Supplementary Materials: Stepwise Construction of Ru(II)-Center Containing Chiral Thiourea Ligand on Graphene Oxide: First Efficient, Reusable and Stable Catalyst for Asymmetric Transfer Hydrogenation of Ketones

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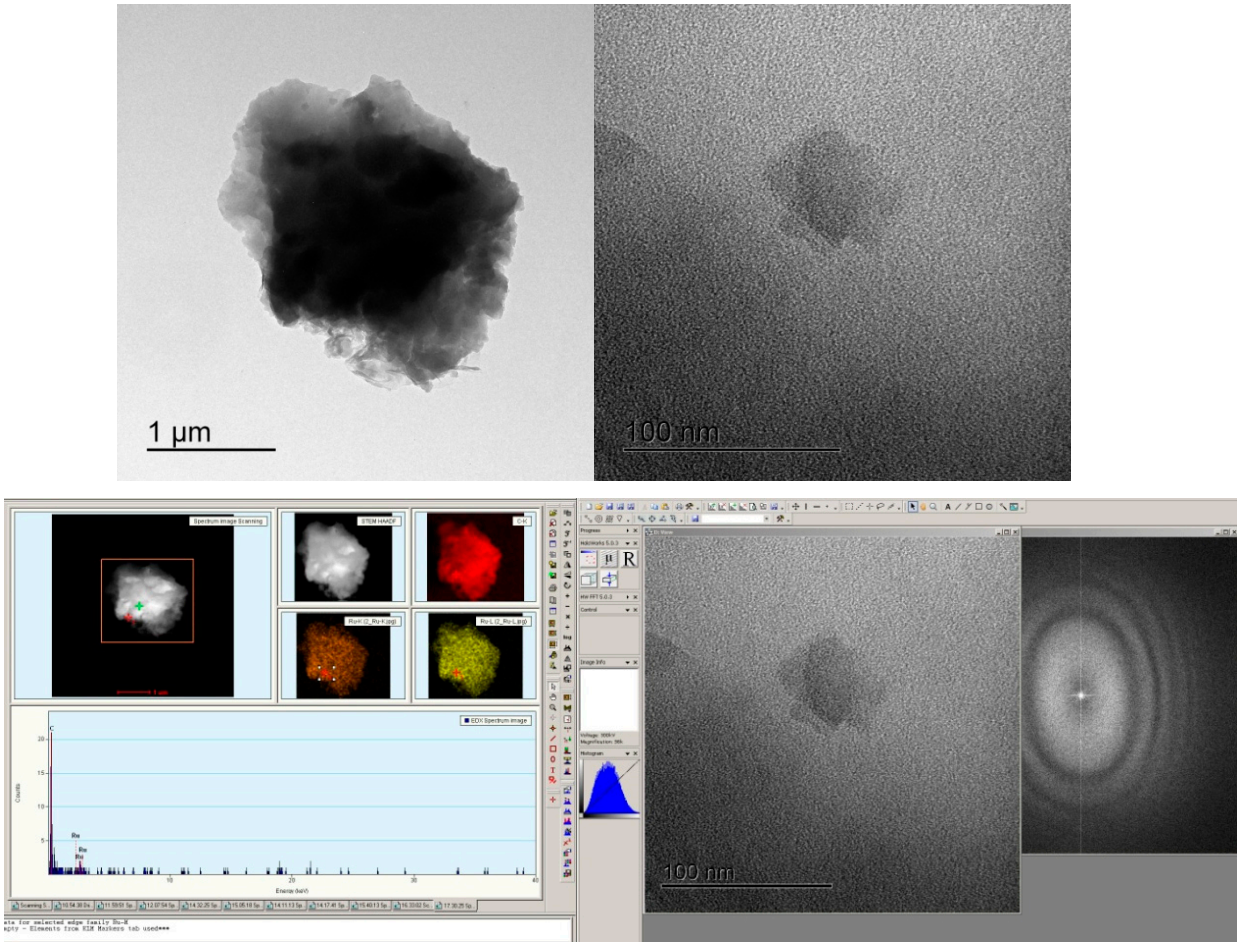


Figure S1. HRTEM images of G-CLRu(II) and the corresponding SAED pattern and elemental mapping.

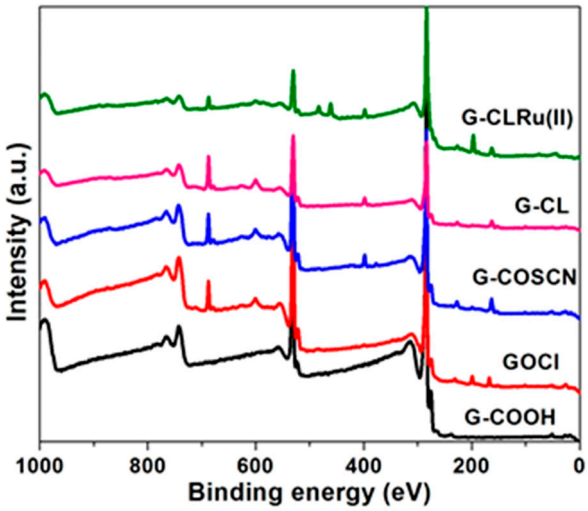


Figure S2. XPS survey spectra of G-COOH, G-COCl, G-CONCS, G-Cl and G-CLRu(II).

