

## Supporting information

### Synthesis, Crystal Structures, and Reactivity of Copper(I) amidate Complexes: a insight into the mechanism of copper(I)-catalyze amide arylation reaction

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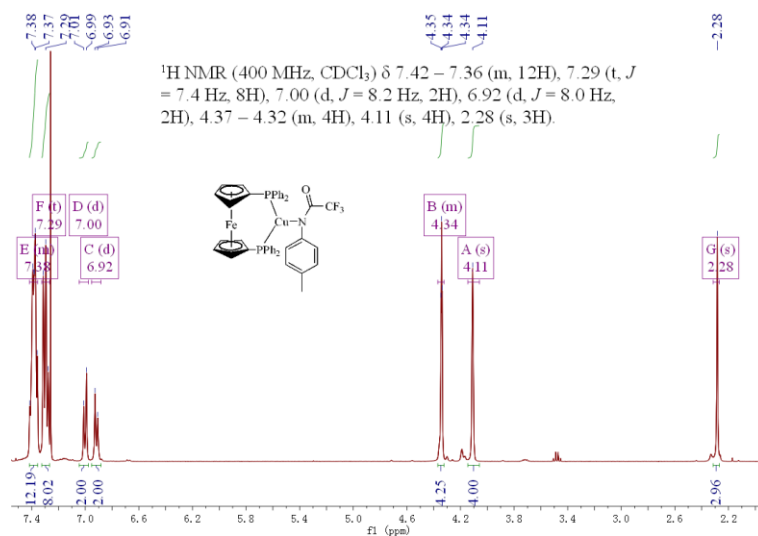


Fig S1. <sup>1</sup>H NMR spectrum of complex 2 recorded at 400 MHz in CDCl<sub>3</sub> at 293 K.

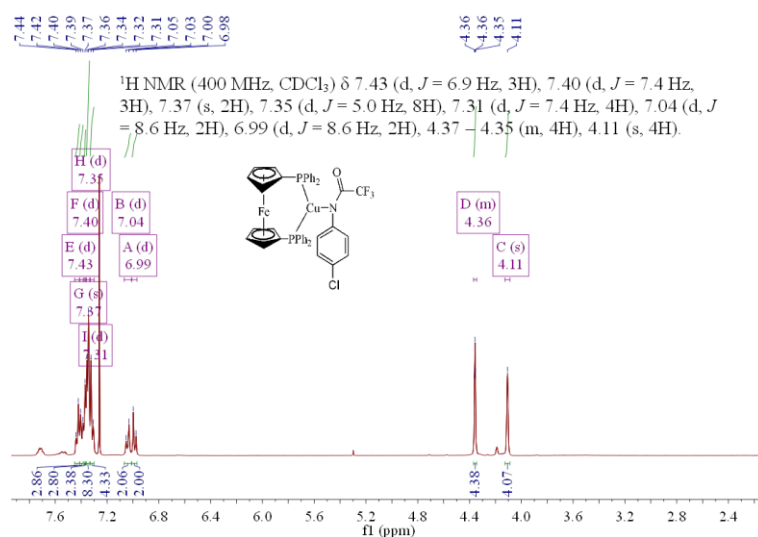


Fig S2. <sup>1</sup>H NMR spectrum of complex 3 recorded at 400 MHz in CDCl<sub>3</sub> at 293 K.

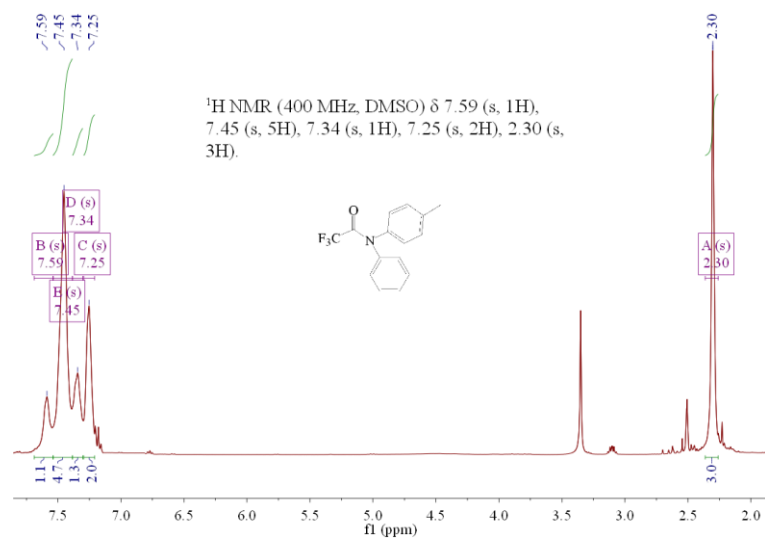


Fig S3.  $^1\text{H NMR}$  spectrum of compound **5** recorded at 400 MHz in  $\text{CDCl}_3$  at 293 K.

