

## Supporting Information

### Gallium and indium complexes containing the bis(imino)phenoxide ligand: synthesis, structural characterization and ROP studies

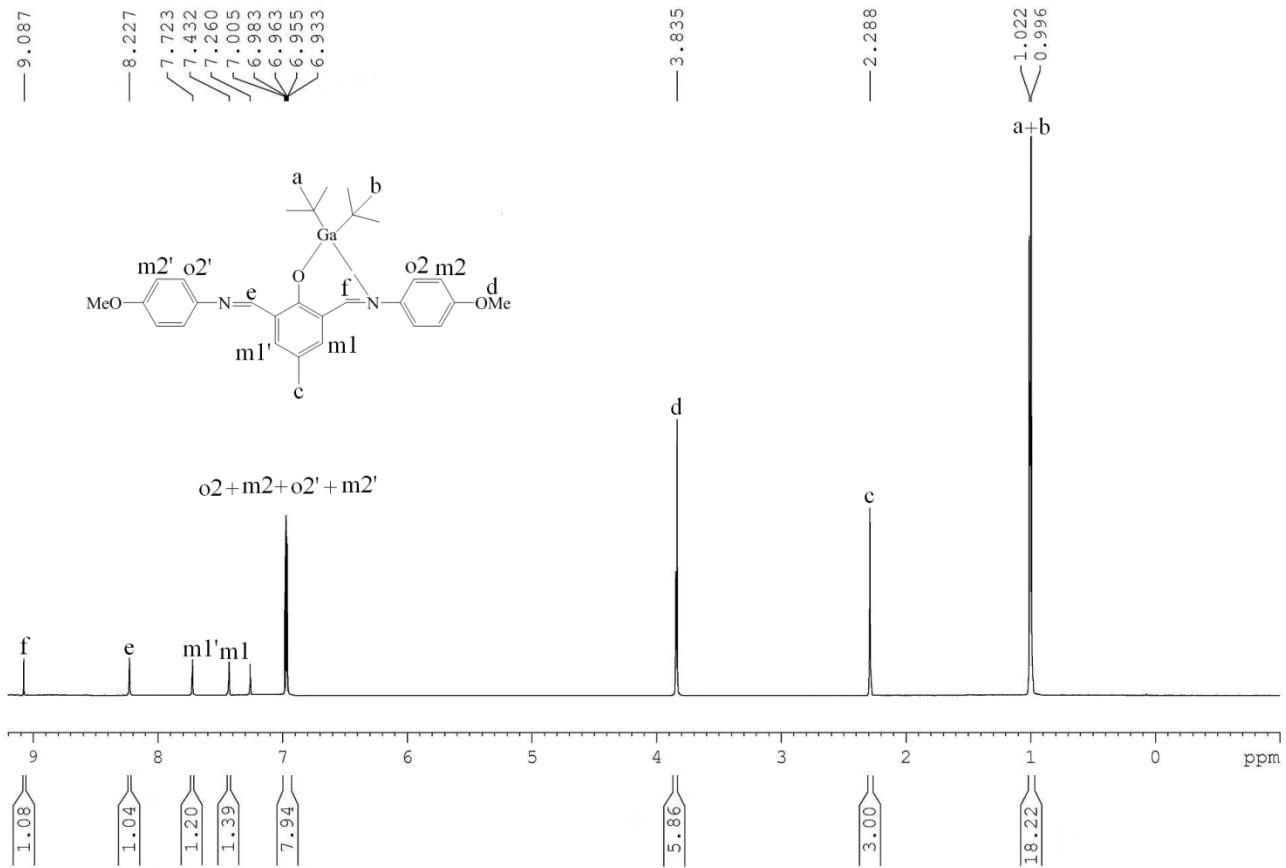
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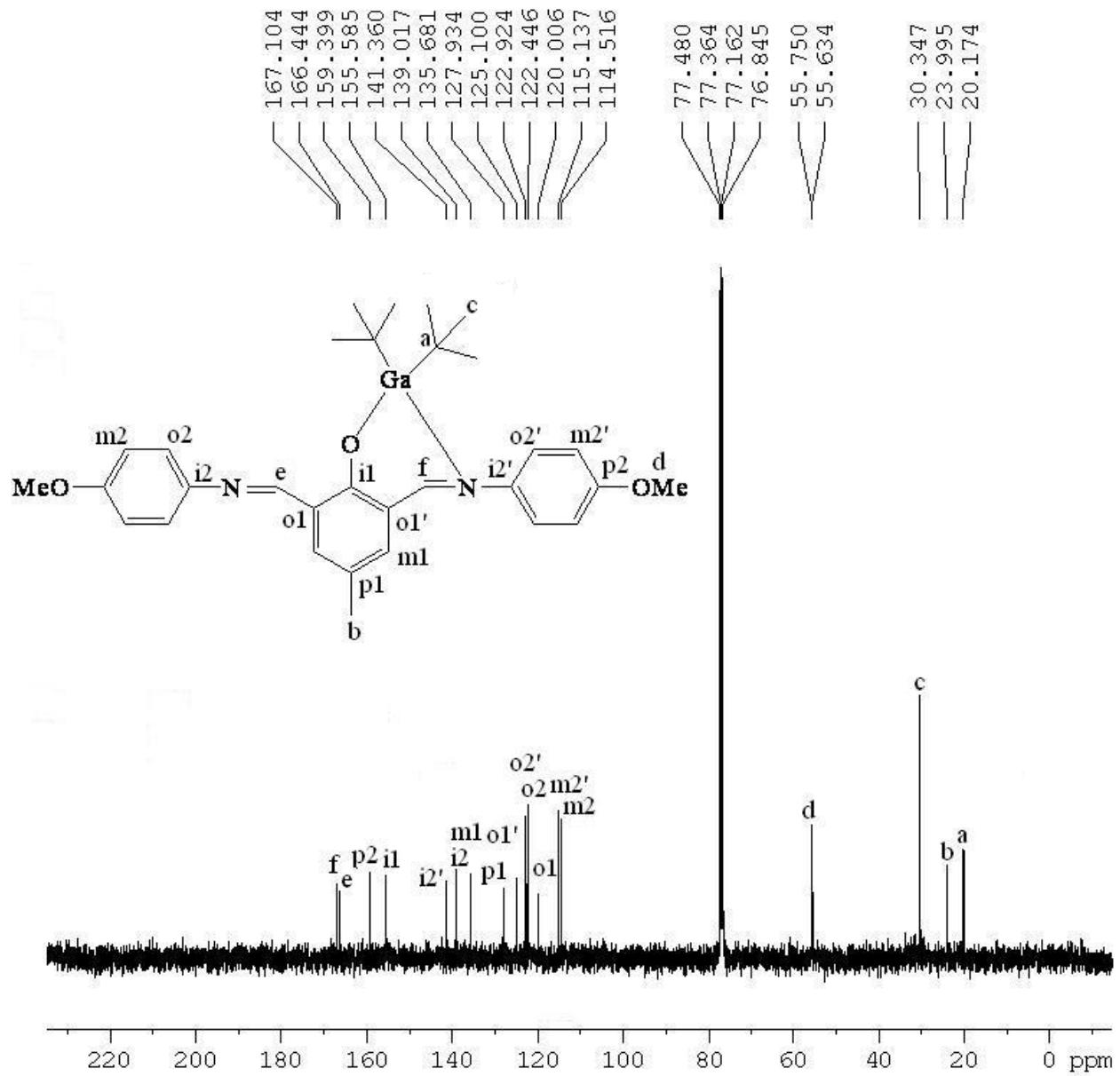
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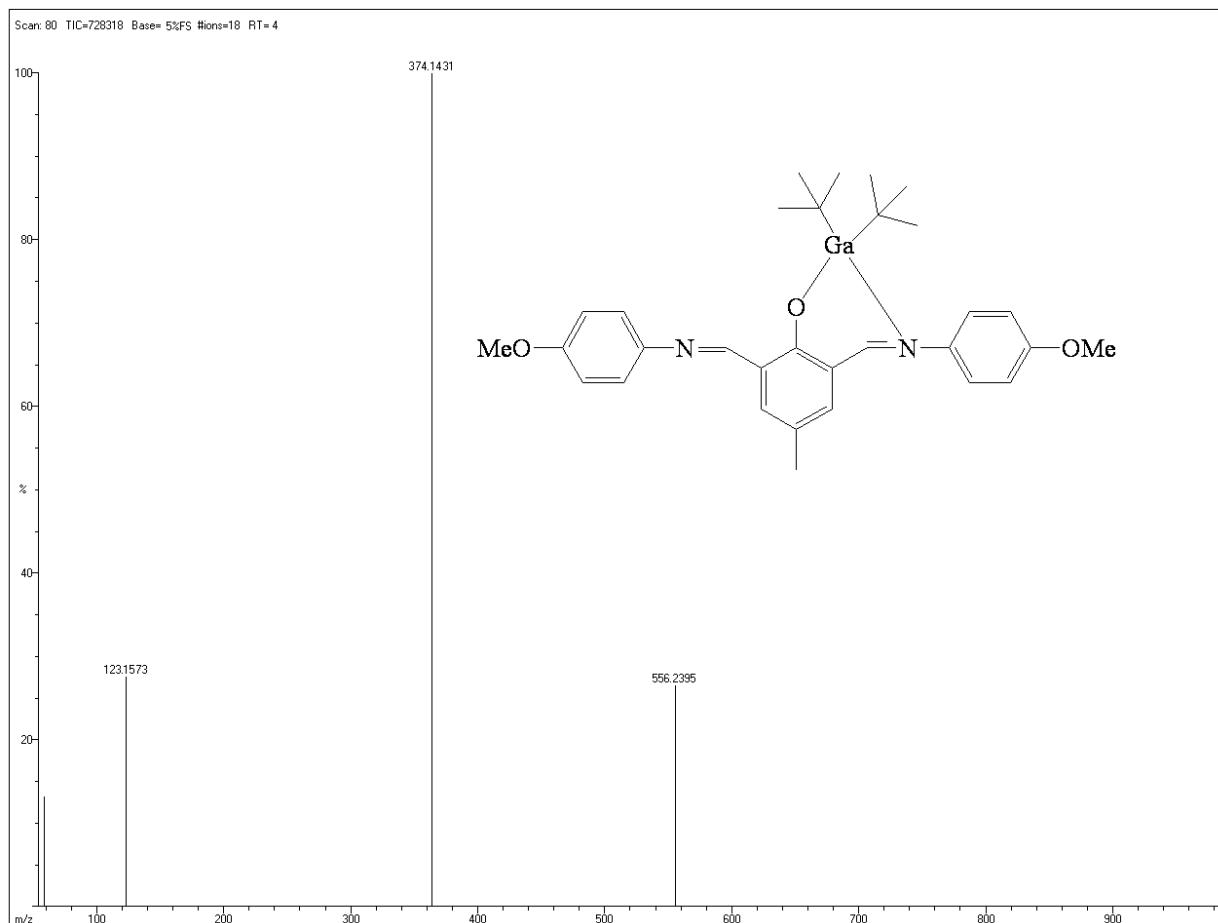
†Current address: *Department of Chemistry, Colorado State University, Fort Collins, CO 80523, United States.*



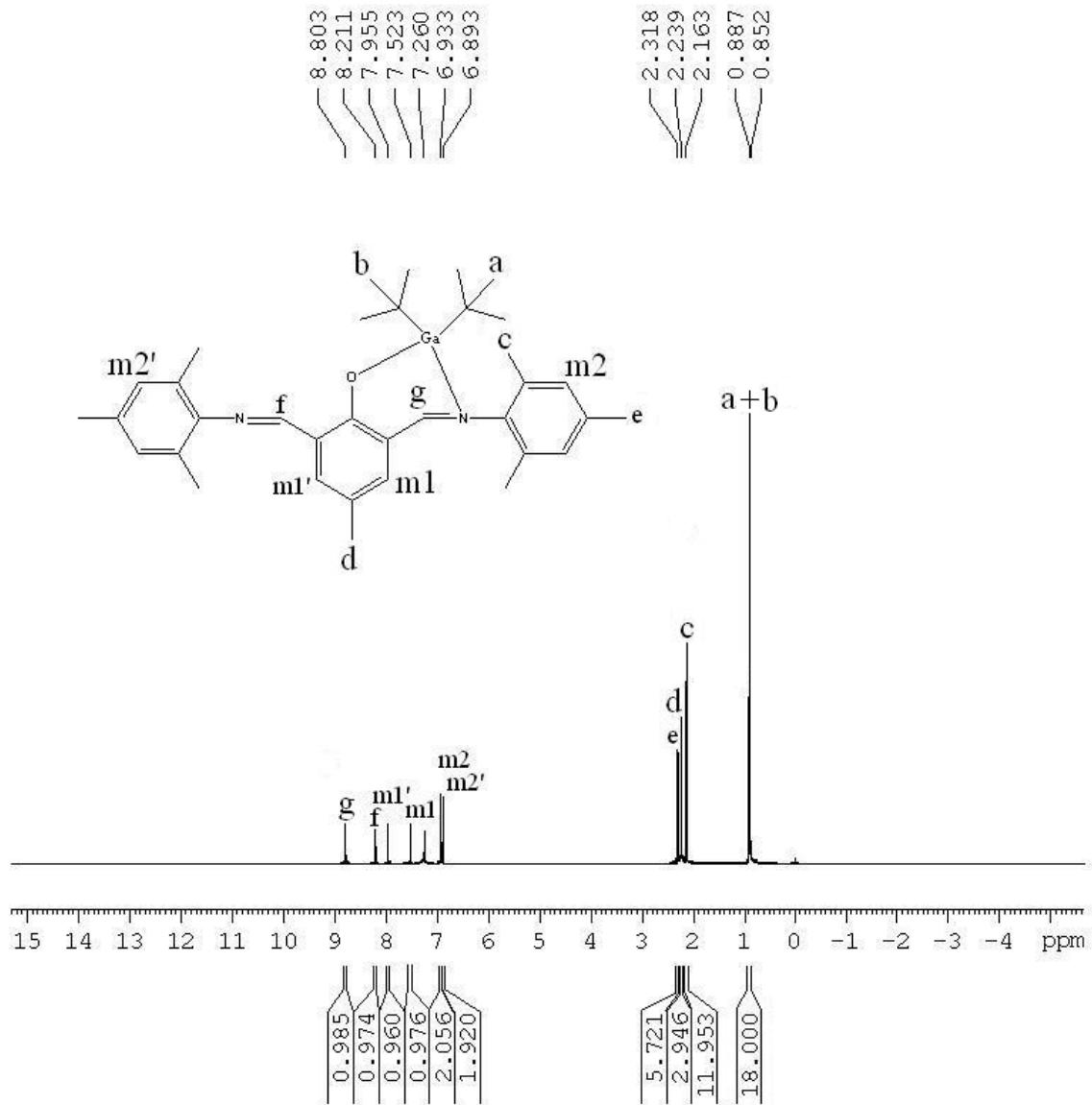
**Fig. S1.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **1**



