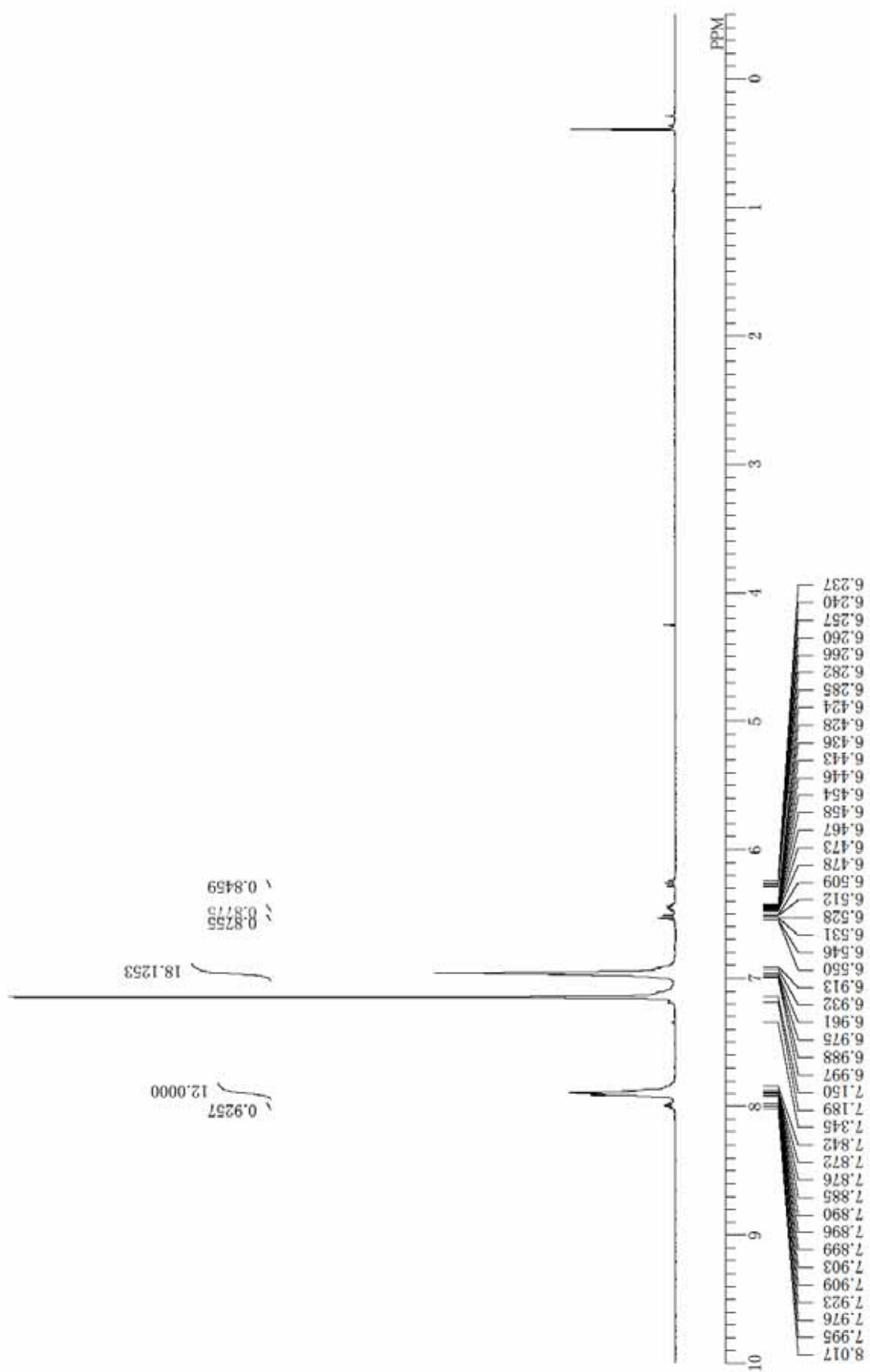


**Supporting Information for *cis*-to-*trans* Isomerization Promoted by  
Pyridine as a Crucial Step for the Selective Preparation of *trans*-  
 $\text{Pt}(\text{SAr})(\text{Cl})(\text{PAr}'_3)_2$**

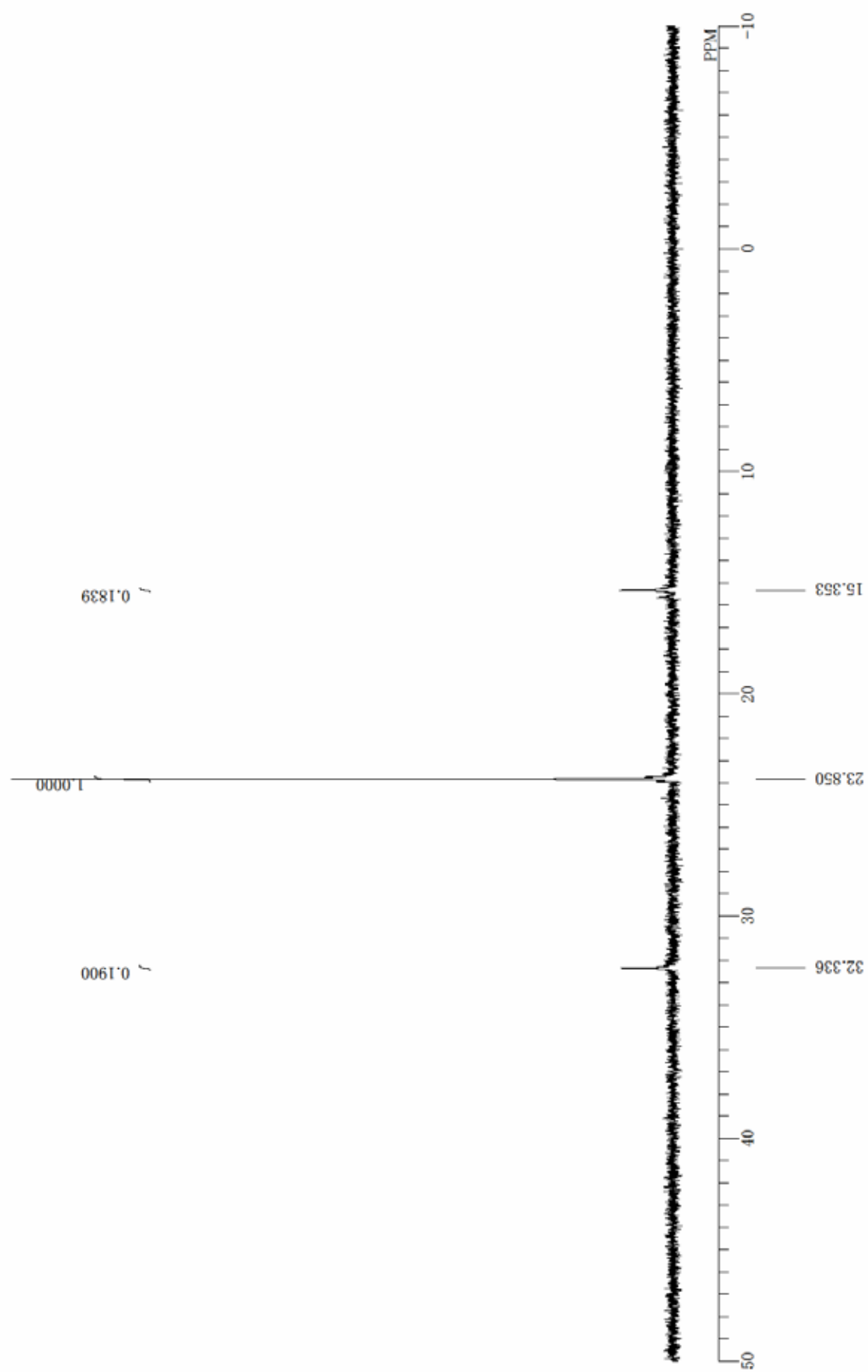
*Fumikazu Yamashita, Hitoshi Kuniyasu,\* Jun Terao and Nobuaki Kambe\**

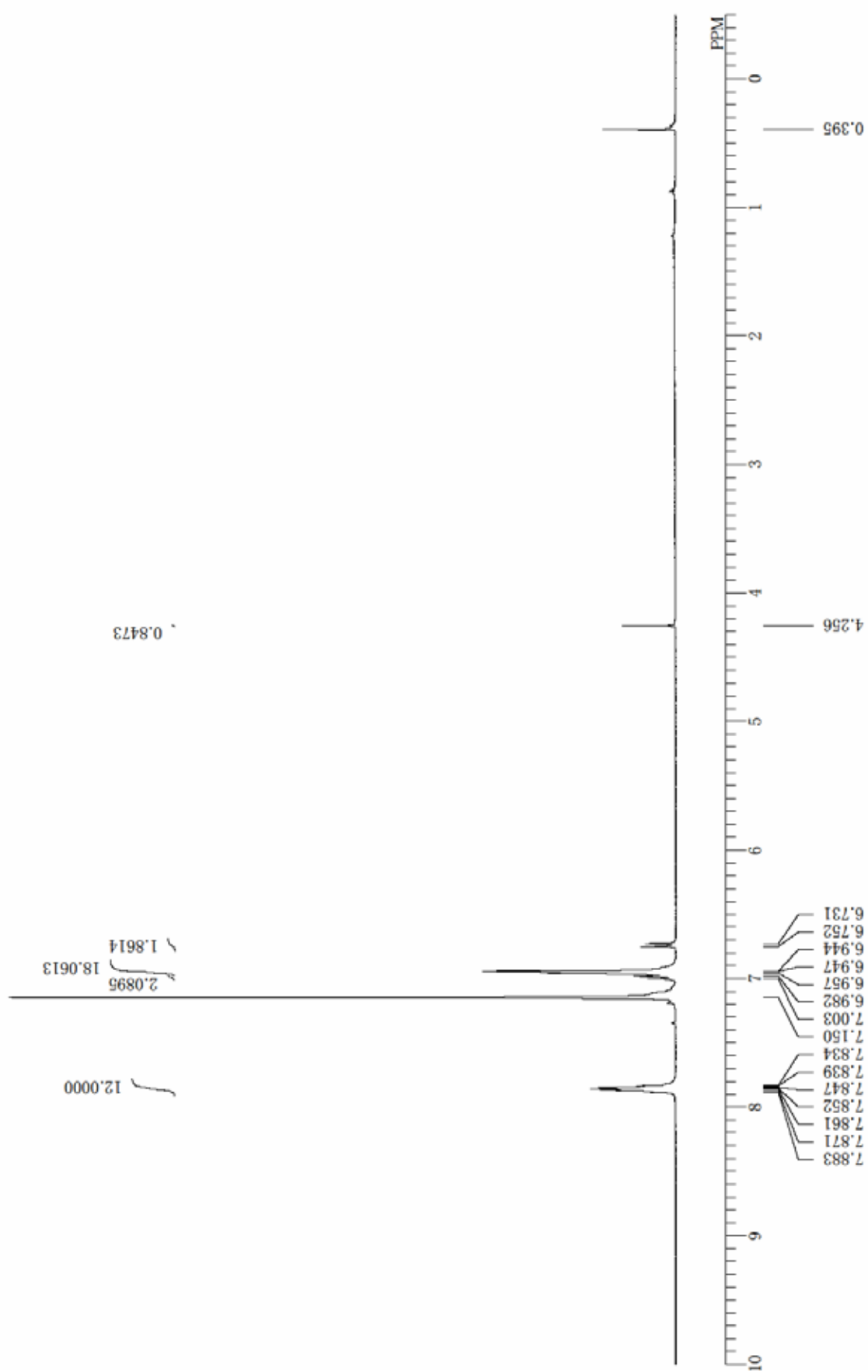
Department of Molecular Chemistry & Frontier Research Center, Graduate School of Engineering, Osaka University,  
Suita, Osaka 565-0871, Japan

