

# Supplementary Materials: Synthesis of New Chiral Benzimidazolylidene–Rh Complexes and Their Application in Asymmetric Addition Reactions of Organoboronic Acids to Aldehydes

Weiping He, Bihui Zhou, Jie Li and Jianyou Shi

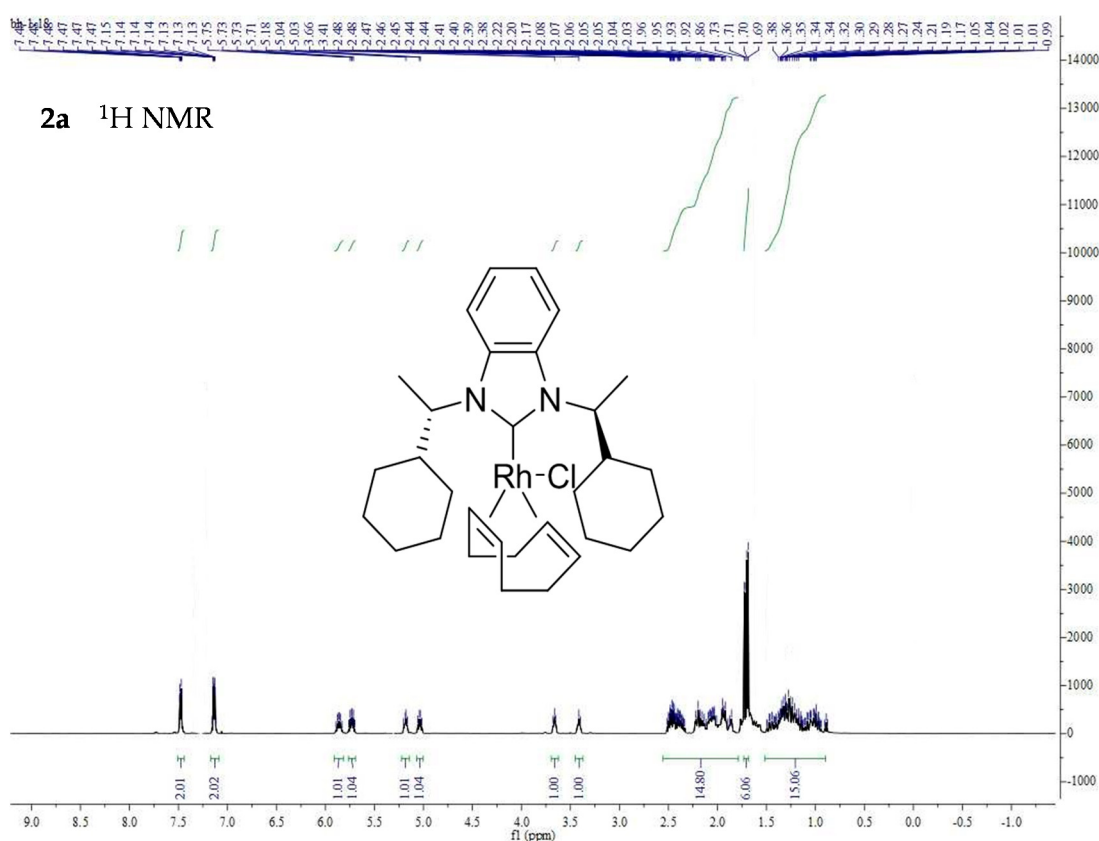
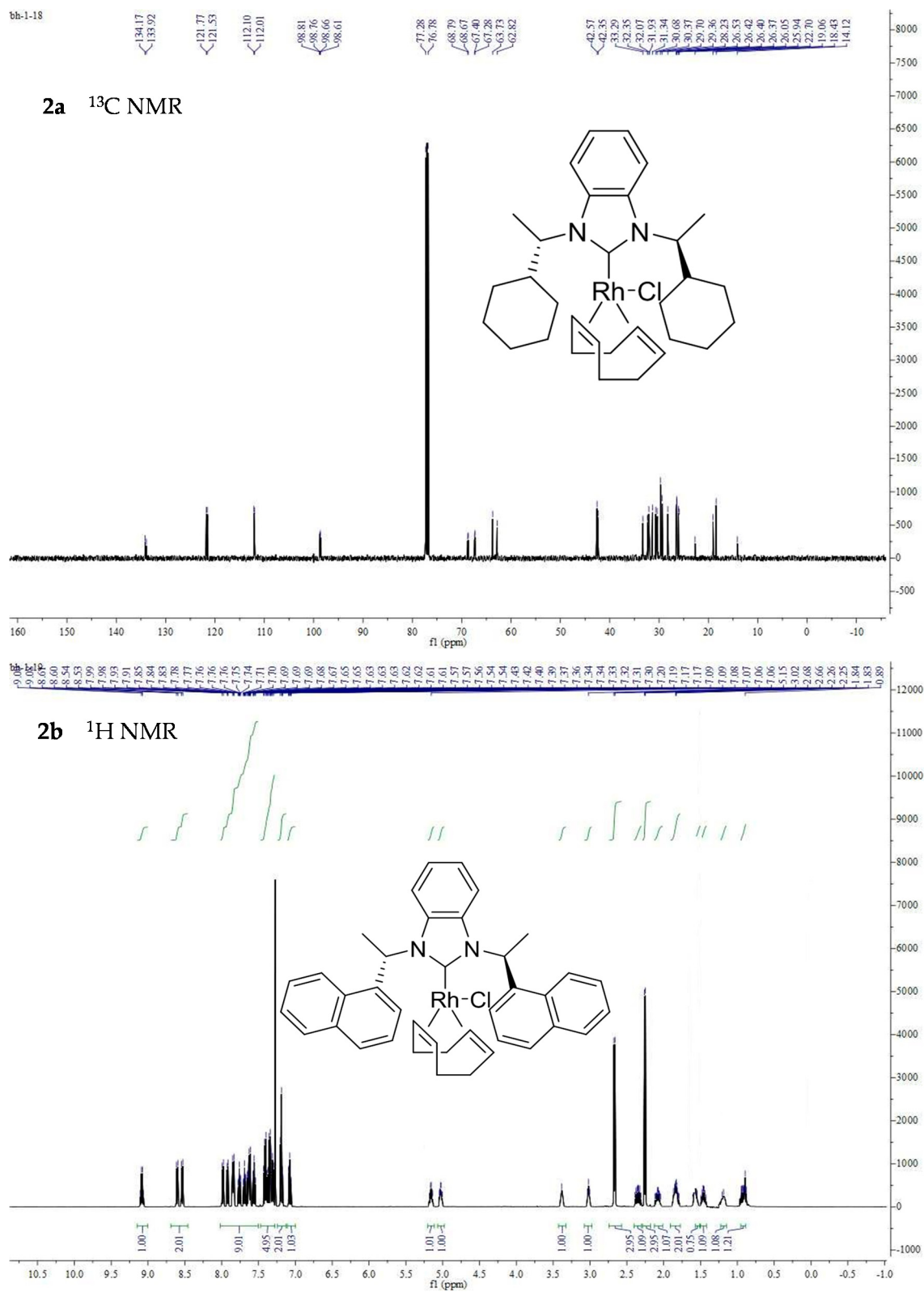


Figure S1. Cont.