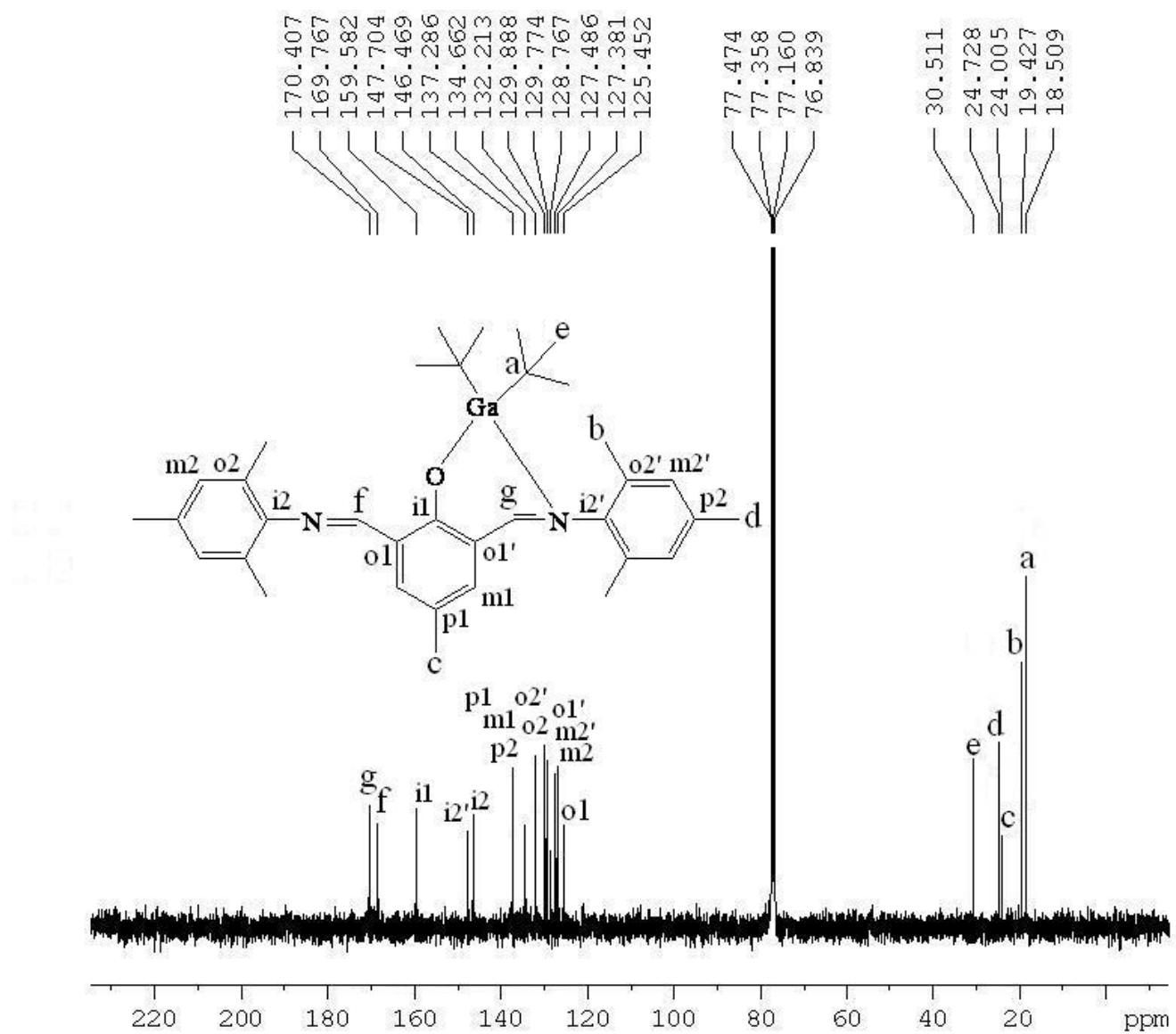
**Fig. S2.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 1



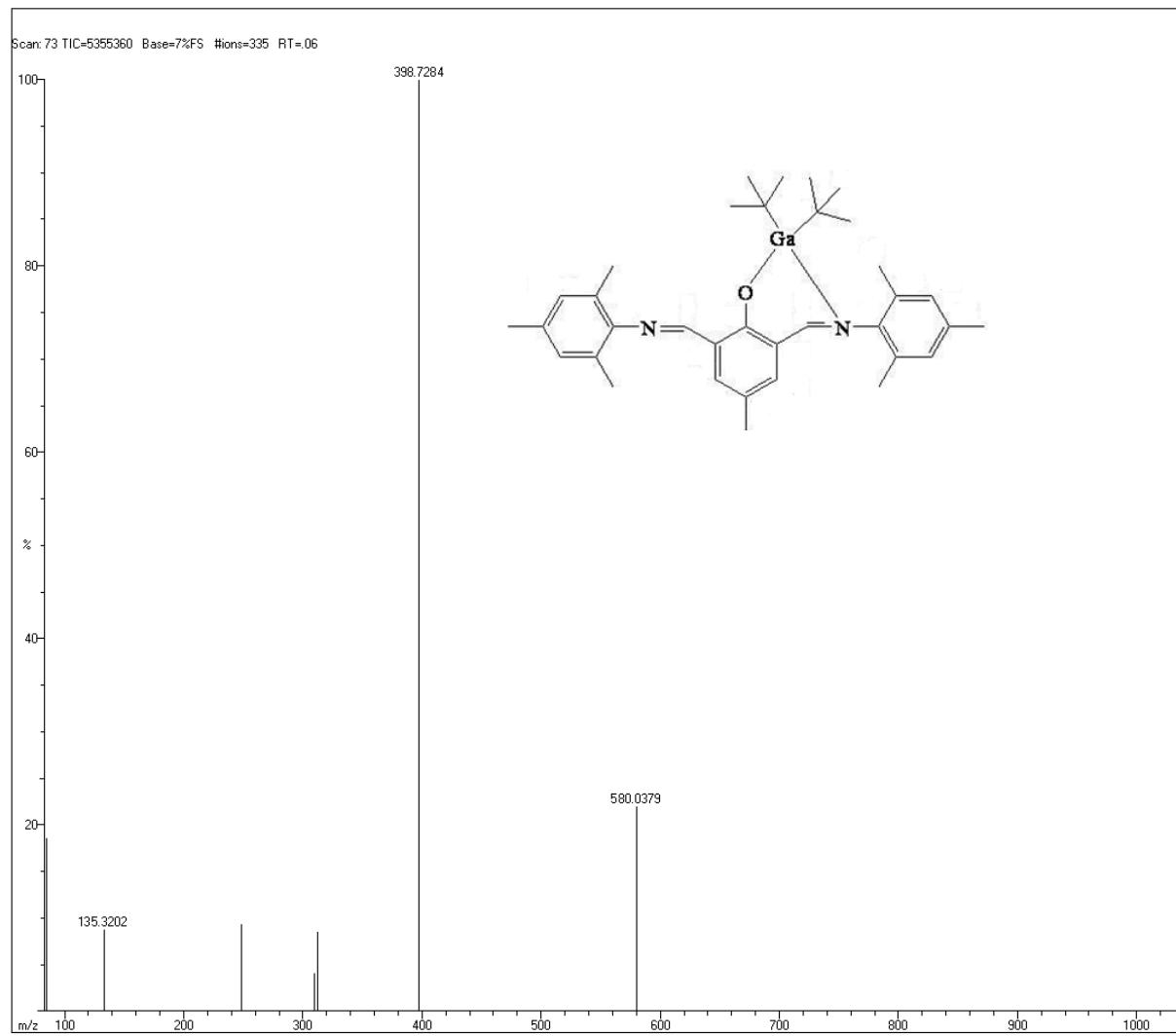
**Fig. S3.** ESI-Mass spectrum of **1**



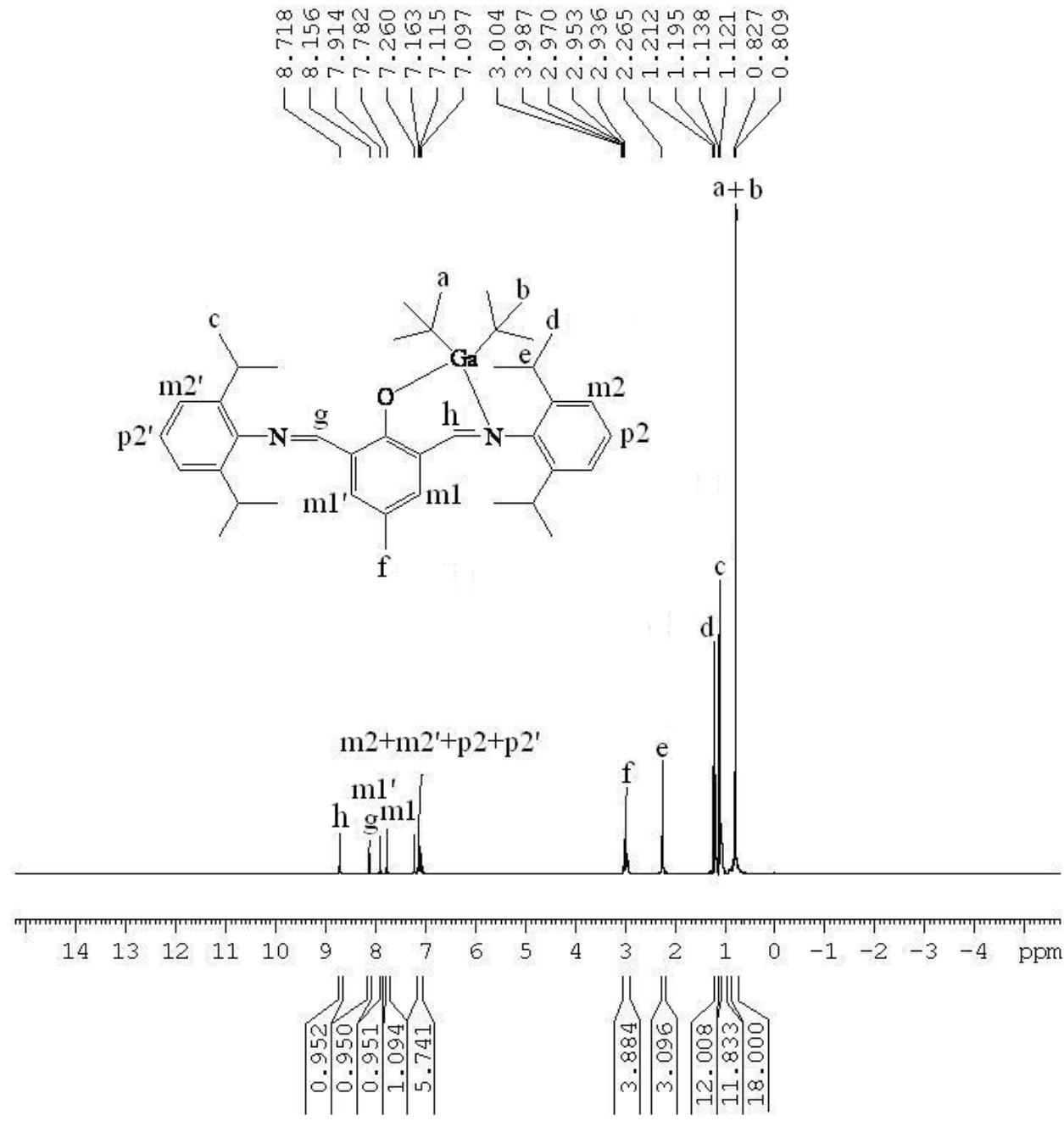
**Fig. S4.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **2**



