

Figure S1: The IR spectrum of *trans*-[PtCl₂(DMSO)C₄H₉NO].

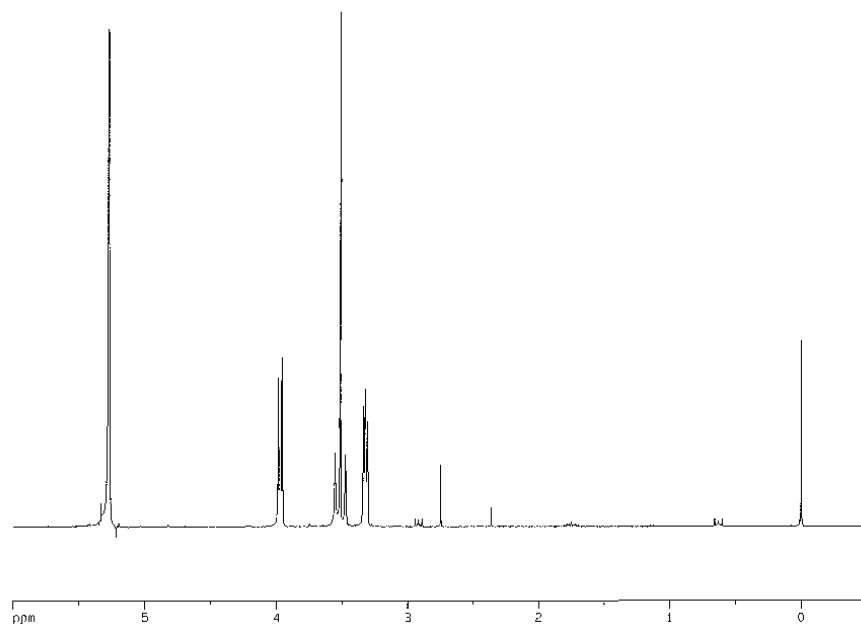


Figure S2: The ^1H NMR spectrum of *trans*- $[\text{PtCl}_2(\text{DMSO})(\text{C}_4\text{H}_9\text{NO})]$.

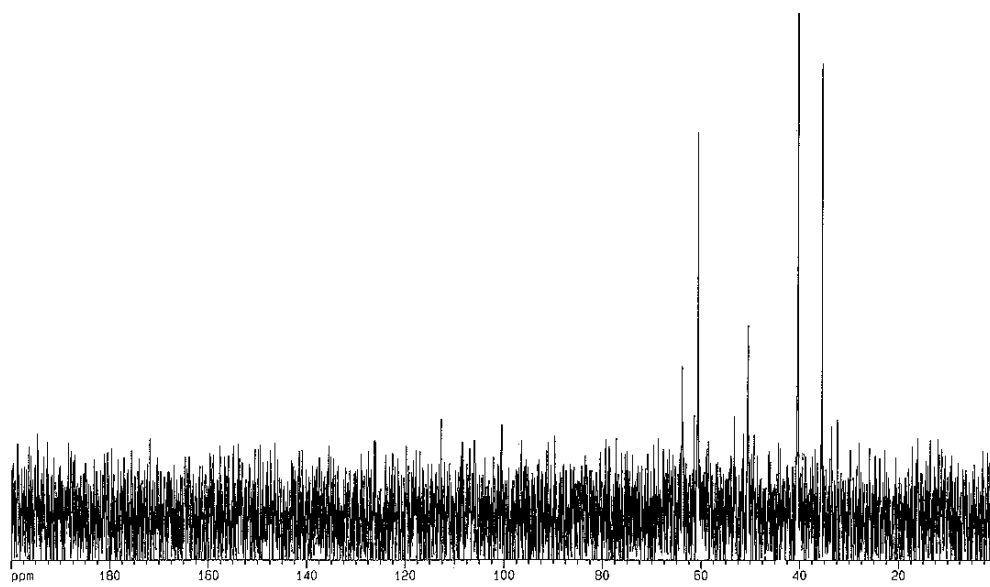


Figure S3: The $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of *trans*- $[\text{PtCl}_2(\text{DMSO})(\text{C}_4\text{H}_9\text{NO})]$.