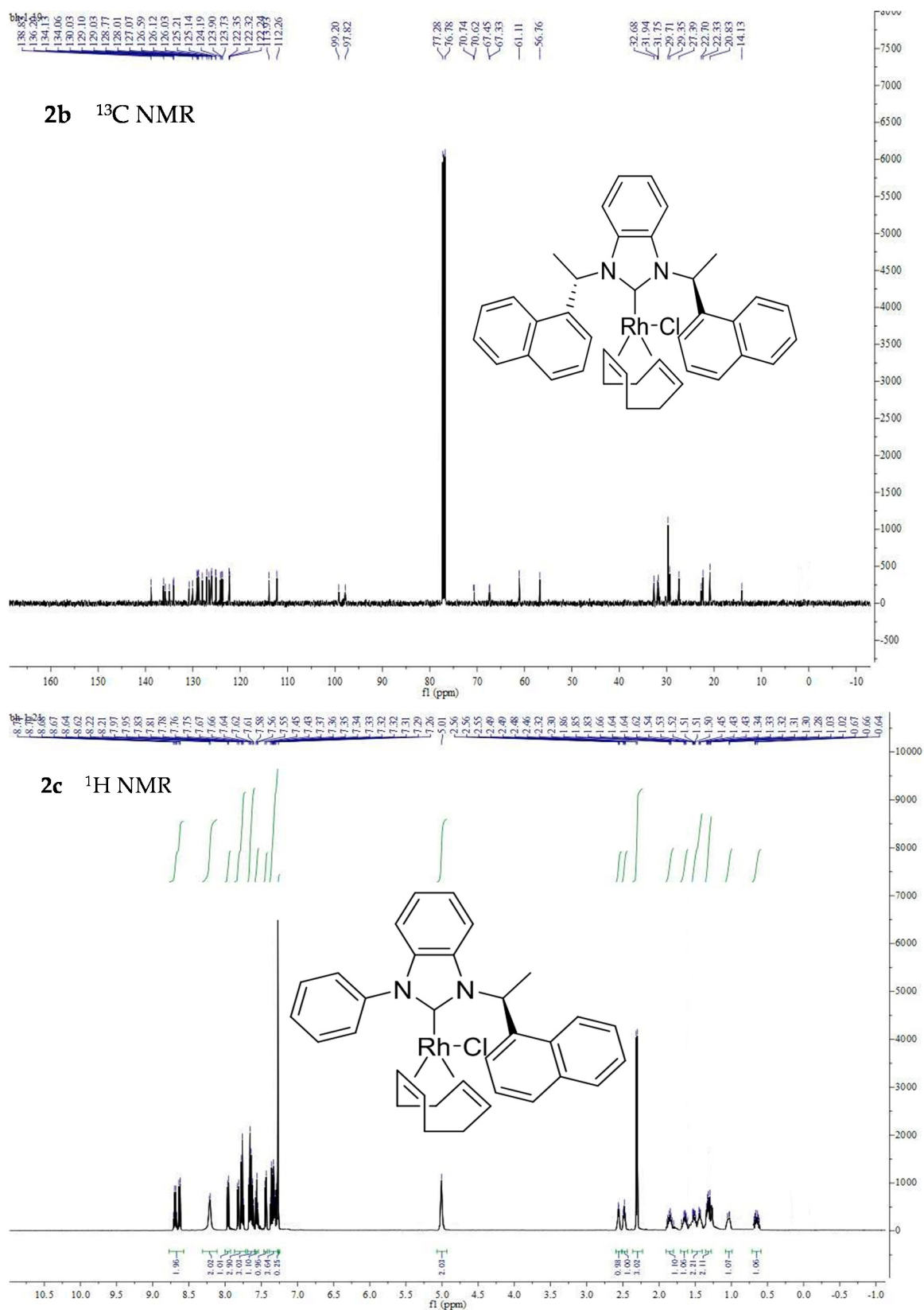


Figure S1. Cont.

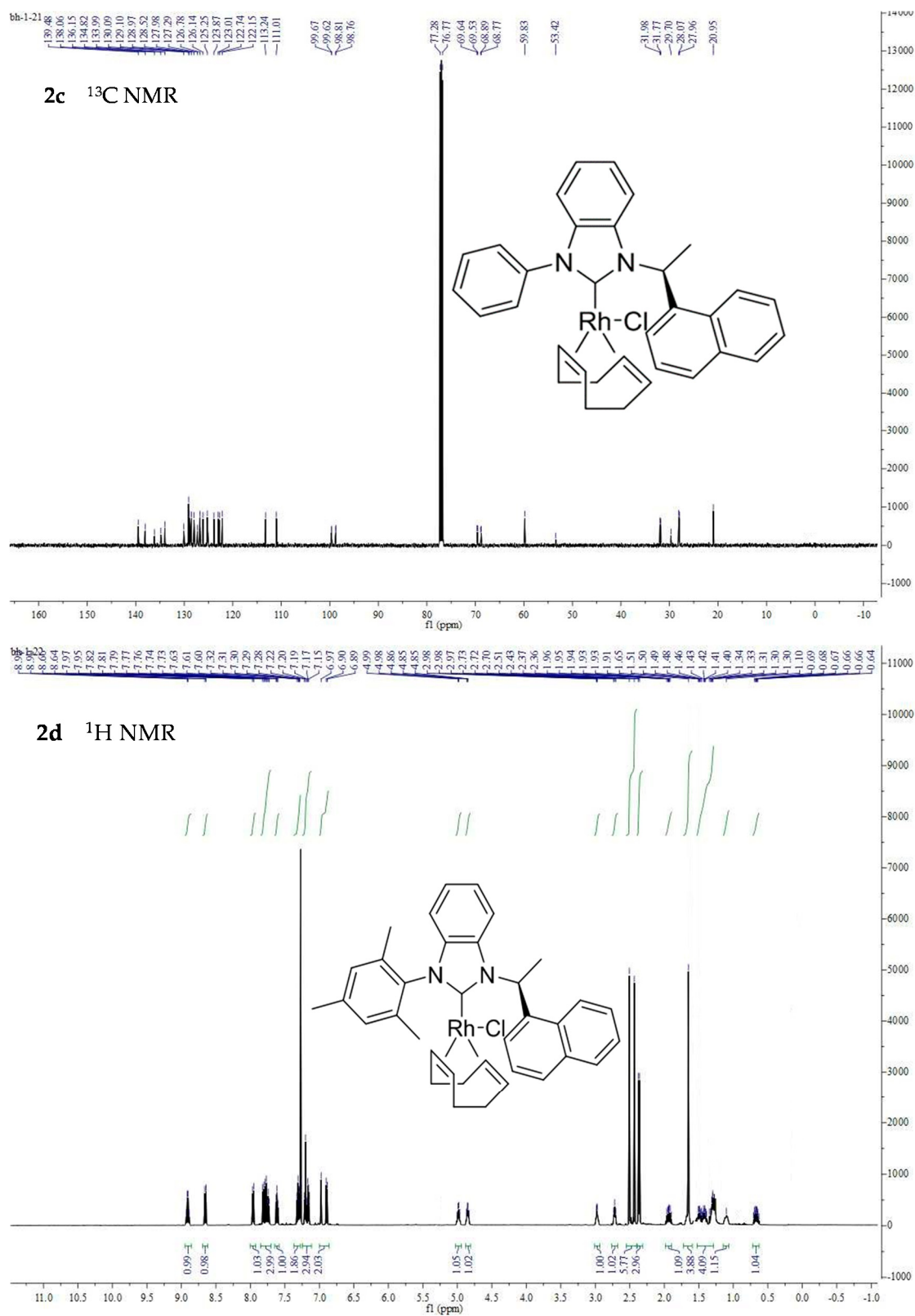


Figure S1. Cont.