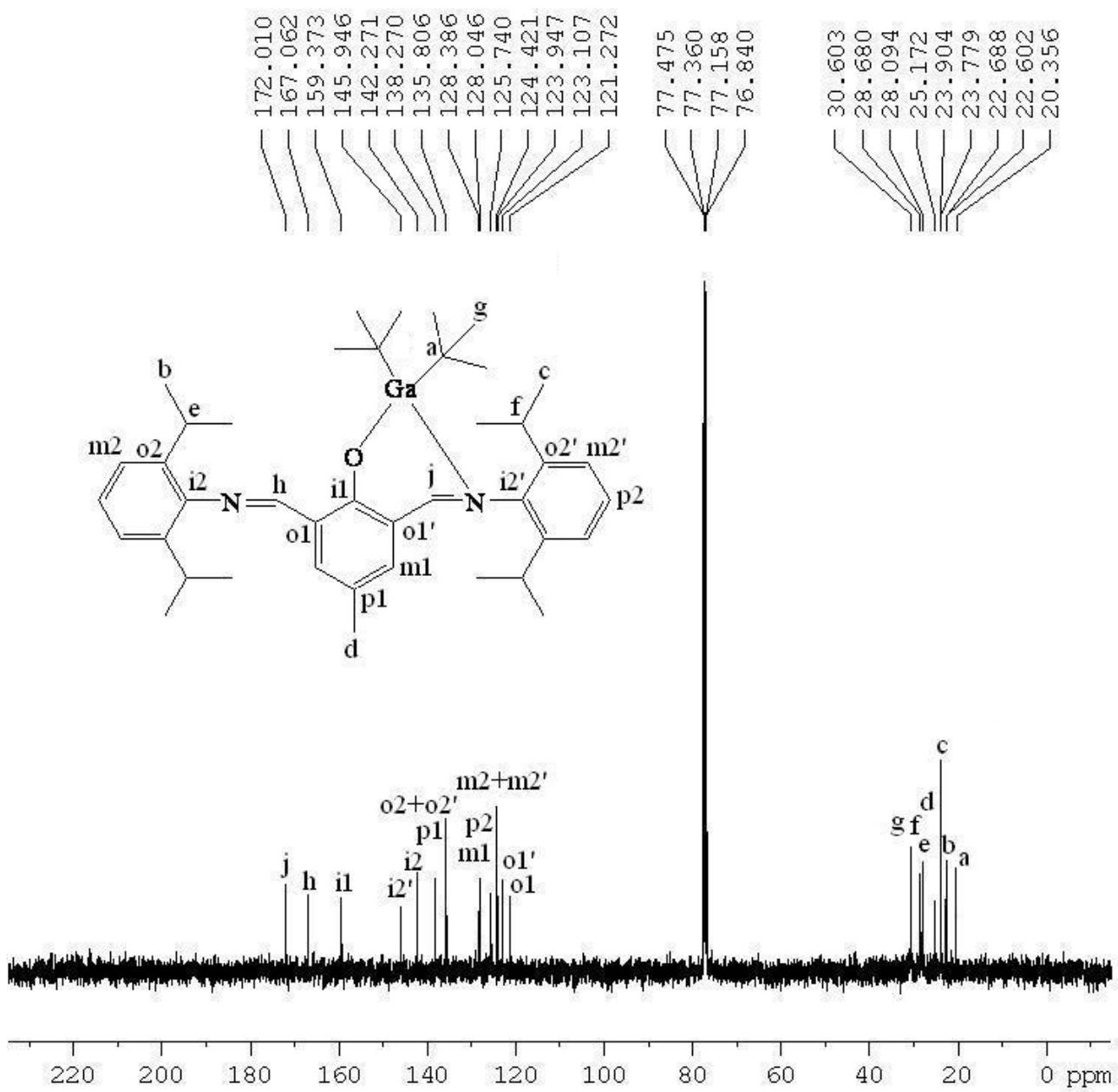
**Fig. S5.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **2**



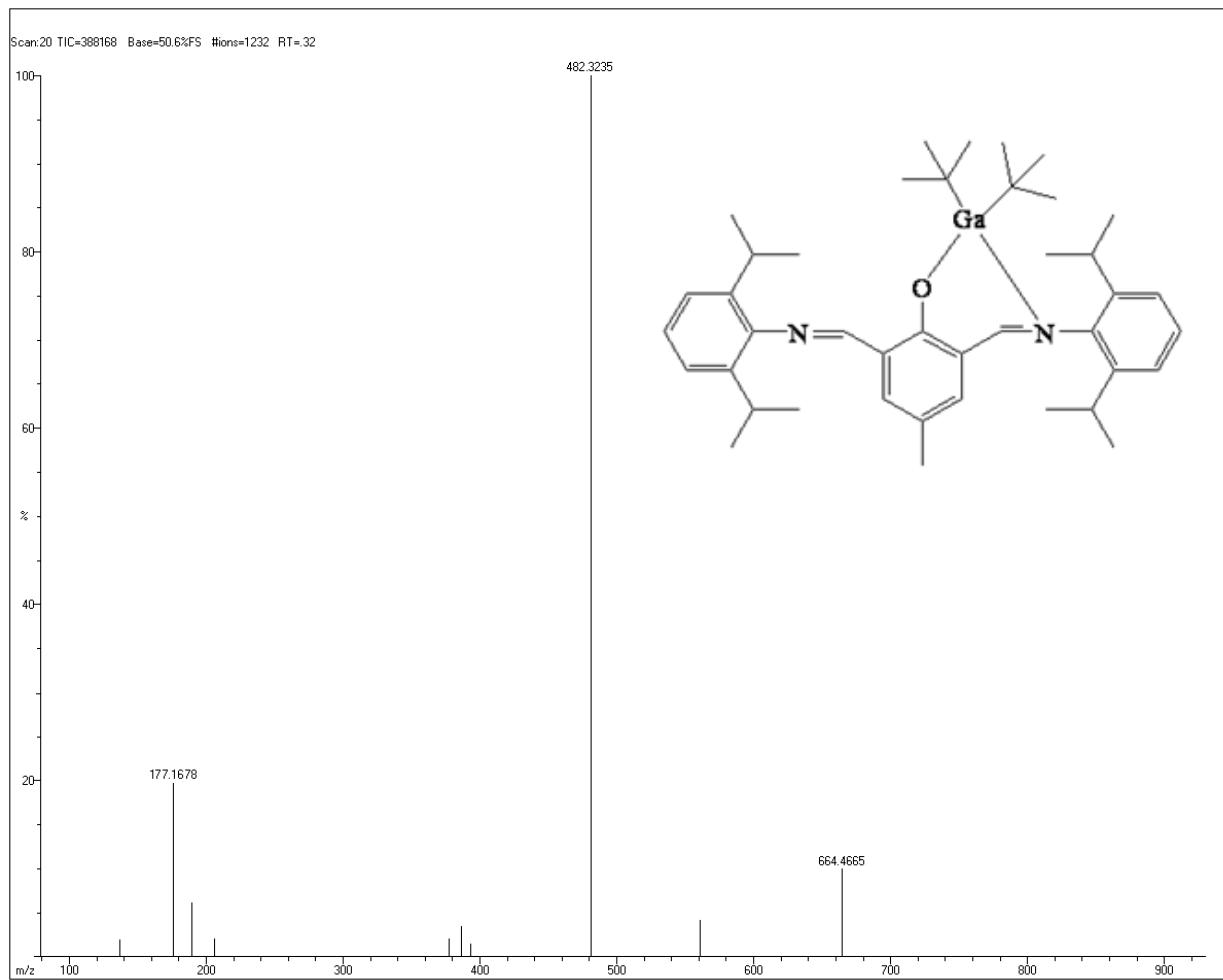
**Fig. S6.** ESI-Mass spectrum of 2



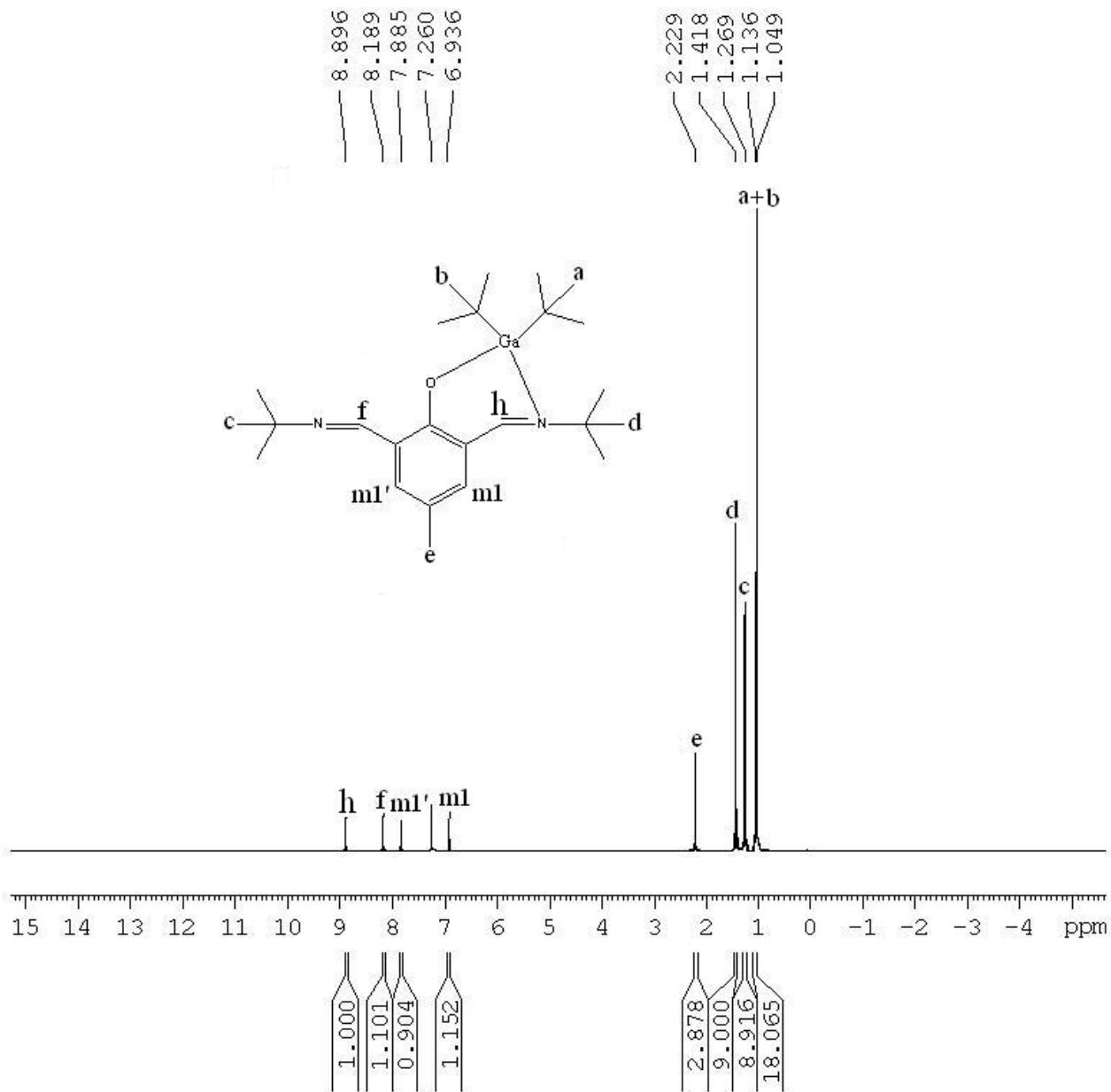
**Fig. S7.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **3**



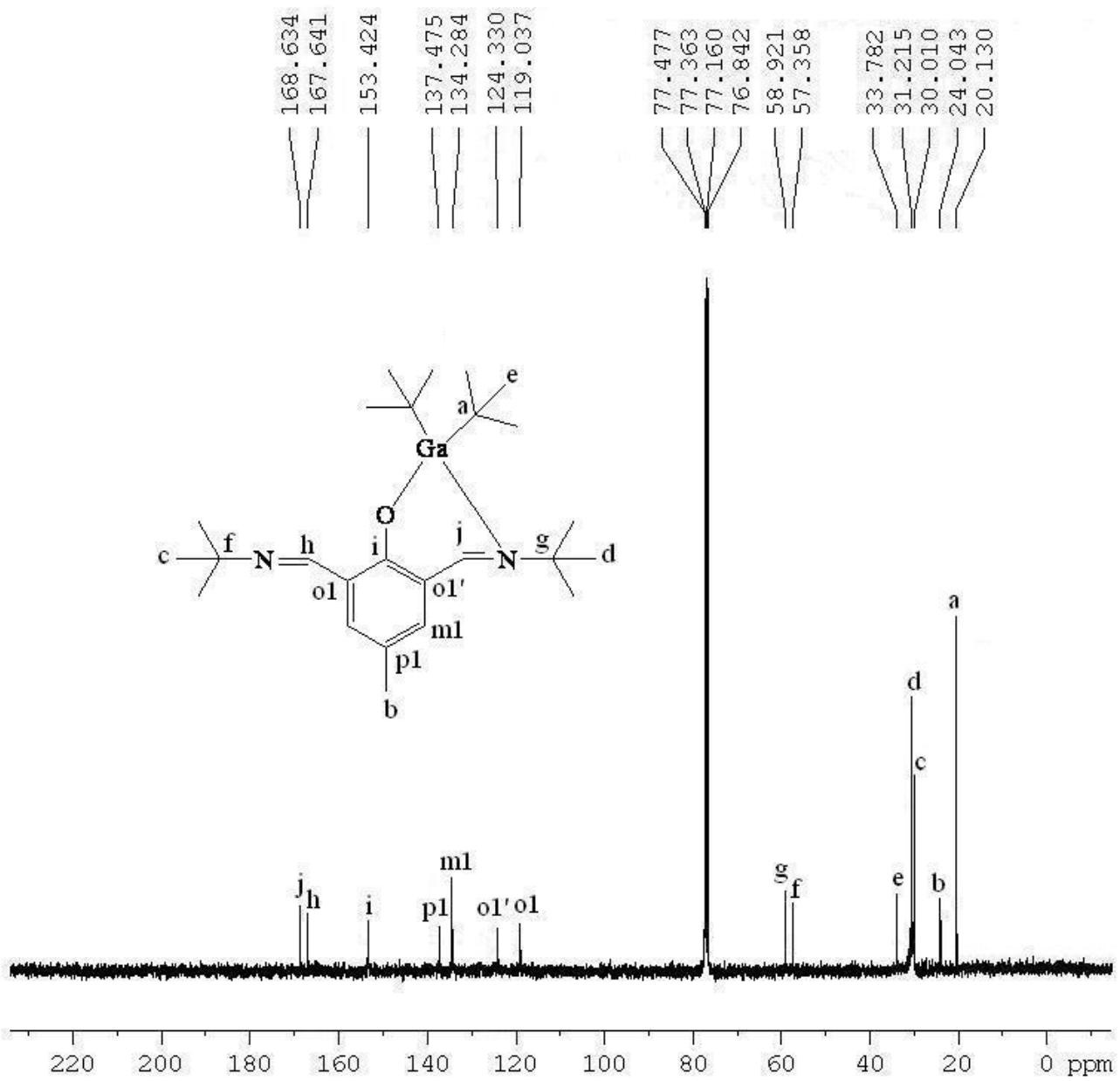
**Fig. S8.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 3



