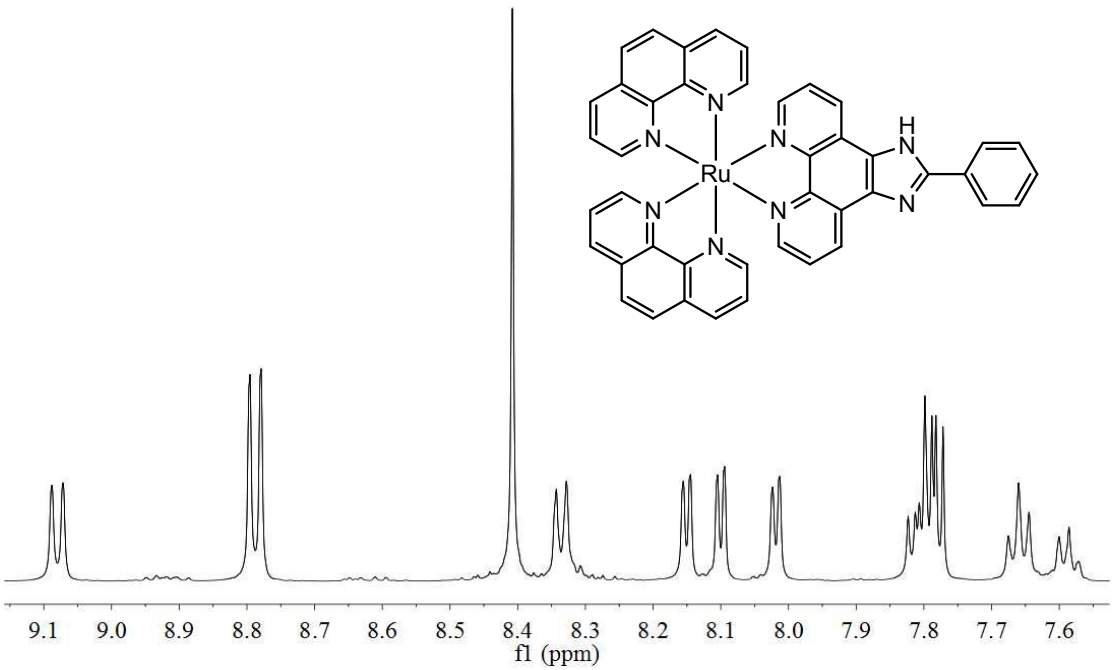

Figure S7. The ^{1}H NMR spectra of **2**

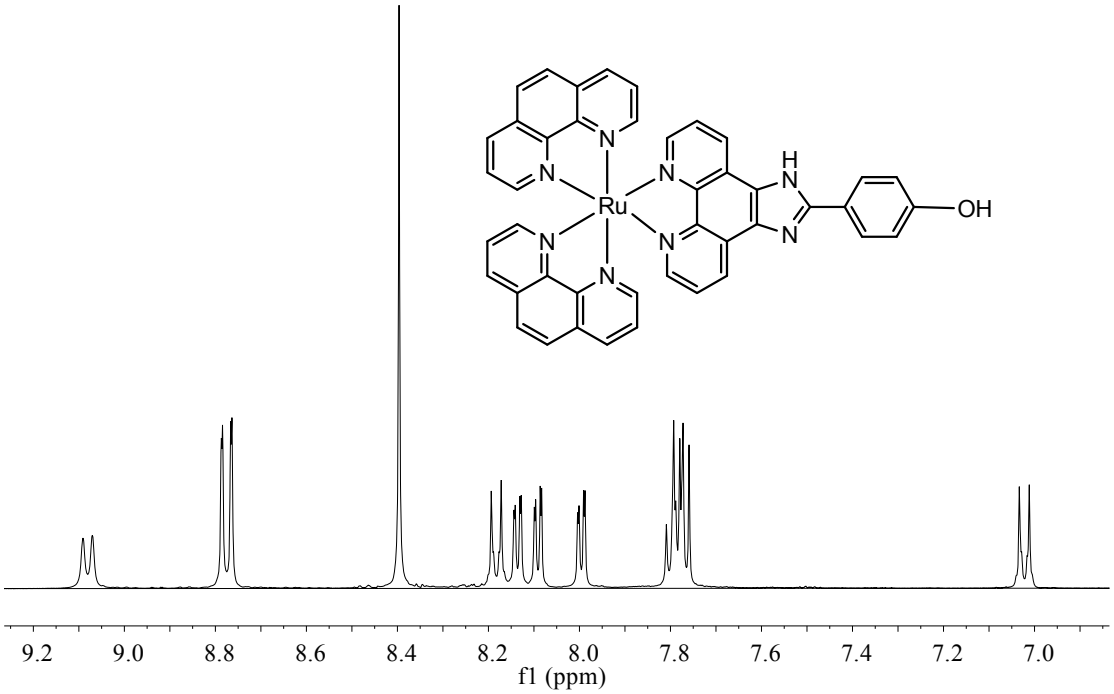

Figure S8. The ^{1}H NMR spectra of **3**