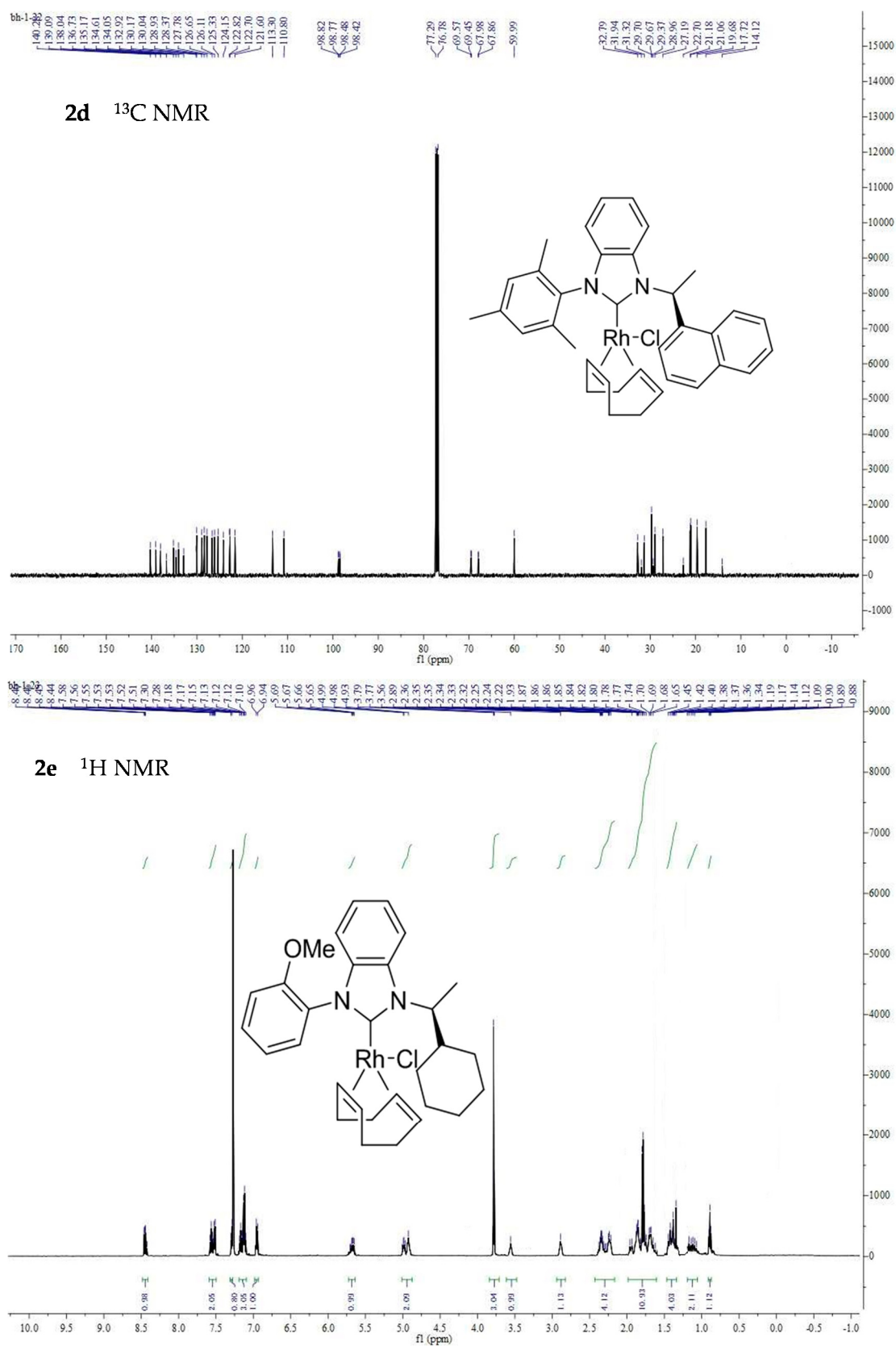


Figure S1. Cont.

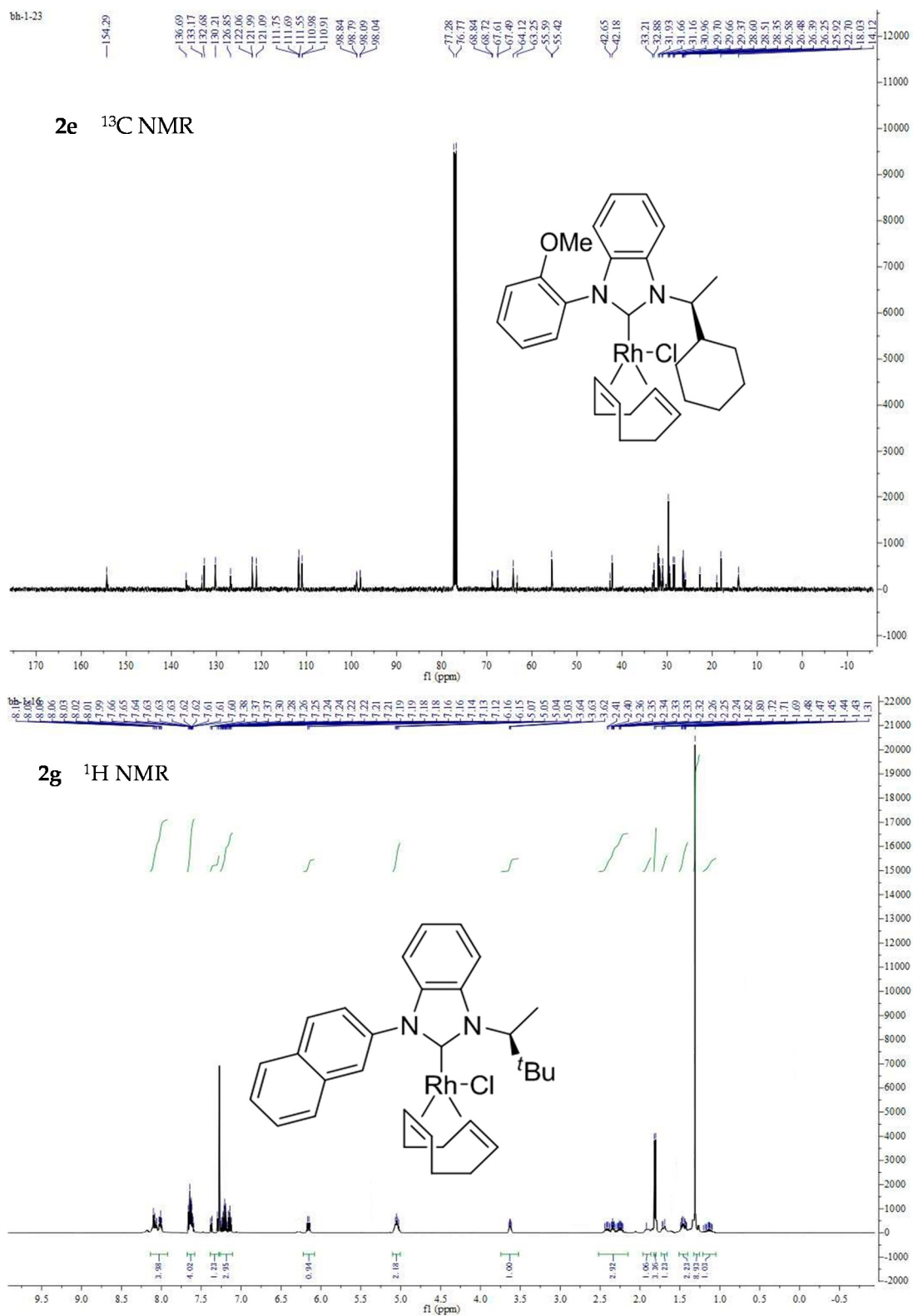


Figure S1. Cont.

