

Supplementary Material

for

Gold Catalysed Oxidative Cycloisomerisation of

1,6-Diyne Acetates to 1-Naphthyl Ketones

Andrew Thomas Holm,^A Sanatan Nayak,^A and Philip Wai Hong Chan^{A,B,C}

^ASchool of Chemistry, Monash University, Clayton, Victoria 3800, Australia

^BDepartment of Chemistry, University of Warwick, Coventry, CV4 7AL, UK

^CCorresponding author. Email: phil.chan@monash.edu and p.w.h.chan@warwick.ac.uk

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^1H and ^{13}C NMR Spectra

Figure S1. ^1H and ^{13}C NMR Spectra of 1-Phenyl-1-(2-(phenylethynyl)phenyl)prop-2-yn-1-yl Acetate (**5a**)

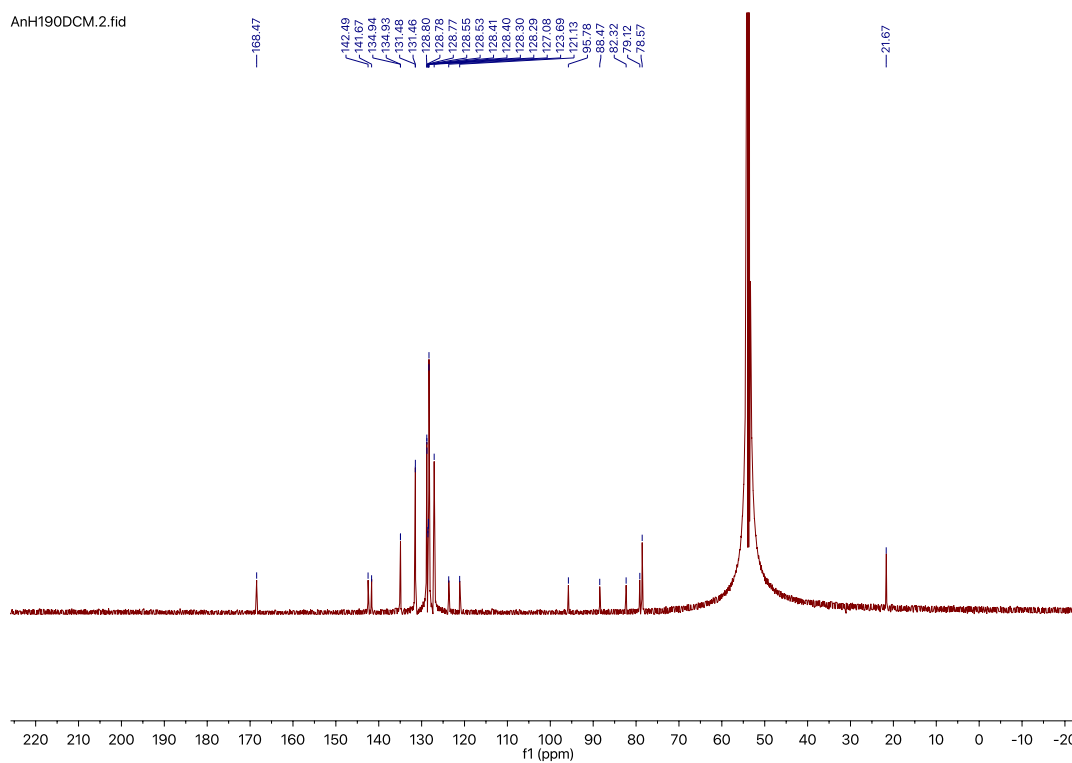
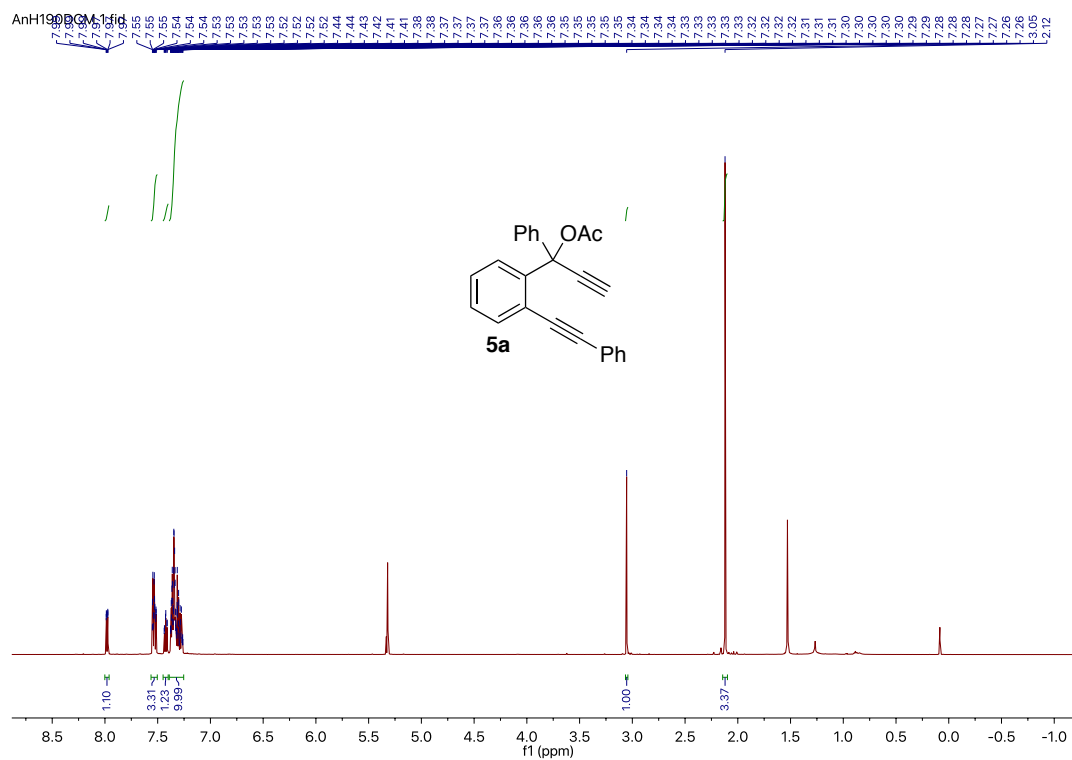