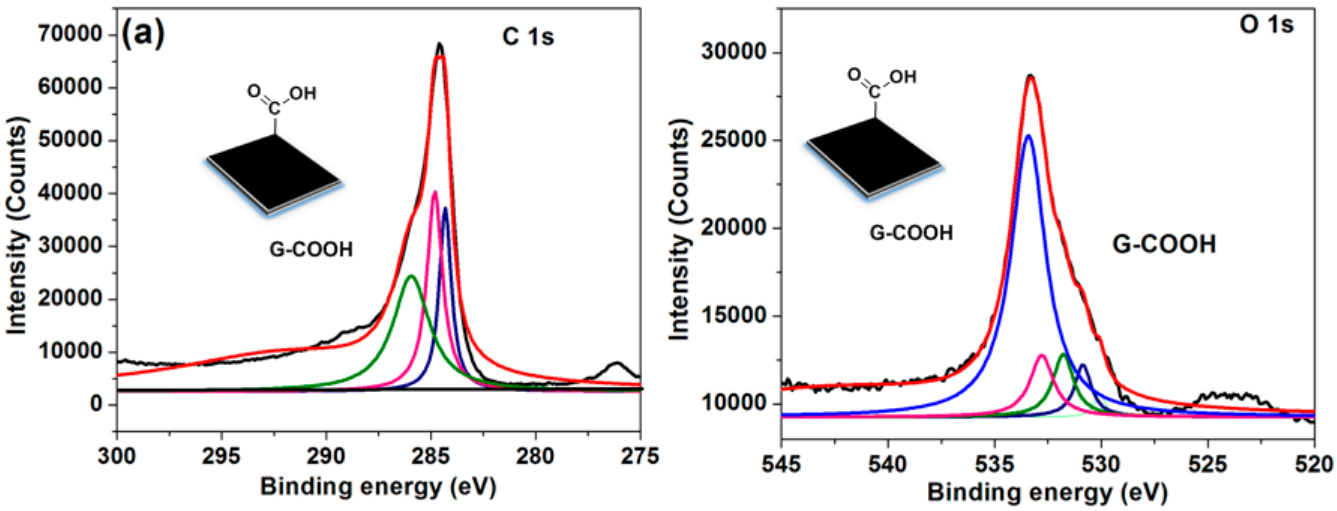


Figure S3. Deconvoluted XPS spectra of (**a**) C 1s and (**b**) O 1s peaks of G-COOH.

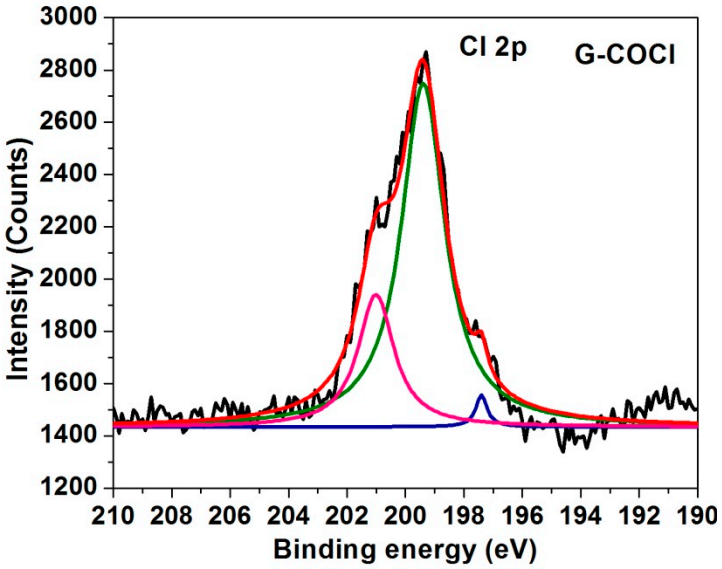


Figure S4. Deconvoluted XPS spectrum of Cl 2p of G-COCl.

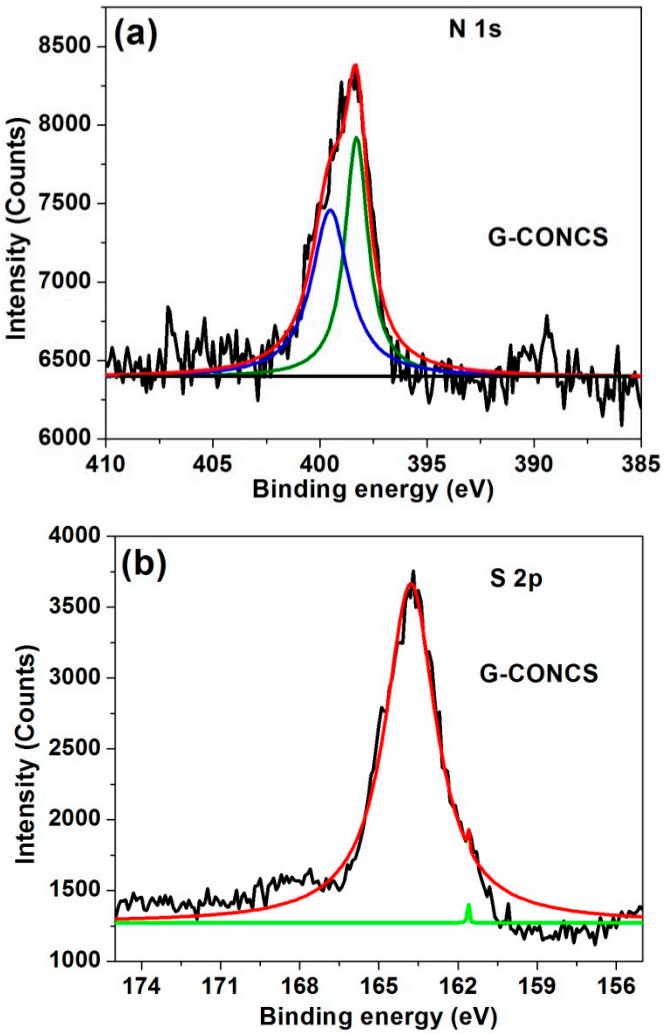


Figure S5. Deconvoluted XPS spectrum of (**a**) N 1s and (**b**) S 2p of G-CONCS.