**Contents of Supporting Information.**  $^1\text{H}$  and  $^{31}\text{P}$  NMR spectrum of *trans*-**1e** (pS2, S3), *trans*-**1i** (pS4, S5) and *trans*-**1l** (pS6, S7). The  $^{31}\text{P}$  NMR spectra of crude reaction mixtures of run 5 in Table 4, run 7 in Table 4, and run 2 in Table 5 were shown in the following S8-S10. The peak at  $\delta$  23.1 in S8 was assigned as *trans*- $\text{Pt}(\text{SC}_6\text{H}_4\text{-2-Cl})_2(\text{PPh}_3)_2$ . The ratio of *trans*-**1f**/*trans*-**4f** was 98/2. The peaks at  $\delta$  15.7 and  $\delta$  22.5 in S9 were assigned as *cis*- $\text{PtCl}_2(\text{PPh}_3)_2$  and *trans*- $\text{Pt}(\text{SC}_6\text{H}_4\text{-2-Cl})_2(\text{PPh}_3)_2$ , respectively. The ratio of *trans*-**1h**/*cis*-**2a**/*trans*-**4h** was 92/4/4. The peaks at  $\delta$  12.7 and  $\delta$  20.8 in S10 were assigned as *cis*- $\text{PtCl}_2[\text{P}(\text{C}_6\text{H}_4\text{-4-OMe})_3]_2$  and *trans*- $\text{Pt}(\text{SC}_6\text{H}_4\text{-4-Me})_2[\text{P}(\text{C}_6\text{H}_4\text{-4-OMe})_3]_2$ , respectively. The ratio of *trans*-**1l**/*cis*-**2c**/*trans*-**4l** was 87/4/9.

