

Electronic Supplementary Material (ESI)
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Synthesis of the first chiral polynuclear copper(I) complex based on (R)-1-(1-phenyl)ethyl-3-(O,O-diethylthiophosphoryl)thiourea and its characterization in the solid state and solution

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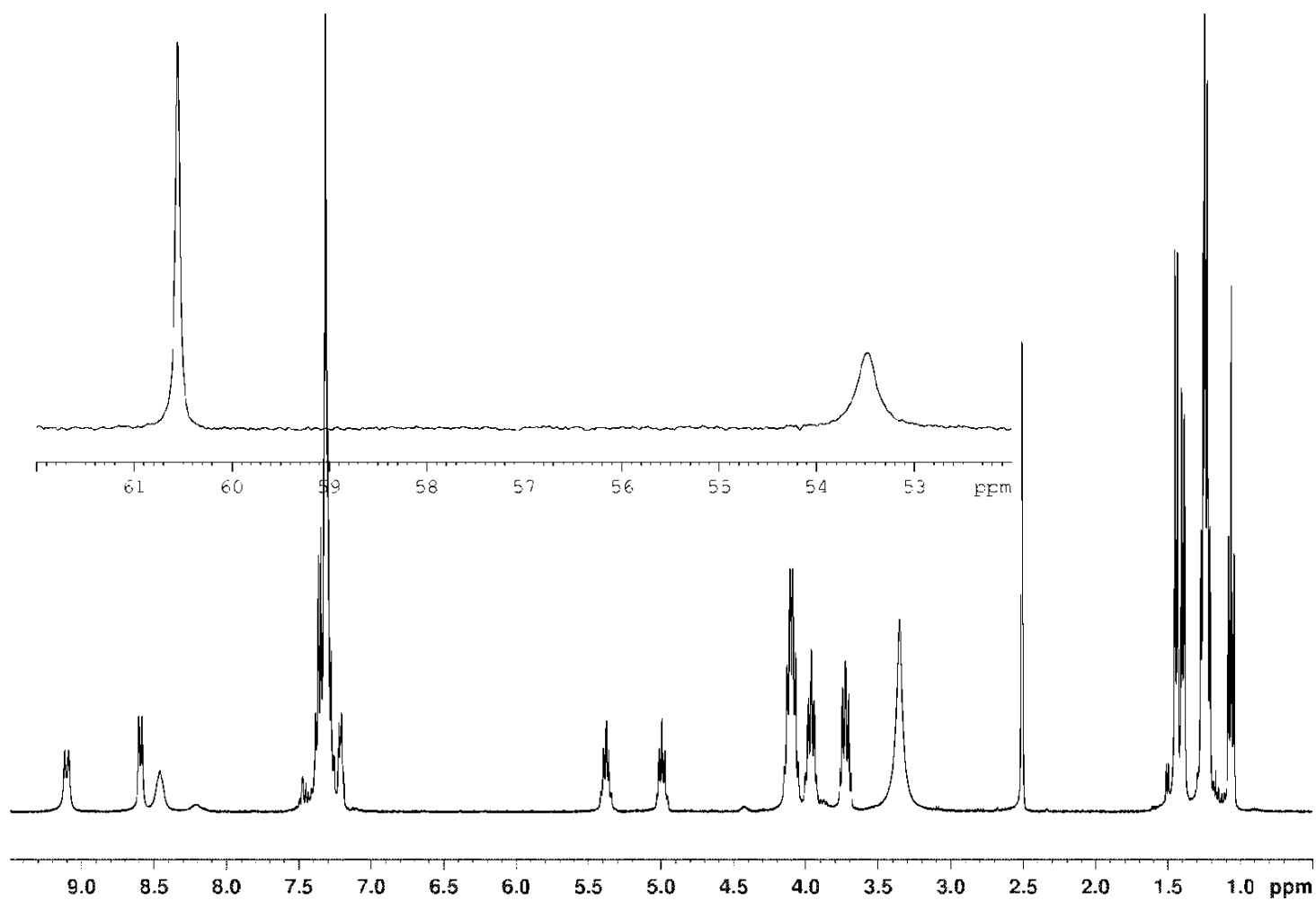


Figure S1. 1D ^1H and $^{31}\text{P}\{^1\text{H}\}$ NMR spectra of **1** + **HL** (1:6 molar ratio) in DMSO-d_6 at $T = 303\text{ K}$.