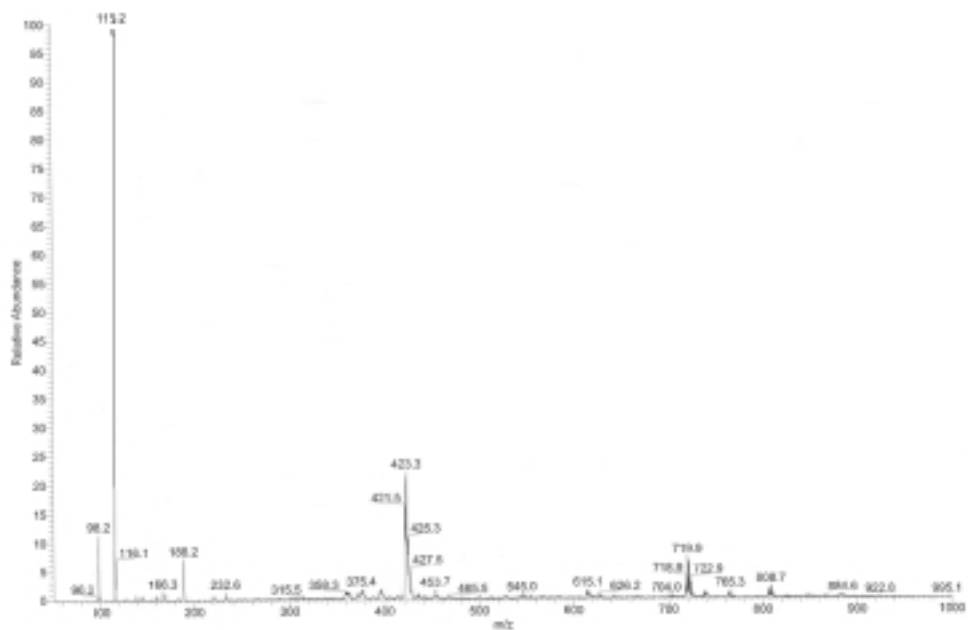


Figure S4: The positive full MS/ESI spectrum of *trans*-[PtCl₂(DMSO)(C₄H₉NO)].

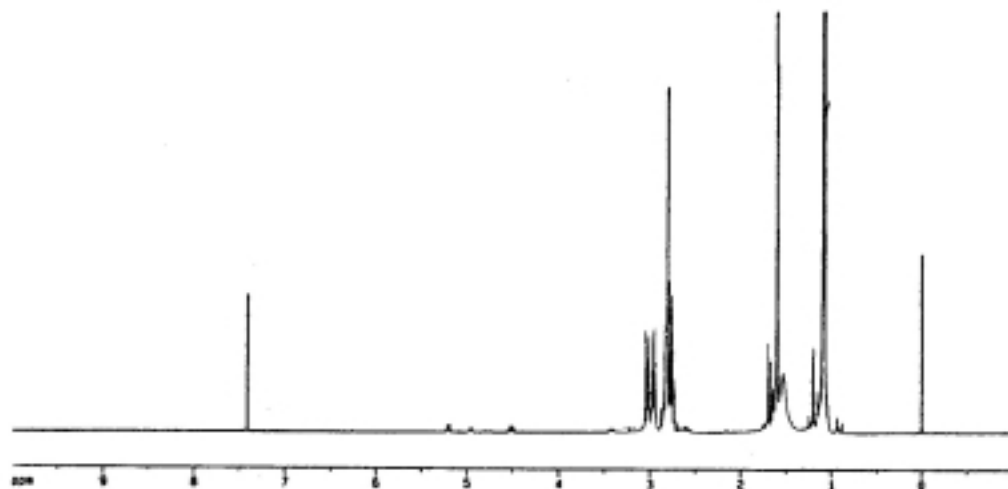


Figure S5: The ¹H NMR of dmdze.

