

Electronic Supplementary Information

**Base-iodine-promoted metal-catalyst-free reactions of [60]fullerene
with β -keto esters for selective formation of [60]fullerene derivatives**

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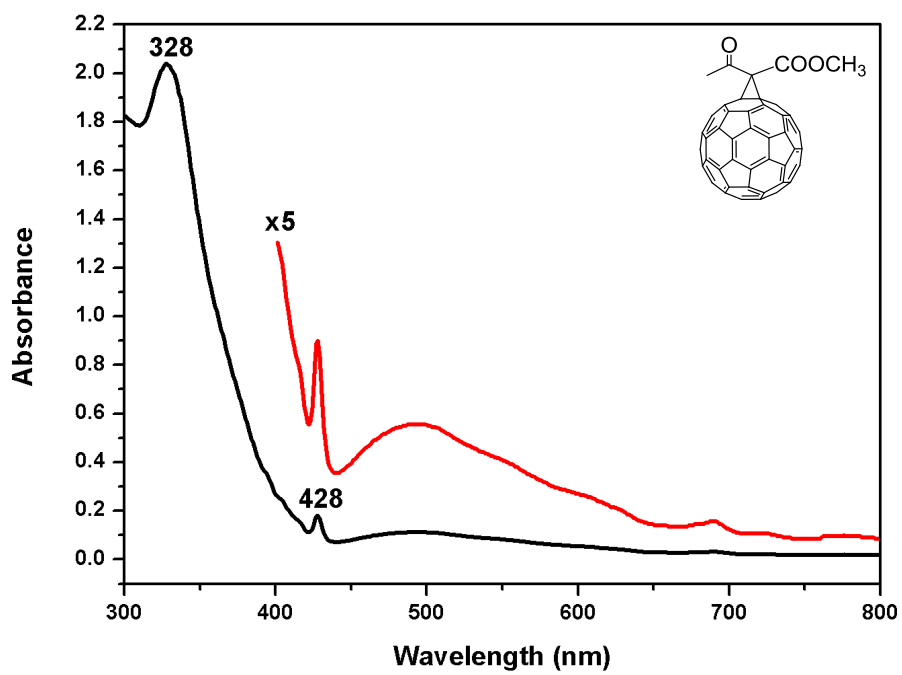


Figure S1. UV-visible spectrum of compound **2a** in toluene.

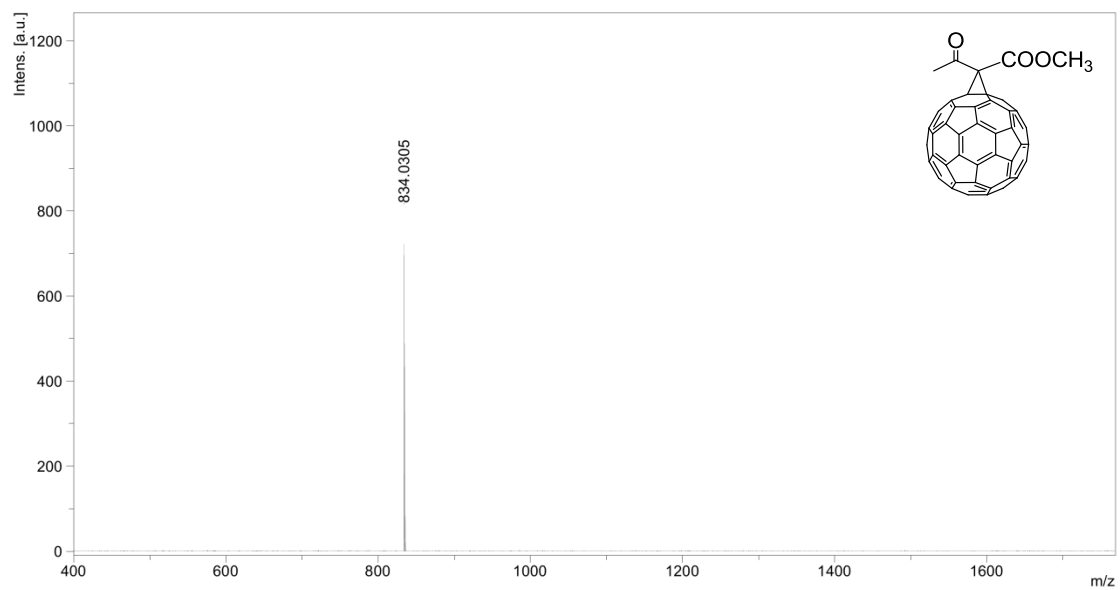


Figure S2. MALDI-TOF MS of compound **2a**

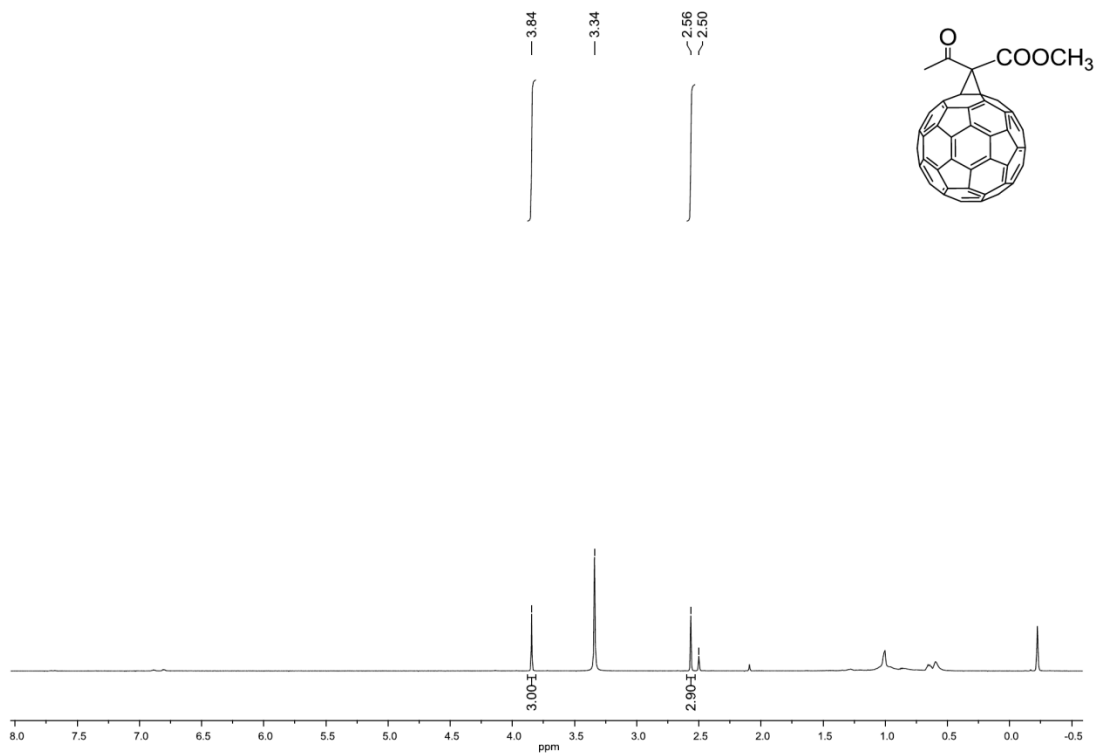


Figure S3. ¹H NMR spectrum (600 MHz) of compound **2a** recorded in CS₂ with DMSO-*d*₆ as the external lock. The resonances at 2.5 ppm and 3.3 ppm are due to the DMSO solvent and H₂O in DMSO respectively.

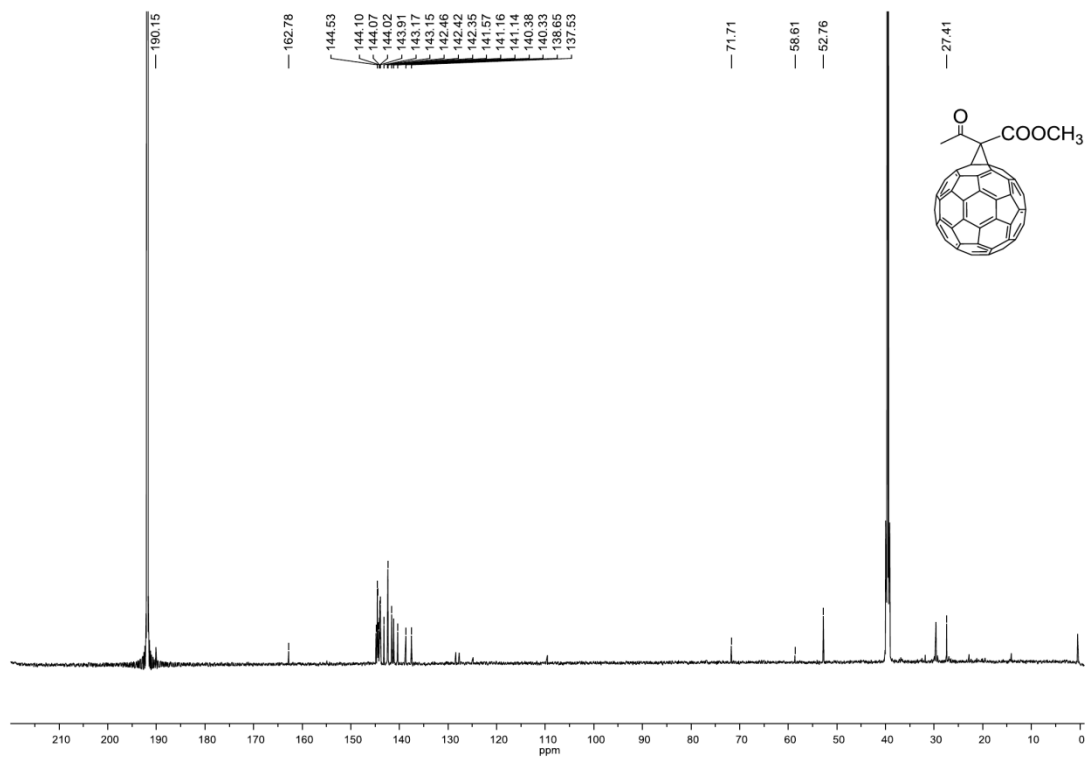


Figure S4. ^{13}C NMR spectrum (151 MHz) of compound **2a** recorded in CS_2 with $\text{DMSO-}d_6$ as the external lock.

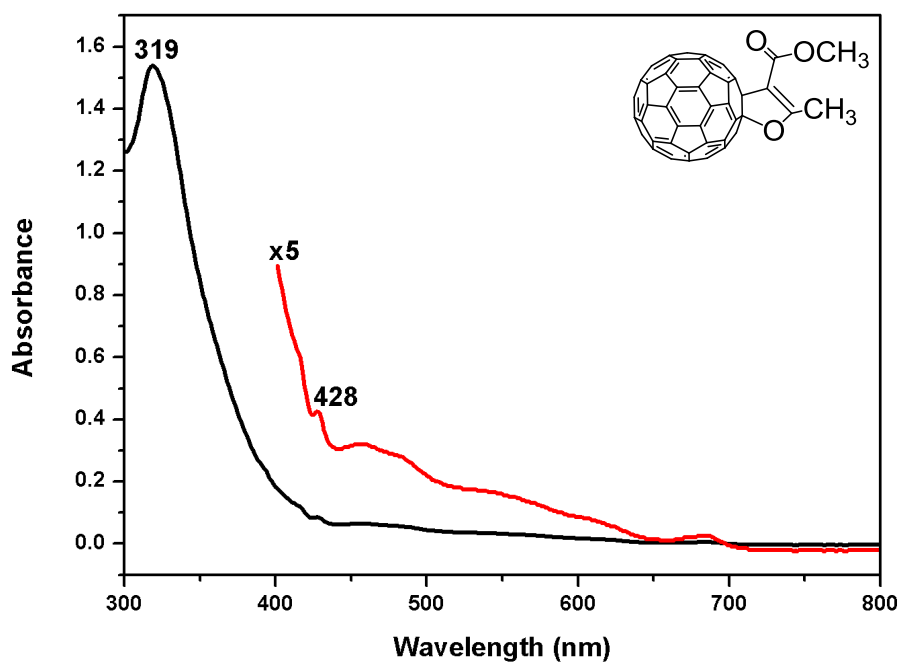


Figure S5. UV-visible spectrum of compound **3a** in toluene.