Figure S2. ^1H and ^{13}C NMR Spectra of 1-(4-Chlorophenyl)-1-(2-(phenylethynyl)phenyl)prop-2-yn-1-yl Acetate (**5b**)

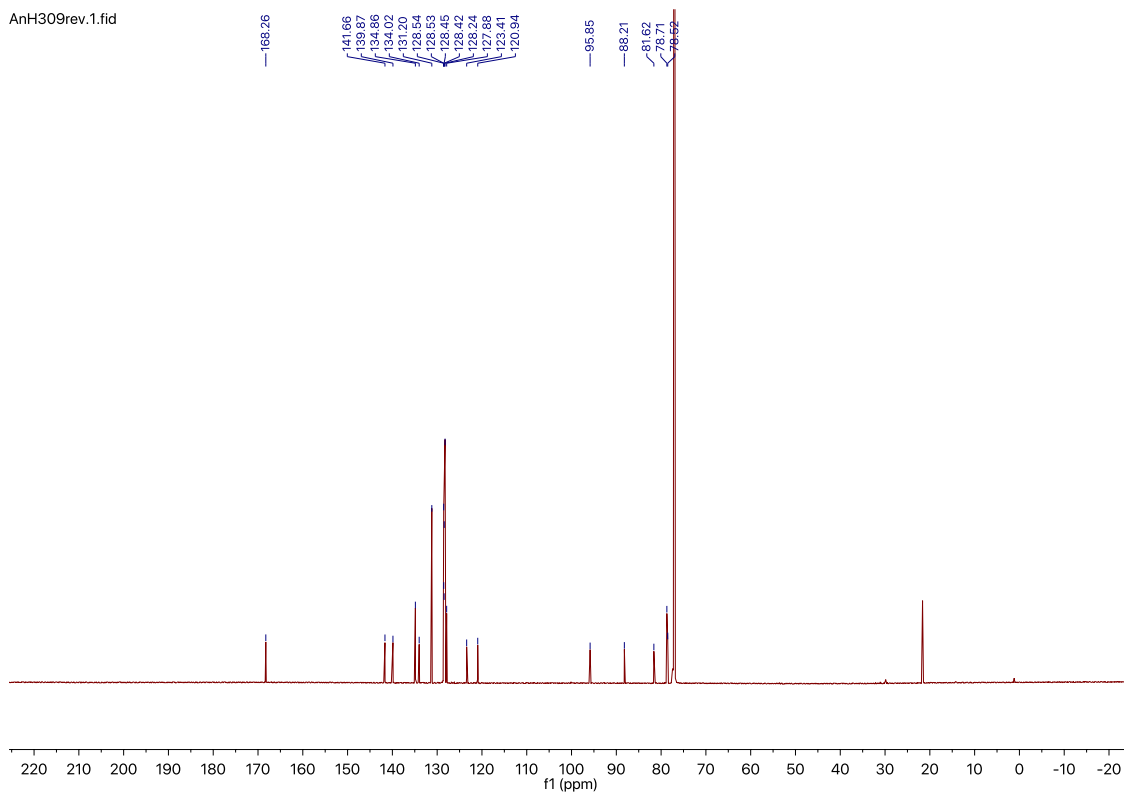
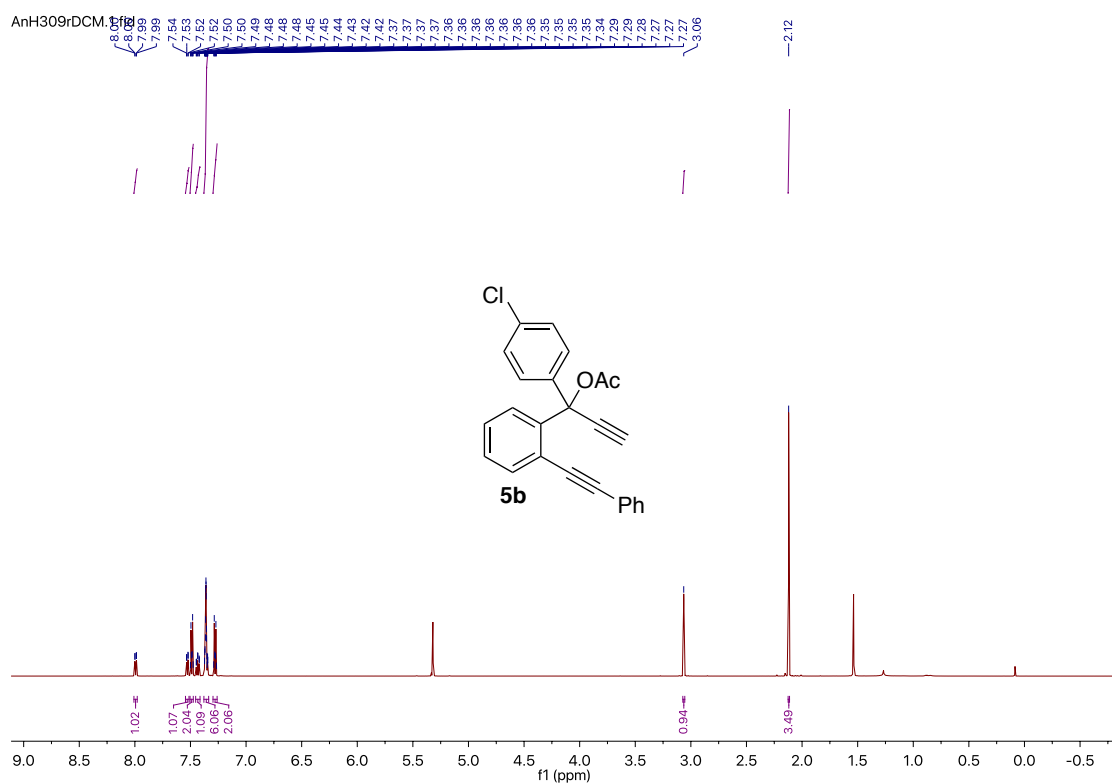