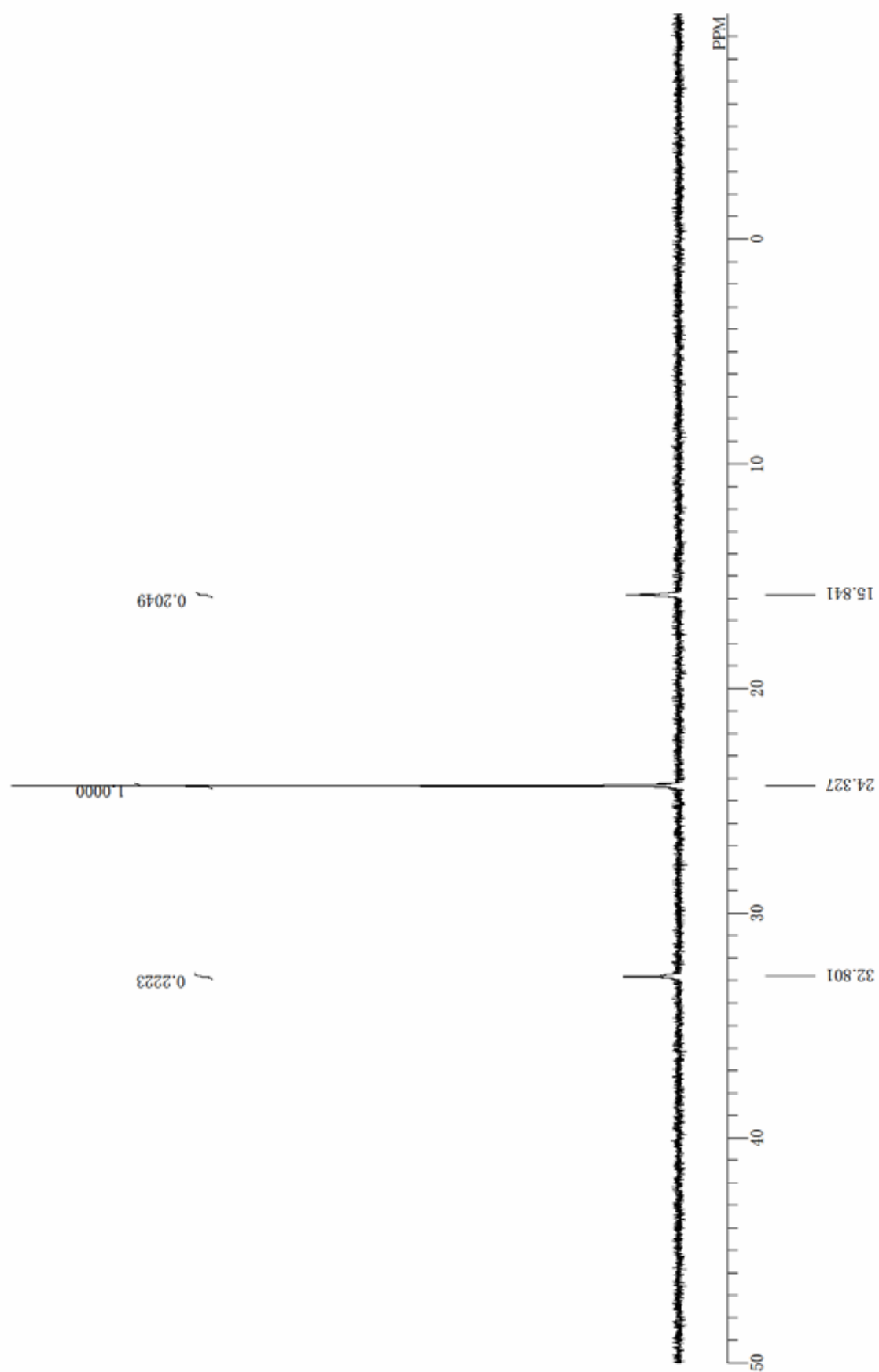


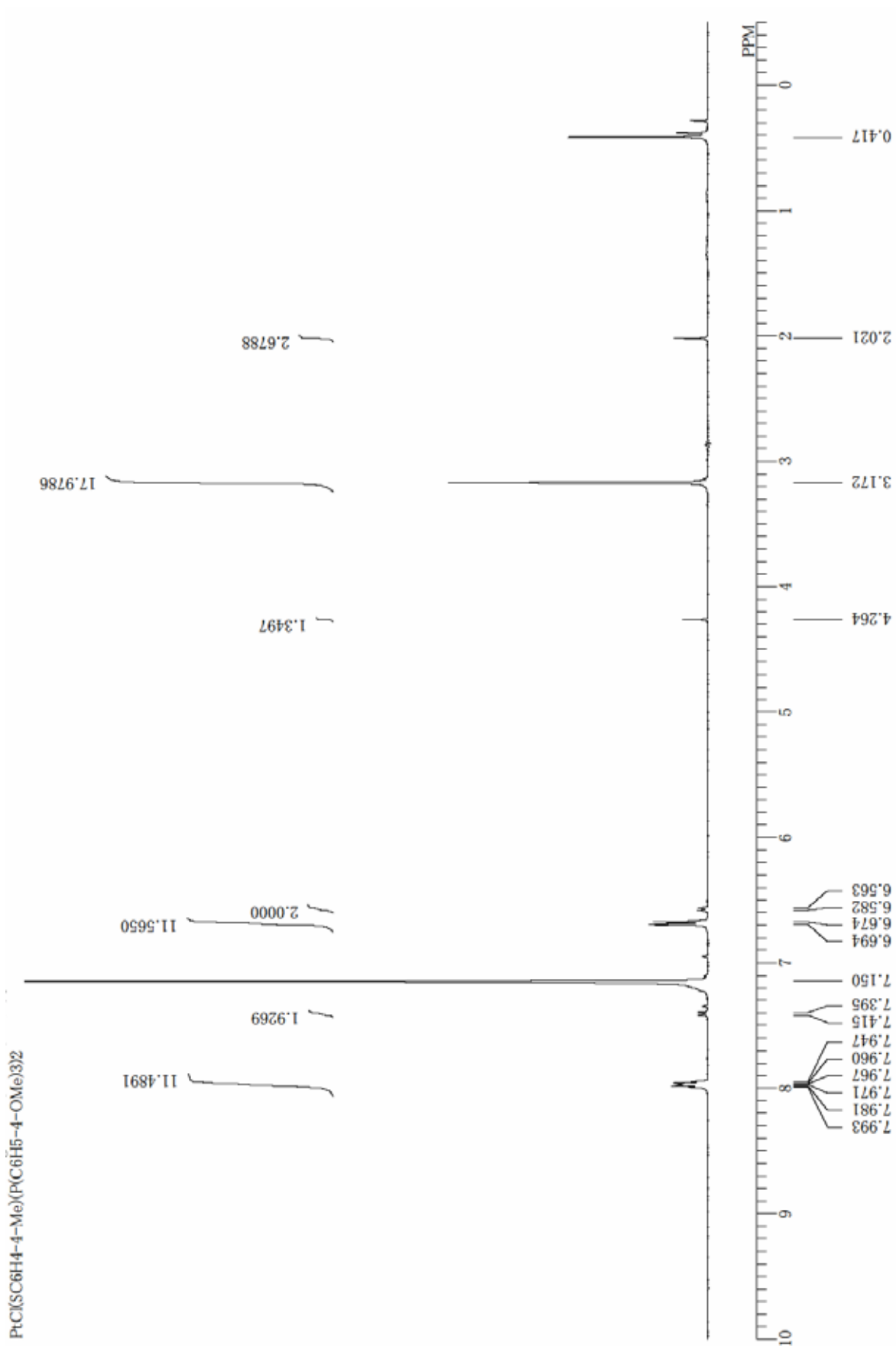