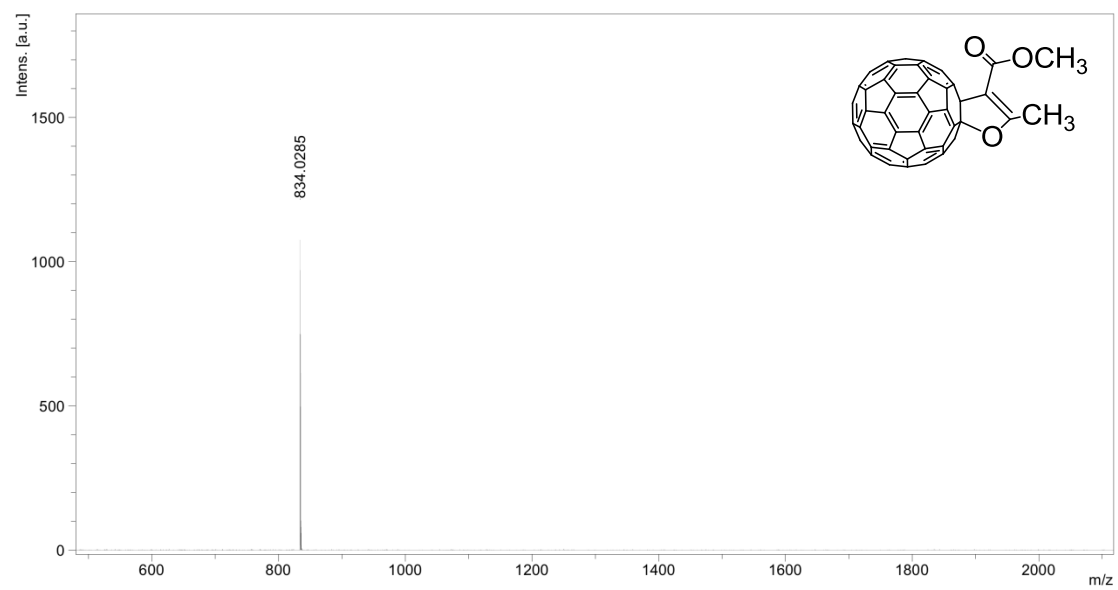


Figure S6. MALDI-TOF MS of compound **3a**

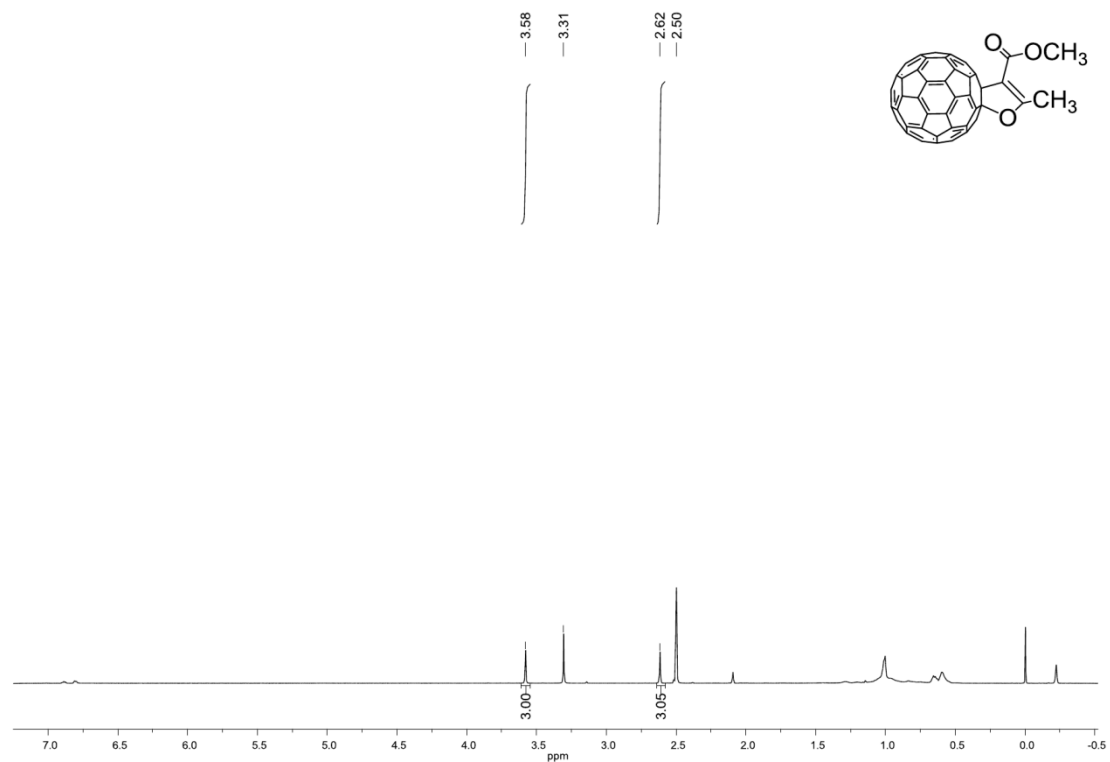


Figure S7. ^1H NMR spectrum (600 MHz) of compound **3a** recorded in CS_2 with $\text{DMSO}-d_6$ as the external lock. The resonances at 2.5 ppm and 3.3 ppm are due to the DMSO solvent and H_2O in DMSO respectively.

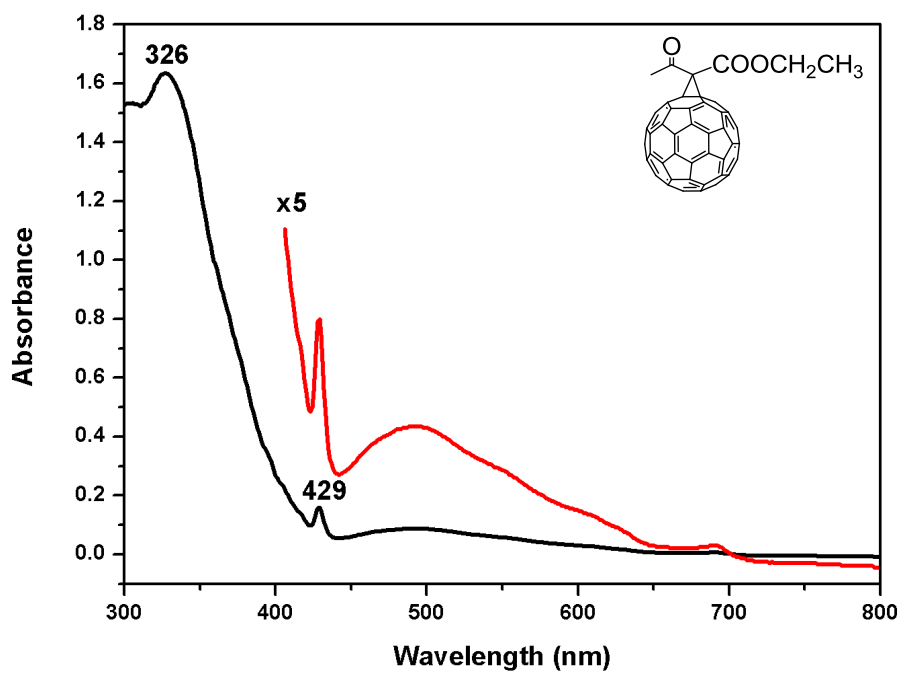


Figure S9. UV-visible spectrum of compound **2b** in toluene.

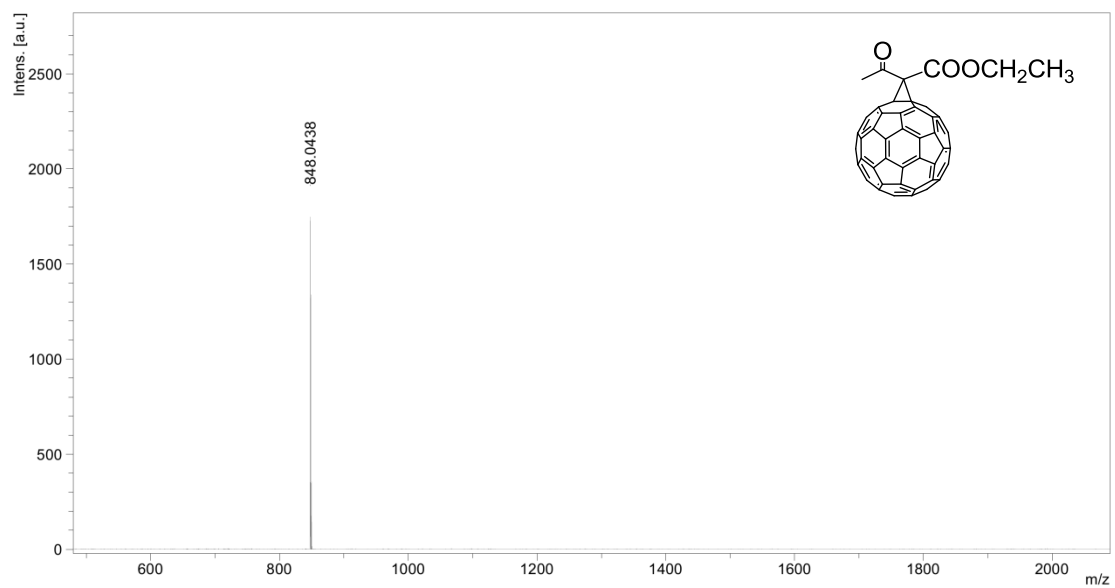


Figure S10. MALDI-TOF MS of compound **2b**

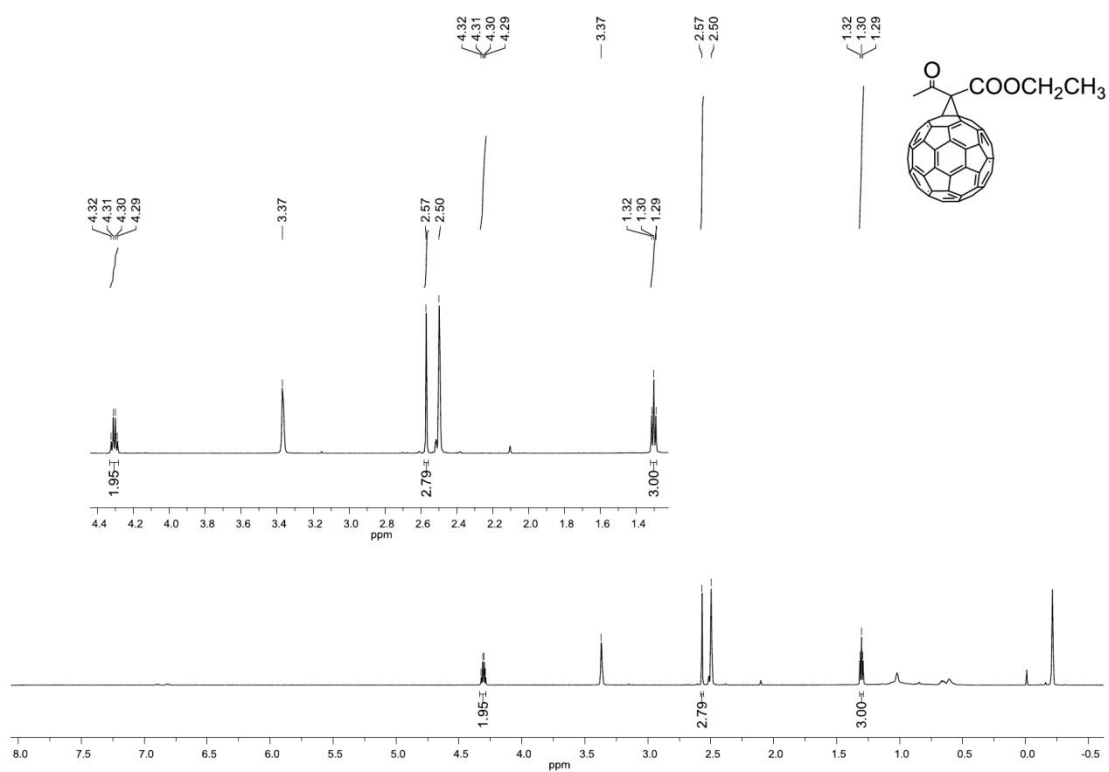


Figure S11. ¹H NMR spectrum (600 MHz) of compound **2b** recorded in CS₂ with DMSO-*d*₆ as the external lock. The resonances at 2.5 ppm and 3.3 ppm are due to the DMSO solvent and H₂O in DMSO respectively.

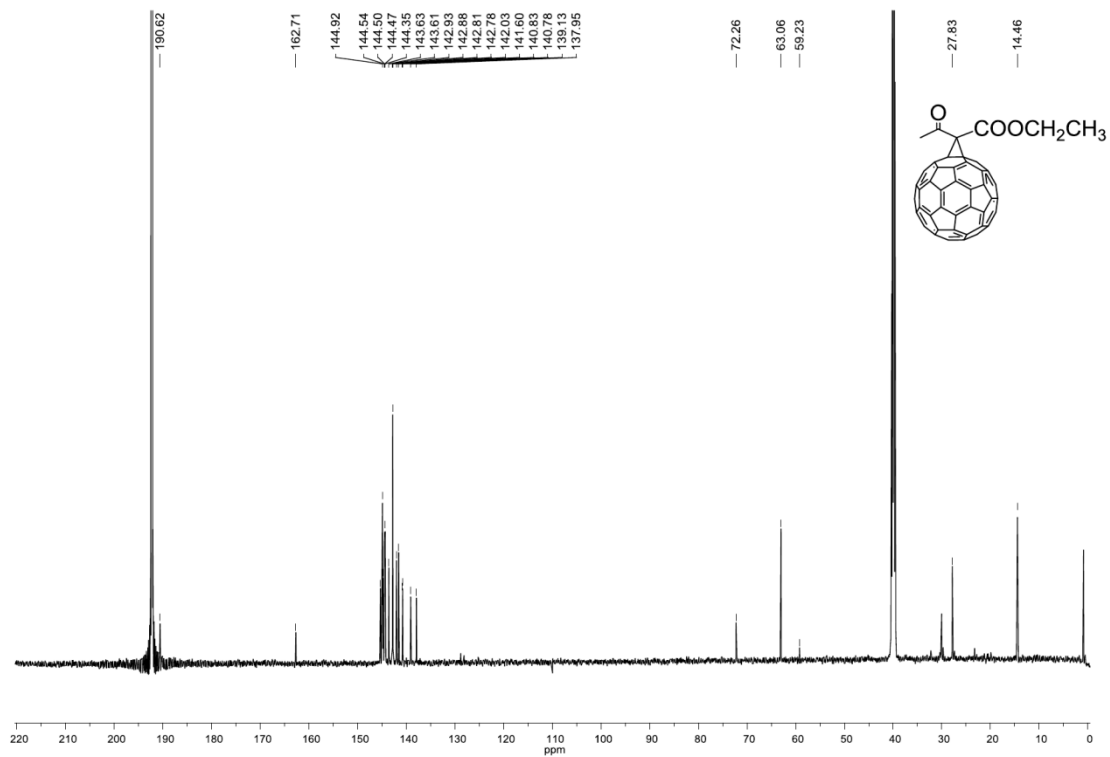


Figure S12. ¹³C NMR spectrum (151 MHz) of compound **2b** recorded in CS₂ with DMSO-*d*₆ as the external lock.

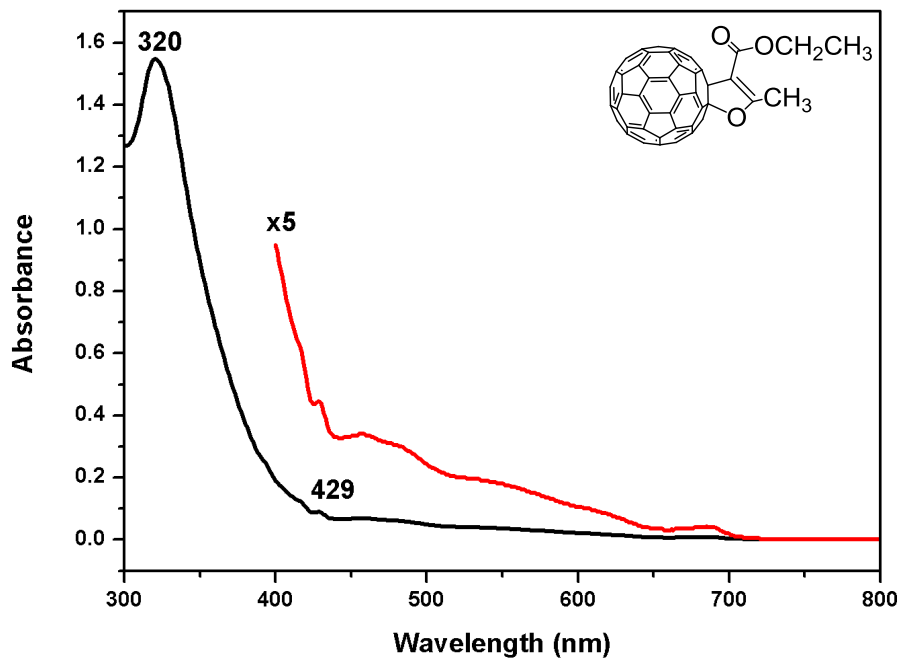


Figure S13. UV-visible spectrum of compound **3b** in toluene.