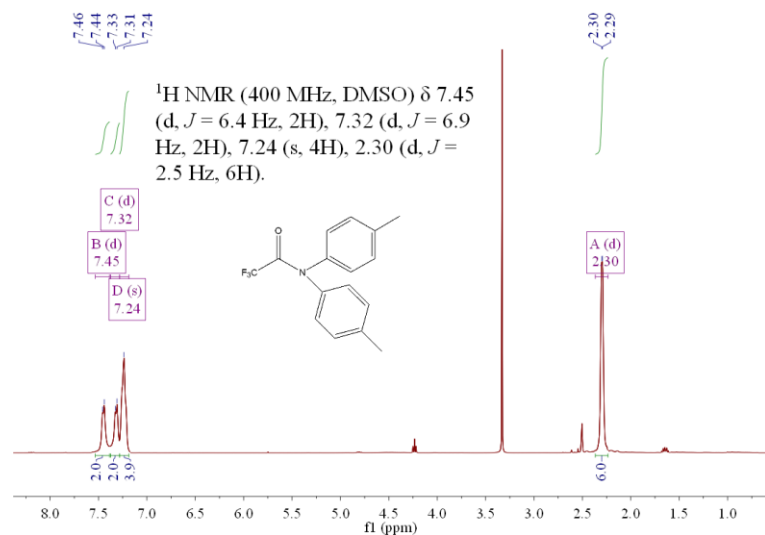


Fig S4.  $^1\text{H NMR}$  spectrum of compound **6** recorded at 400 MHz in  $\text{CDCl}_3$  at 293 K.

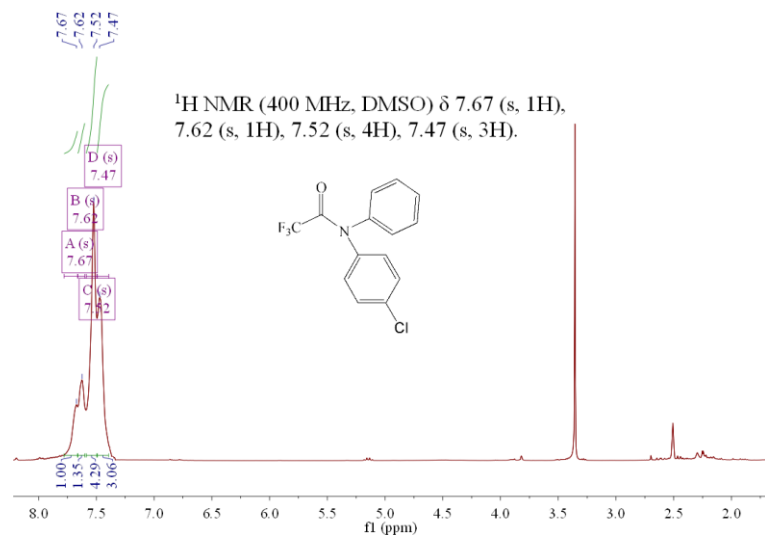


Fig S5.  $^1\text{H}$  NMR spectrum of compound **7** recorded at 400 MHz in  $\text{CDCl}_3$  at 293 K.