$\text{PtCl}(\text{SC}_6\text{H}_4\text{-2-F})(\text{PPh}_3)_2$



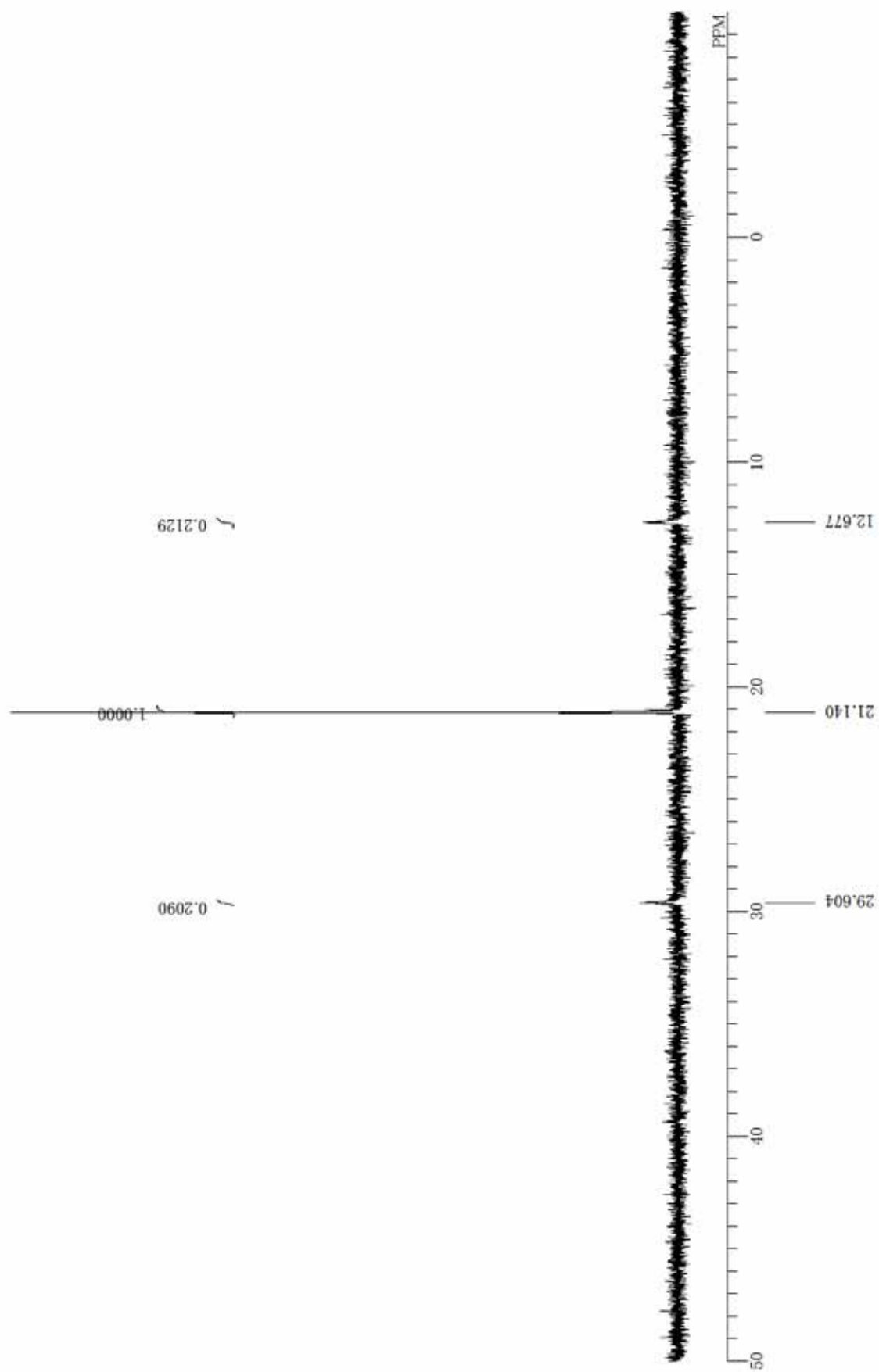