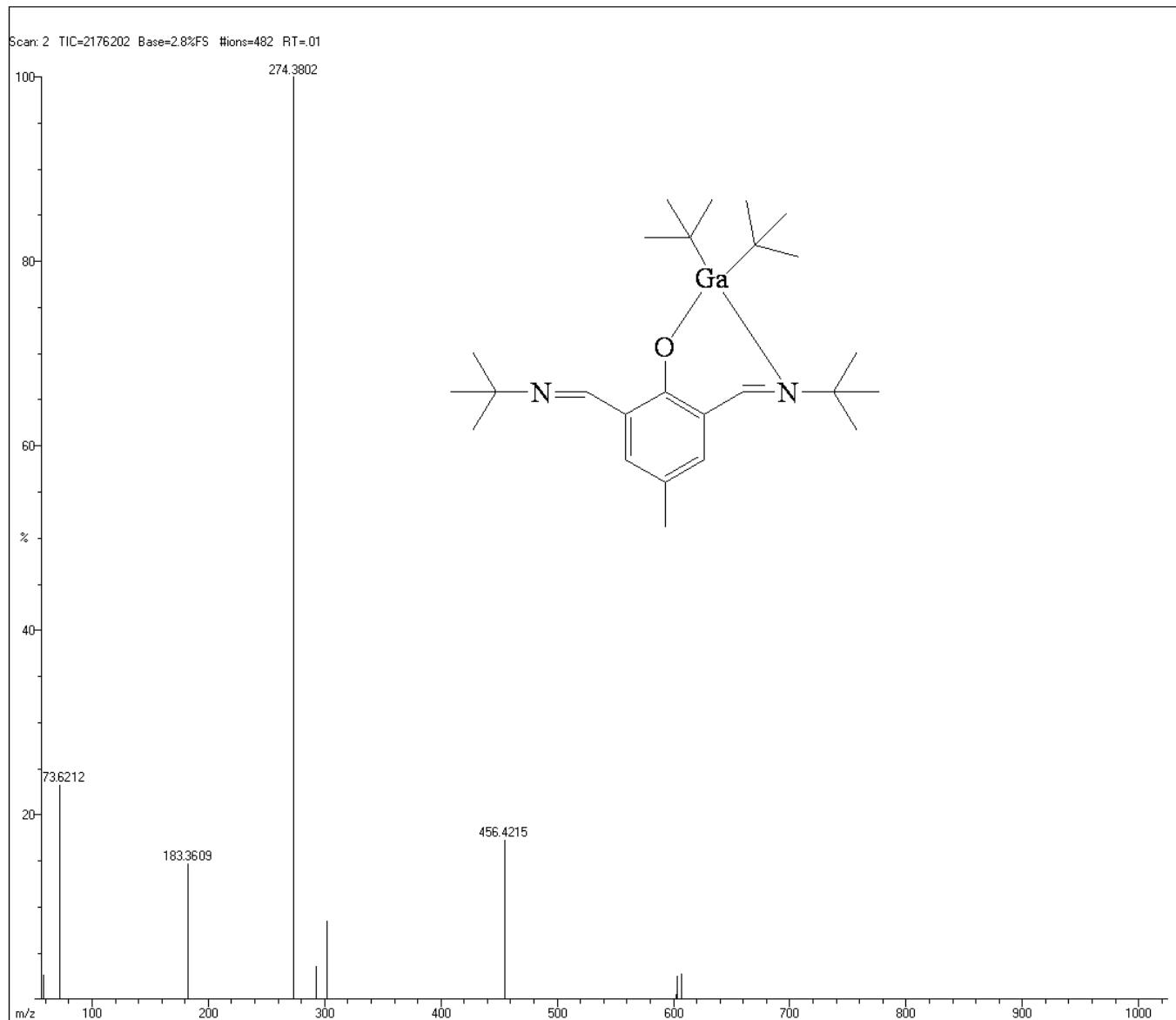
**Fig. S9.** ESI-Mass spectrum of **3**



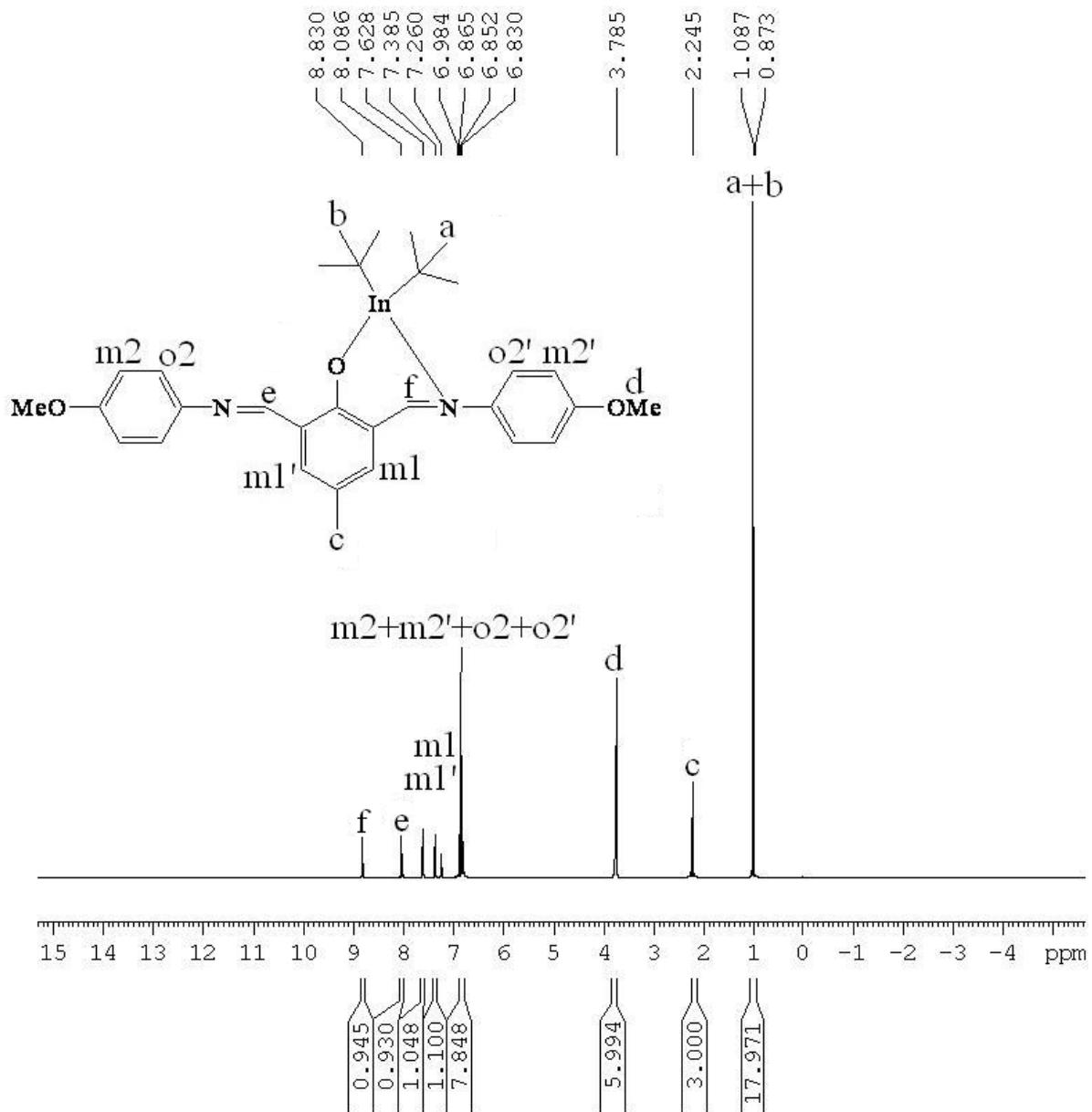
**Fig. S10.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of 4



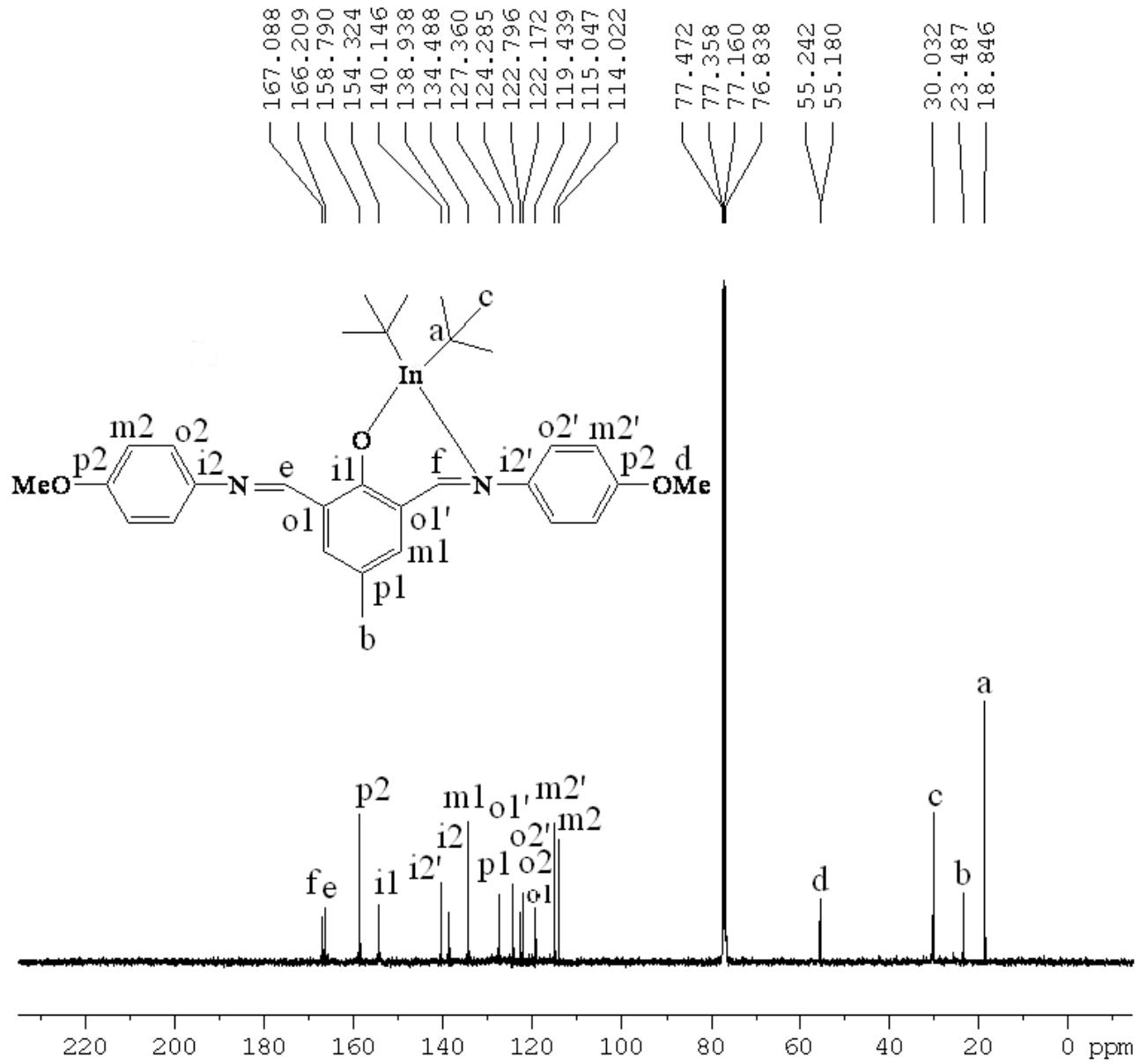
**Fig. S11.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of spectrum 4