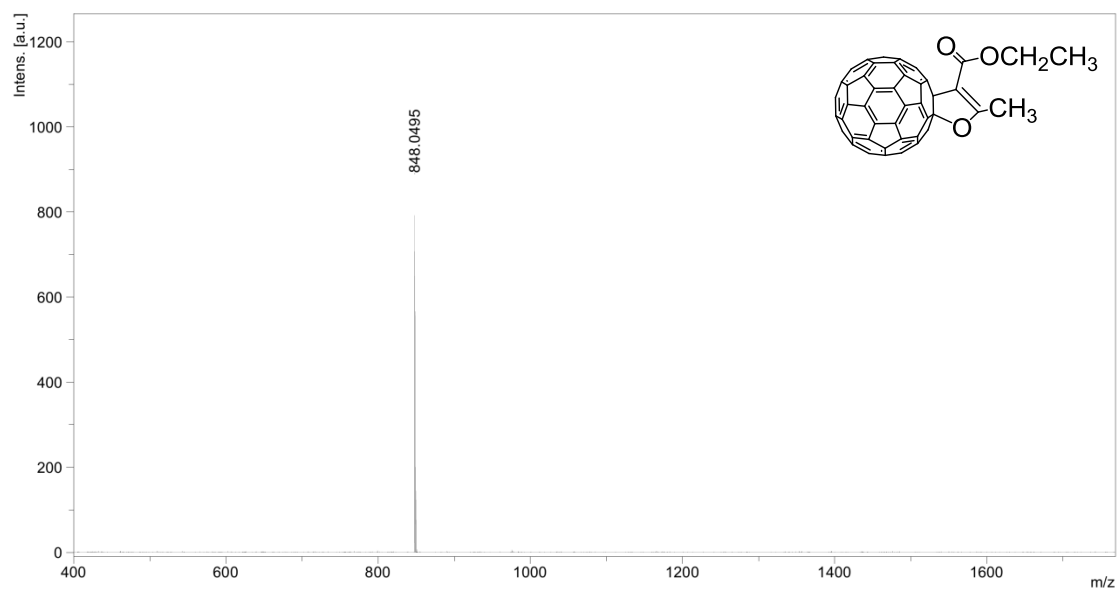


Figure S14. MALDI-TOF MS of compound **3b**

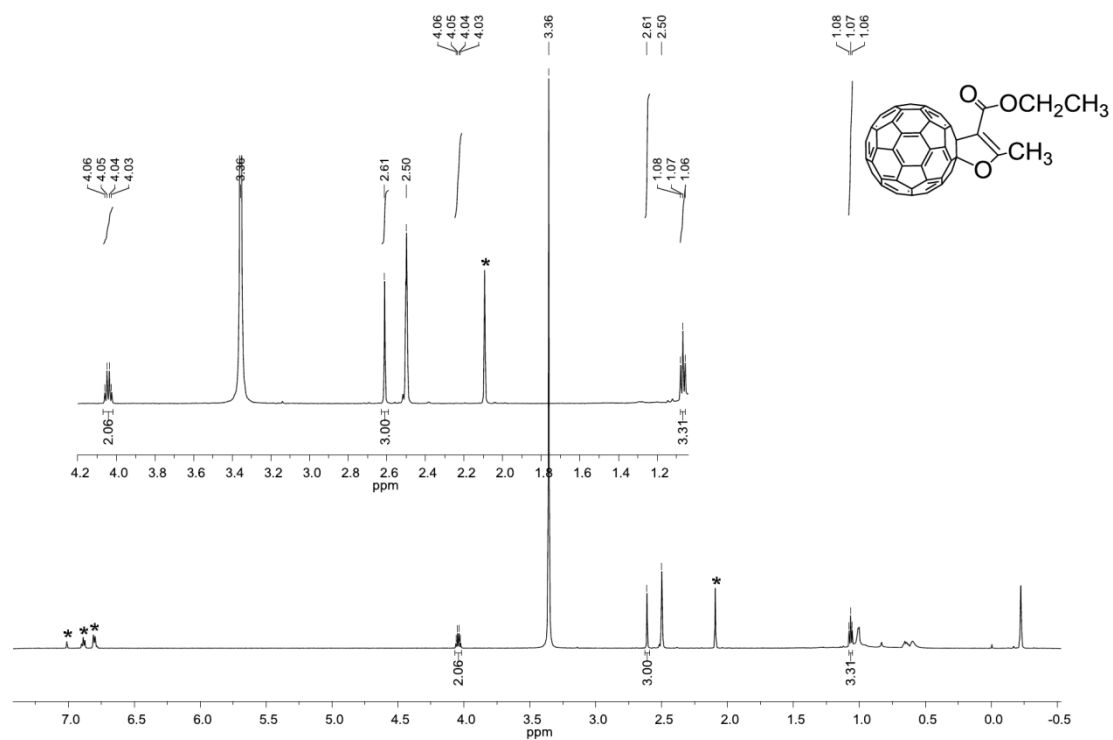


Figure S15. ¹H NMR spectrum (600 MHz) of compound **3b** recorded in CS₂ with DMSO-*d*₆ as the external lock. The resonances at 2.5 ppm and 3.3 ppm are due to the DMSO solvent and H₂O in DMSO respectively. The peaks labeled with asterisks belong to toluene residue in the sample.

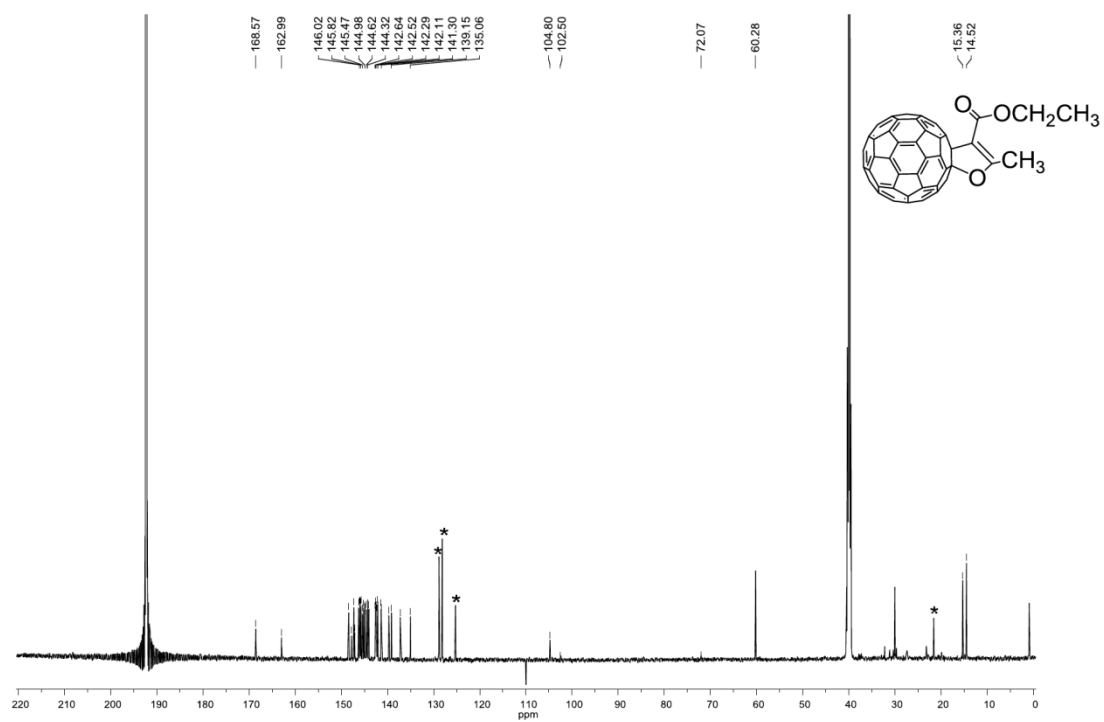


Figure S16. ^{13}C NMR spectrum (151 MHz) of compound **3b** recorded in CS_2 with $\text{DMSO-}d_6$ as the external lock. The peaks labeled with asterisks belong to toluene residue in the sample.

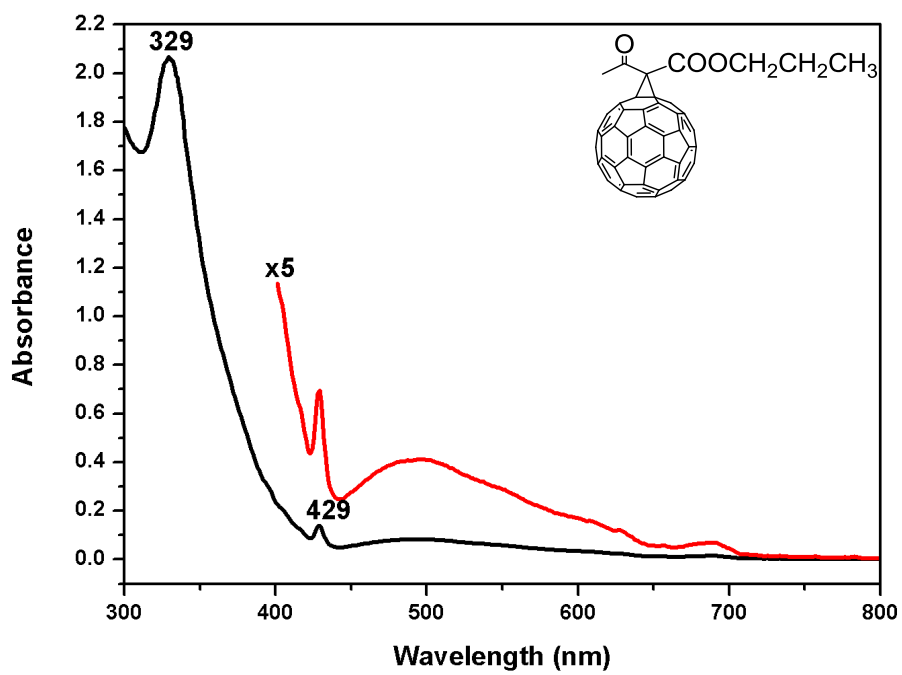


Figure S17. UV-visible spectrum of compound **2c** in toluene.

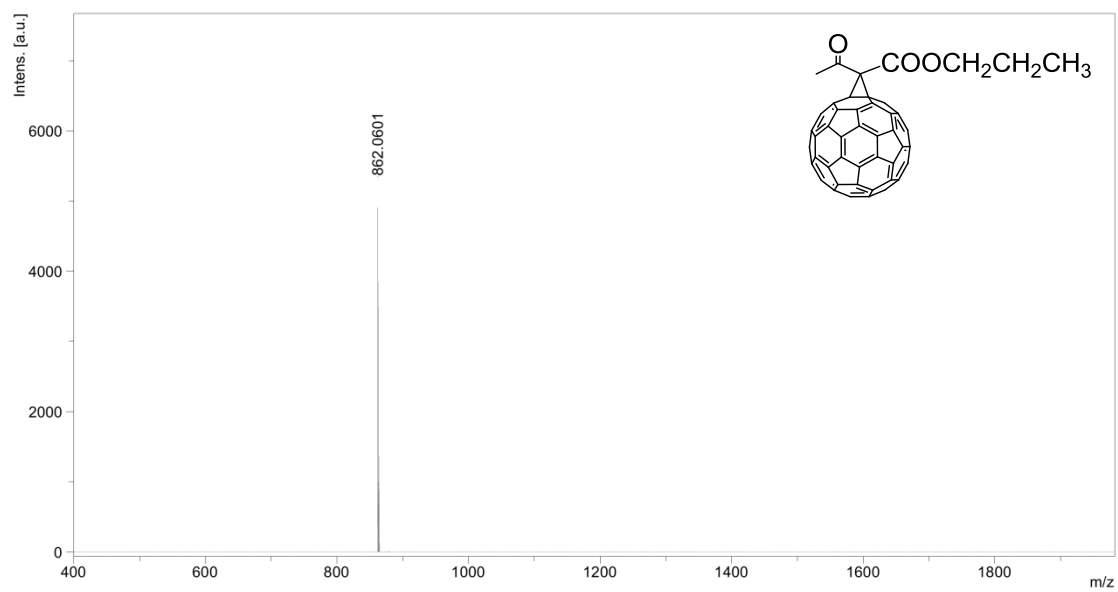


Figure S18. MALDI-TOF MS of compound **2c**

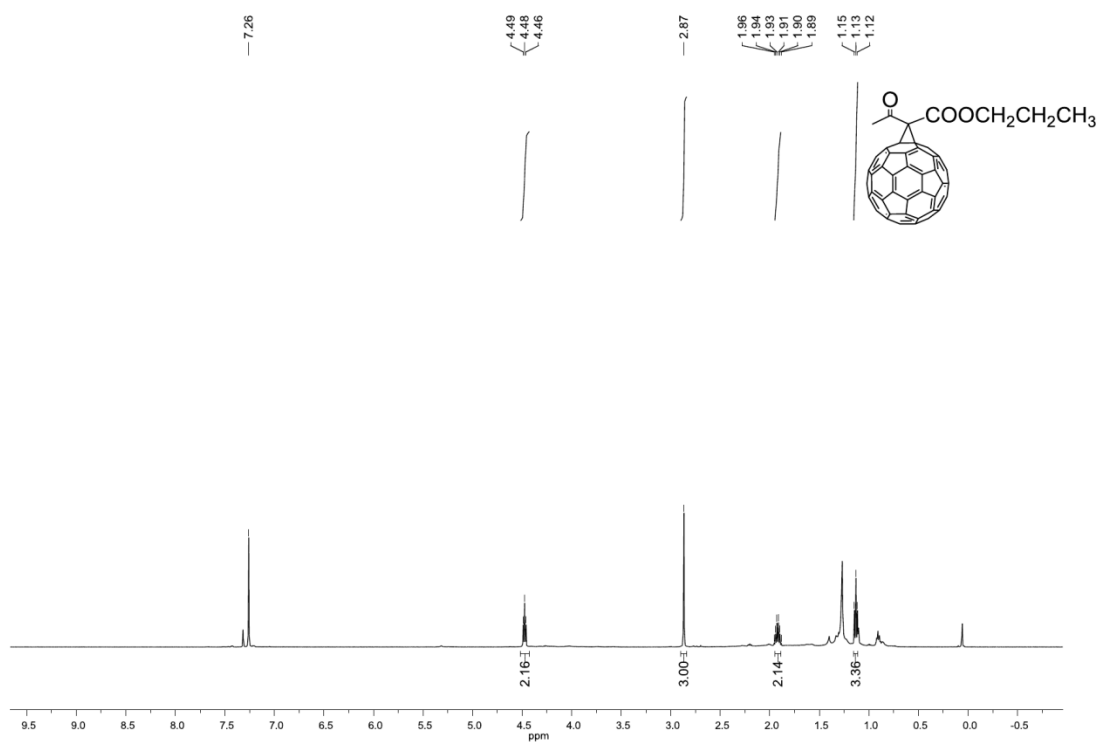


Figure S19. ^1H NMR spectrum (500 MHz) of compound **2c** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$). The resonance at 7.26 ppm is due to the CHCl_3 solvent.