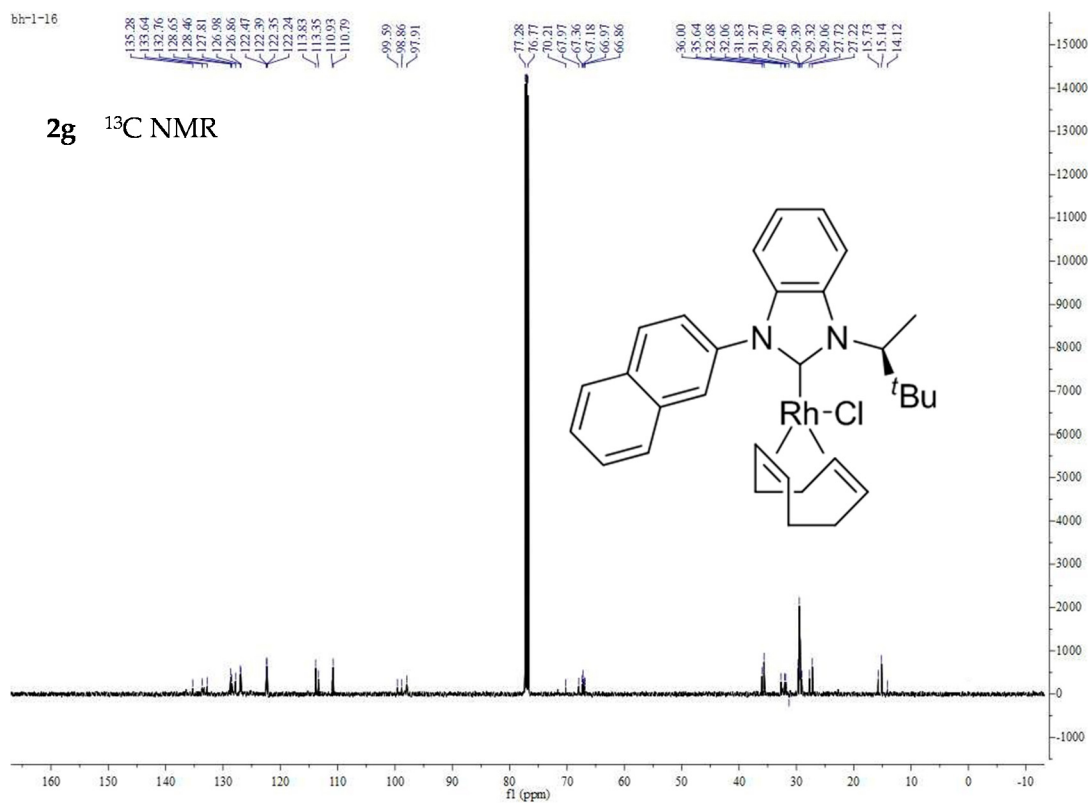
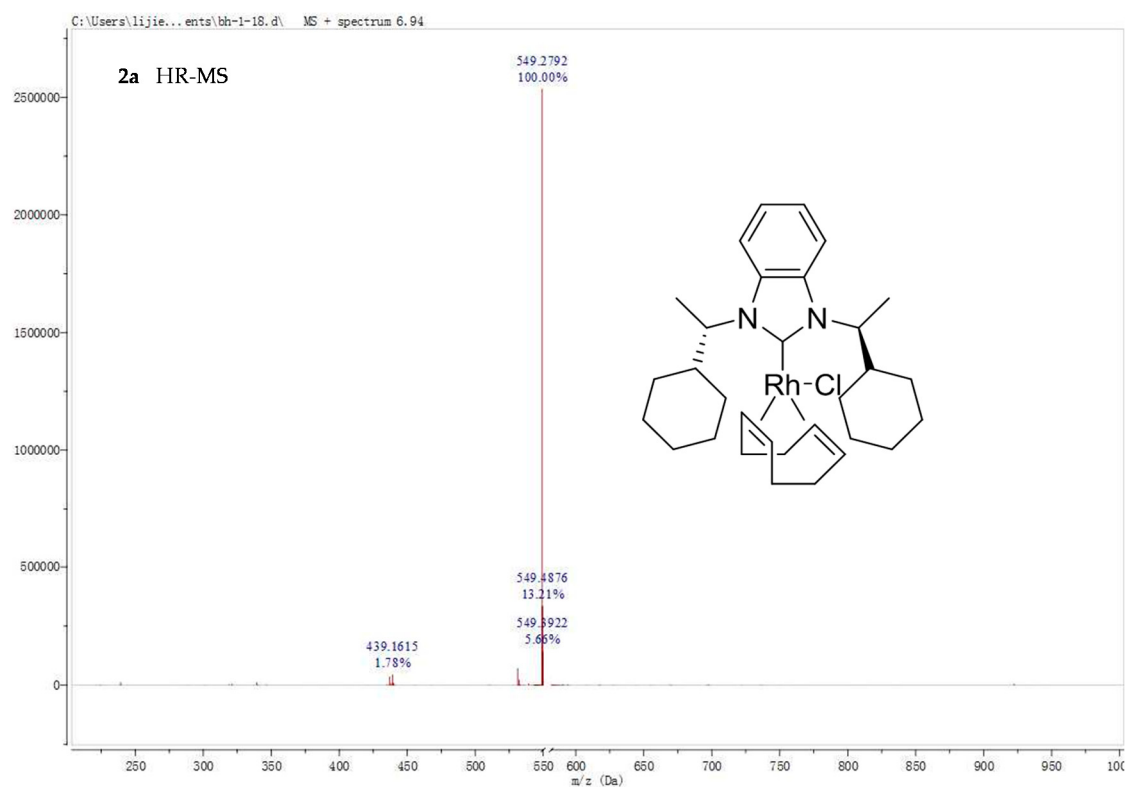
Figure S1.  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR Spectra of compounds 2a–g.

Figure S2. Cont.