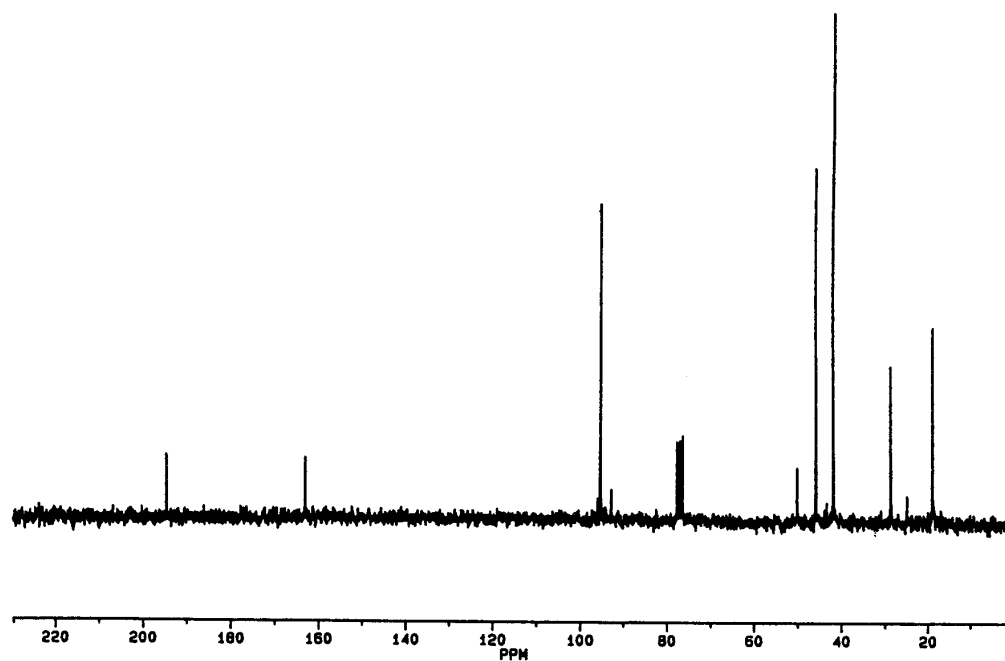


Figure S6: The $^{13}\text{C}\{^1\text{H}\}$ NMR of dmdze.

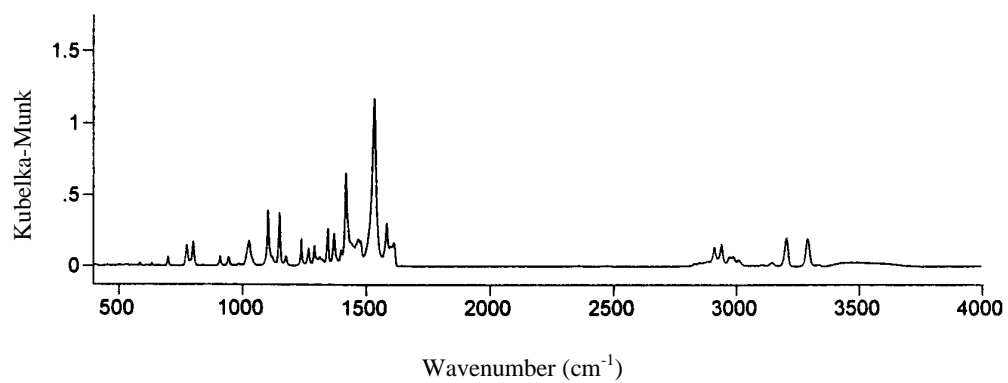


Figure S7: The IR spectrum of *trans*-[PtCl₂(DMSO)(dmdze)].