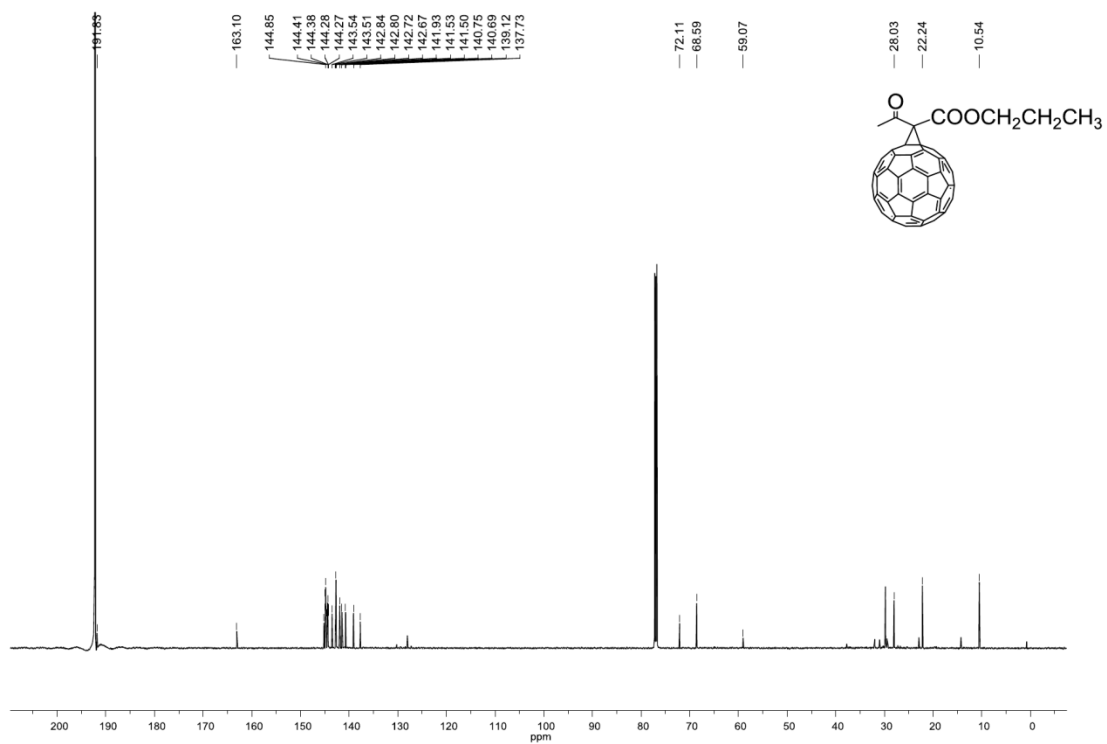


Figure S20. ^{13}C NMR spectrum (151 MHz) of compound **2c** recorded in $\text{CS}_2\text{-CDCl}_3$ (v/v=2:1).

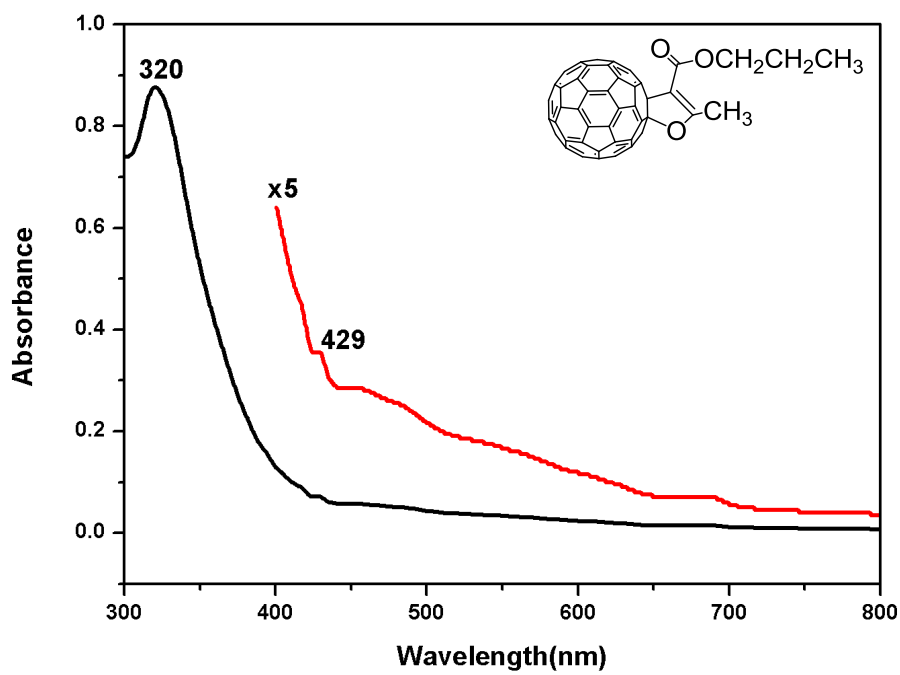


Figure S21. UV-visible spectrum of compound **3c** in toluene.

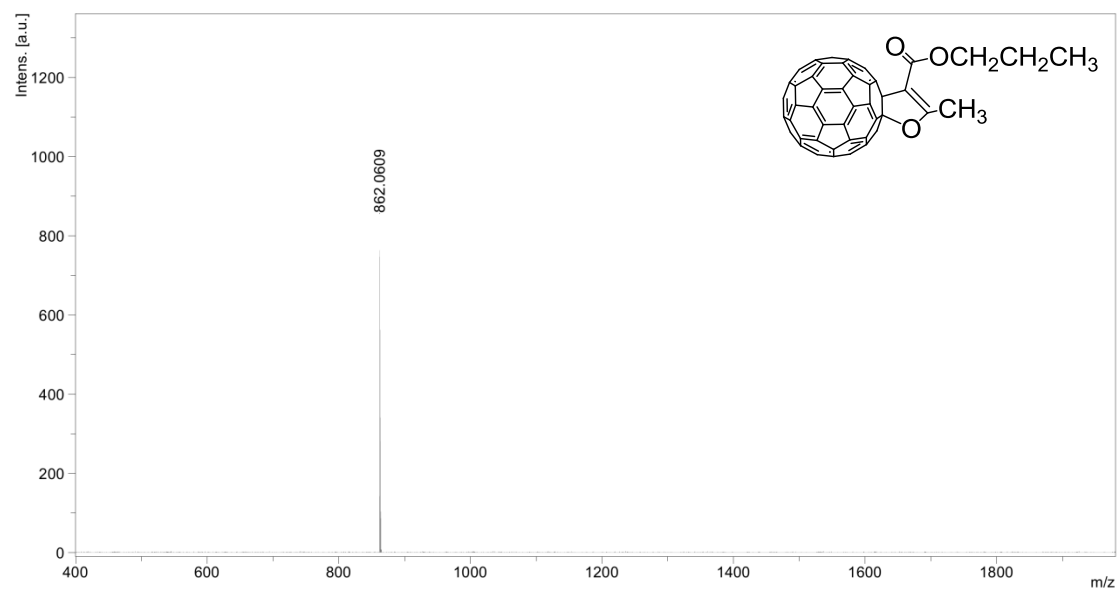


Figure S22. MALDI-TOF MS of compound **3c**

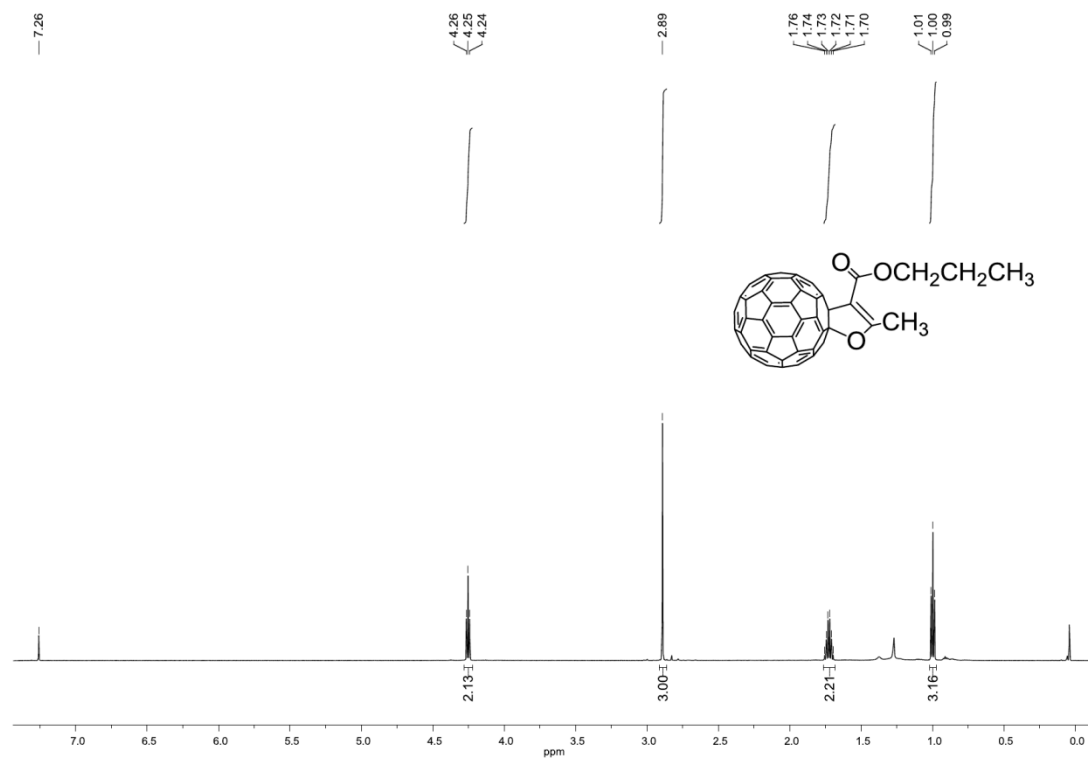


Figure S23. ^1H NMR spectrum (600 MHz) of compound **3c** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$). The resonance at 7.26 ppm is due to the CHCl_3 solvent.

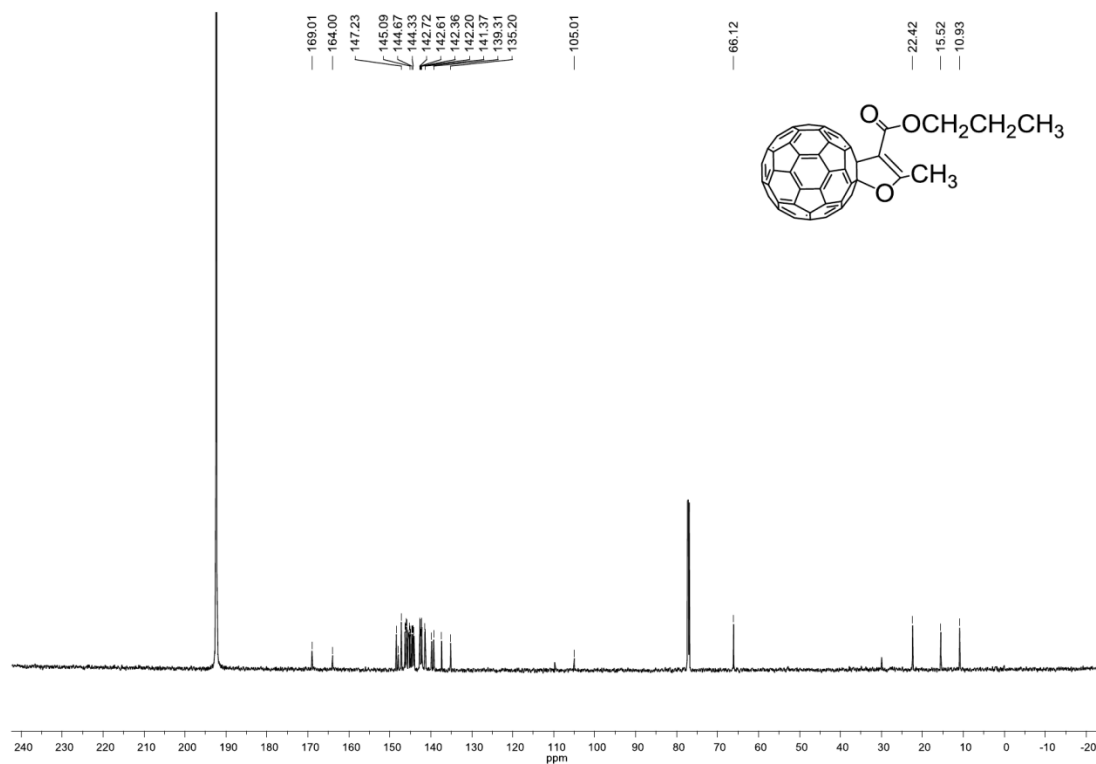


Figure S24. ¹³C NMR spectrum (151 MHz) of compound **3c** recorded in CS₂-CDCl₃ (v/v=2:1).

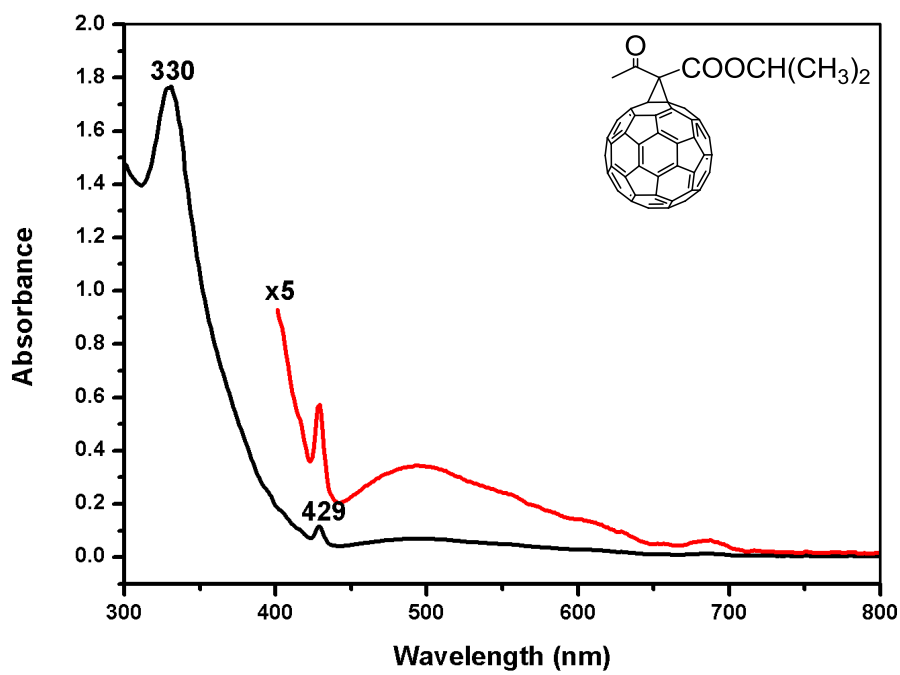


Figure S25. UV-visible spectrum of compound **2d** in toluene.