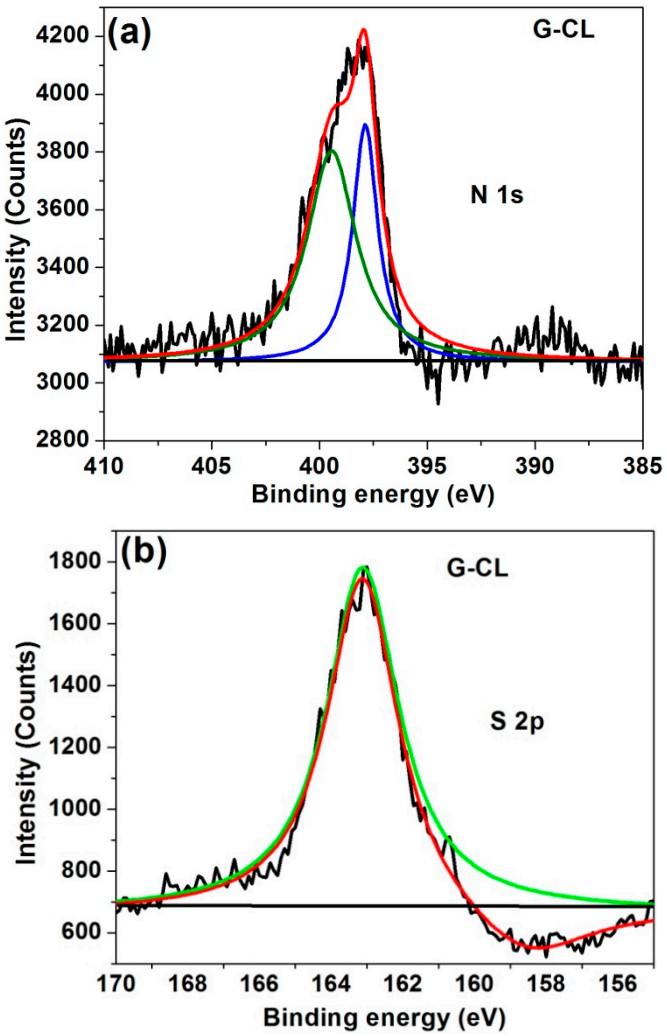


Figure S6. Deconvoluted XPS spectrum of (a) N 1s and (b) S 2p of G-CL.

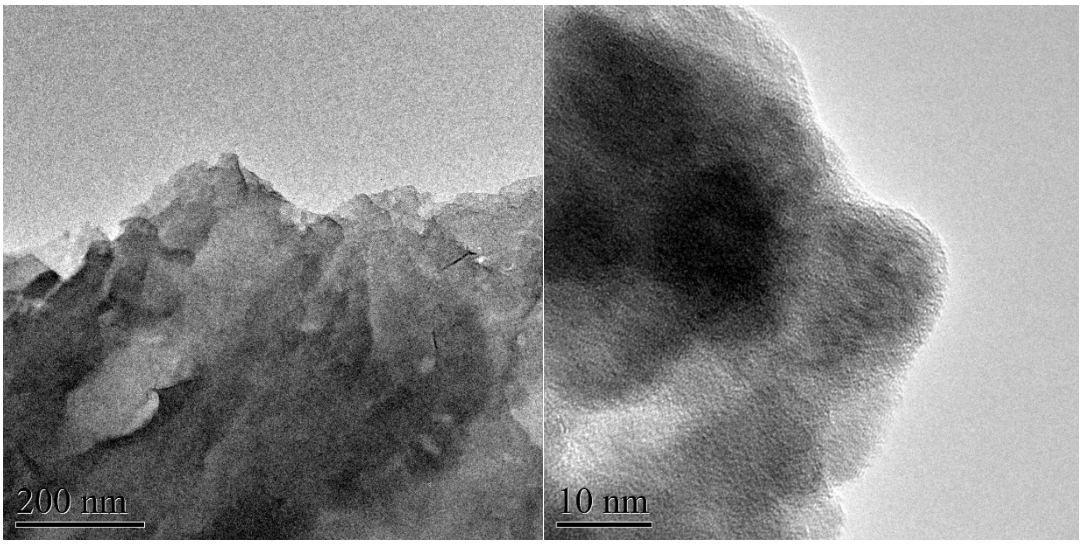
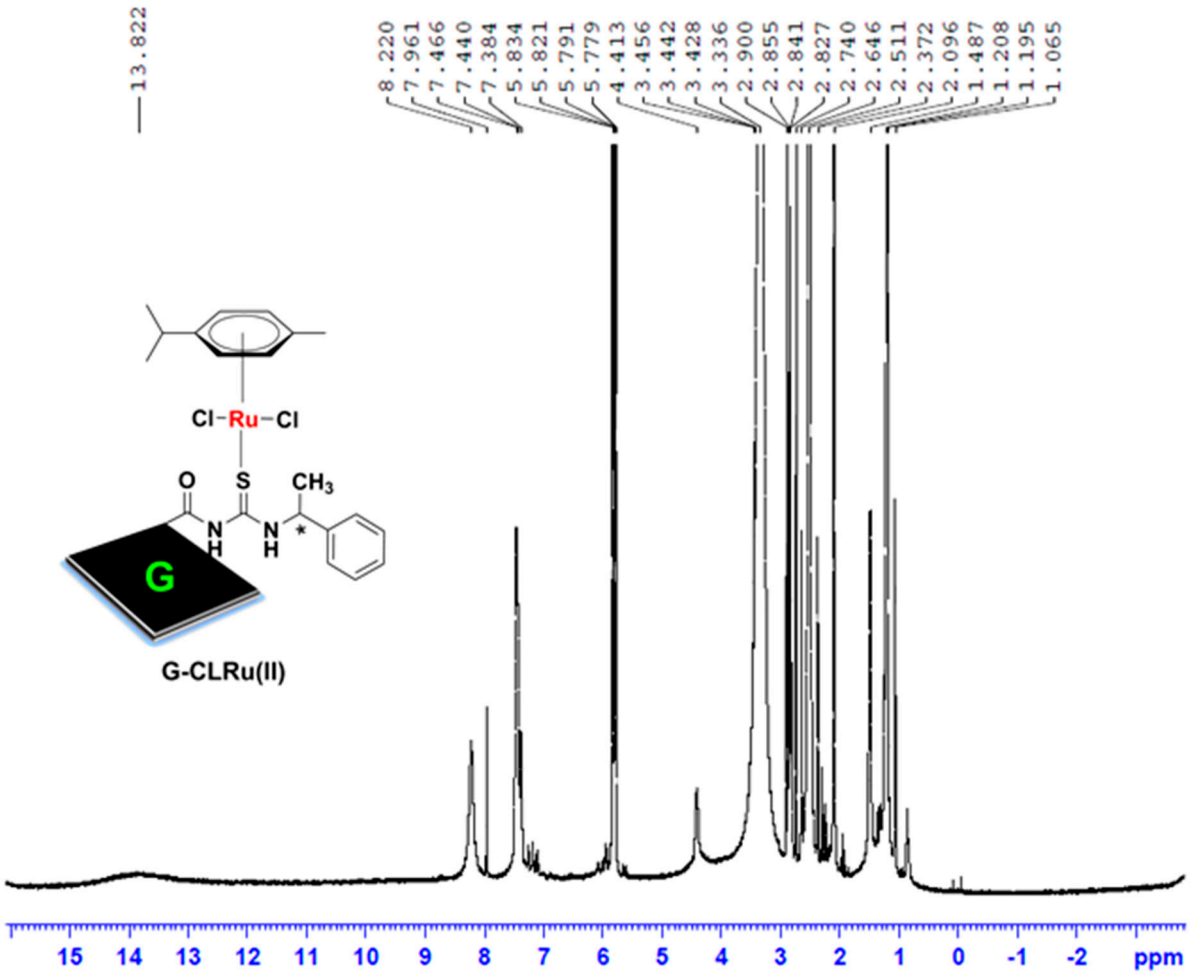