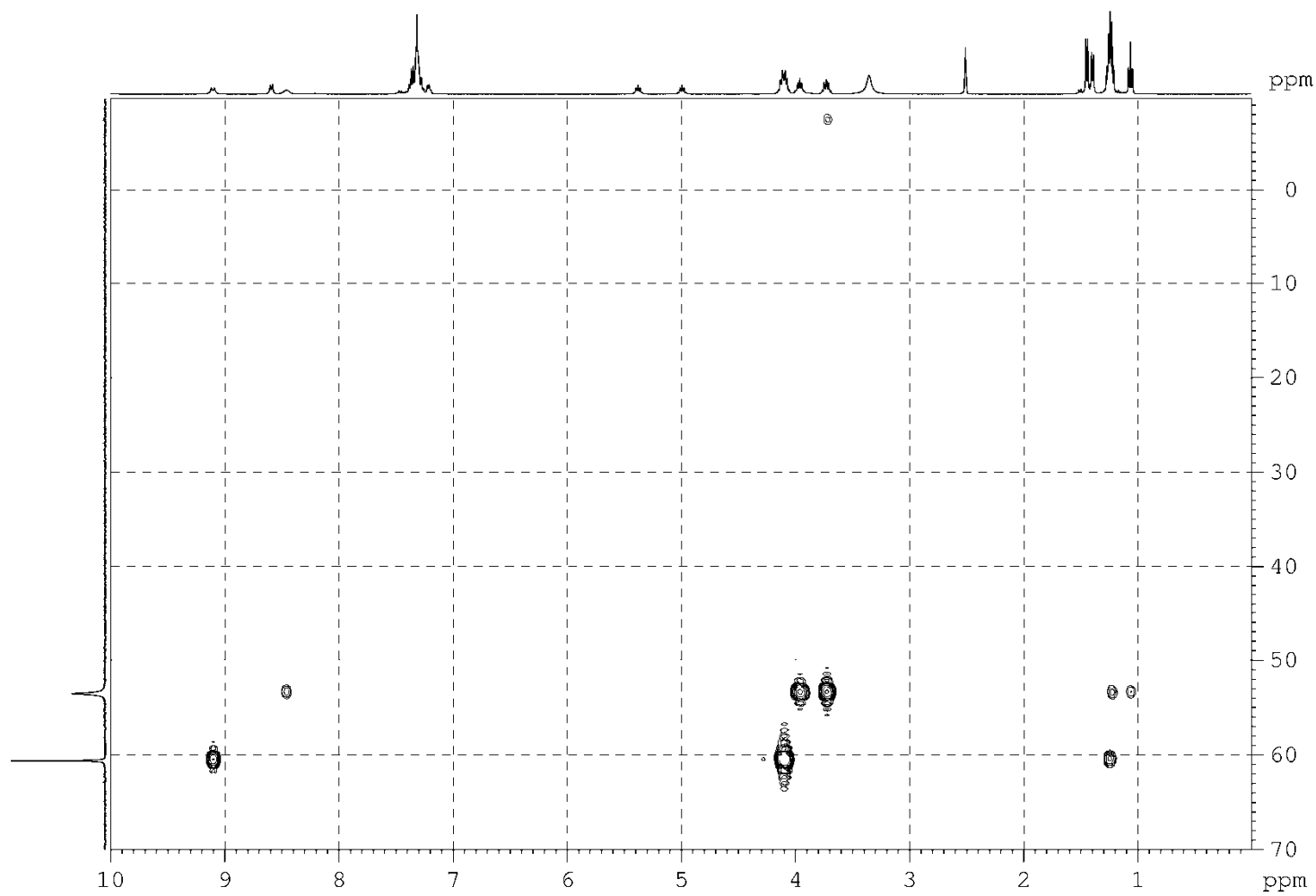


Figure S2. 2D ^1H - ^{31}P HMBC NMR spectra of **1** + **HL** (1:6 molar ratio) in DMSO- d_6 at $T = 303$ K.