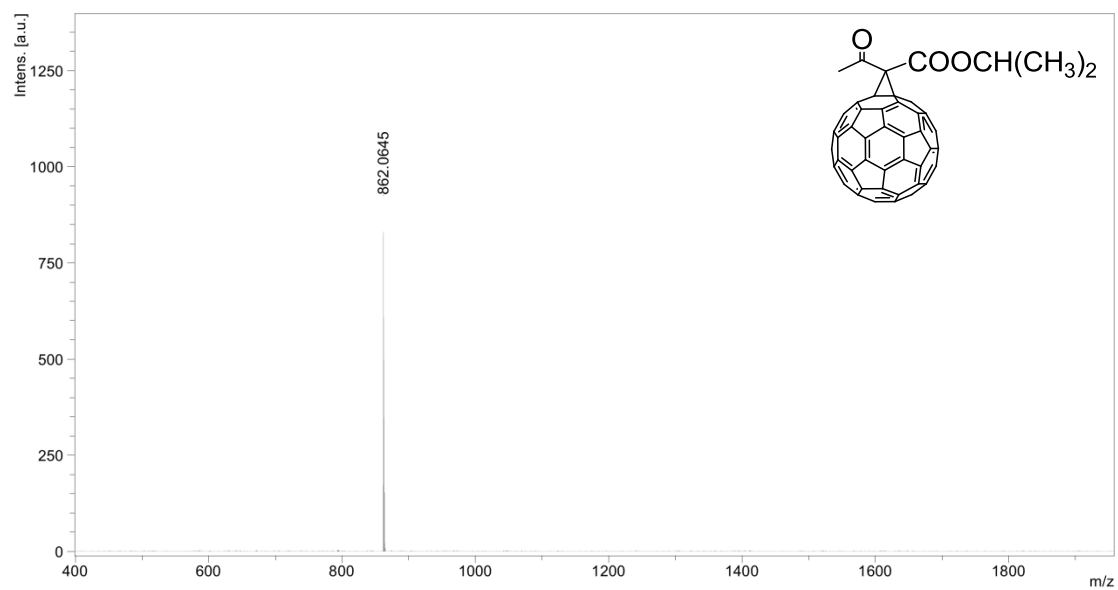


Figure S26. MALDI-TOF MS of compound **2d**

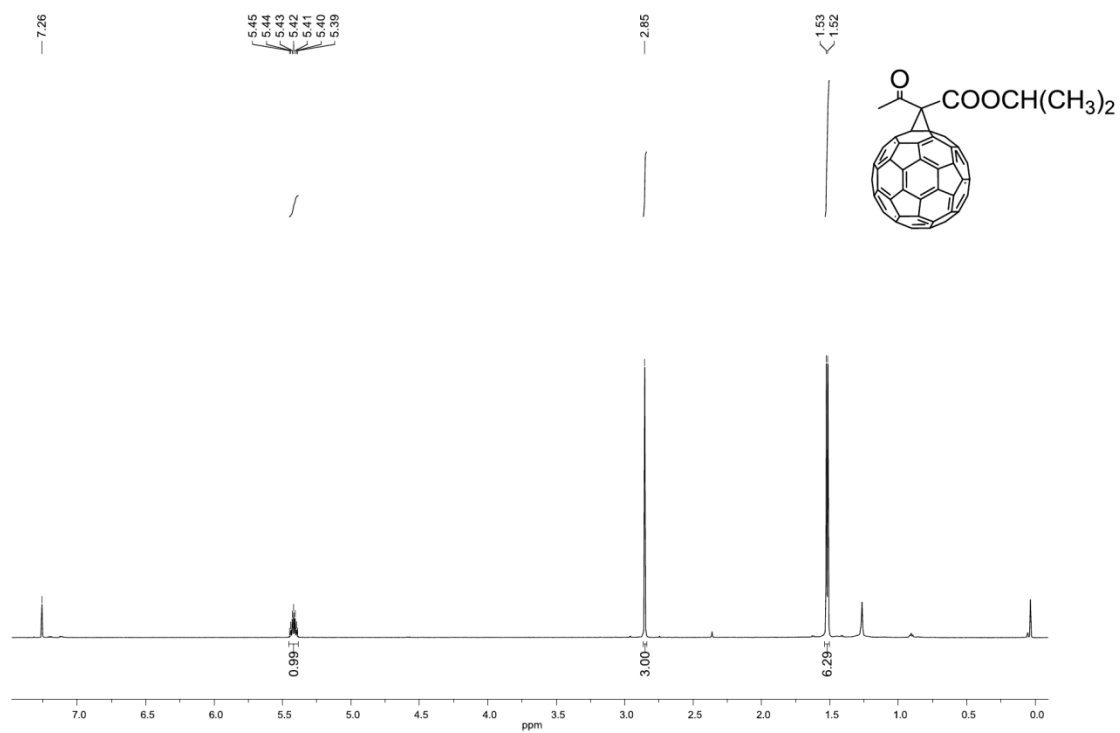


Figure S27. ^1H NMR spectrum (600 MHz) of compound **2d** recorded in $\text{CS}_2\text{-CDCl}_3$ (v/v=2:1). The resonance at 7.26 ppm is due to the CHCl_3 solvent.

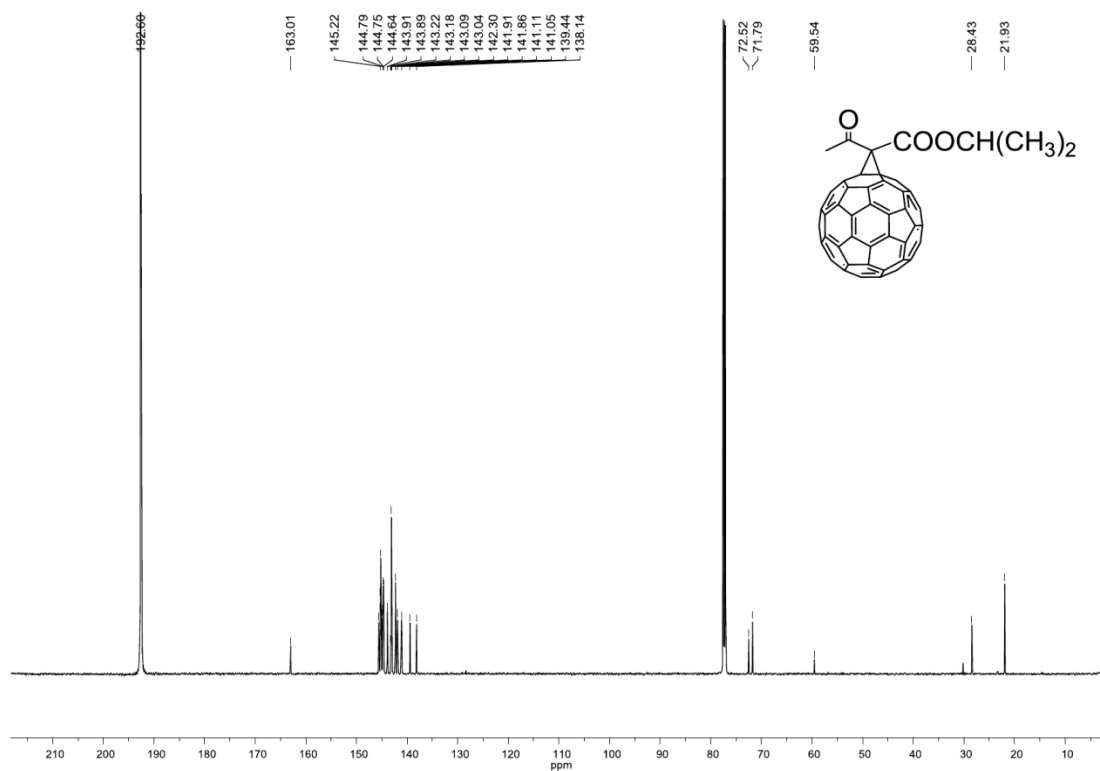


Figure S28. ^{13}C NMR spectrum (151 MHz) of compound **2d** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$).

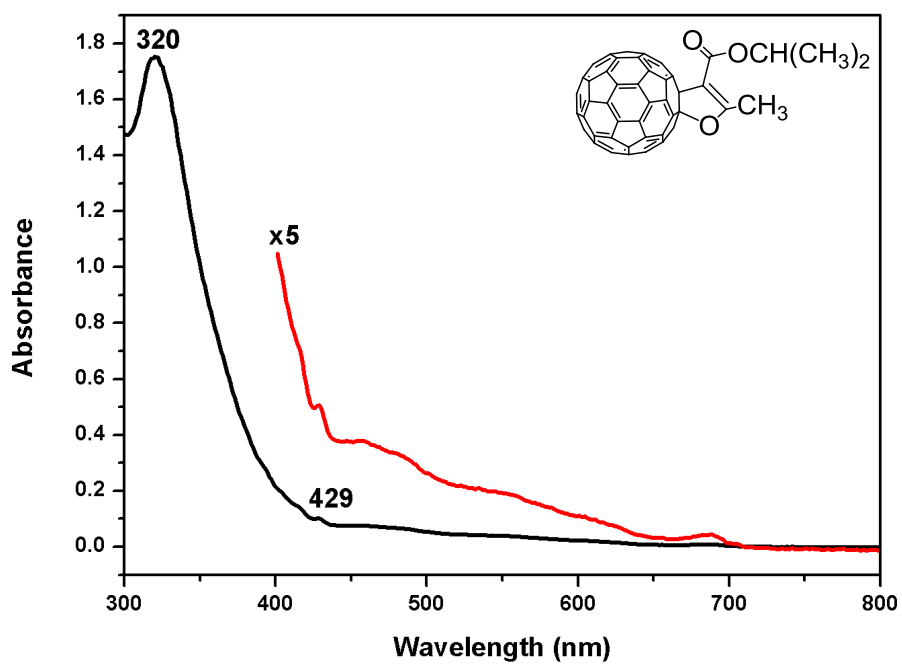


Figure S29. UV-visible spectrum of compound **3d** in toluene.

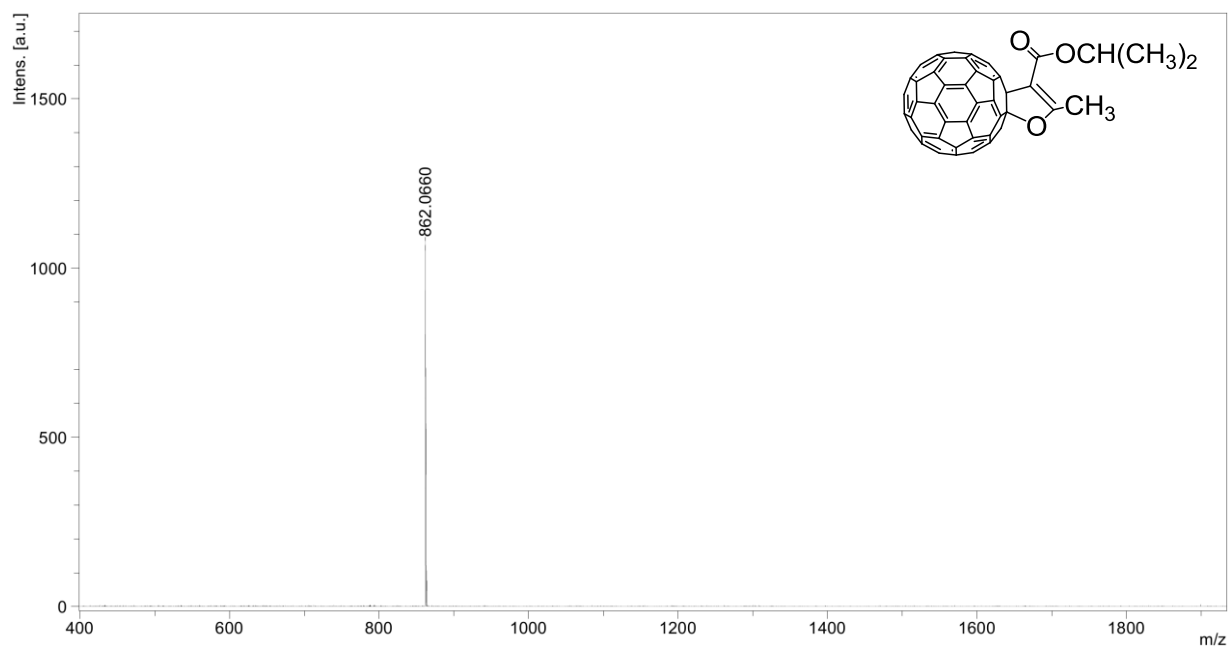


Figure S30. MALDI-TOF MS of compound **3d**

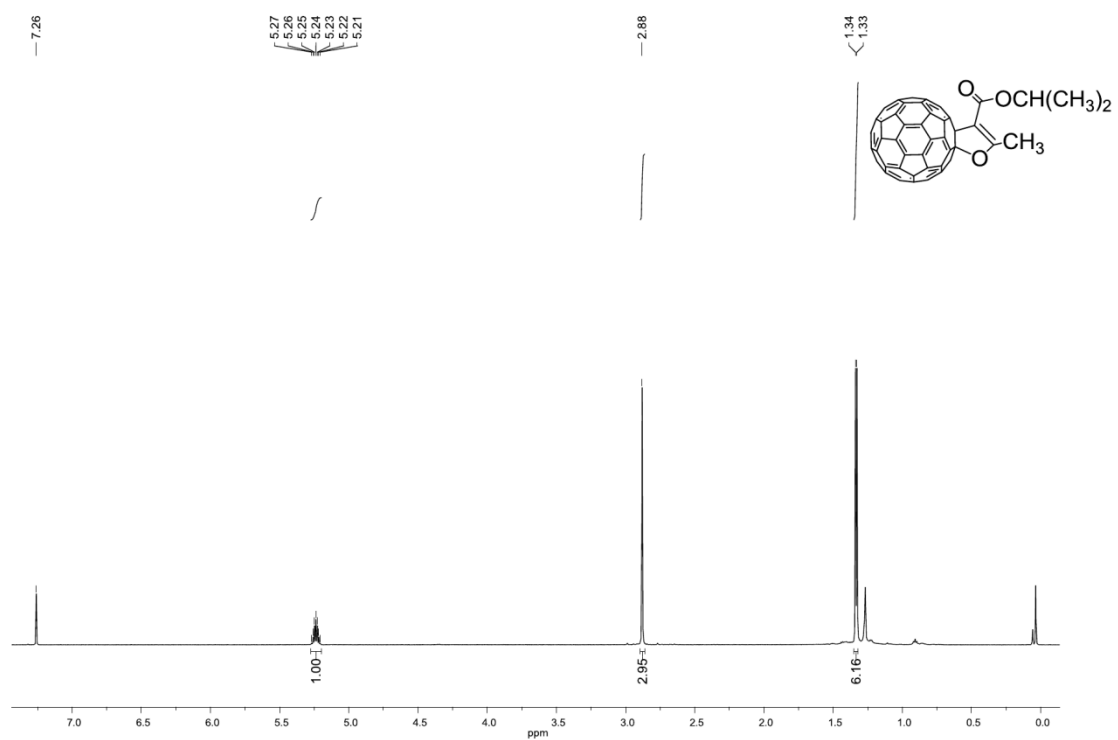


Figure S31. ¹H NMR spectrum (600 MHz) of compound **3d** recorded in CS₂-CDCl₃ (v/v=2:1). The resonance at 7.26 ppm is due to the CHCl₃ solvent.