Figure S7. HRTEM images of G-CLRu(II) after use.



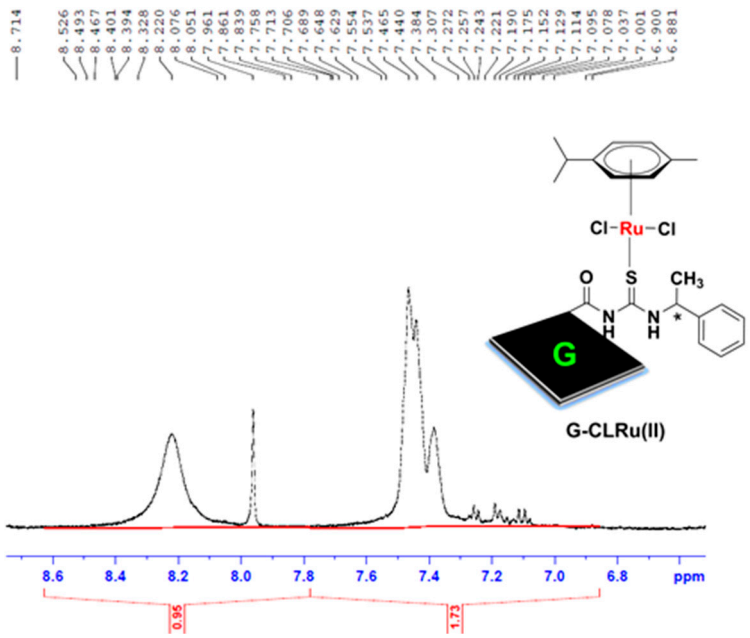


Figure S8. [1]H NMR spectra of G-CLRu(II).