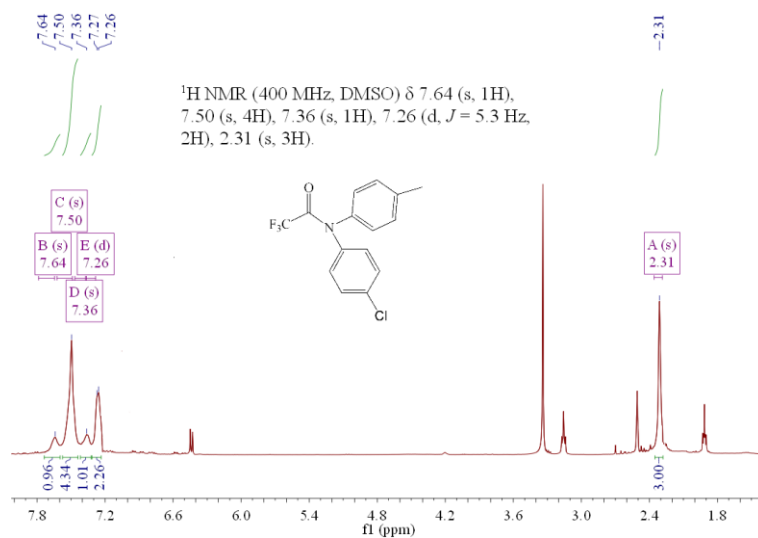


Fig S6.  $^1\text{H}$  NMR spectrum of compound **8** recorded at 400 MHz in  $\text{CDCl}_3$  at 293 K.

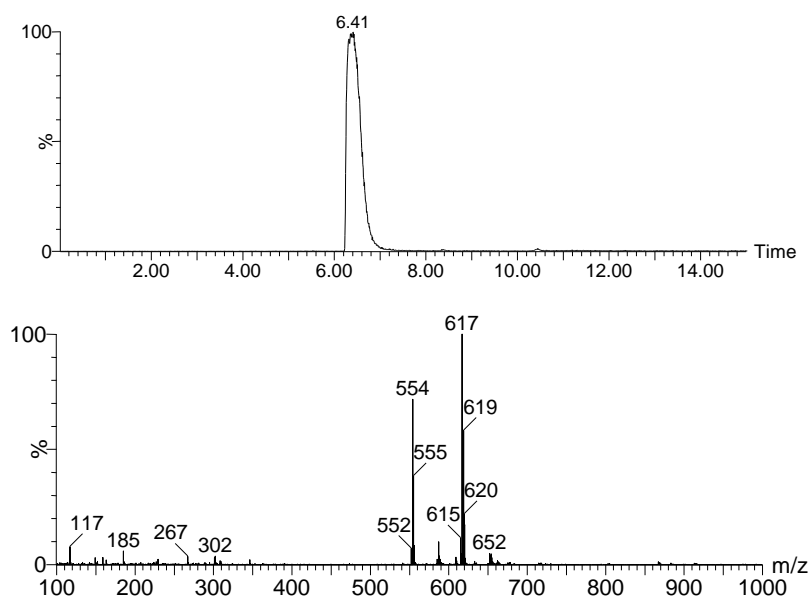


Fig. S7 LC-MS/MS chromatograms for the analysis of compound **4**

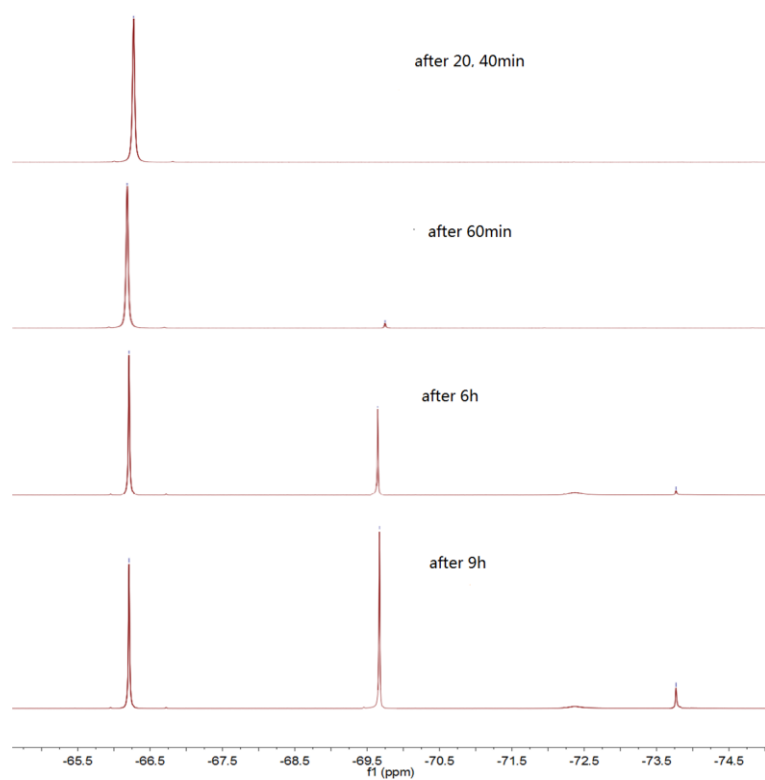


Fig S8. the time course of the  $^{19}\text{F}$  NMR signals of the reaction of complex **2** with iodobenzene