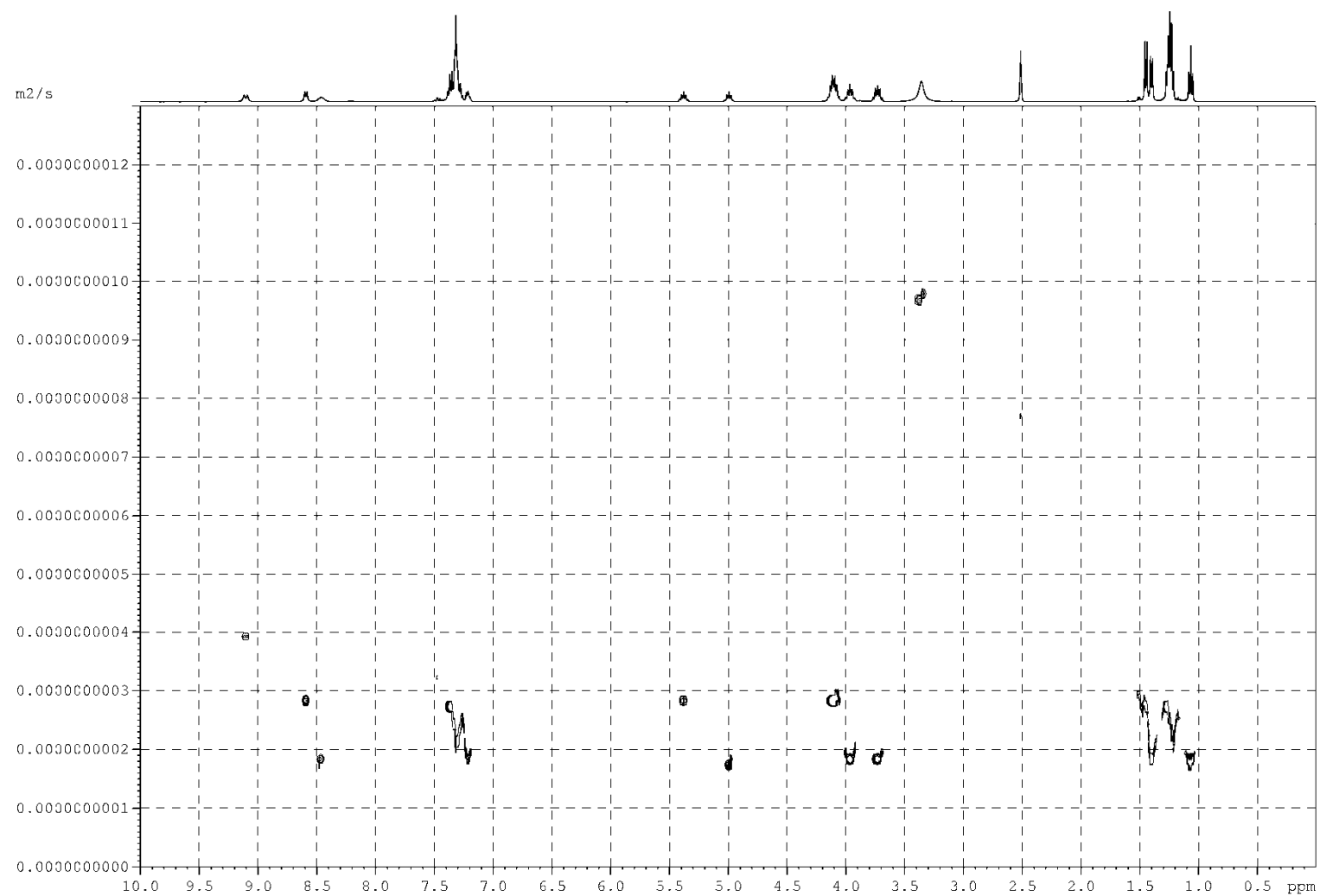


Figure S3. 2D ^1H DOSY NMR spectra of **1** + **HL** (1:6 molar ratio) in DMSO- d_6 at $T = 303\text{ K}$.