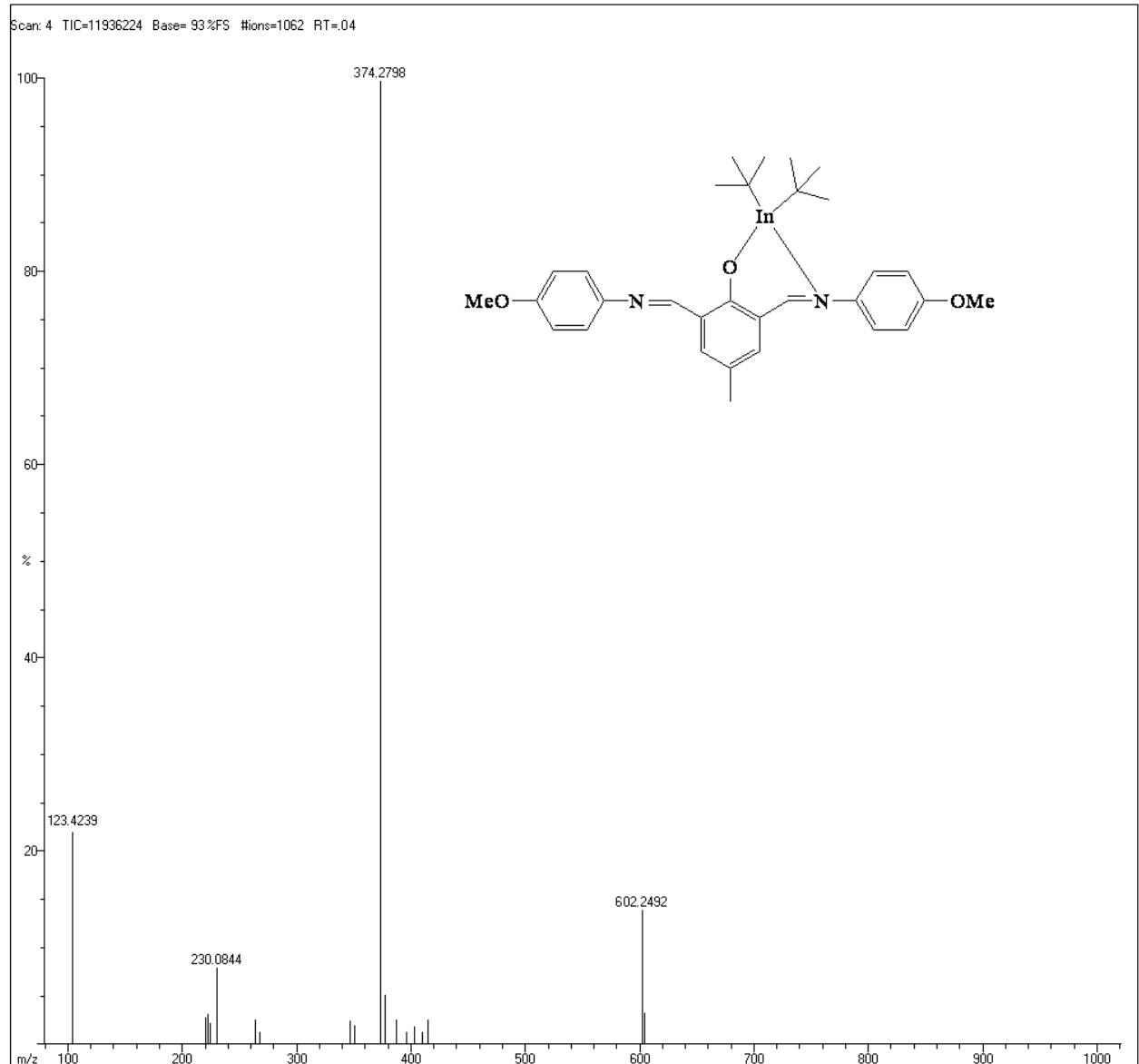
**Fig. S12.** ESI-Mass spectrum of 4



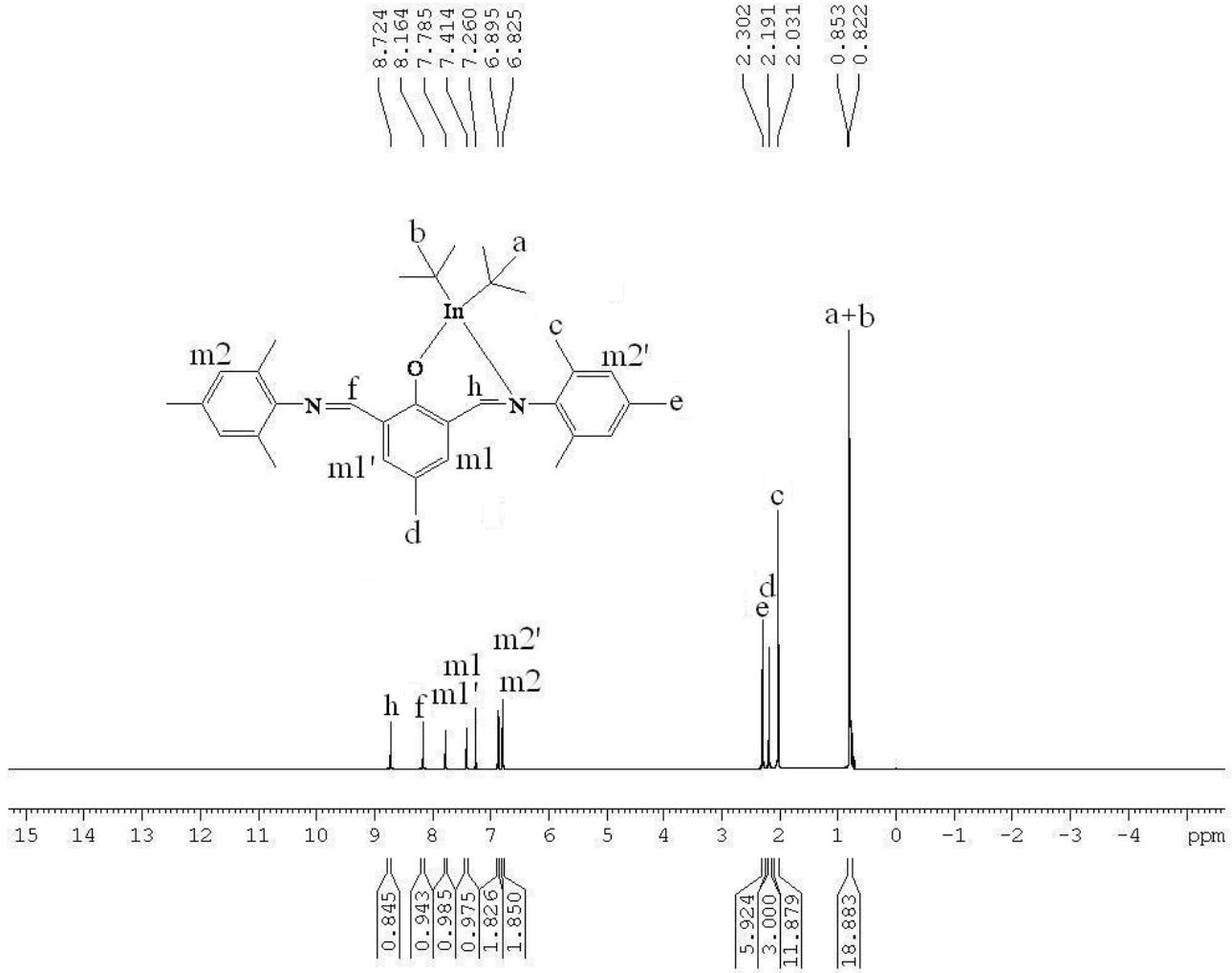
**Fig. S13.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **5**



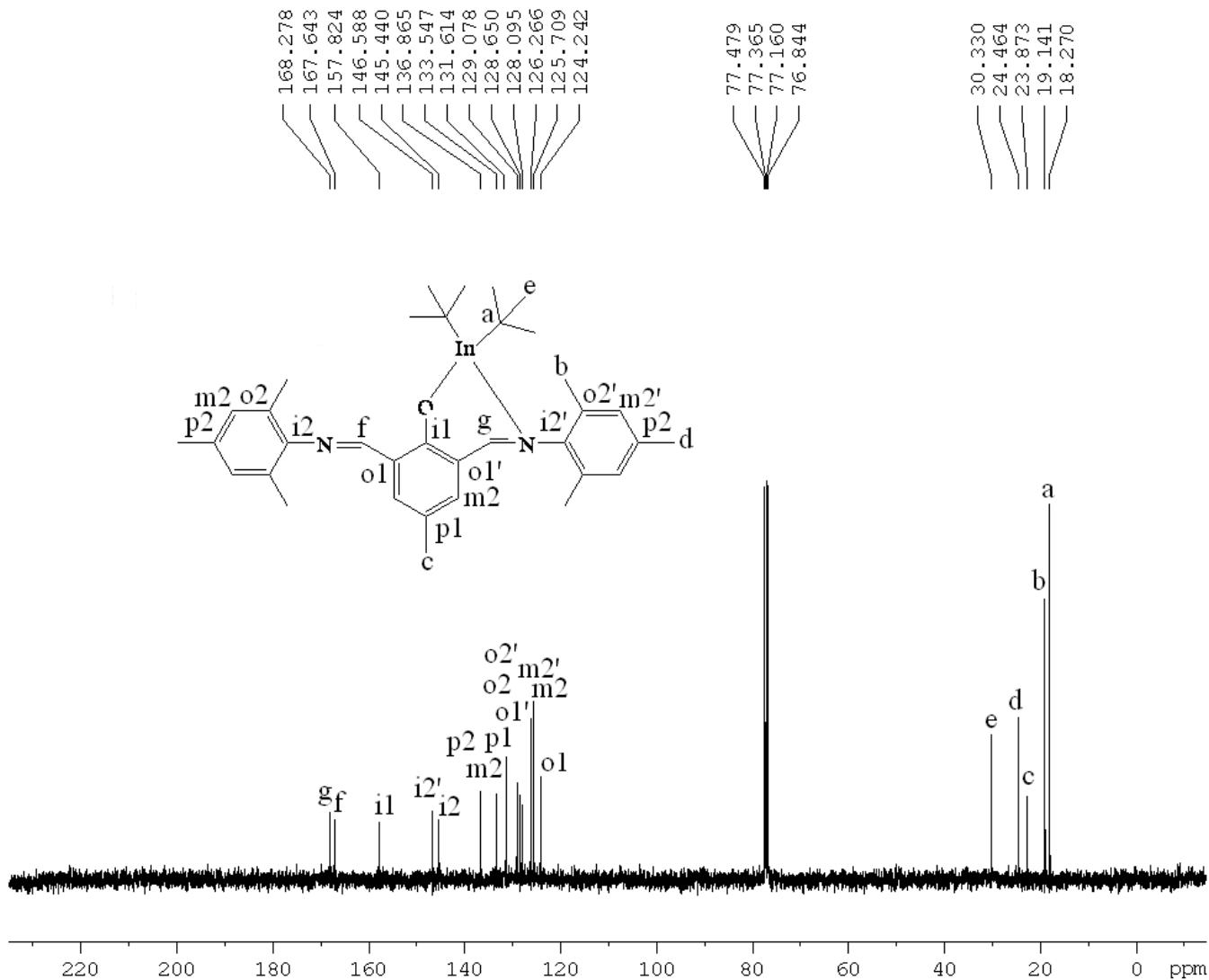
**Fig. S14.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **5**



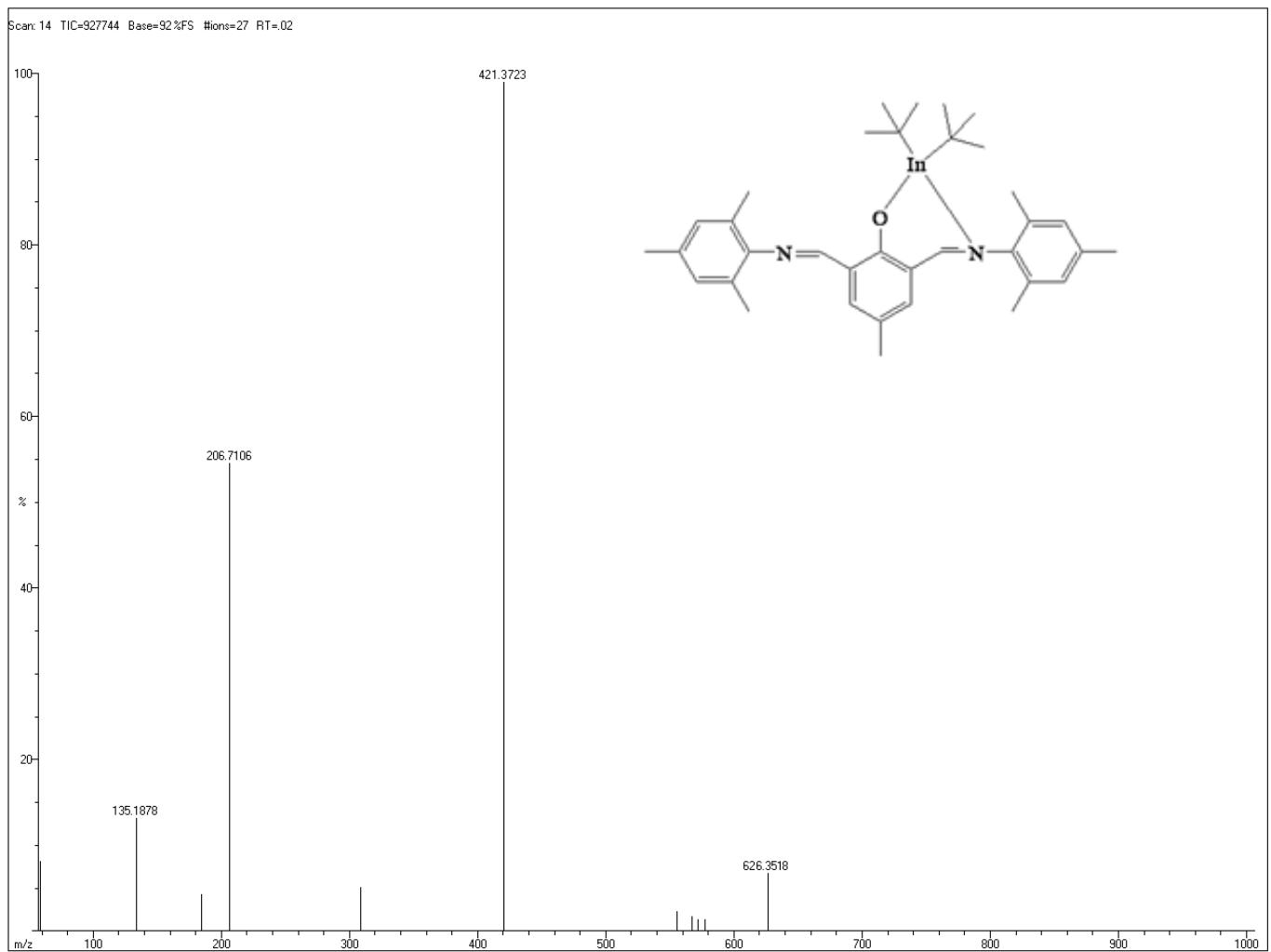
**Fig. S15.** ESI-Mass spectrum of **5**