Figure S4. ^1H and ^{13}C NMR Spectra of 1-(2-(Phenylethynyl)phenyl)-1-(*o*-tolyl)prop-2-yn-1-yl Acetate (**5d**)

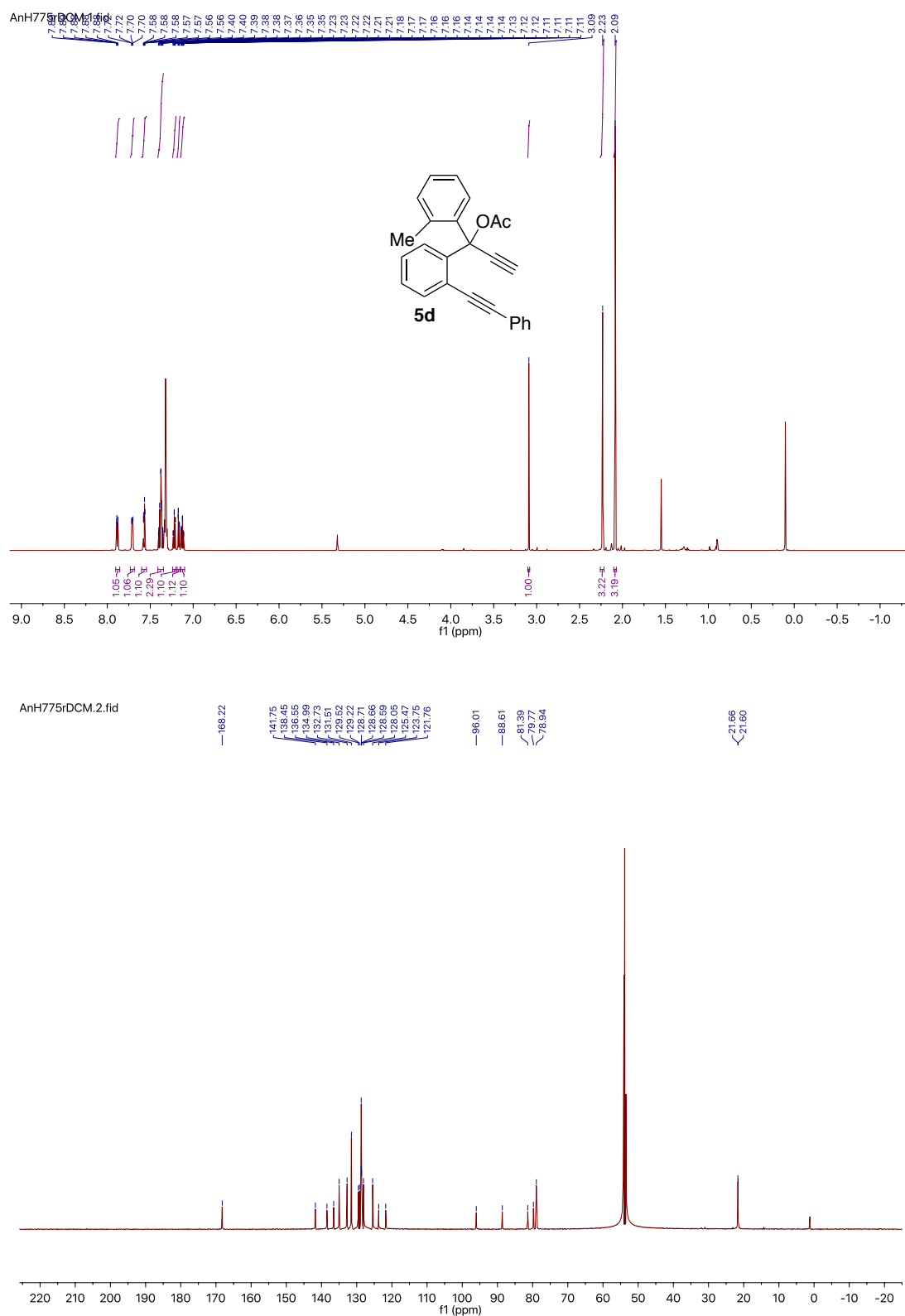