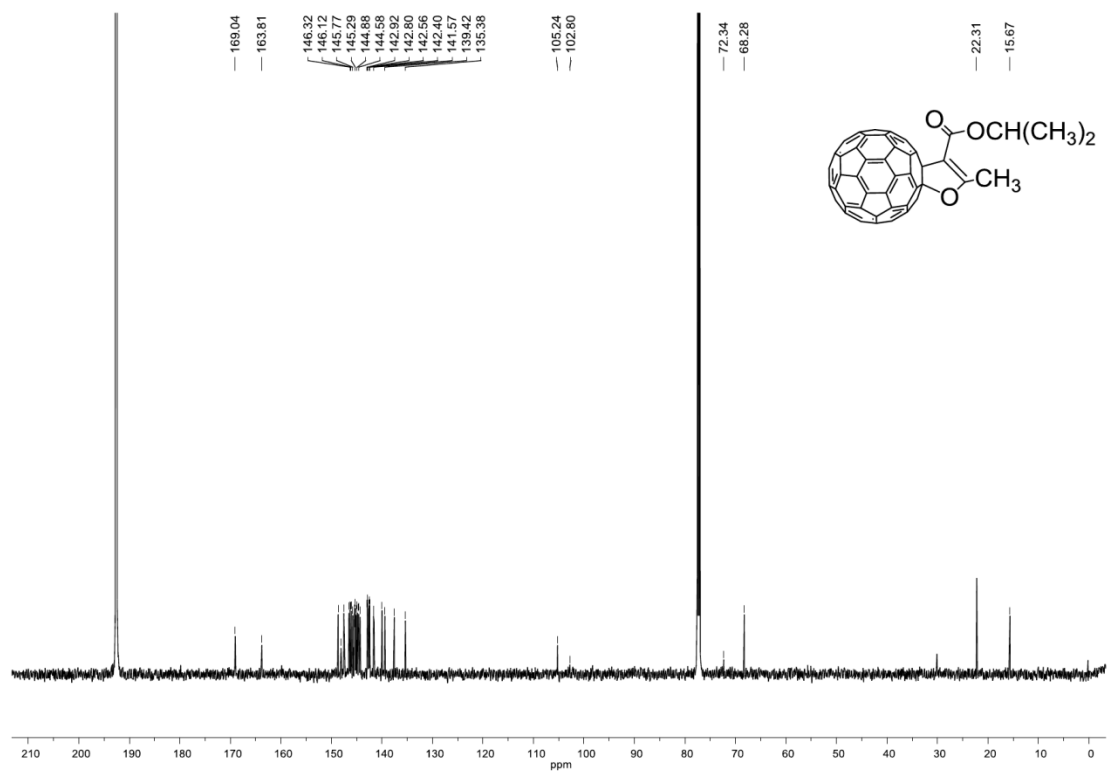


Figure S32. ¹³C NMR spectrum (151 MHz) of compound **3d** recorded in CS₂-CDCl₃ (v/v=2:1).

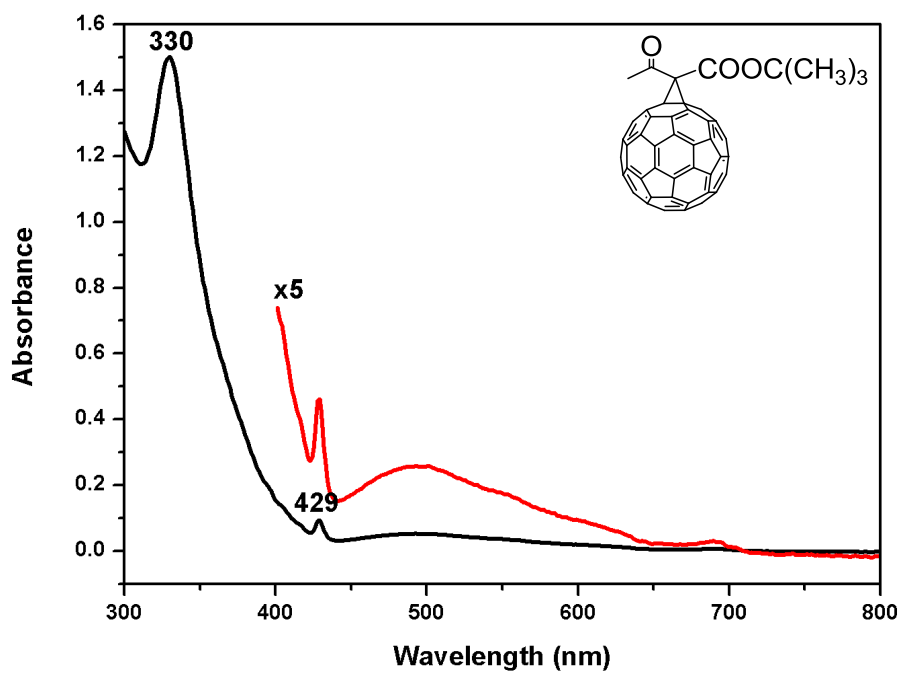


Figure S33. UV-visible spectrum of compound **2e** in toluene.

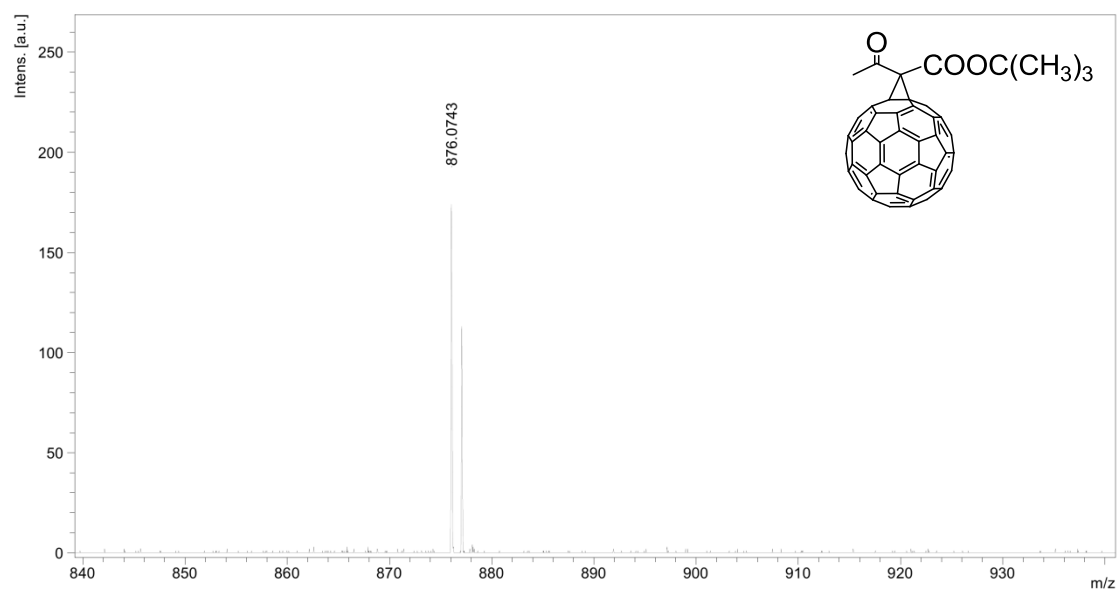


Figure S34. MALDI-TOF MS of compound **2e**

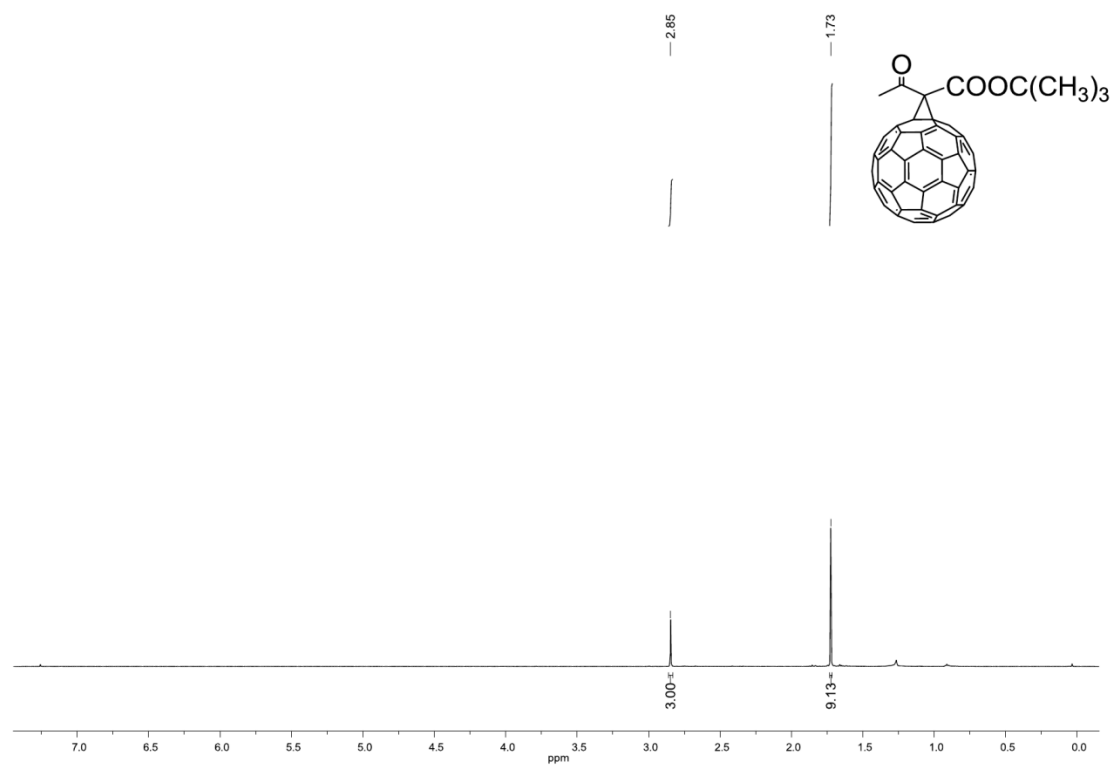


Figure S35. ^1H NMR spectrum (600 MHz) of compound **2e** recorded in $\text{CS}_2\text{-CDCl}_3$ (v/v=2:1).

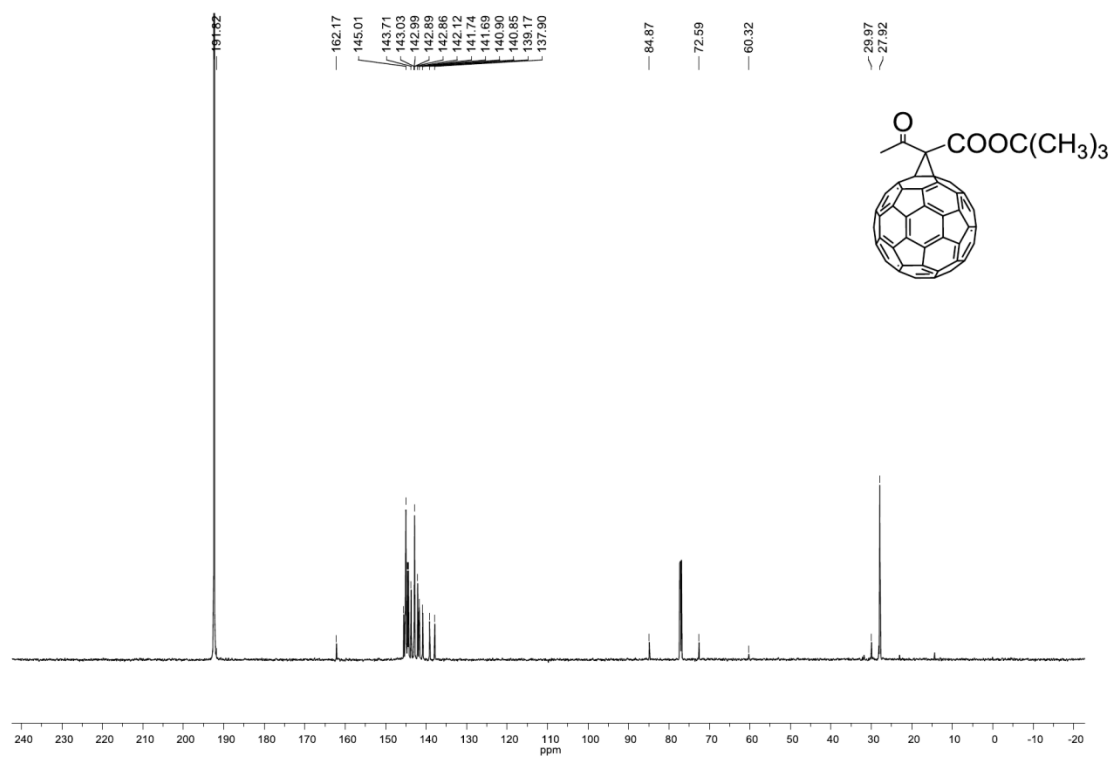


Figure S36. ^{13}C NMR spectrum (151 MHz) of compound **2e** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$).