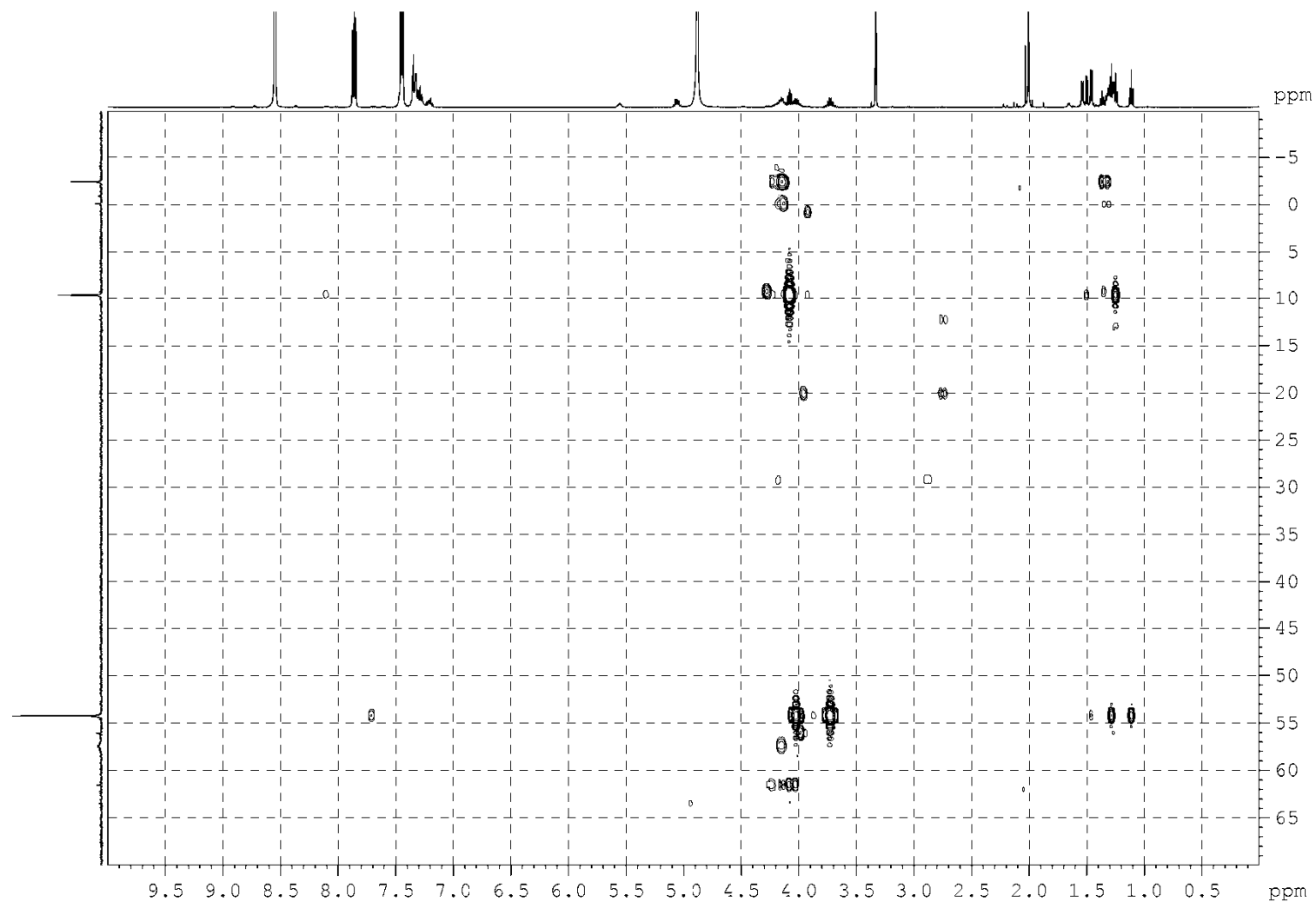


Figure S4. 2D ^1H - ^{31}P HMBC NMR spectra of the reaction mixture in CD_3OD at $T = 303\text{ K}$.