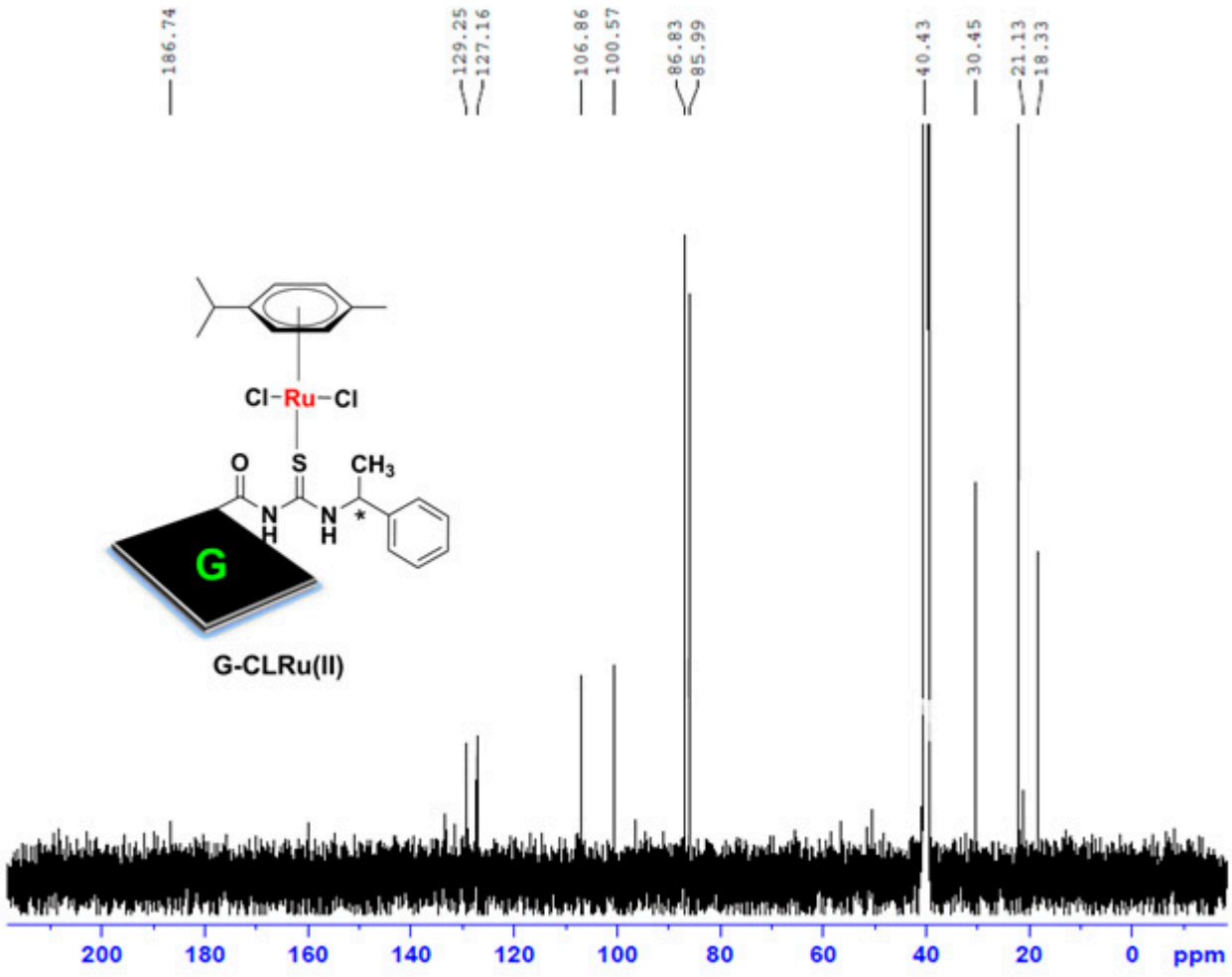


Figure S9. [13]C NMR spectra of G-CLRu(II).

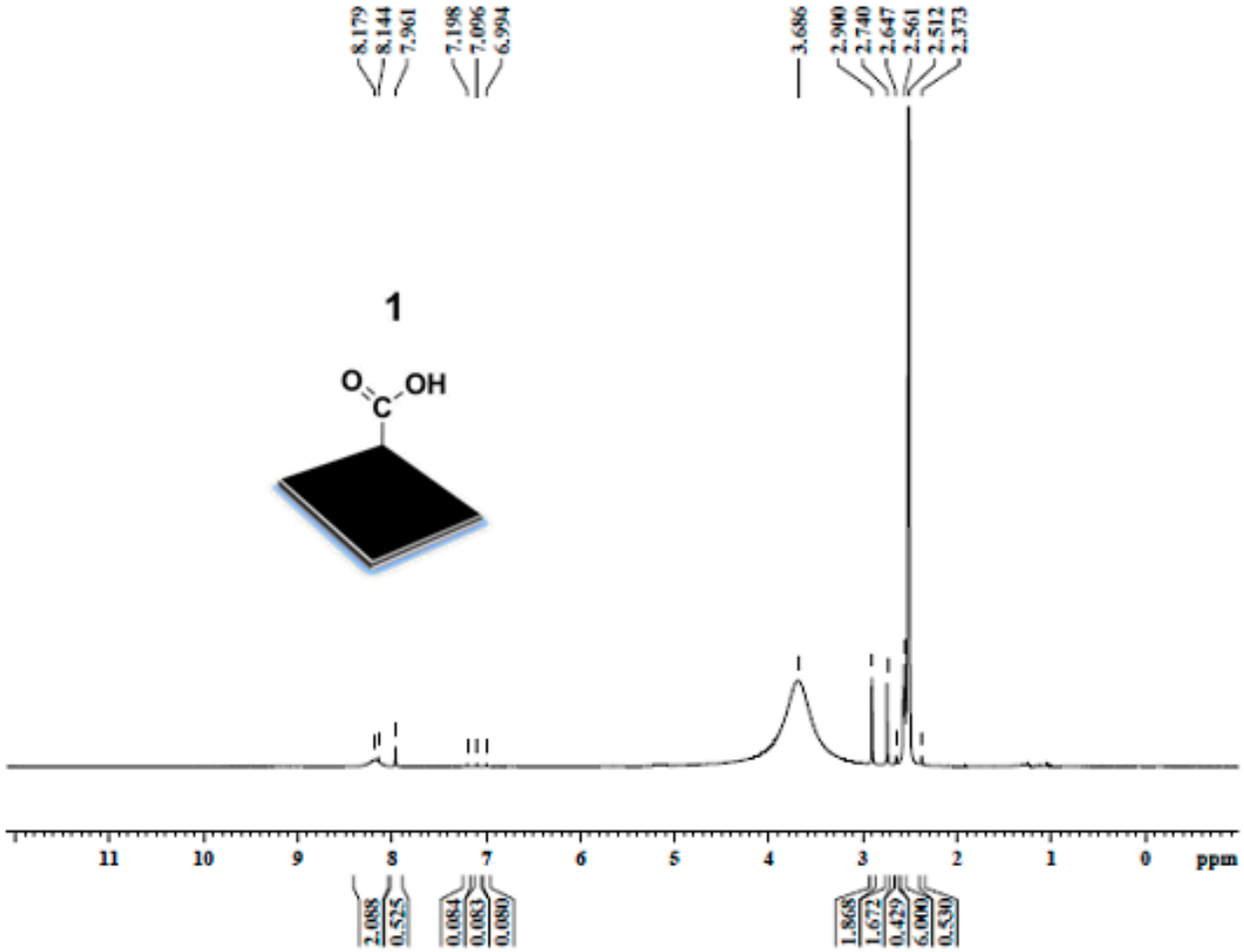


Figure S10. ^{1}H NMR spectra of G-COOH.