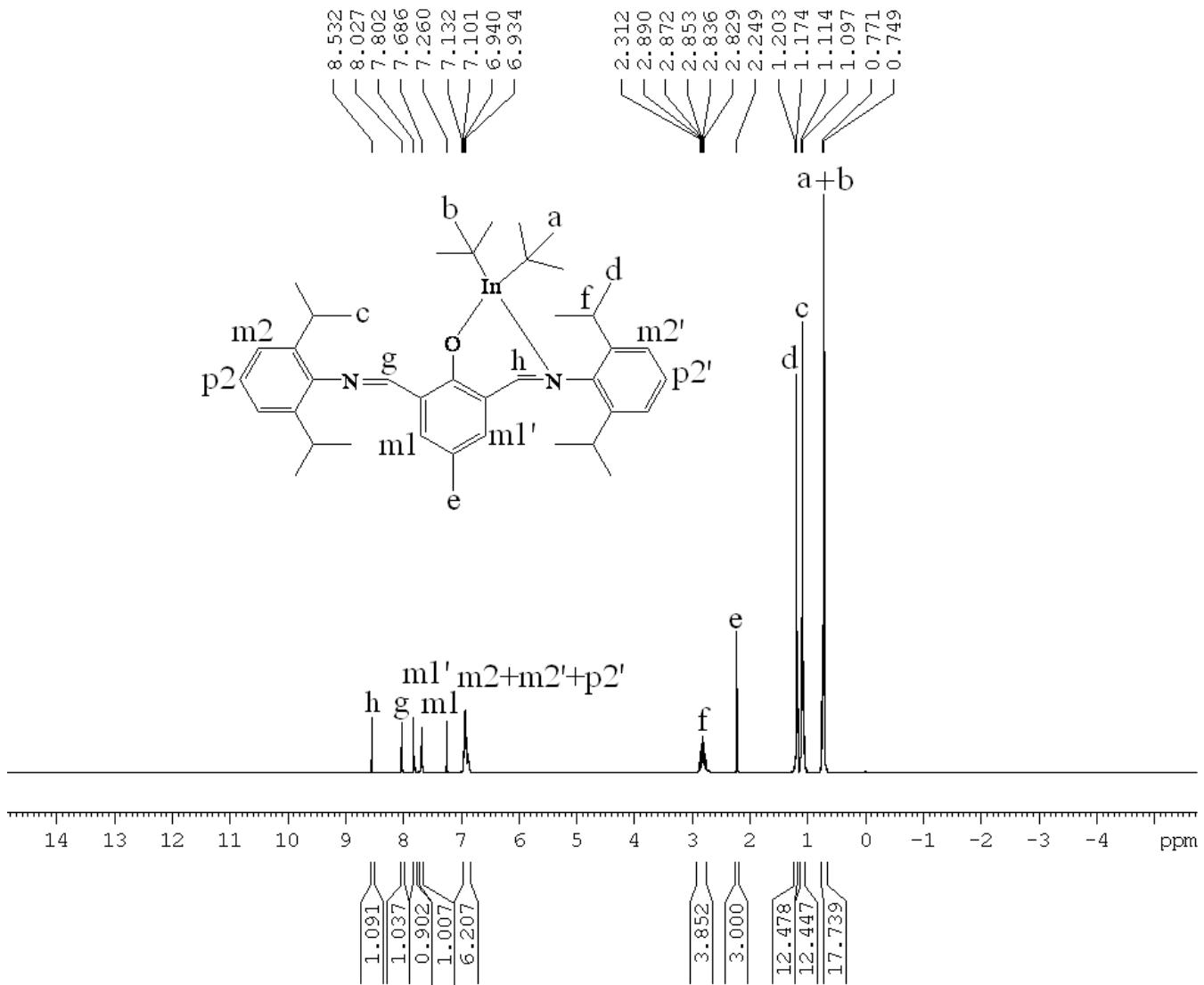
**Fig. S16.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **6**



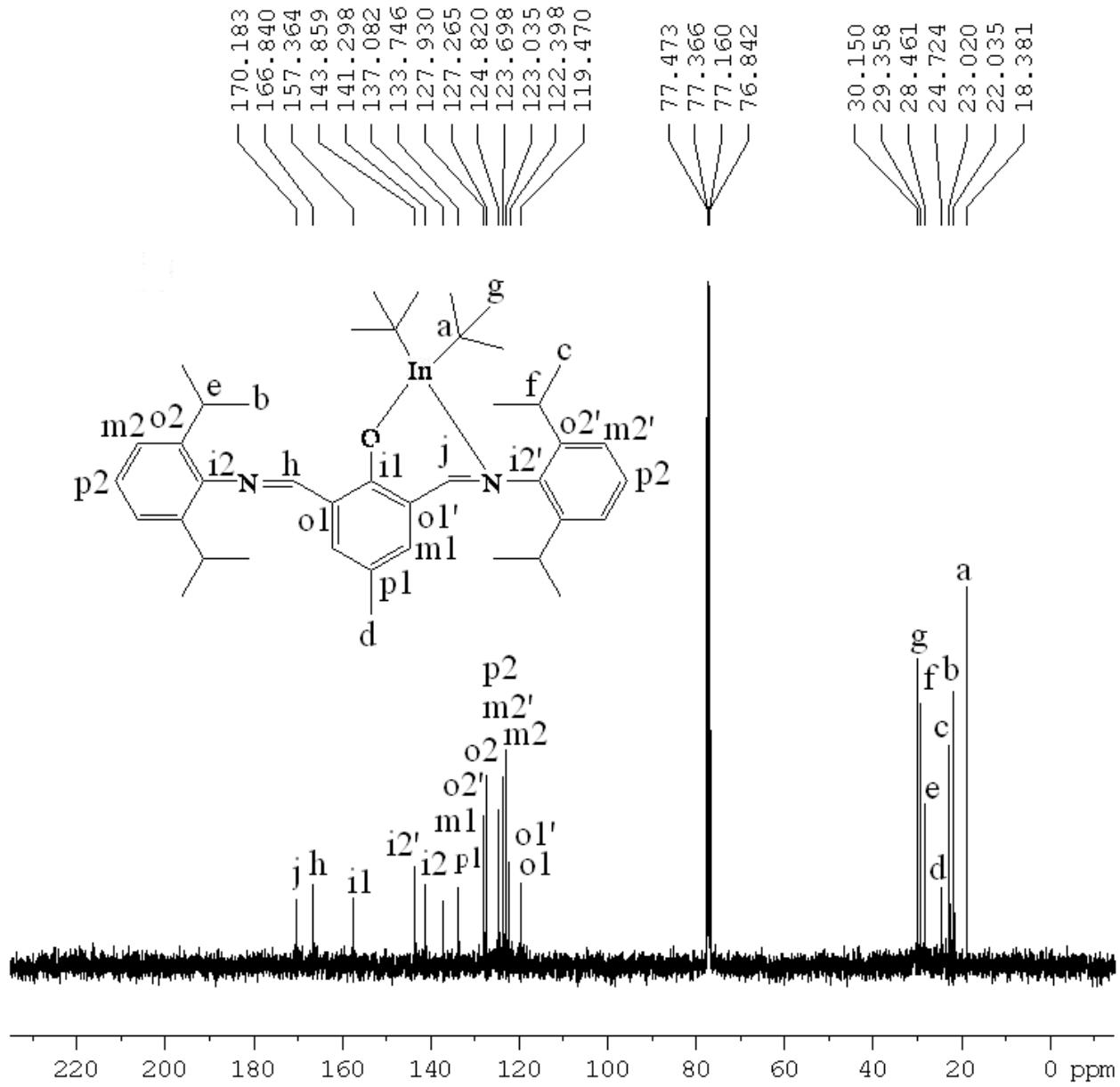
**Fig. S17.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **6**



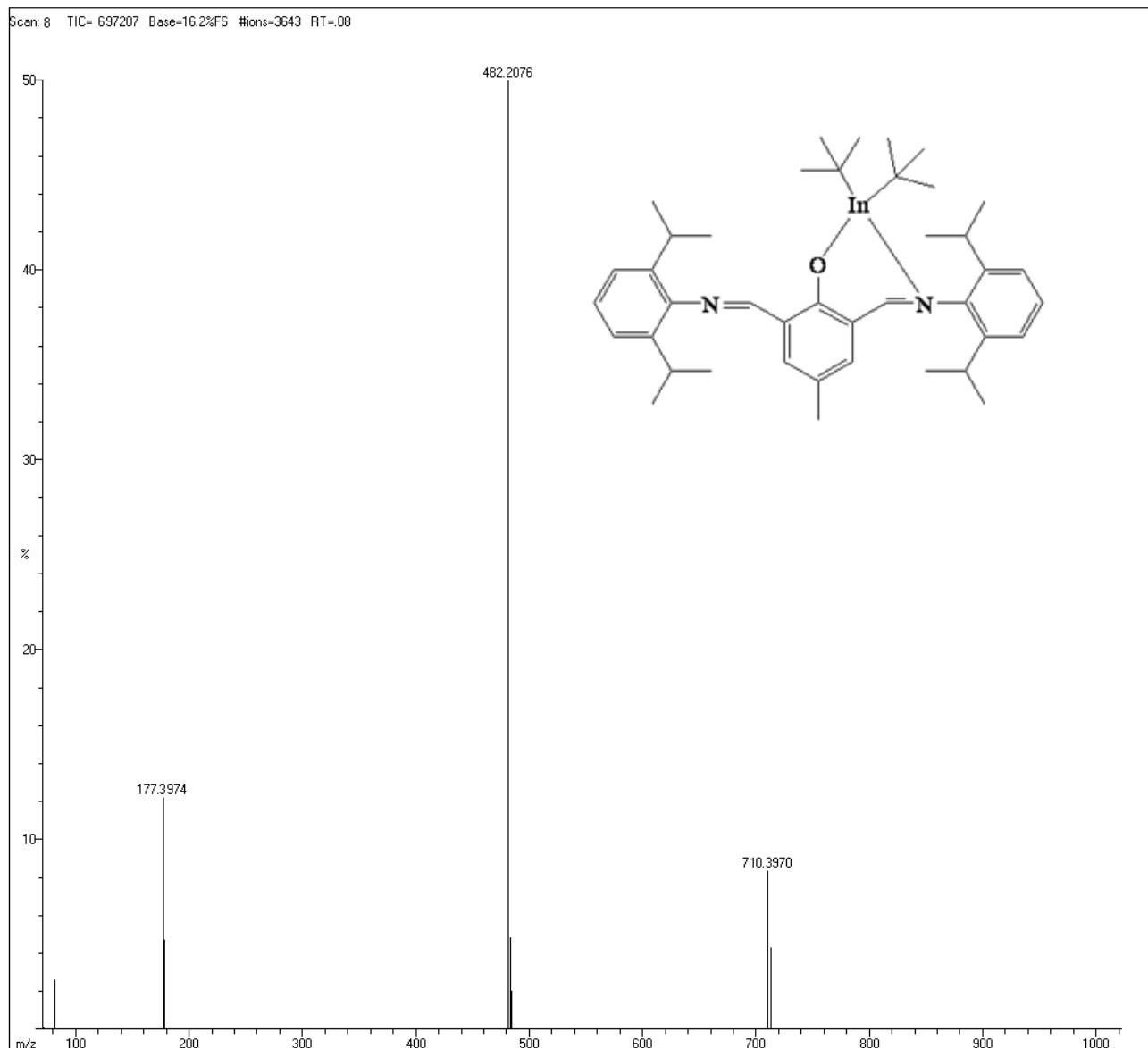
**Fig. S18.** ESI-Mass spectrum of **6**



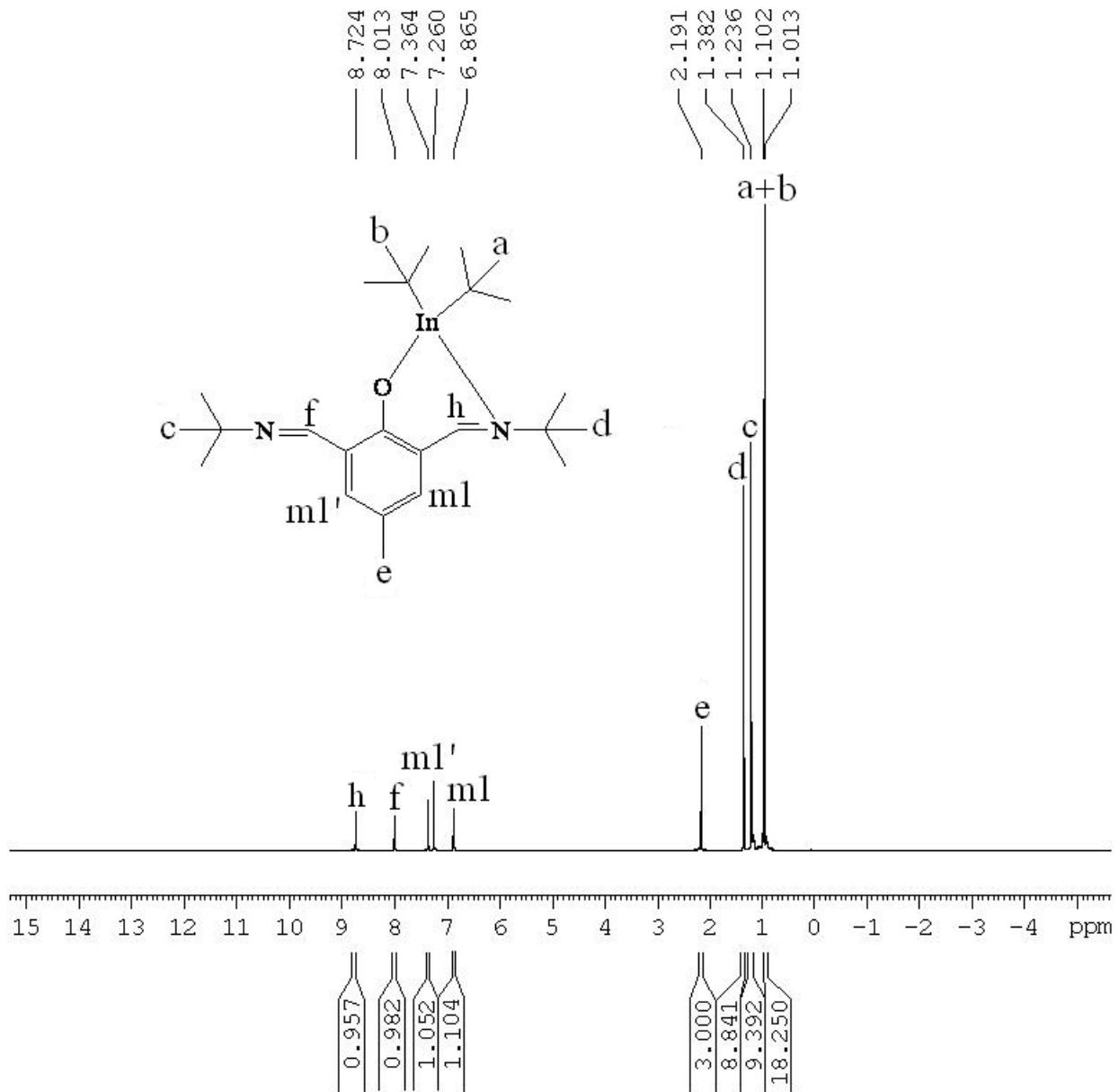
**Fig. S19.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of 7