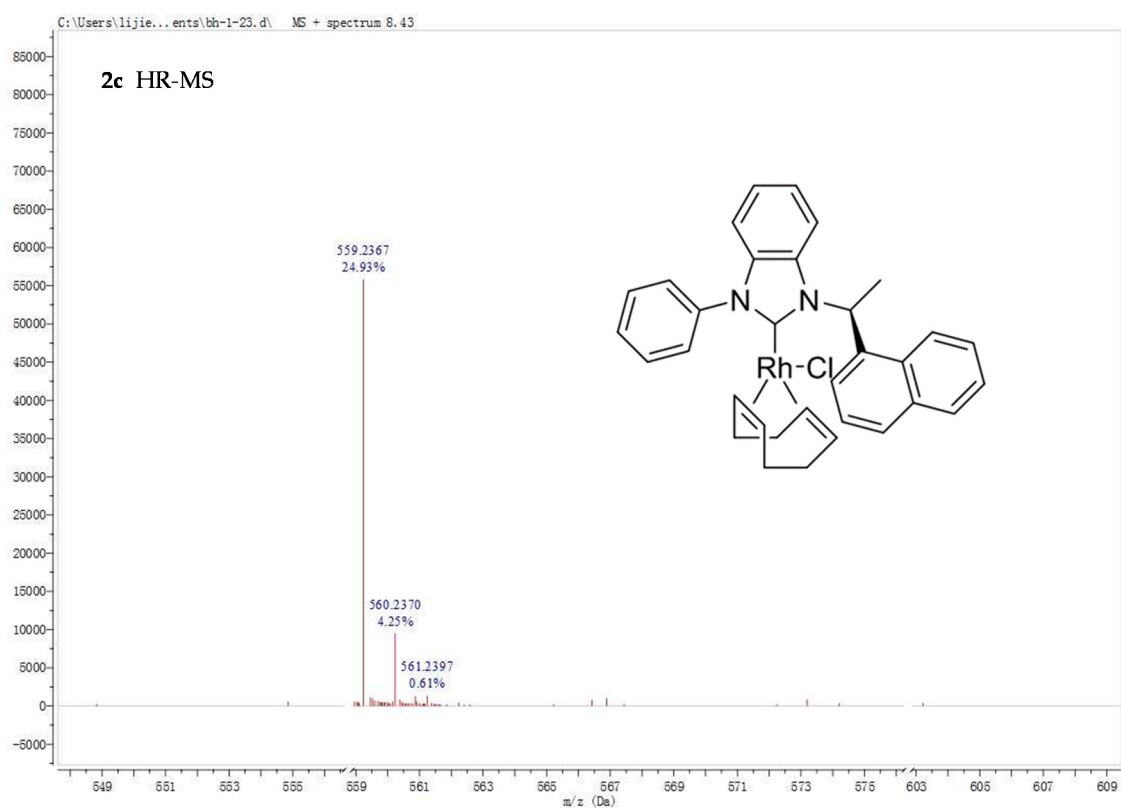
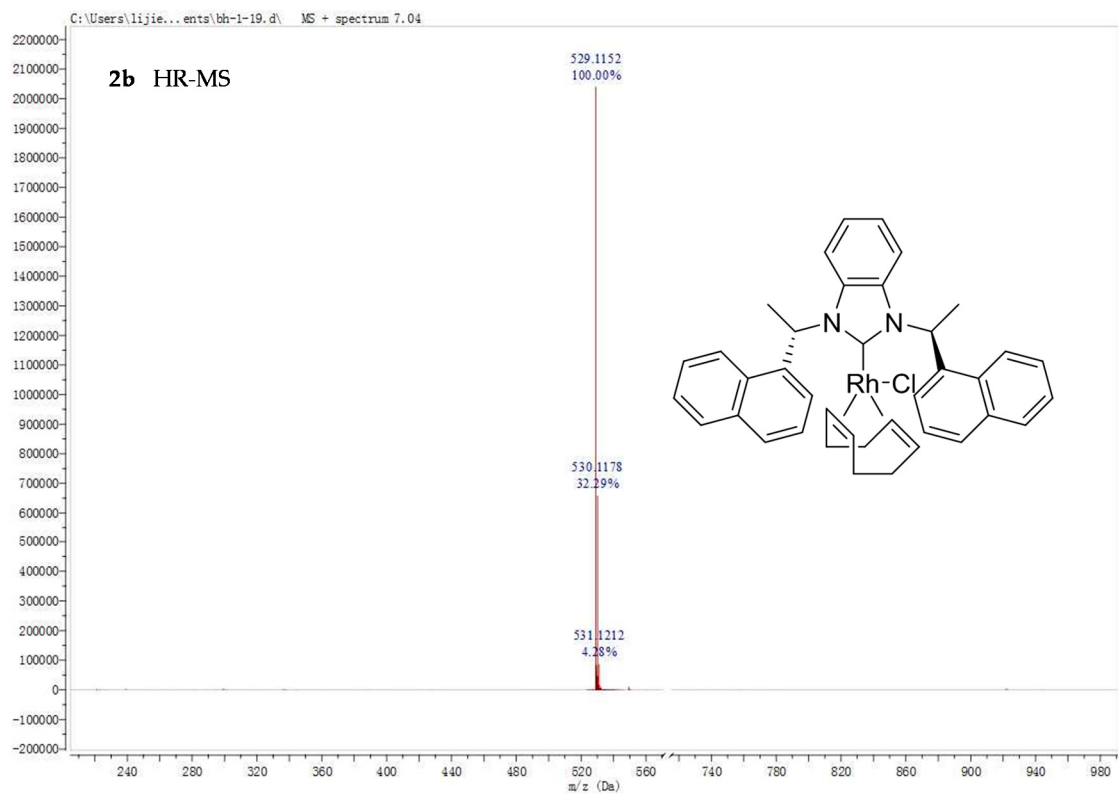


Figure S2. Cont.

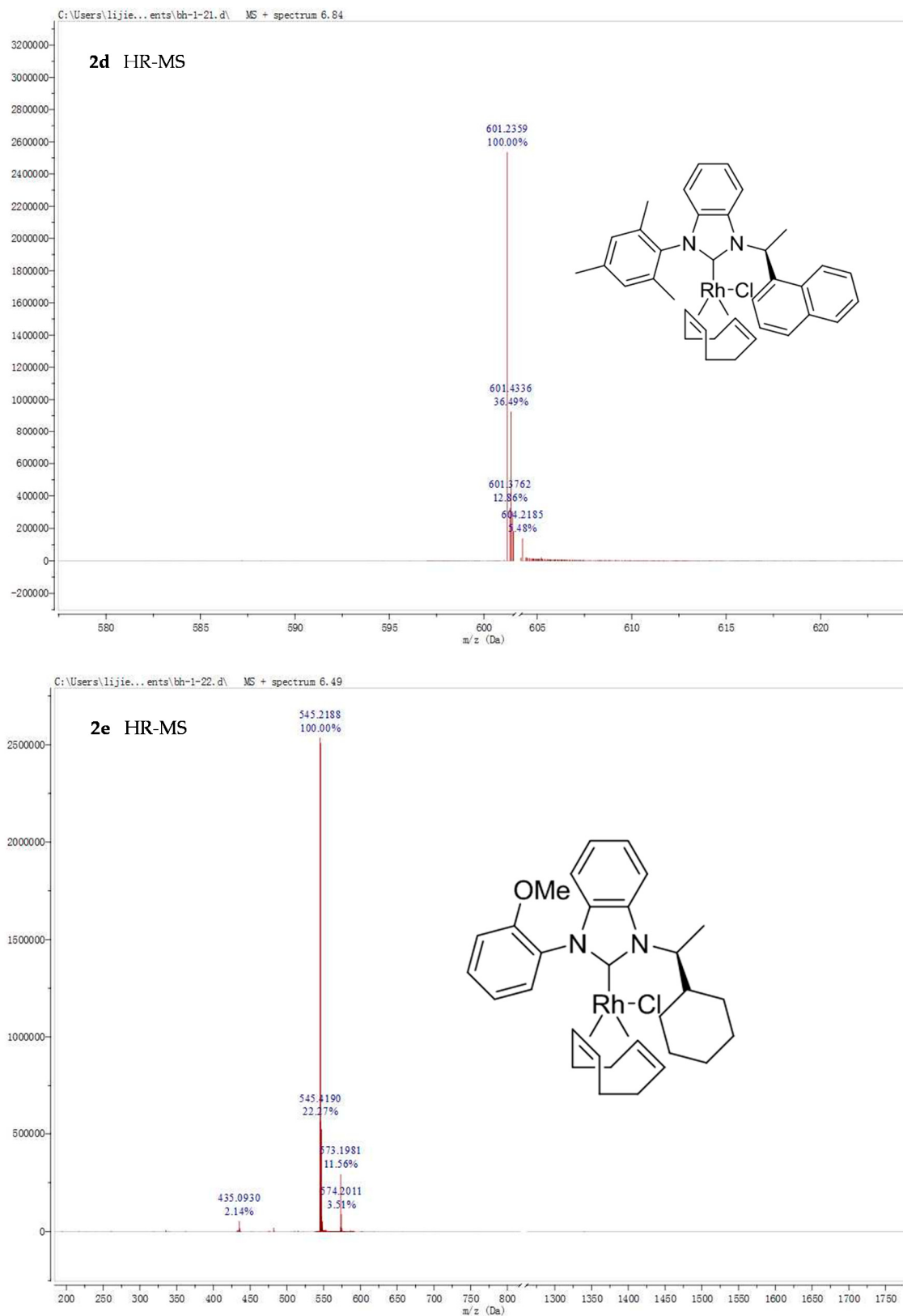


Figure S2. Cont.