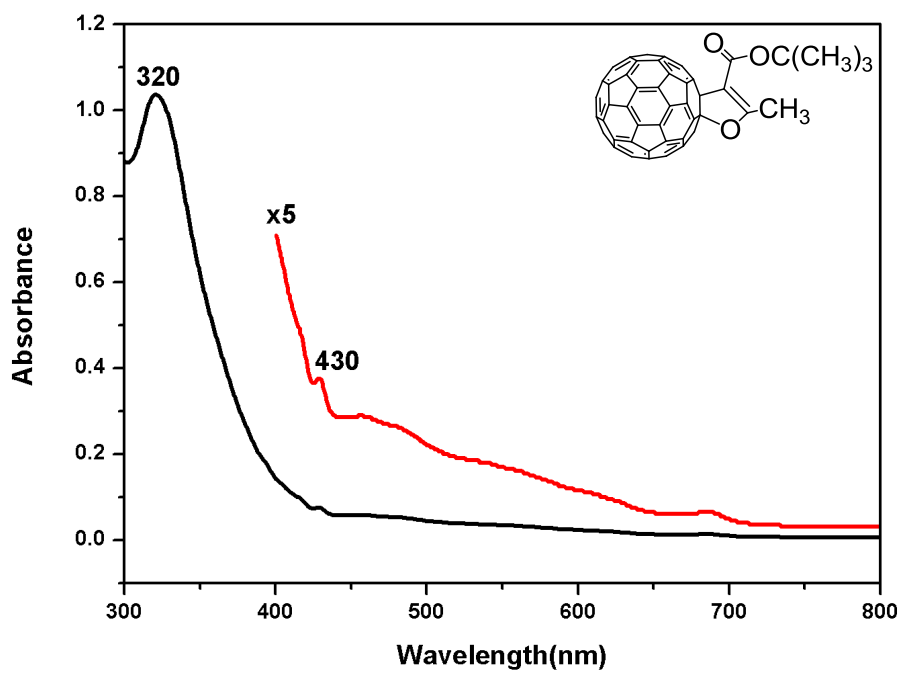


Figure S37. UV-visible spectrum of compound **3e** in toluene.

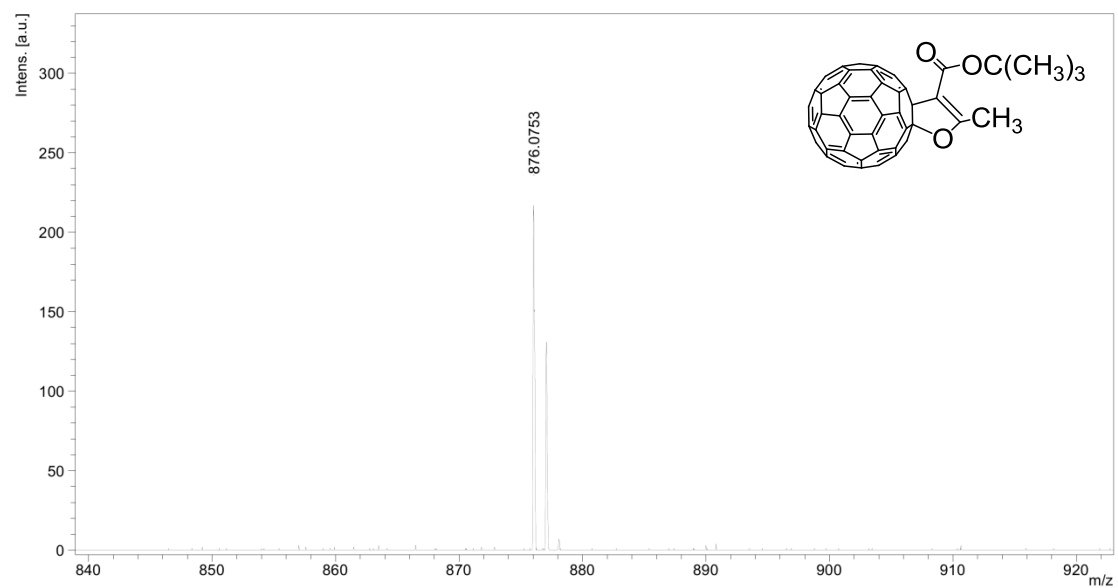
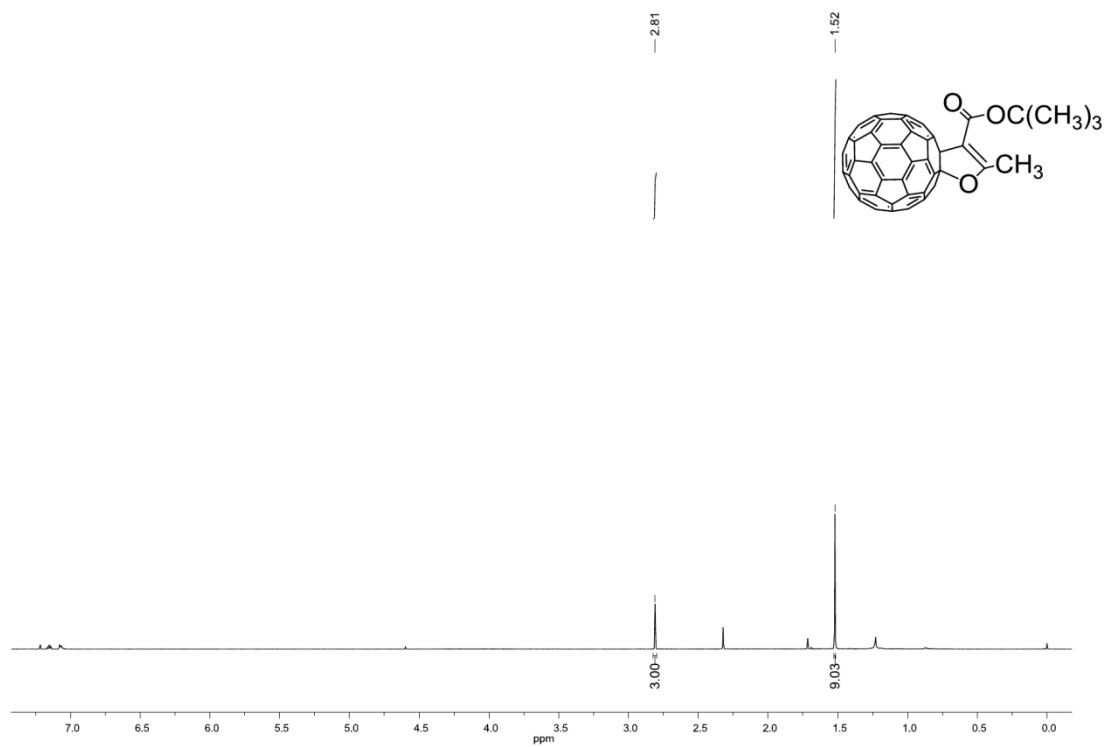


Figure S38. MALDI-TOF MS of compound **3e**



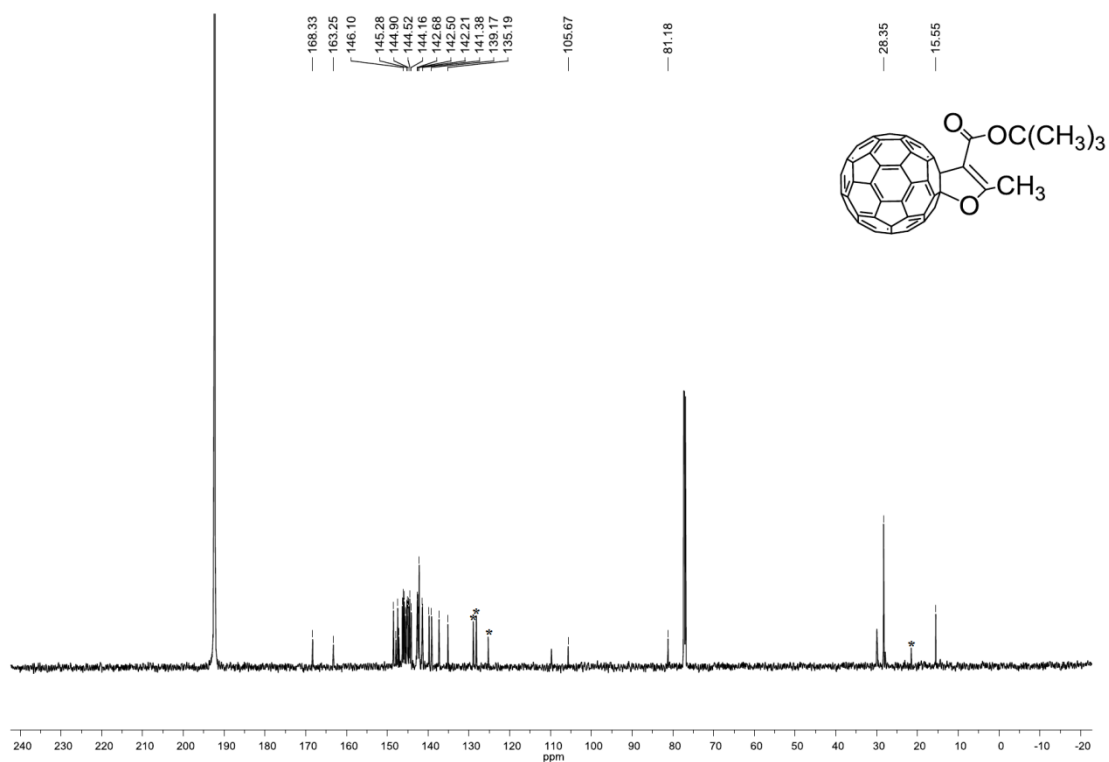


Figure S40. ¹³C NMR spectrum (151 MHz) of compound **3e** recorded in CS₂-CDCl₃ (v/v=2:1). The peaks labeled with asterisks belong to toluene residue in the sample.

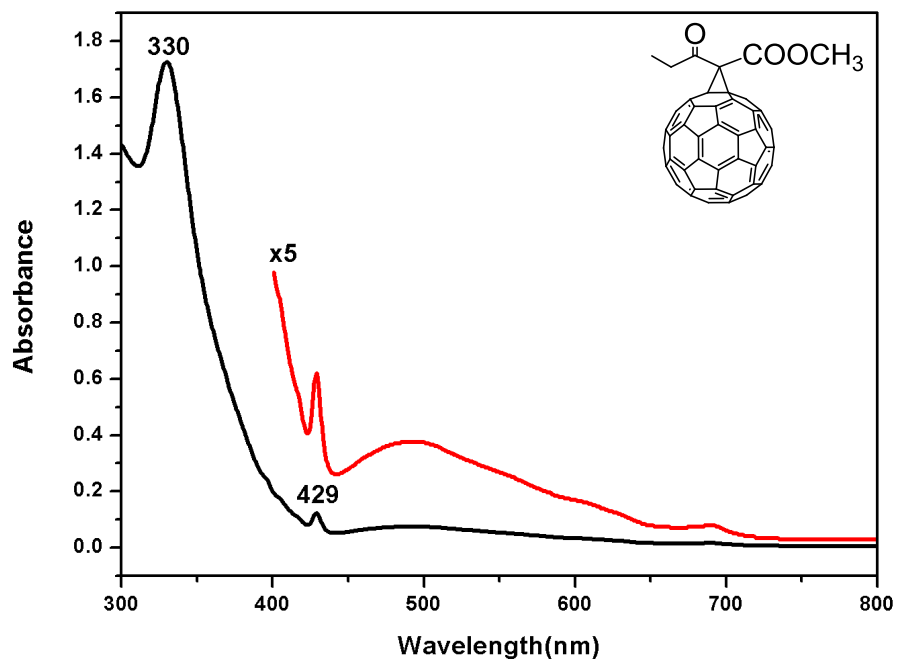


Figure S41. UV-visible spectrum of compound **2f** in toluene.

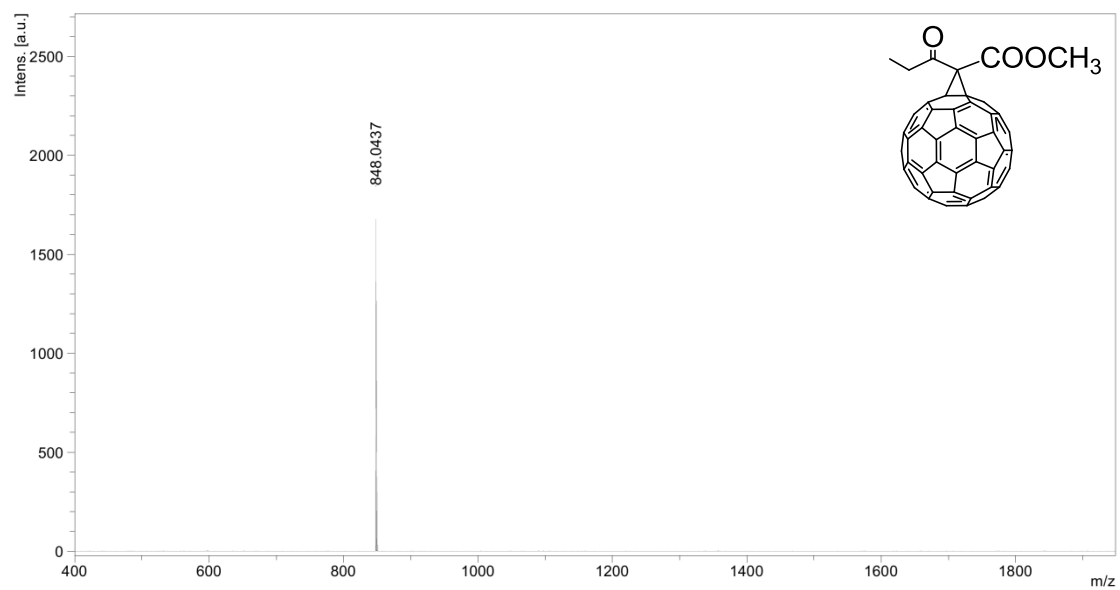


Figure S42. MALDI-TOF MS of compound **2f**

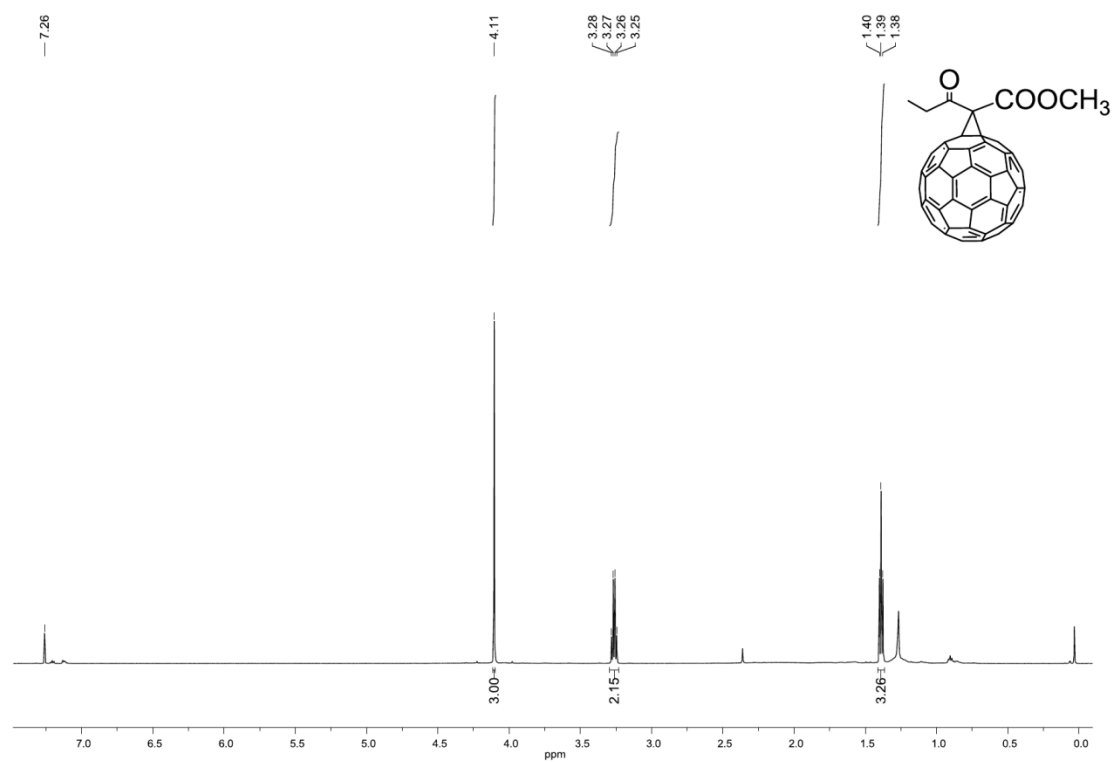


Figure S43. ^1H NMR spectrum (600 MHz) of compound **2f** recorded in $\text{CS}_2\text{-CDCl}_3$ (v/v=2:1). The resonance at 7.26 ppm is due to the CHCl_3 solvent.