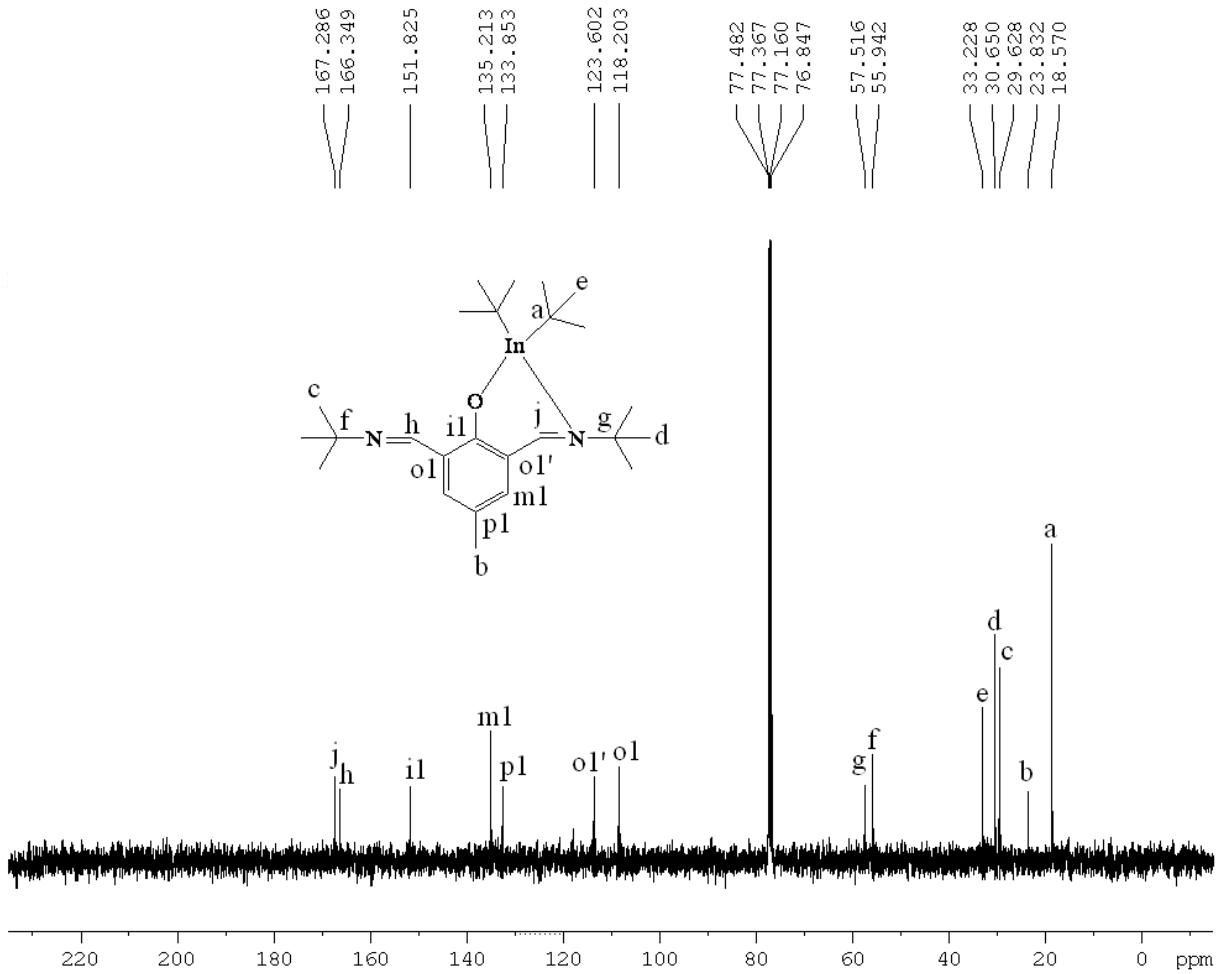
**Fig. S20.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 7



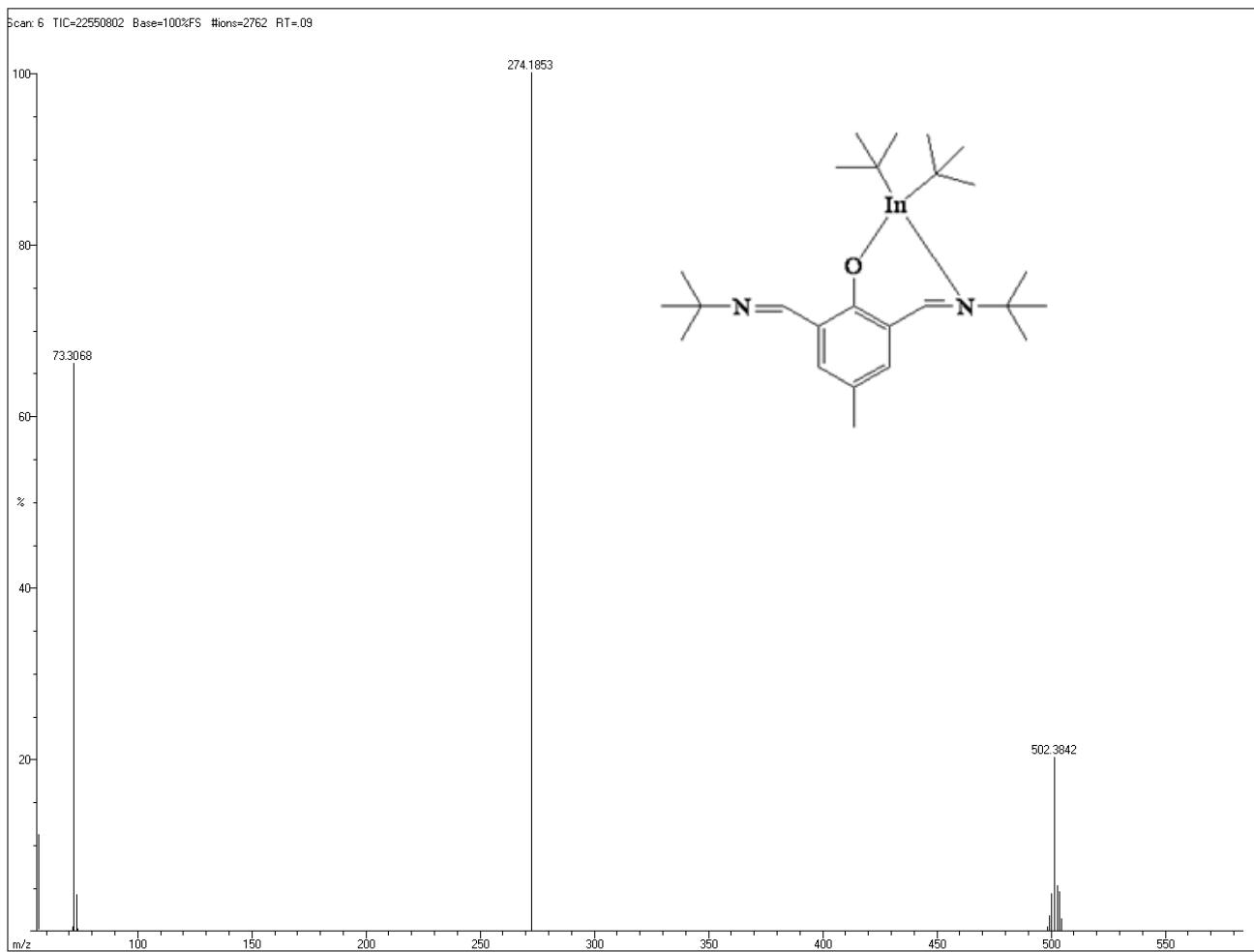
**Fig. S21.** ESI-Mass spectrum of **7**



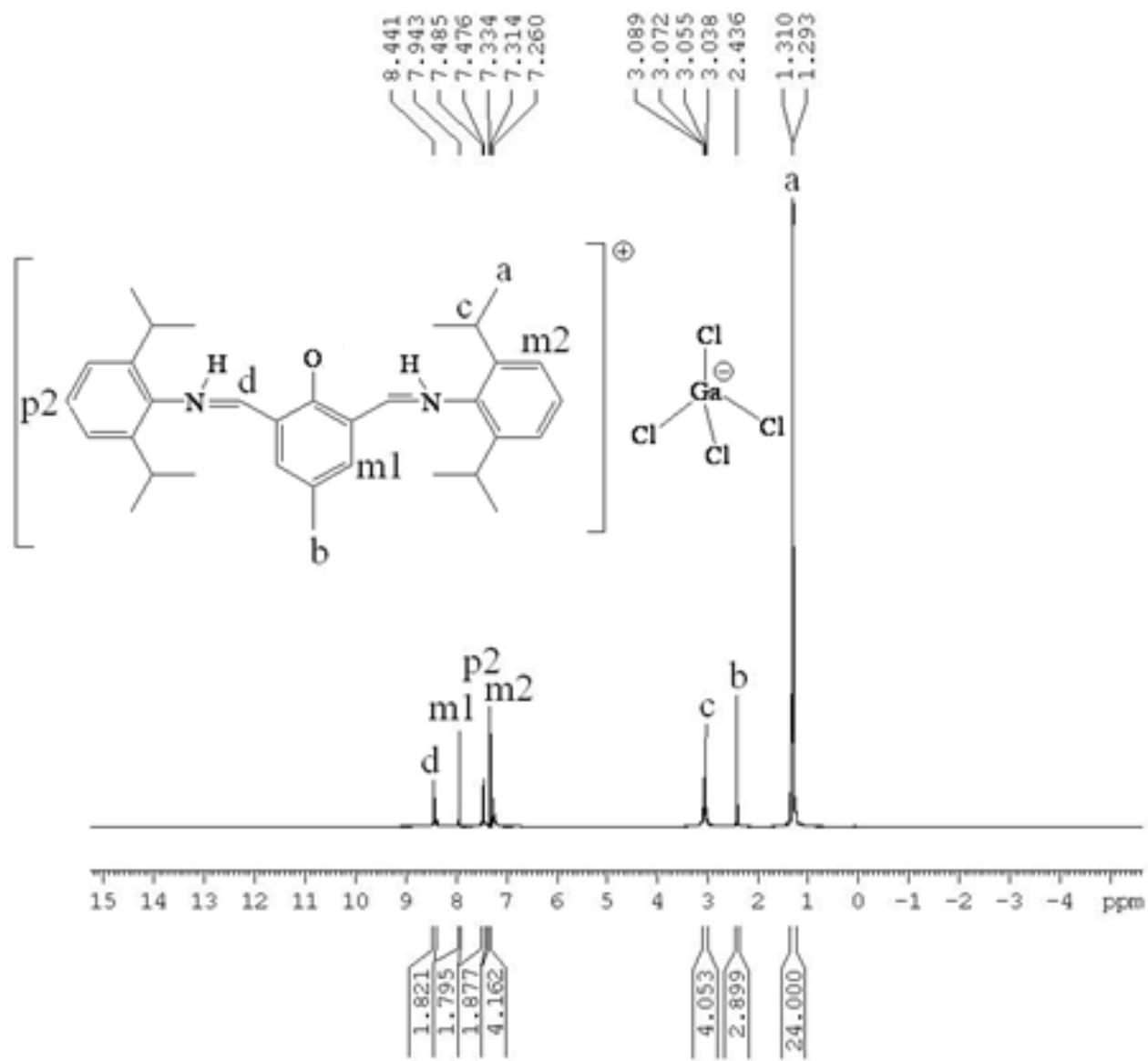
**Fig. S22.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **8**