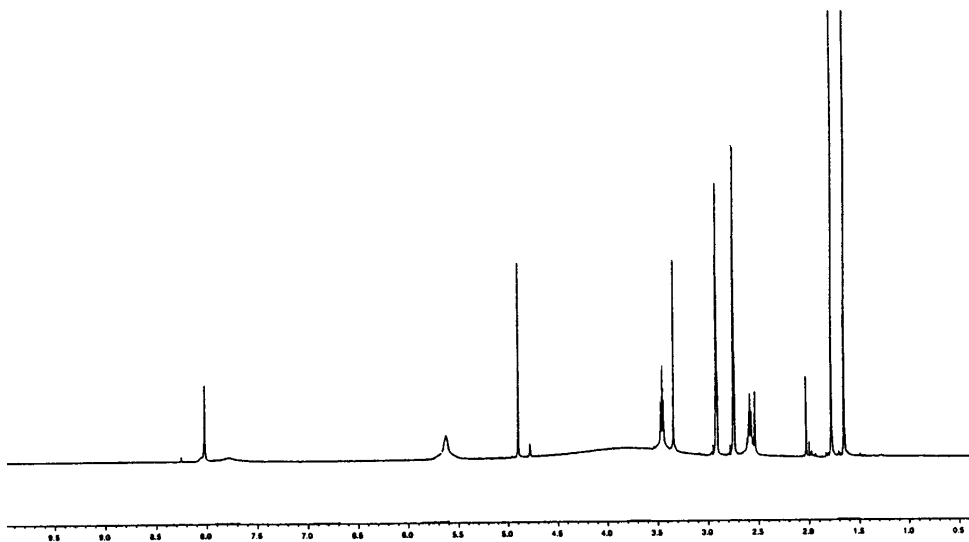


Figure S8: The ^1H NMR spectrum of *trans*-[PtCl₂(DMSO)(dmdze)].

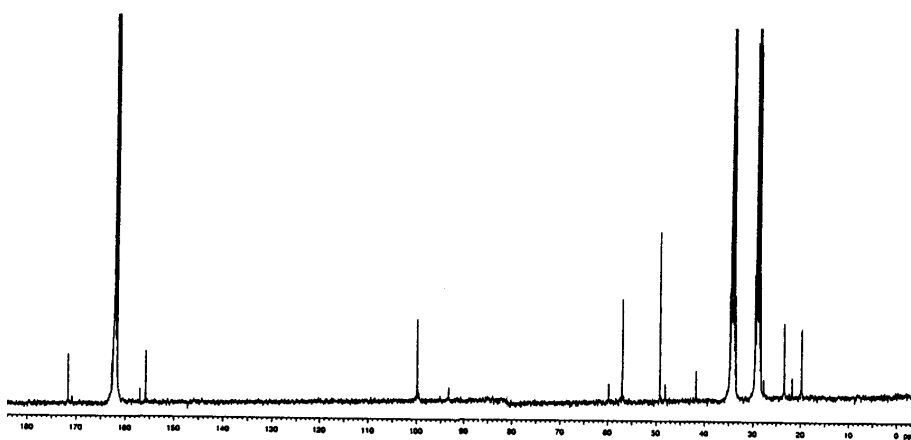


Figure S9: The $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of *trans*-[PtCl₂(DMSO)(dmdze)].

Table S1: Least squares planes in *trans*-[PtCl₂(DMSO)(C₄H₉NO)].

Plane number 1		
Atoms Defining Plane		Distance (Å)
Pt(1)		0.0008
Cl(1)		-0.0330
Cl(2)		-0.0542
S(1)		-0.0039
N(1)		0.1184
Mean deviation from plane		0.0421 Å
Chi-squared		5057.2
Plane number 2		
Atoms Defining Plane		Distance (Å)
C(1)		-0.0058
C(2)		0.0114
C(3)		-0.0099
C(4)		0.0066
Mean deviation from plane		0.0084 Å
Chi-squared		9.8
Additional Atoms		
O(1)		-1.9777
N(1)		-0.6421
Dihedral angles between least-squares planes		
plane	Plane	angle (°)
2	1	113.11

Estimated standard deviation in the last significant figure are in parentheses.

Table S2 Least-squares planes for the product of the attempted synthesis of *trans*-[PtCl₂(DMSO)(dmdze)].

Atoms Defining Plane	Distance (Å)
Pt(1)	0.0040
Cl(1)	0.0334
Cl(2)	0.0321
S(1)	-0.0323
N(1)	-0.0373
Mean deviation from plane	0.0278 Å
Chi-squared	0.0