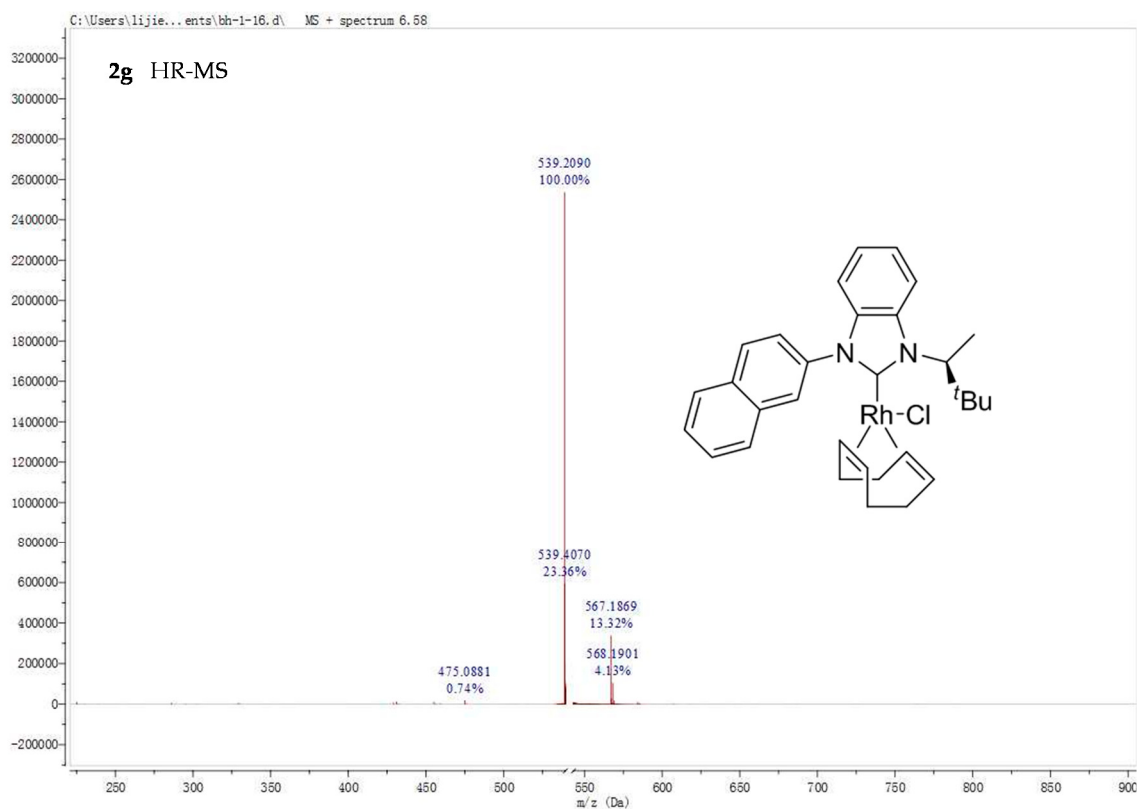
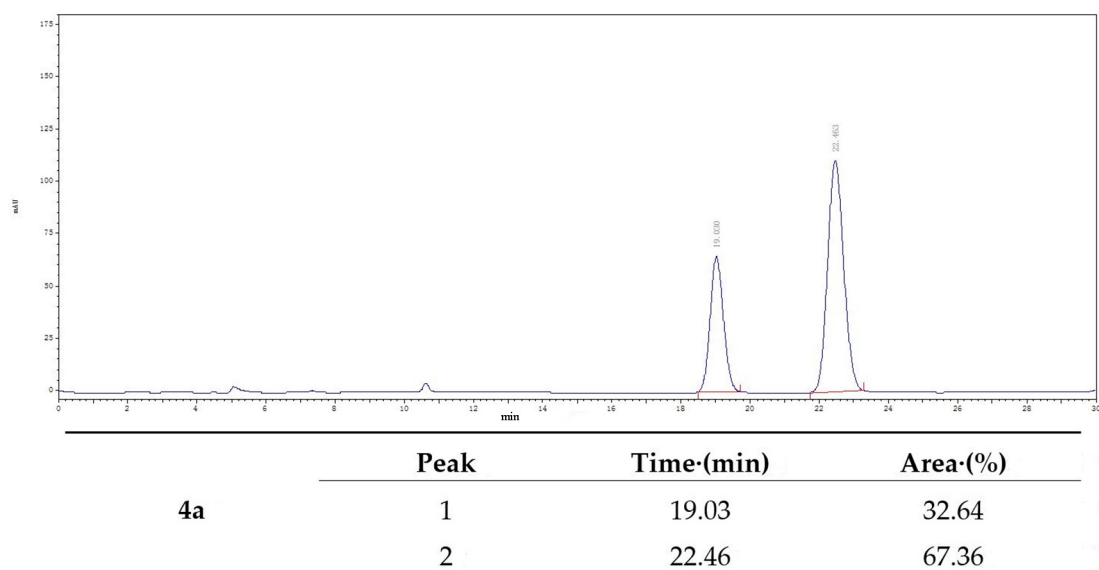
Figure S2. HR-MS Spectra for Compounds **2a–g**.

Figure S3. Cont.

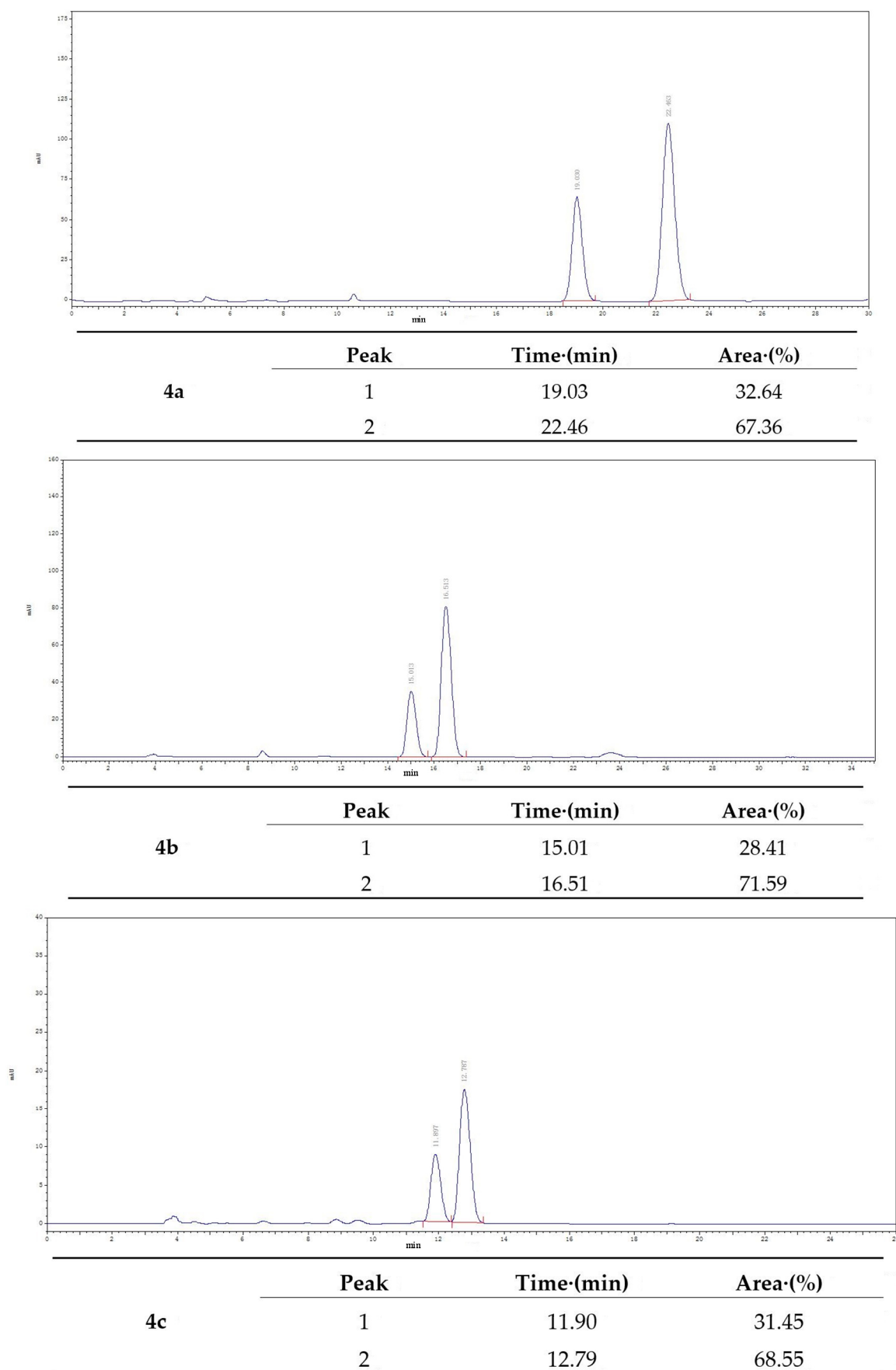
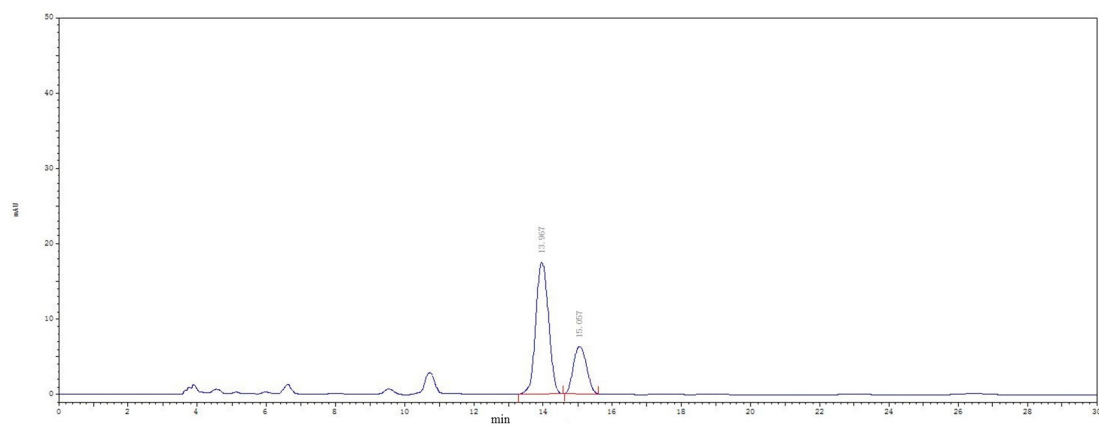
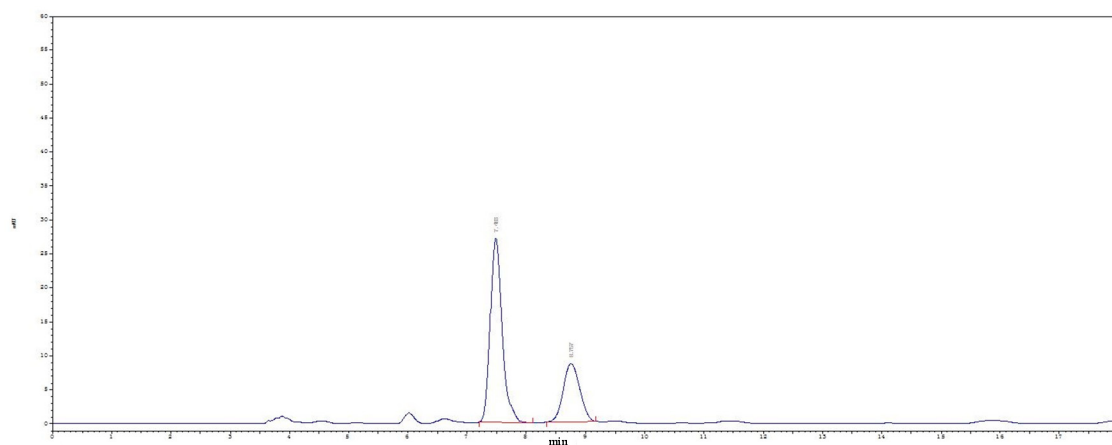