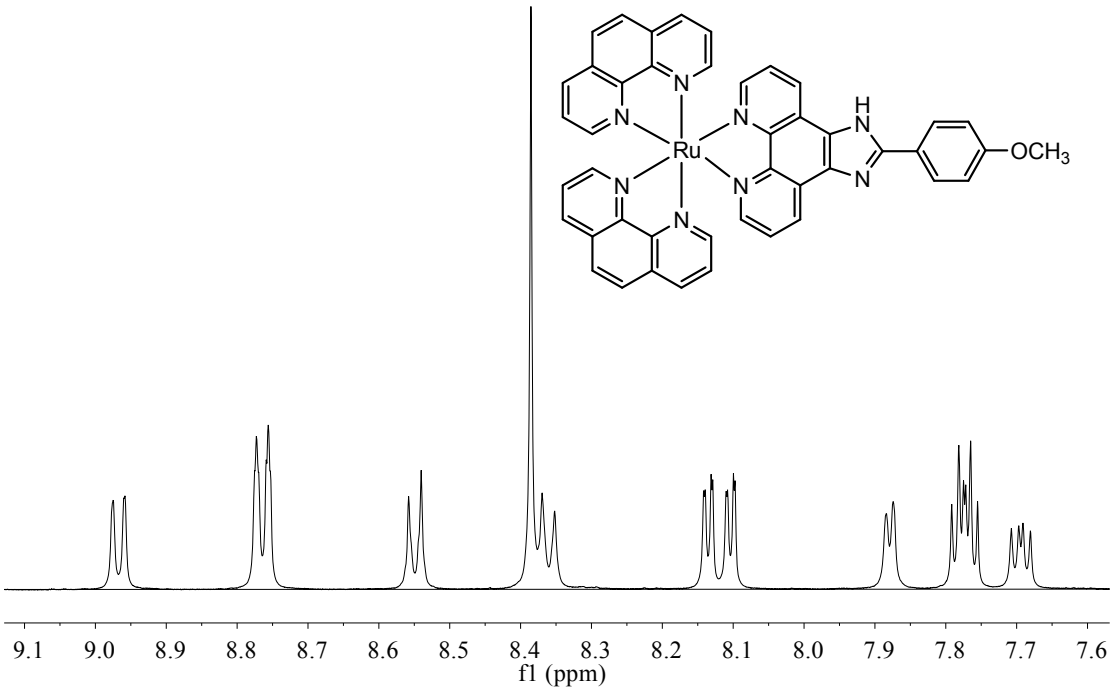

Figure S9. The ^{1}H NMR spectra of **4**

4. ^{13} C NMR spectra

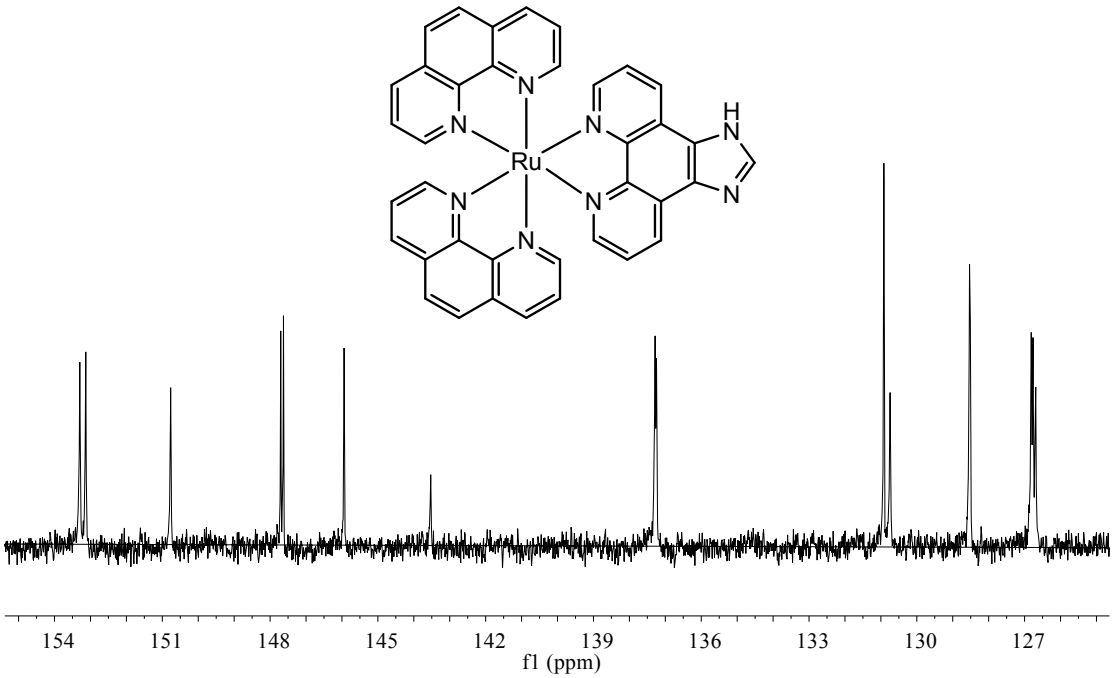