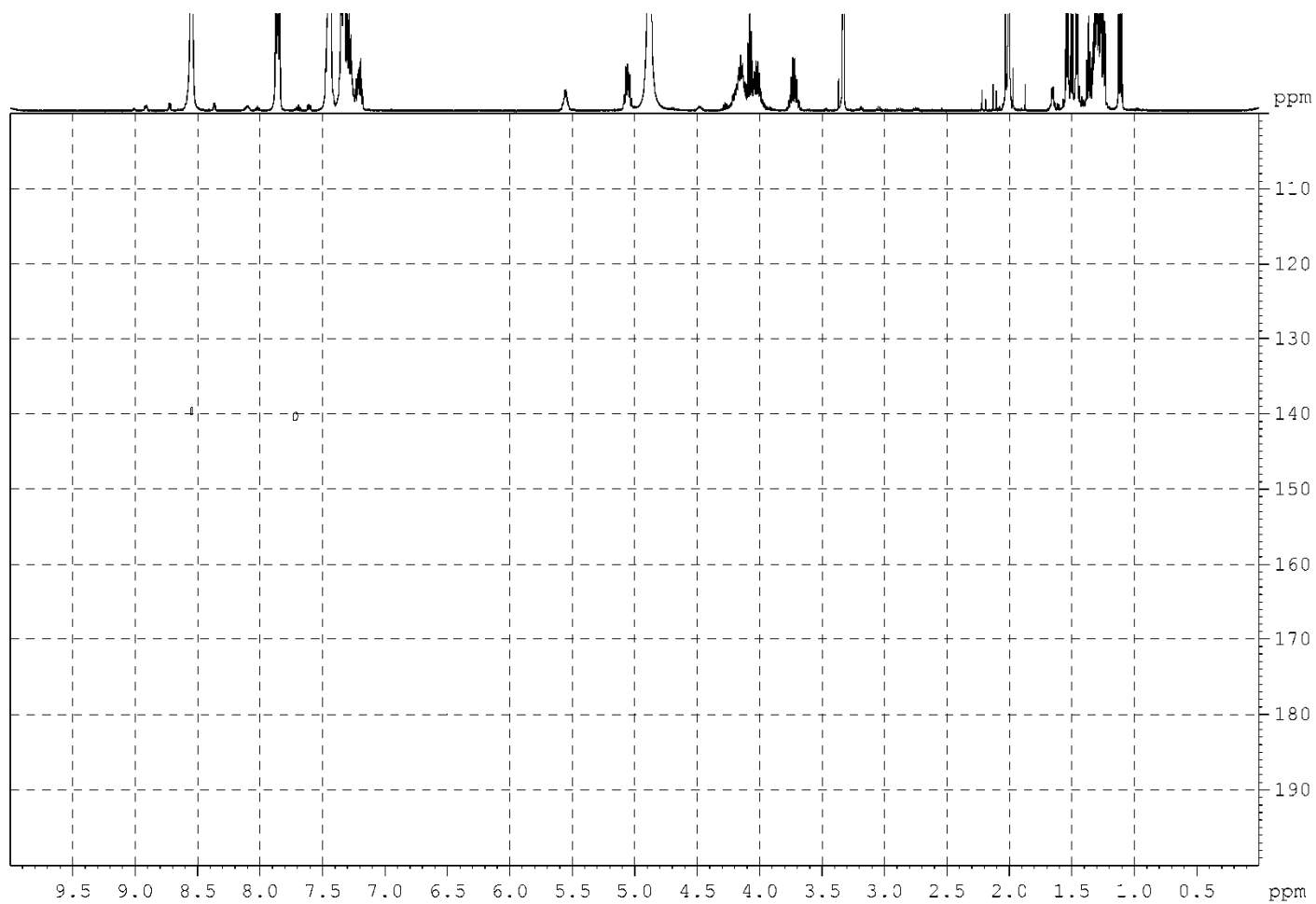
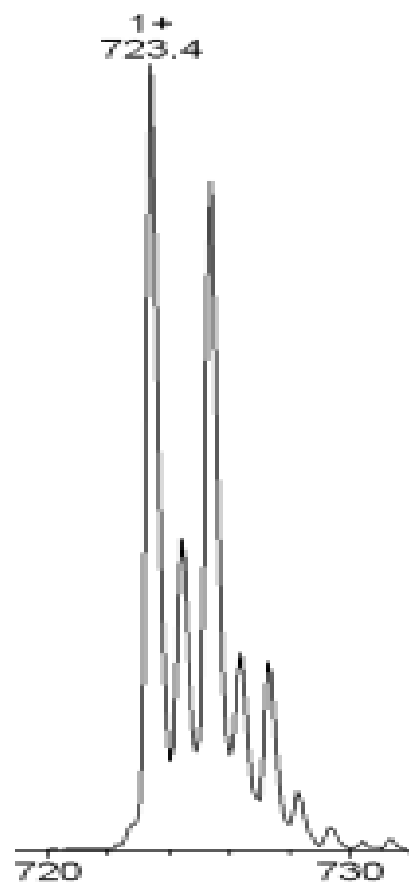