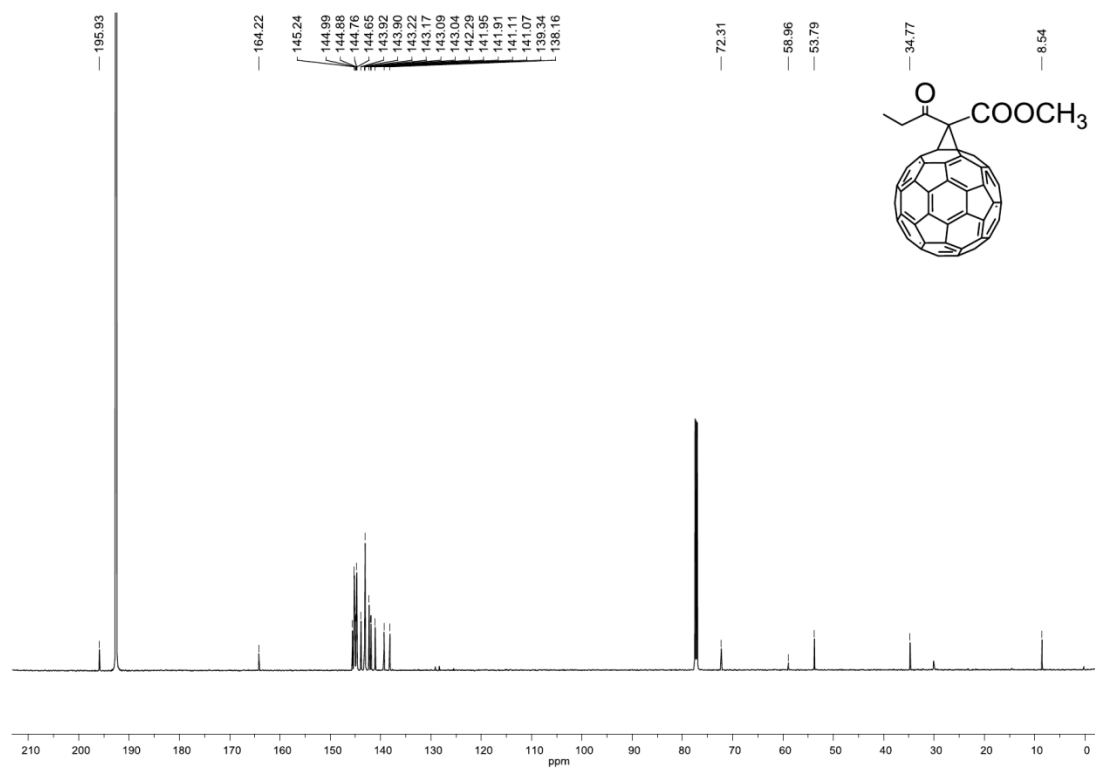


Figure S44. ^{13}C NMR spectrum (151 MHz) of compound **2f** recorded in $\text{CS}_2\text{-CDCl}_3$ (v/v=2:1).

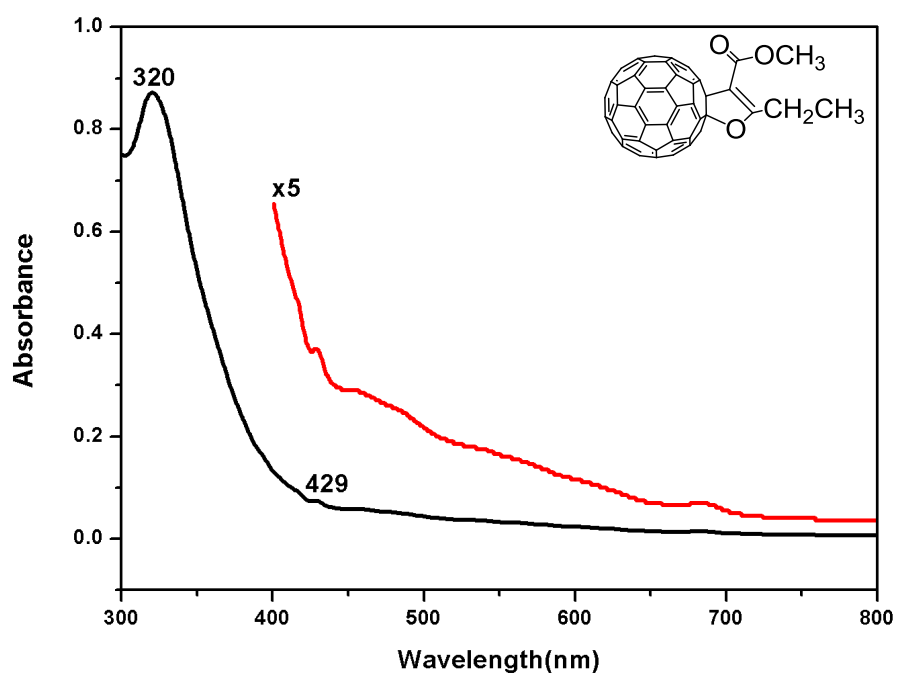


Figure S45. UV-visible spectrum of compound **3f** in toluene.

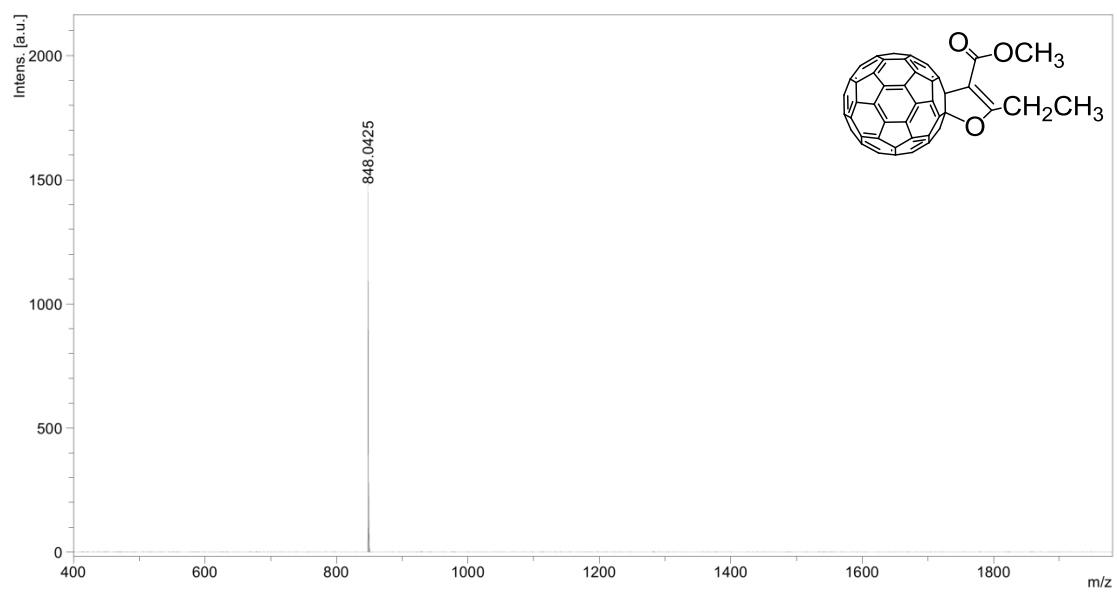


Figure S46. MALDI-TOF MS of compound **3f**

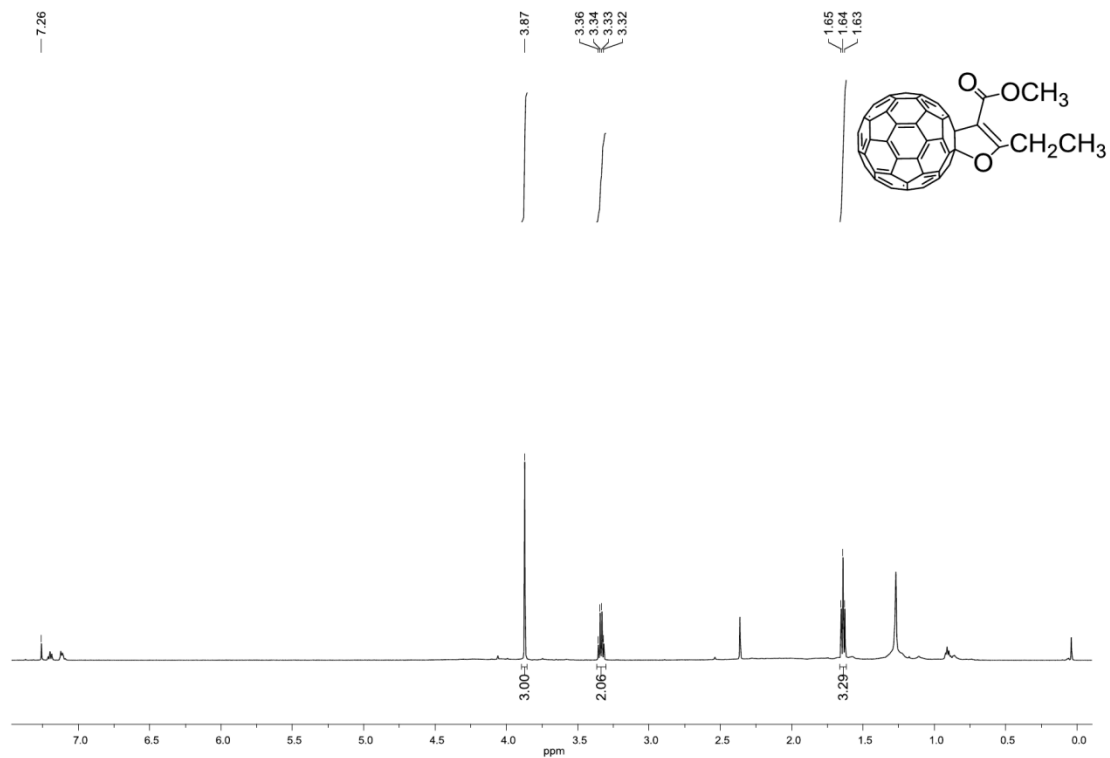


Figure S47. ^1H NMR spectrum (600 MHz) of compound **3f** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$). The resonance at 7.26 ppm is due to the CHCl_3 solvent.

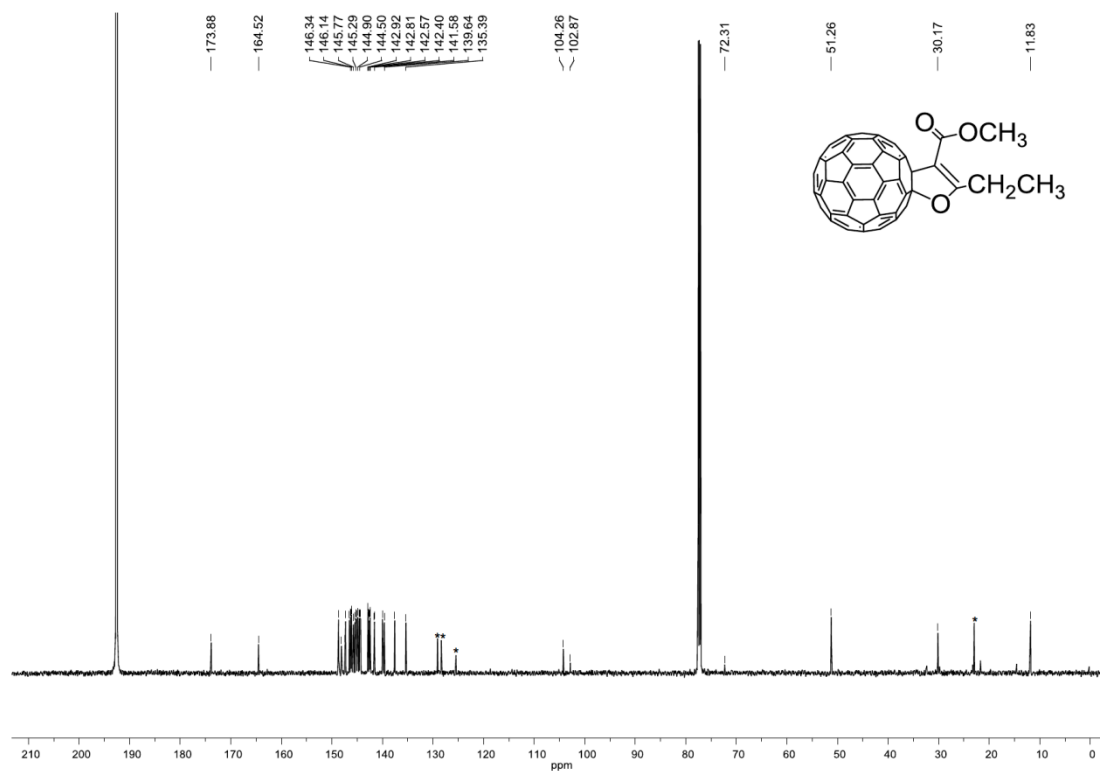


Figure S48. ^{13}C NMR spectrum (151 MHz) of compound **3f** recorded in $\text{CS}_2\text{-CDCl}_3$ ($v/v=2:1$). The peaks labeled with asterisks belong to toluene residue in the sample.