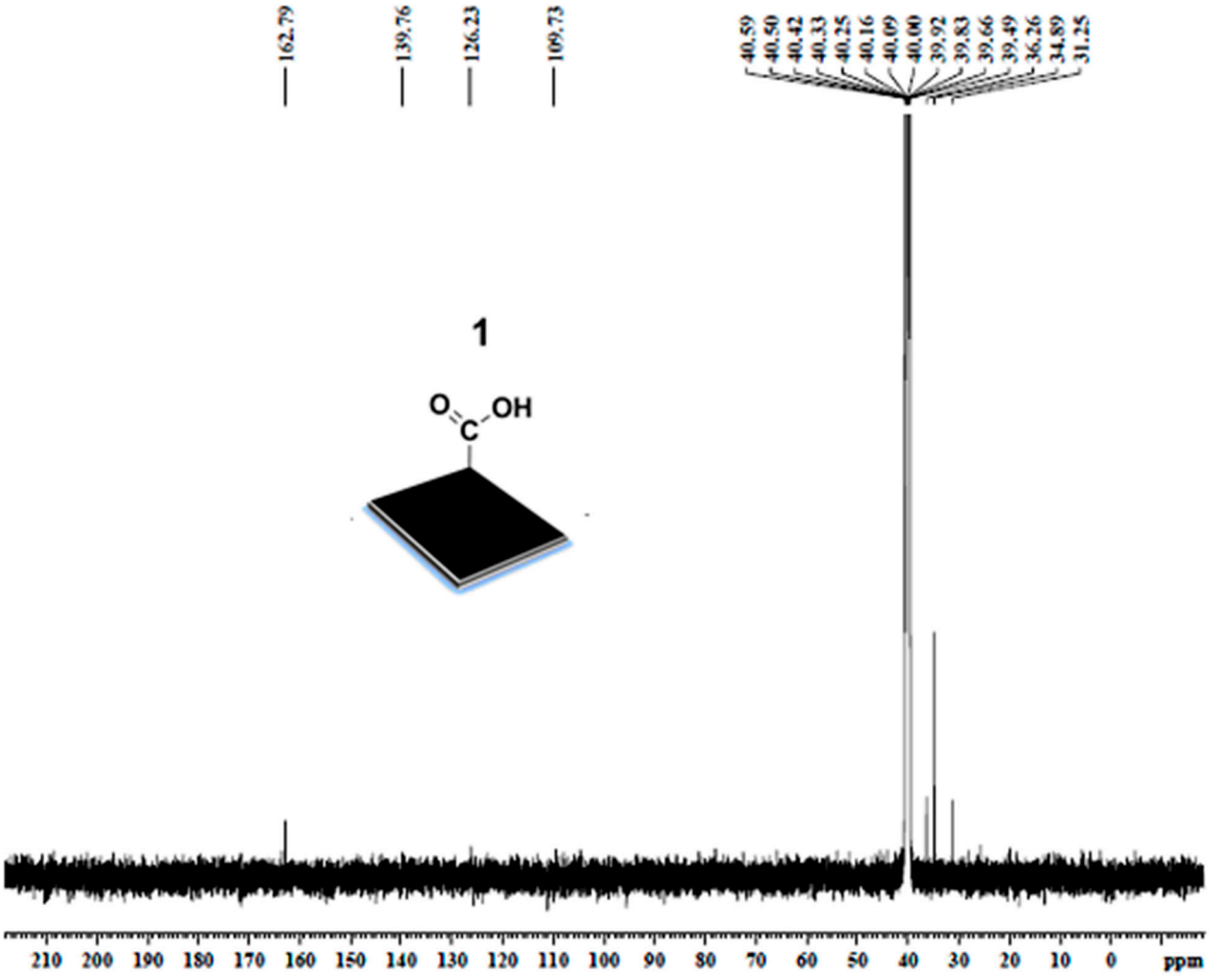


Figure S11. ^{13}C NMR spectra of G-COOH.