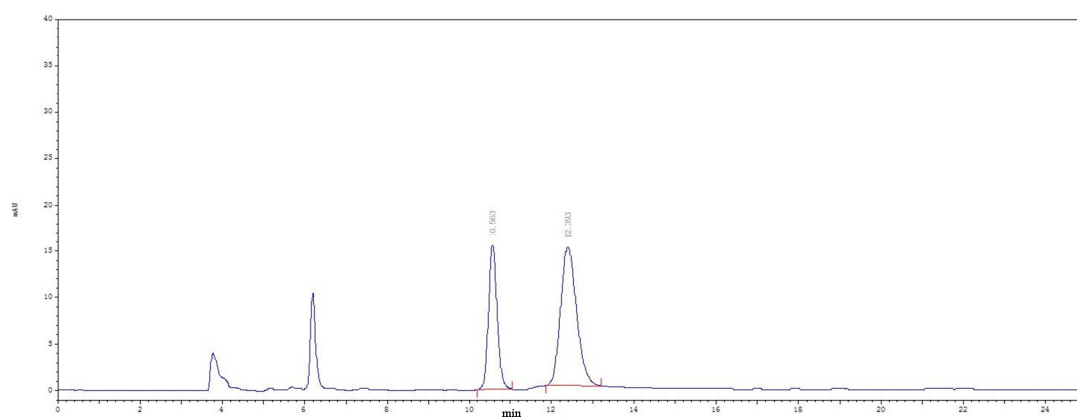
Figure S3. Cont.



| 4d | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
|    | 1    | 13.97      | 73.04    |
|    | 2    | 15.06      | 26.96    |

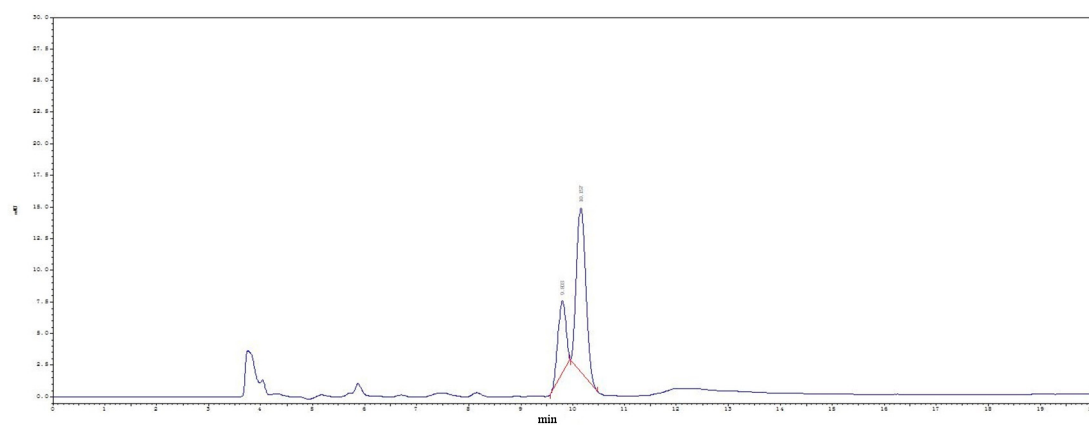


| 4e | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
|    | 1    | 7.48       | 69.89    |
|    | 2    | 8.76       | 30.11    |

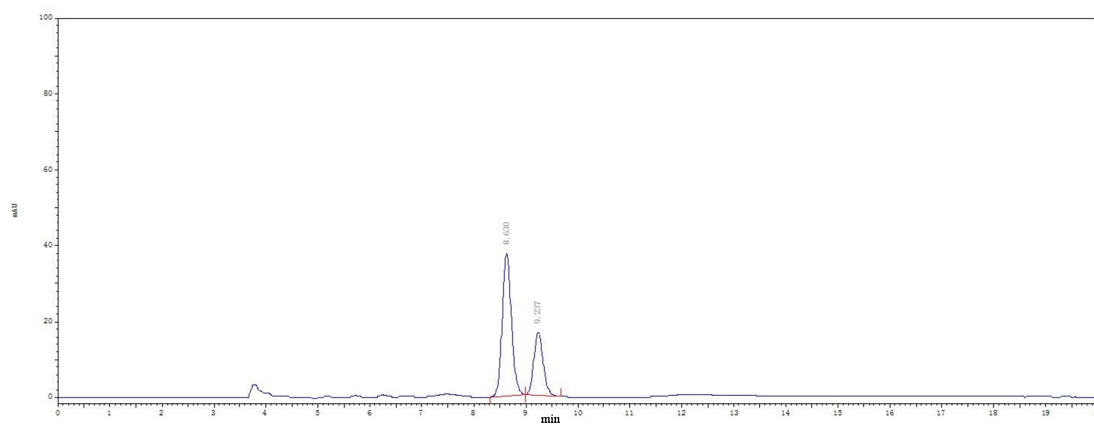


| 4f | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
|    | 1    | 10.56      | 35.97    |
|    | 2    | 12.39      | 64.03    |