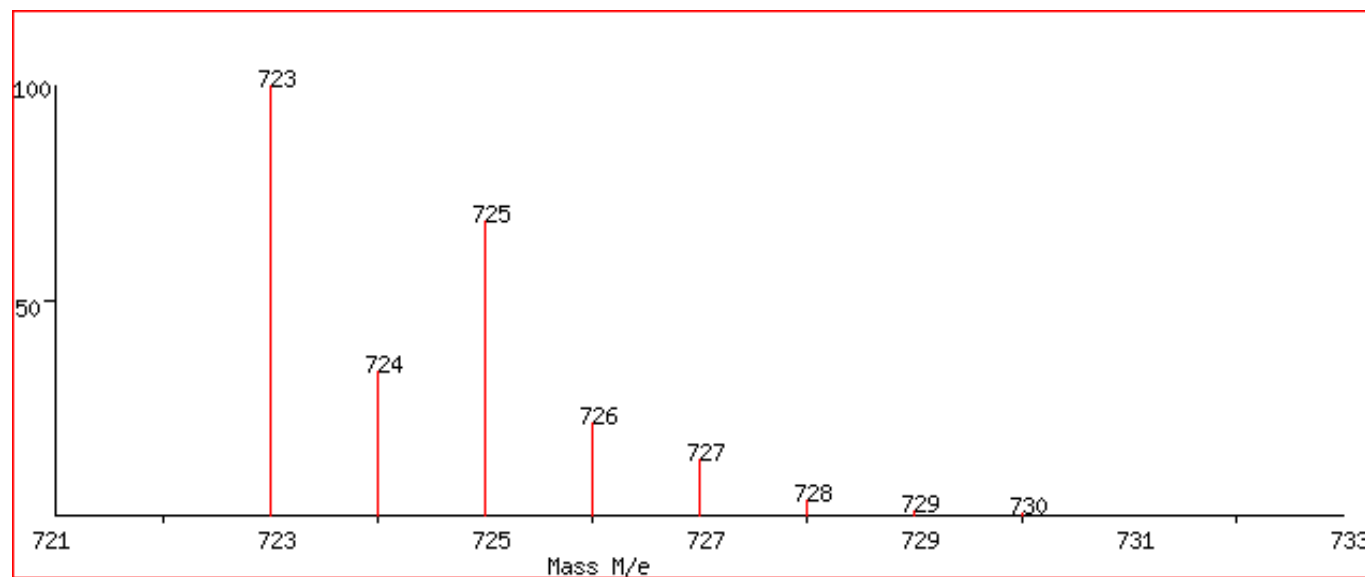