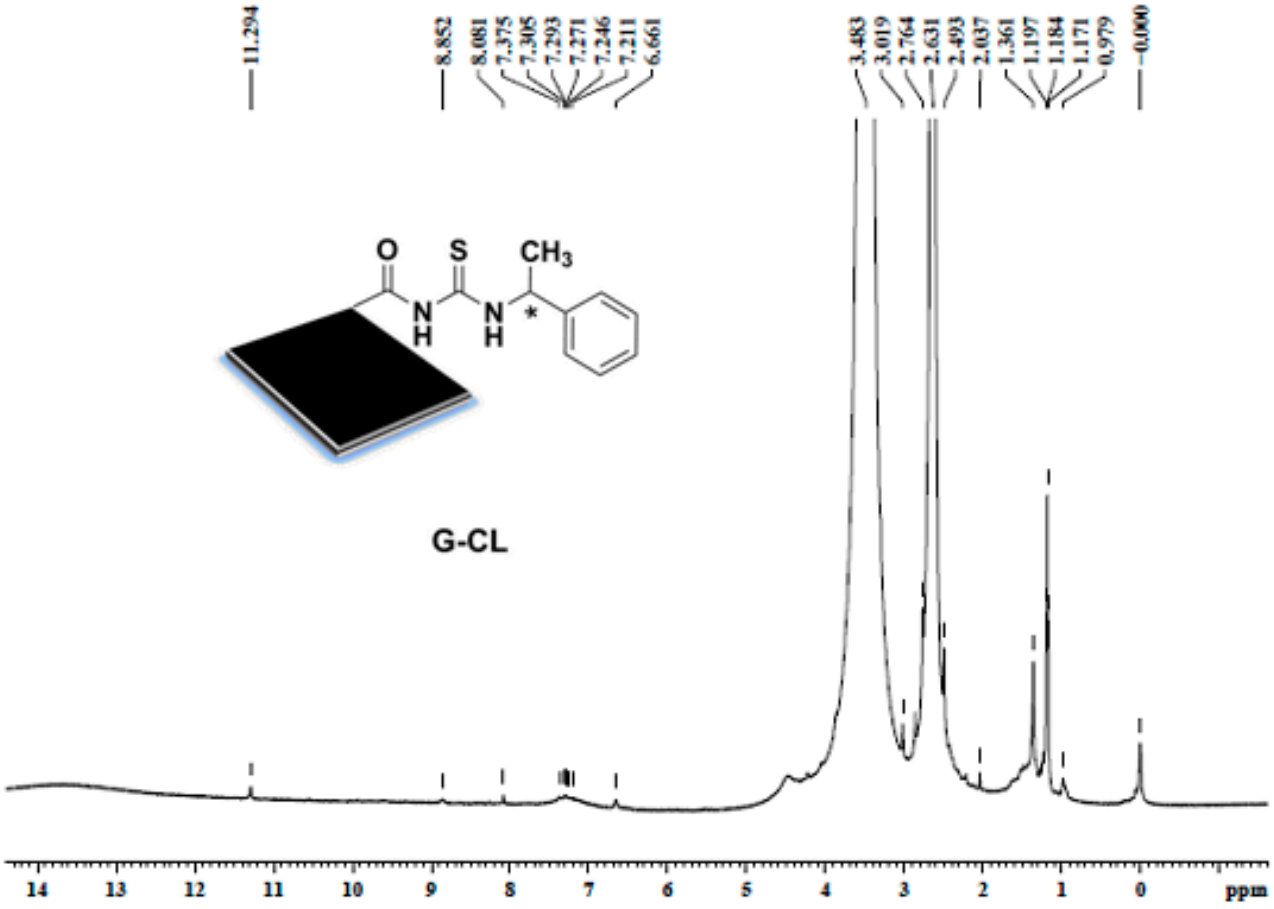


Figure S12. ^{1}H NMR spectra of G-CL.