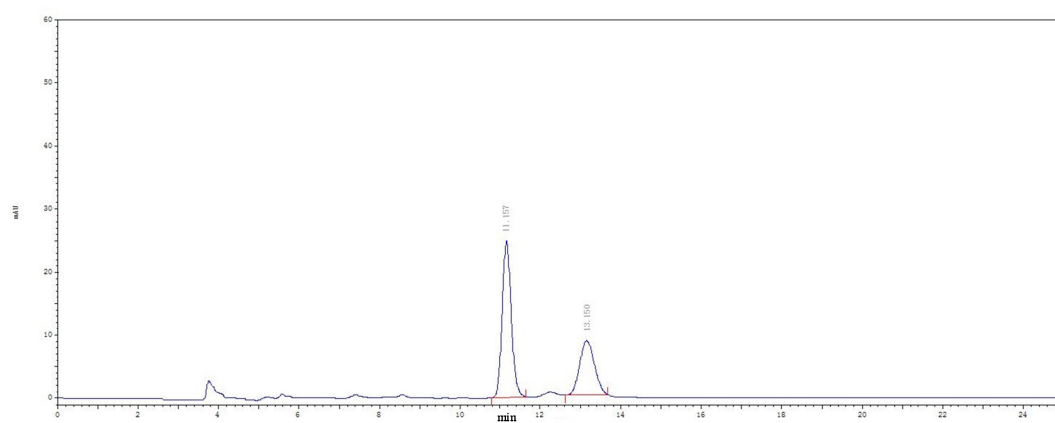
Figure S3. Cont.



|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4g | 1    | 9.80       | 27.17    |
|    | 2    | 10.16      | 72.83    |

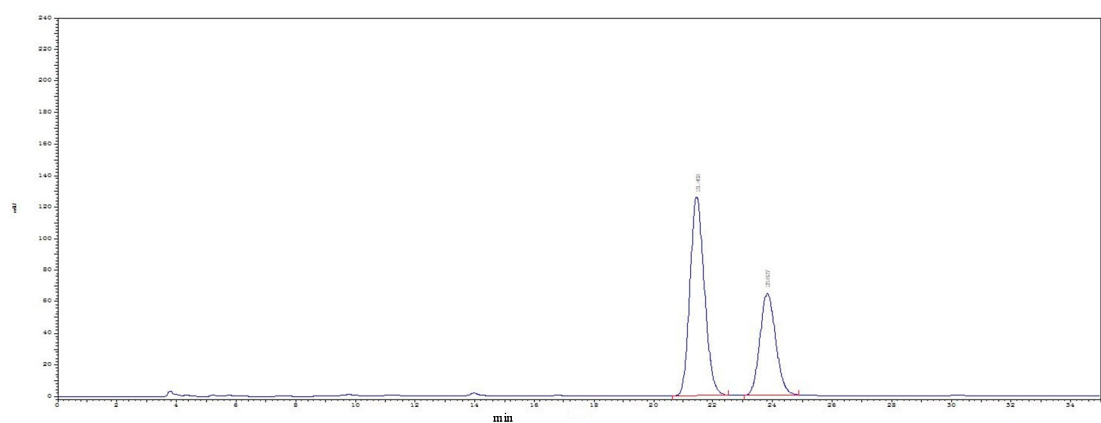


|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4h | 1    | 8.63       | 68.80    |
|    | 2    | 9.24       | 31.20    |

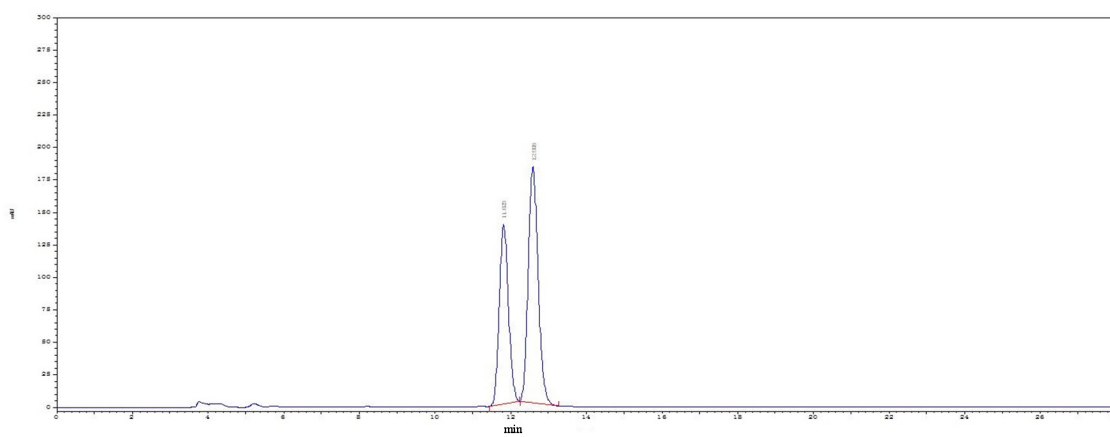


|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4i | 1    | 11.16      | 63.88    |
|    | 2    | 13.15      | 36.12    |

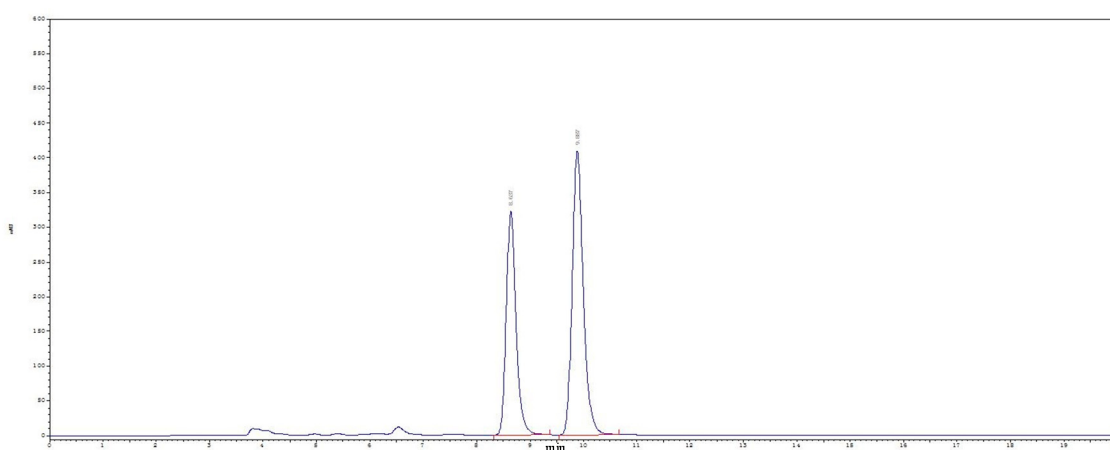
Figure S3. Cont.



|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4j | 1    | 21.45      | 64.01    |
|    | 2    | 23.83      | 35.99    |



|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4k | 1    | 11.82      | 41.25    |
|    | 2    | 12.59      | 58.75    |



|    | Peak | Time·(min) | Area·(%) |
|----|------|------------|----------|
| 4l | 1    | 8.64       | 40.66    |
|    | 2    | 9.89       | 59.34    |

Figure S3. HPLC data of 4a–l.