$\text{PtCl}(\text{SC}_6\text{H}_4\text{-4-Br})(\text{PPh}_3)_2$

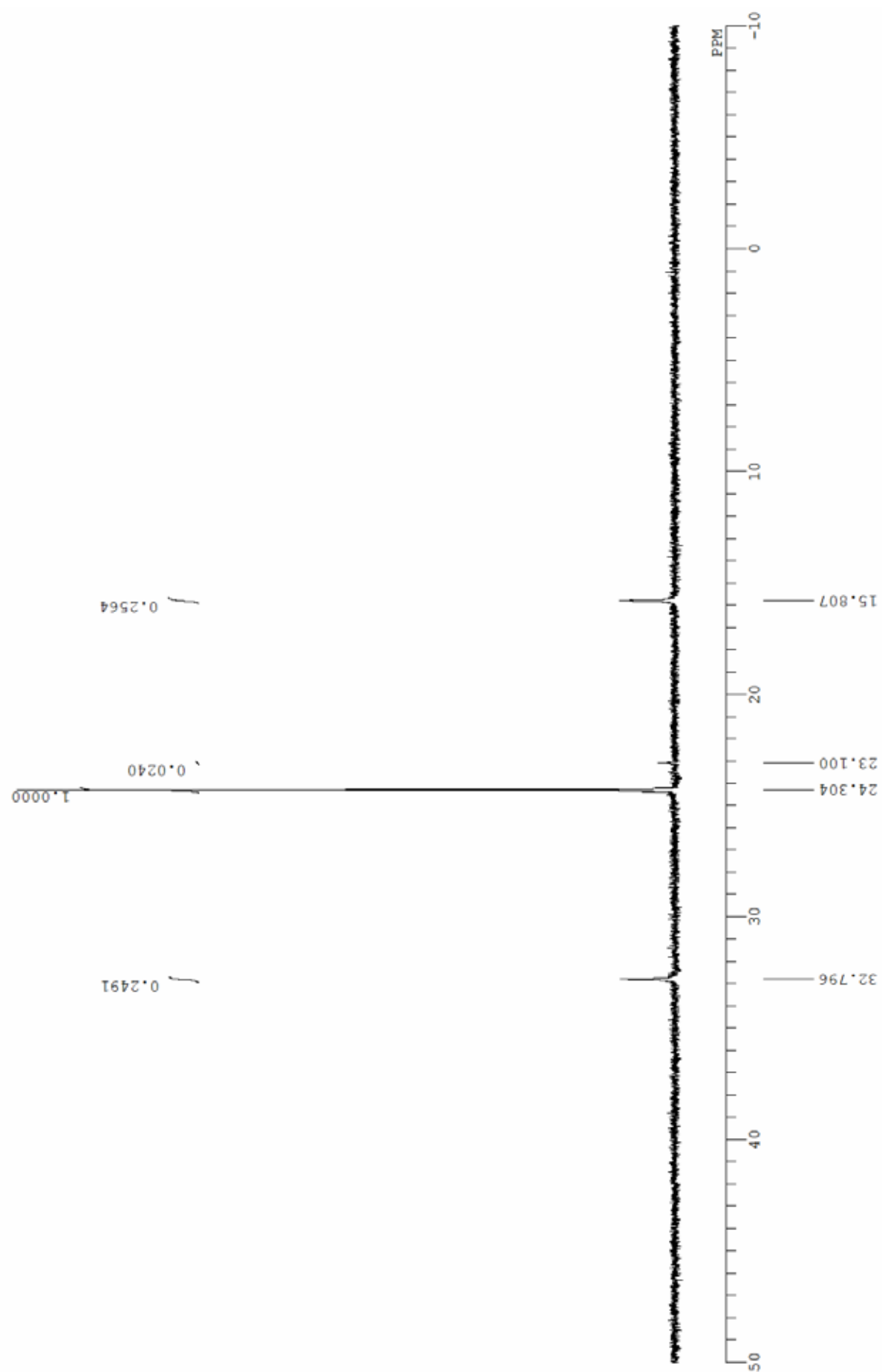