Figure S10. The ^{13}C NMR spectra of **1**

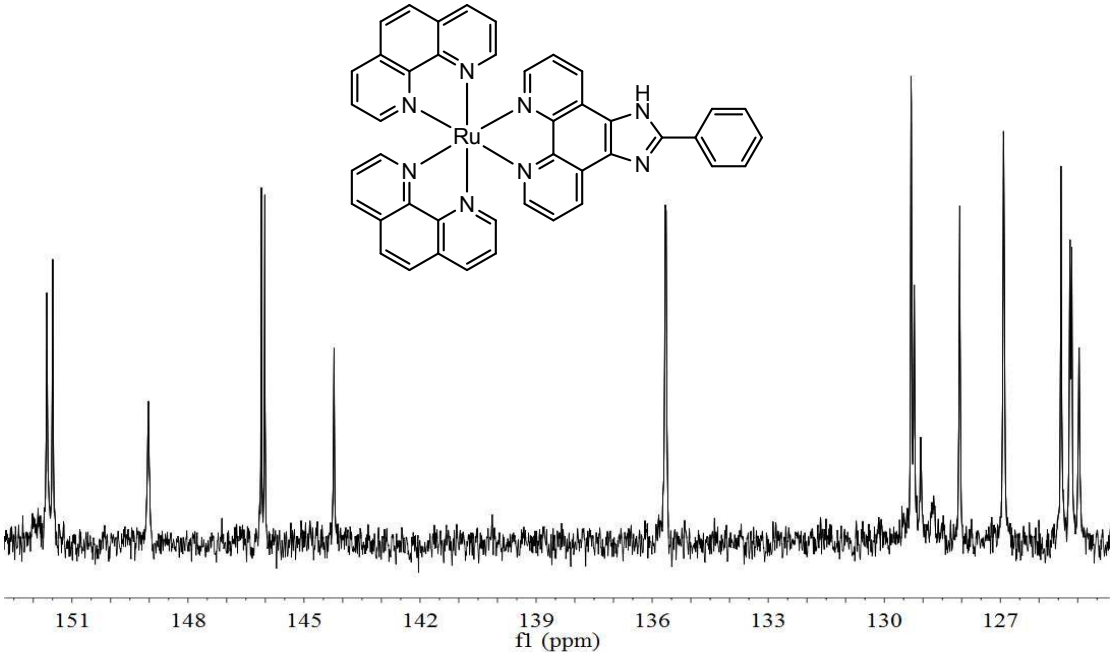

Figure S11. The ^{13}C NMR spectra of **2**