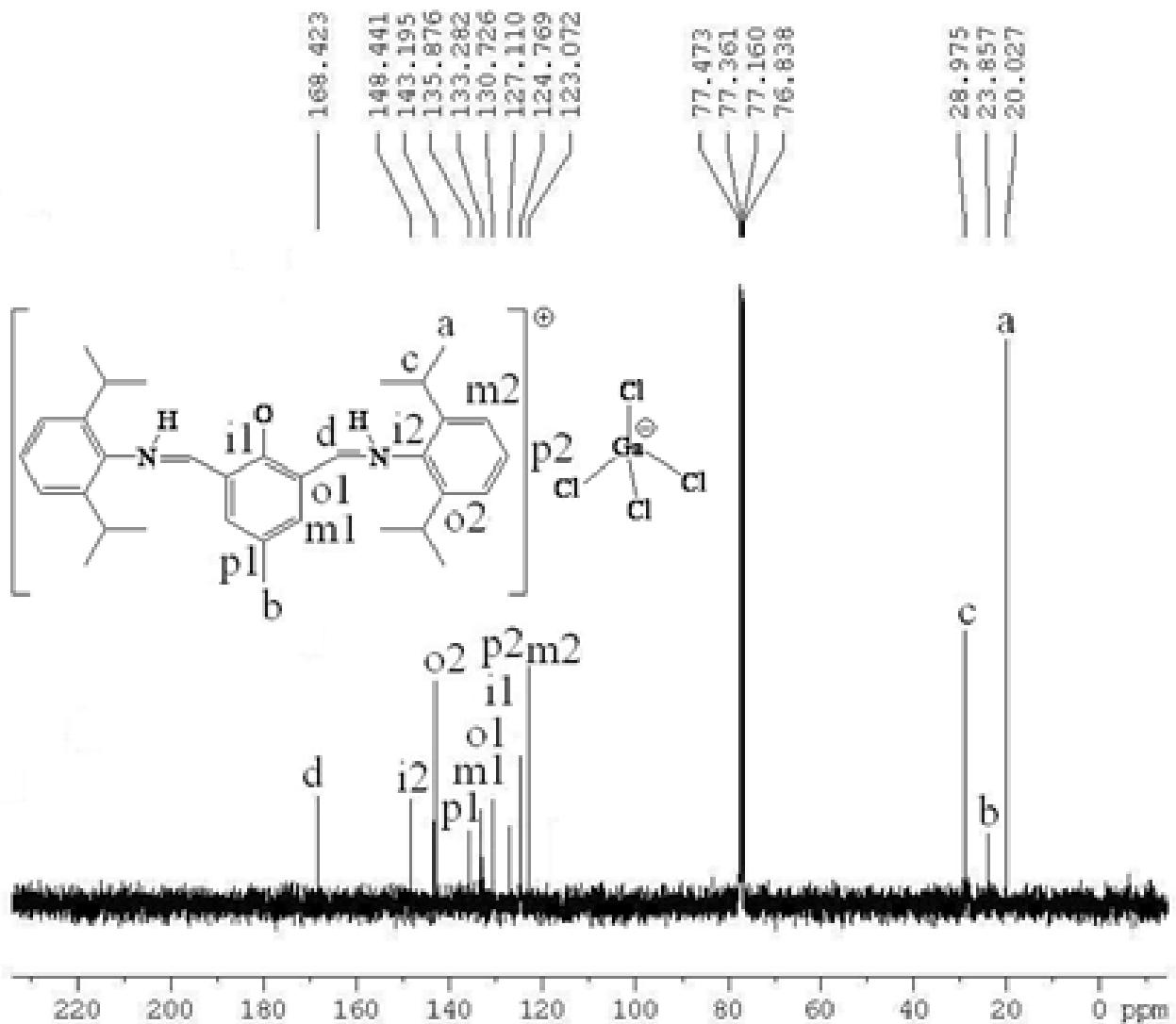
**Fig. S23.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **8**



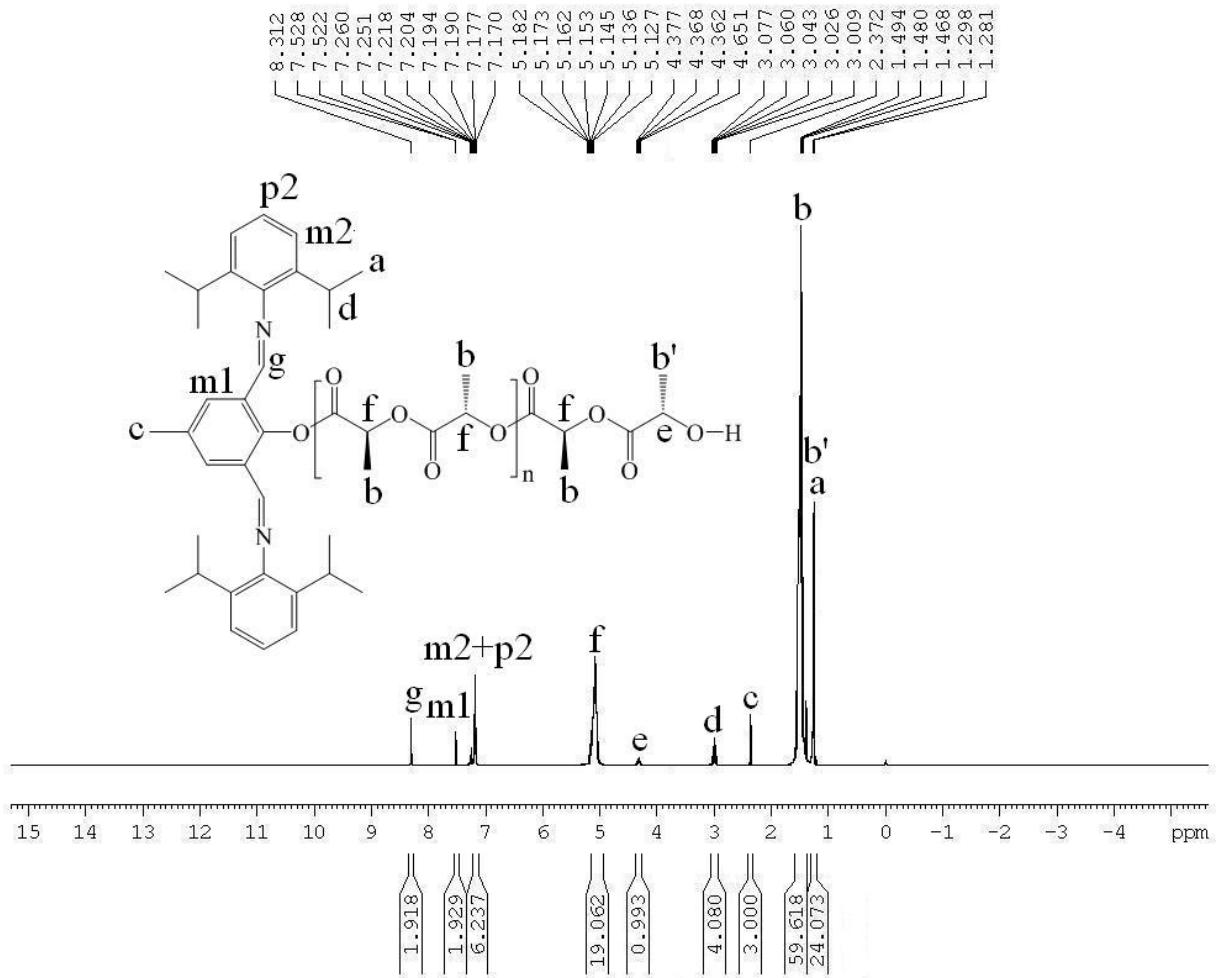
**Fig. S24.** ESI-Mass spectrum of **8**



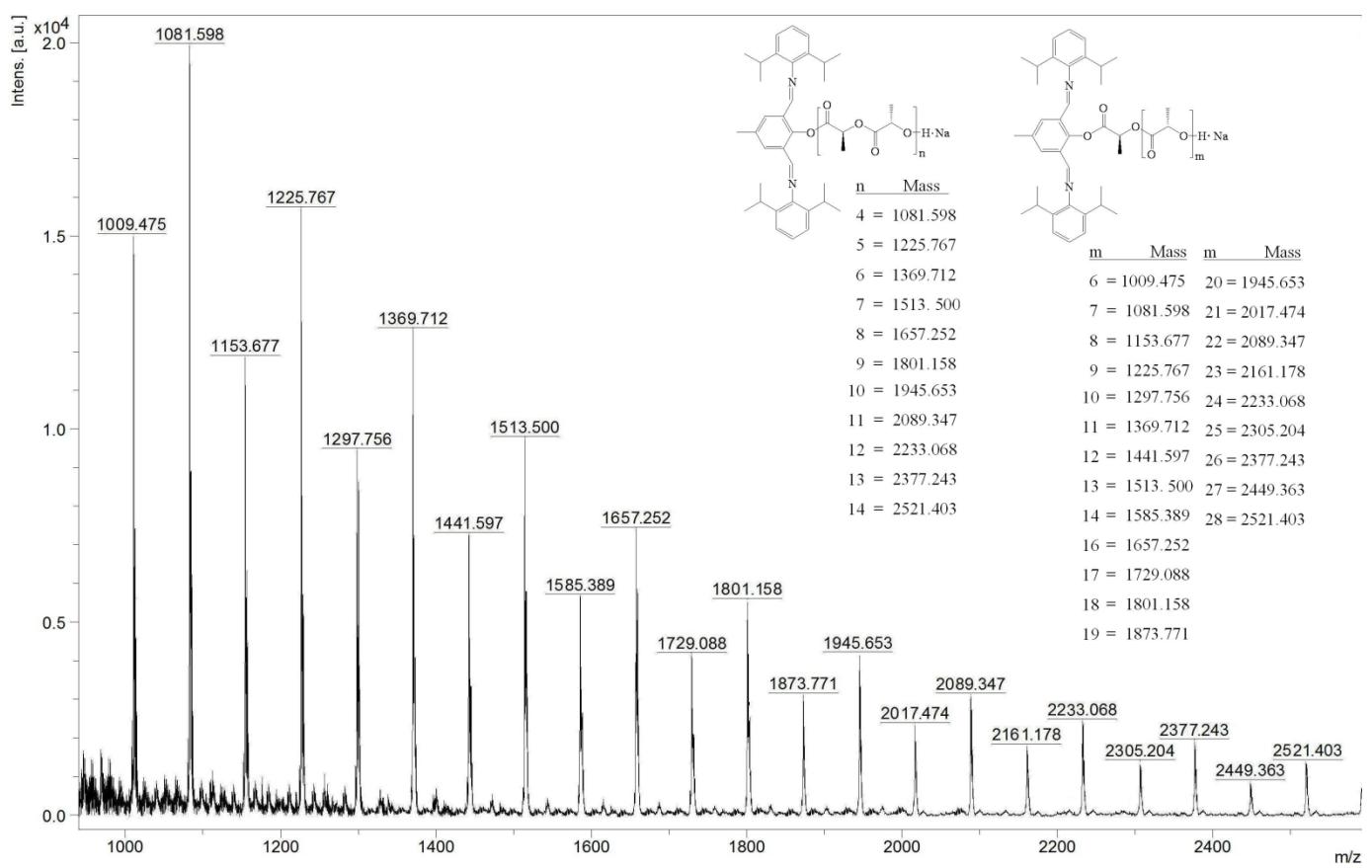
**Fig. S25.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **9**



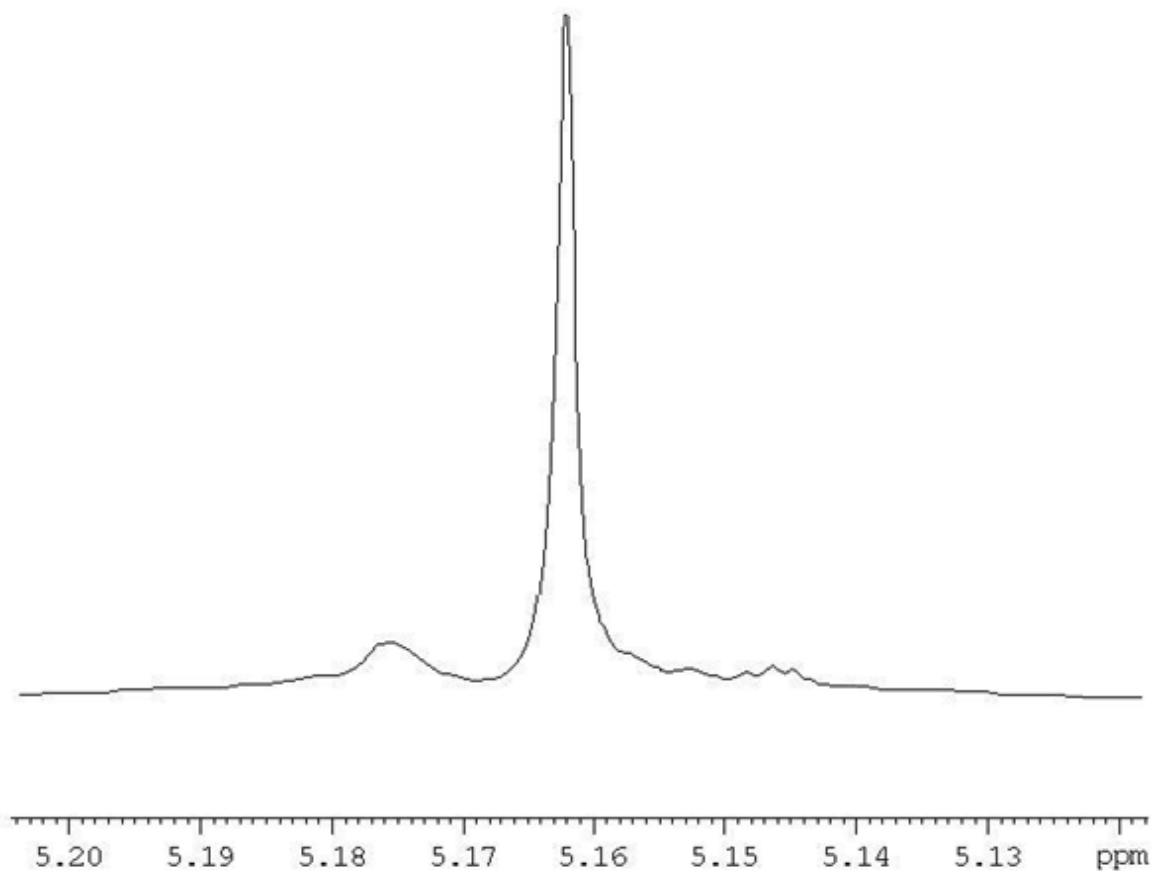
**Fig. S26.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **9**



**Fig. S27.** <sup>1</sup>H NMR spectrum of the crude product obtained from a reaction between *L*-LA and **9** in the ratio 10:1



**Fig. S28.** MALDI-TOF spectrum of the crude product obtained from a reaction between *L*-LA and **9** in the ratio 10:1



**Fig. S29.**  $^1\text{H}$  homonuclear decoupled spectrum of isotactic enriched PLA obtained from a reaction between *L*-LA and catalyst in the ratio 200:1