Figure S5. 2D ^1H - ^{15}N HSQC NMR spectra of the reaction mixture in CD_3OD at $T = 303\text{ K}$.



a)



b)

Figure S6. a) $[\text{CuG}]^+$ peak and b) theoretical plot.

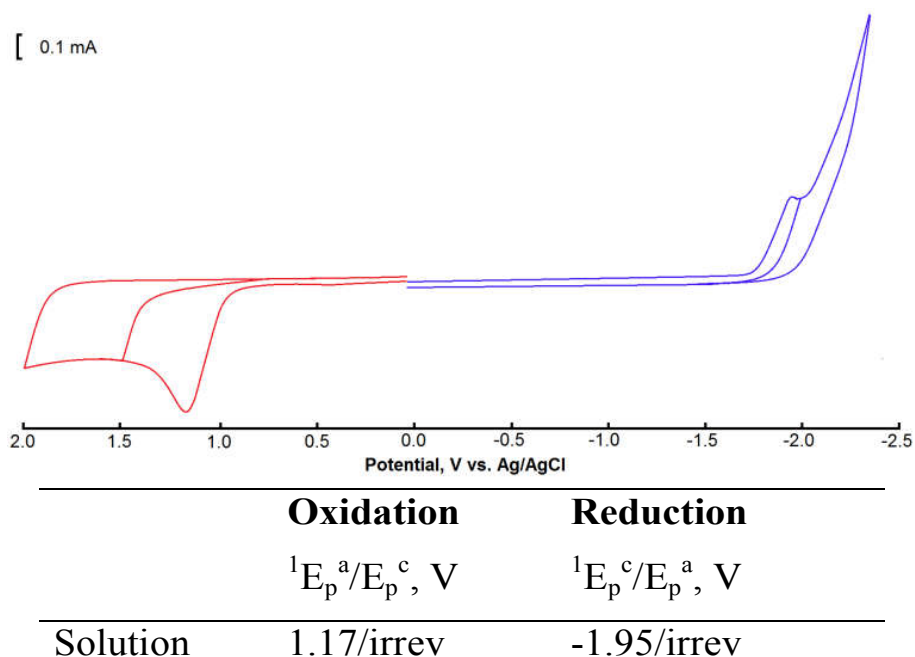


Figure S7. Cyclic voltammograms and electrochemical data of **HL** (5 mM). Conditions: CH₃CN/0.1M Bu₄NBF₄, working electrode: GC; RE: Ag/AgCl.

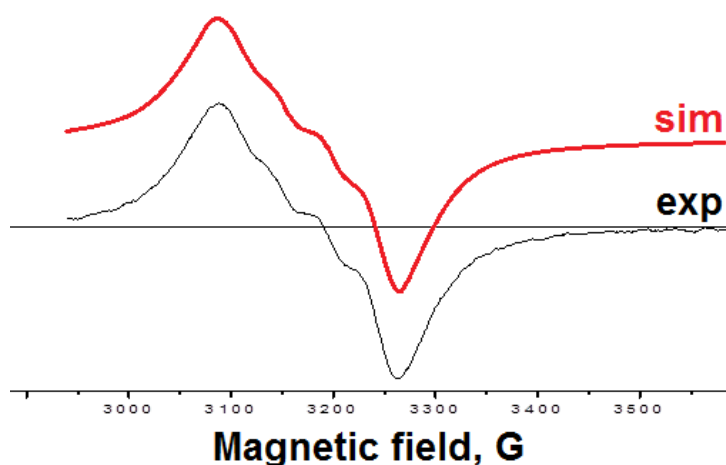


Figure S8. ESR spectra recorded during electrooxidation of **1**: 0.5mM in 5mL of CH₃CN at 25°C at the 0.7-1.3V vs. Ag/AgCl.