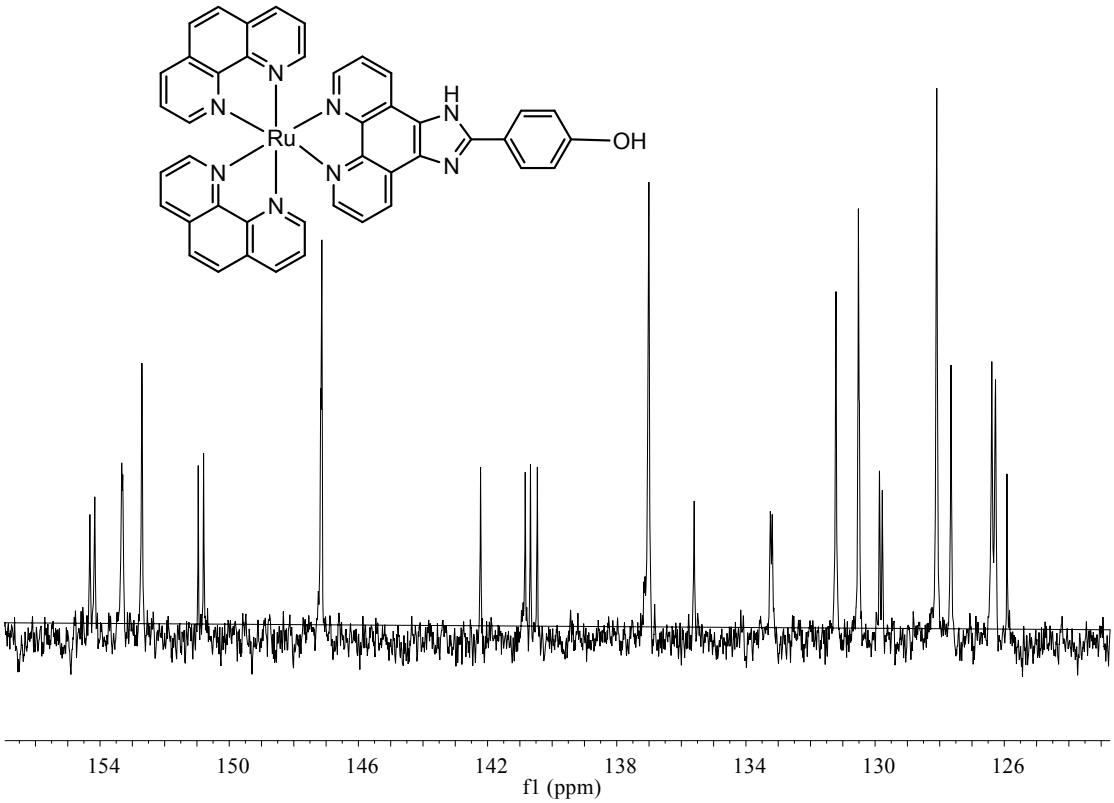

Figure S12. The ^{13}C NMR spectra of **3**

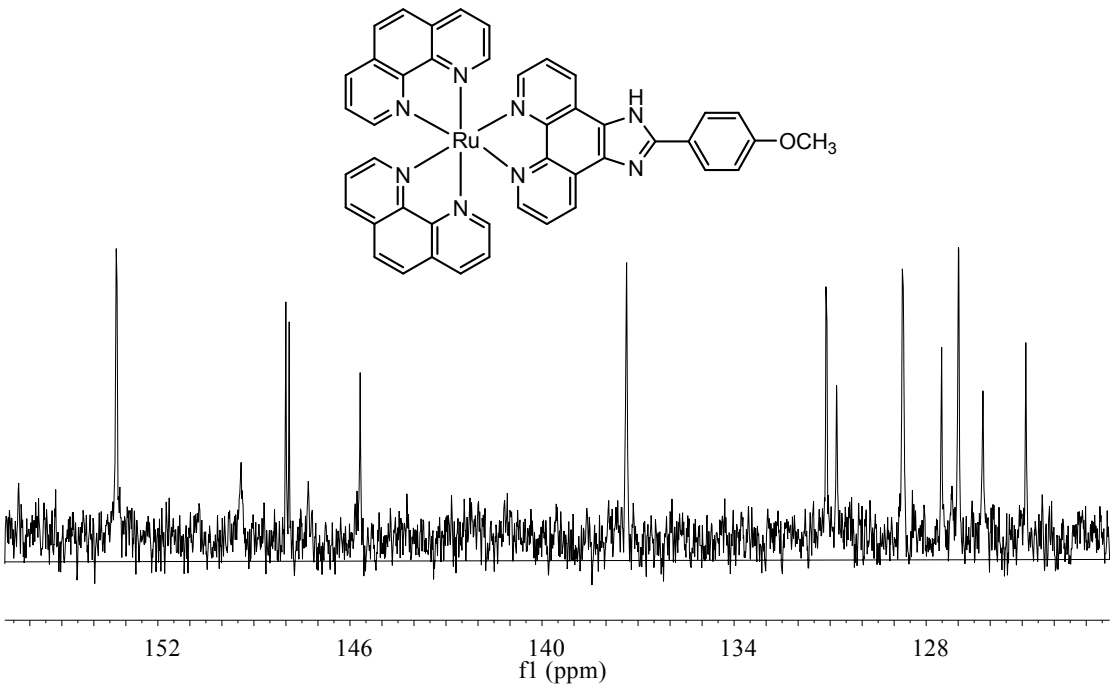

Figure S13. The ^{13}C NMR spectra of **4**