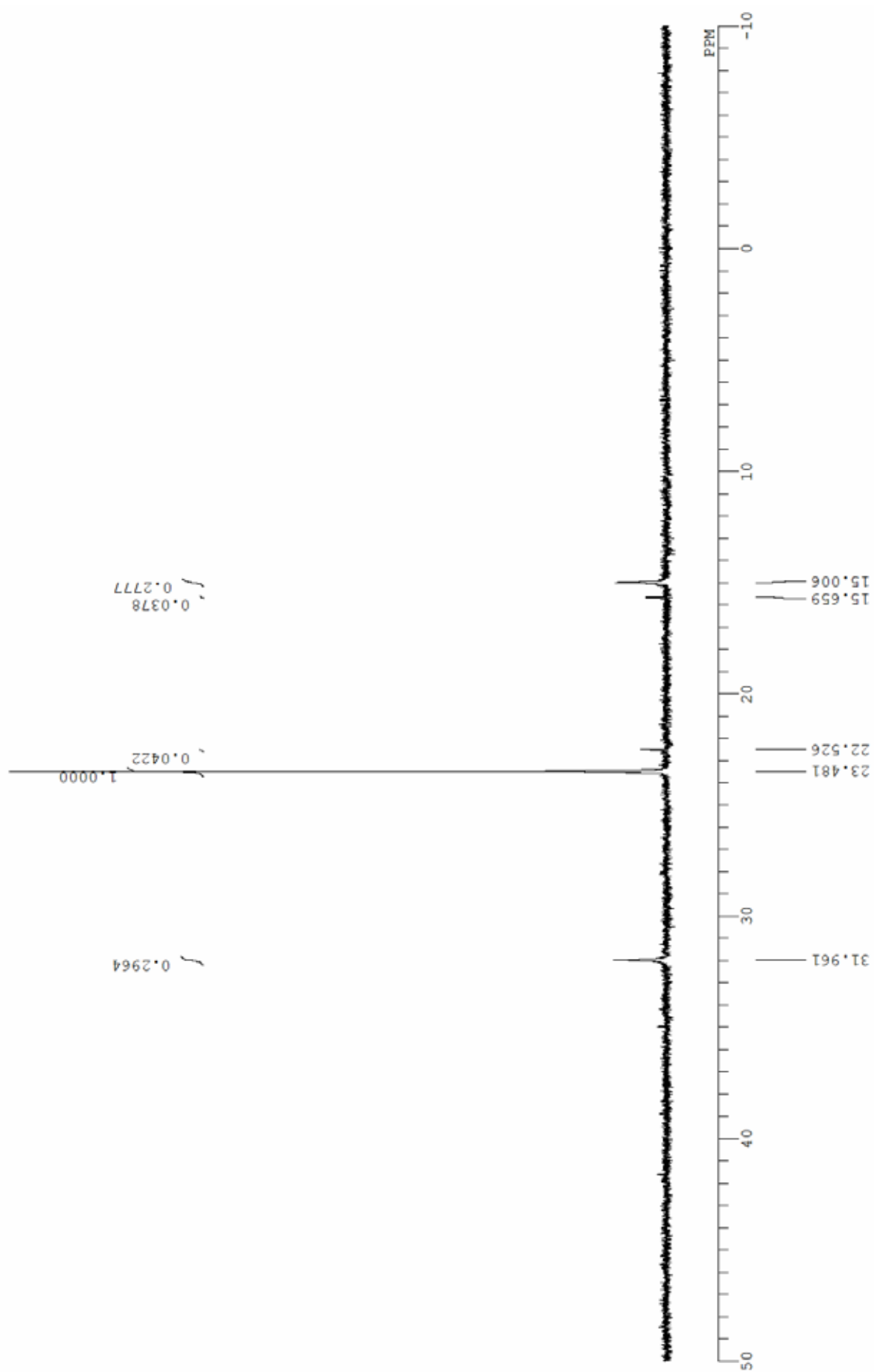
PtCl(SC6H4-4-Me)(PC6H5-4-OMe)3/2



a crude product of run 5 of Table 4



a crude product of run 7 of Table 4



a crude product of run 2 of Table 5