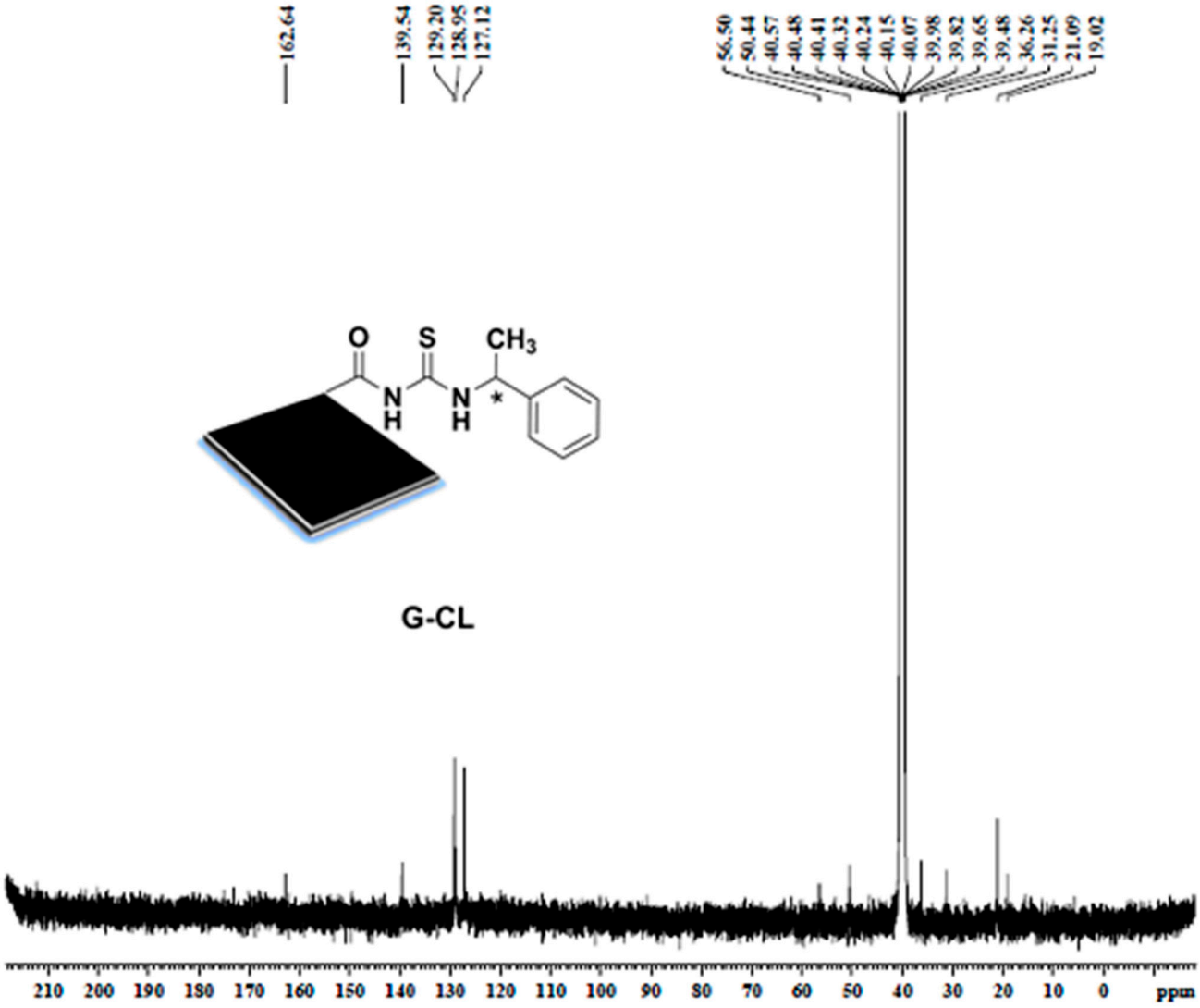


Figure S13. ^{13}C NMR spectra of G-CL.

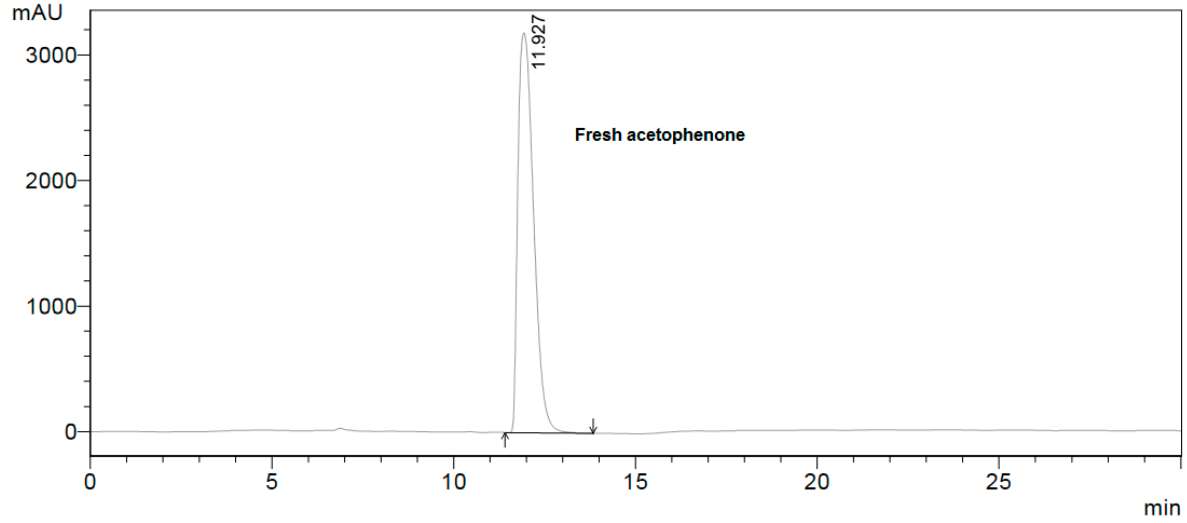


Figure S14. HPCL chromatogram of acetophenone.

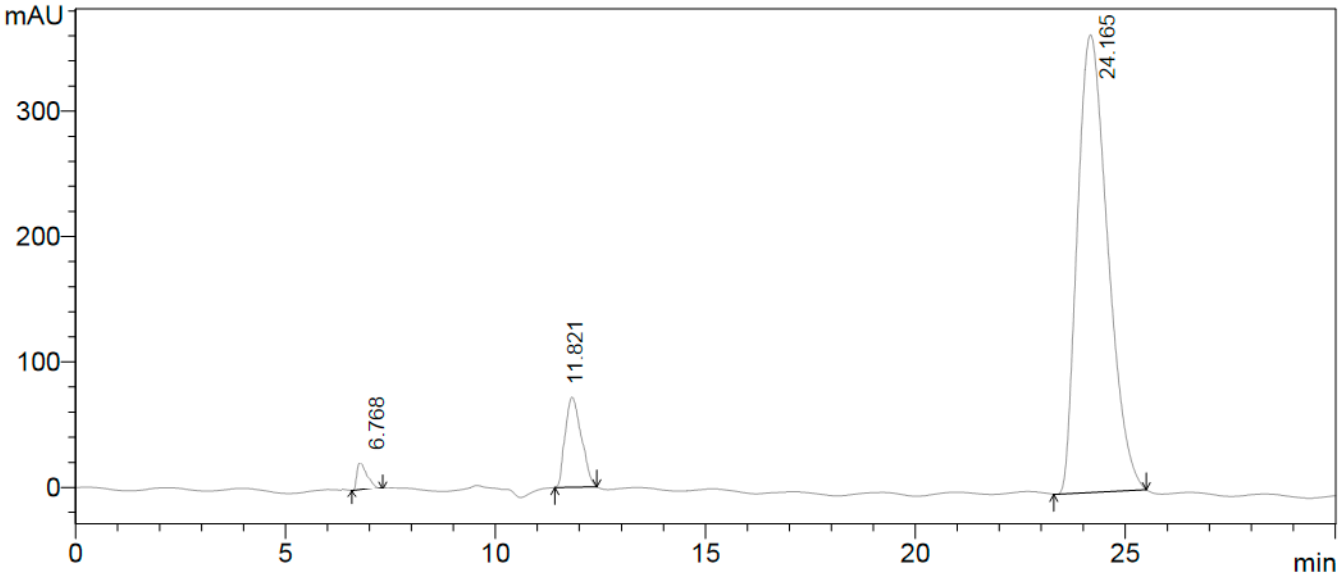


Figure S15. HPCL chromatogram of acetophenone after catalyzed by G-CLRu(II) under optimized reaction conditions.