Figure S5. ^1H and ^{13}C NMR Spectra of 1-(2-(Phenylethynyl)phenyl)-1-(*p*-tolyl)prop-2-yn-1-yl Acetate (**5e**)

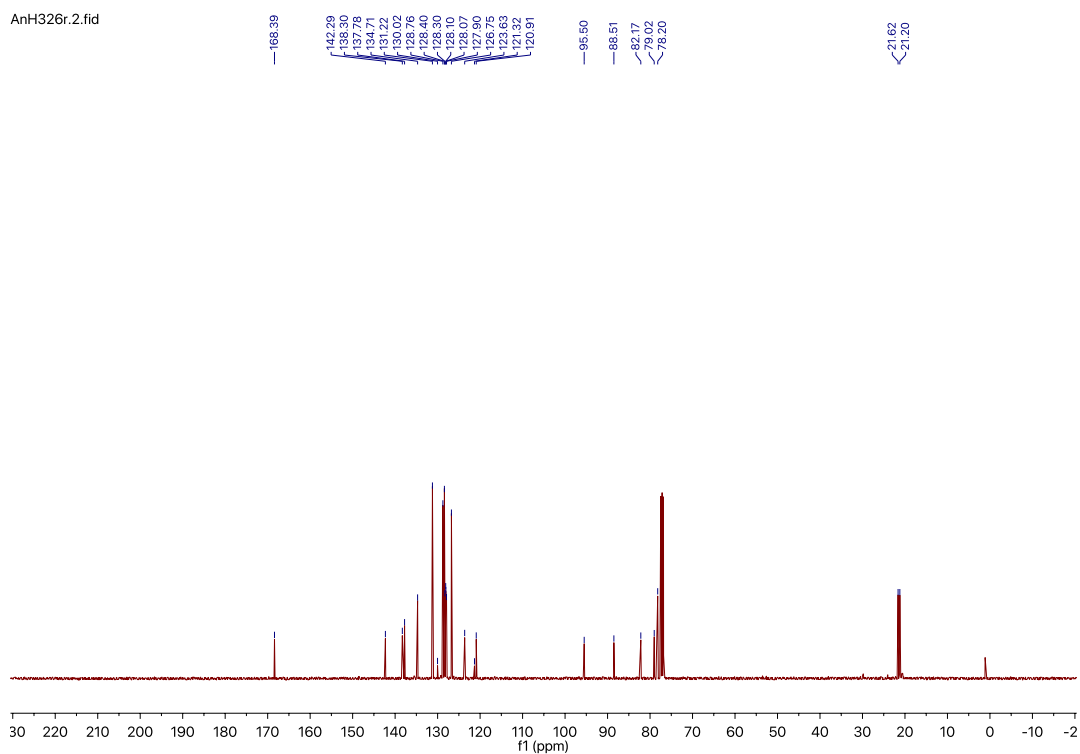
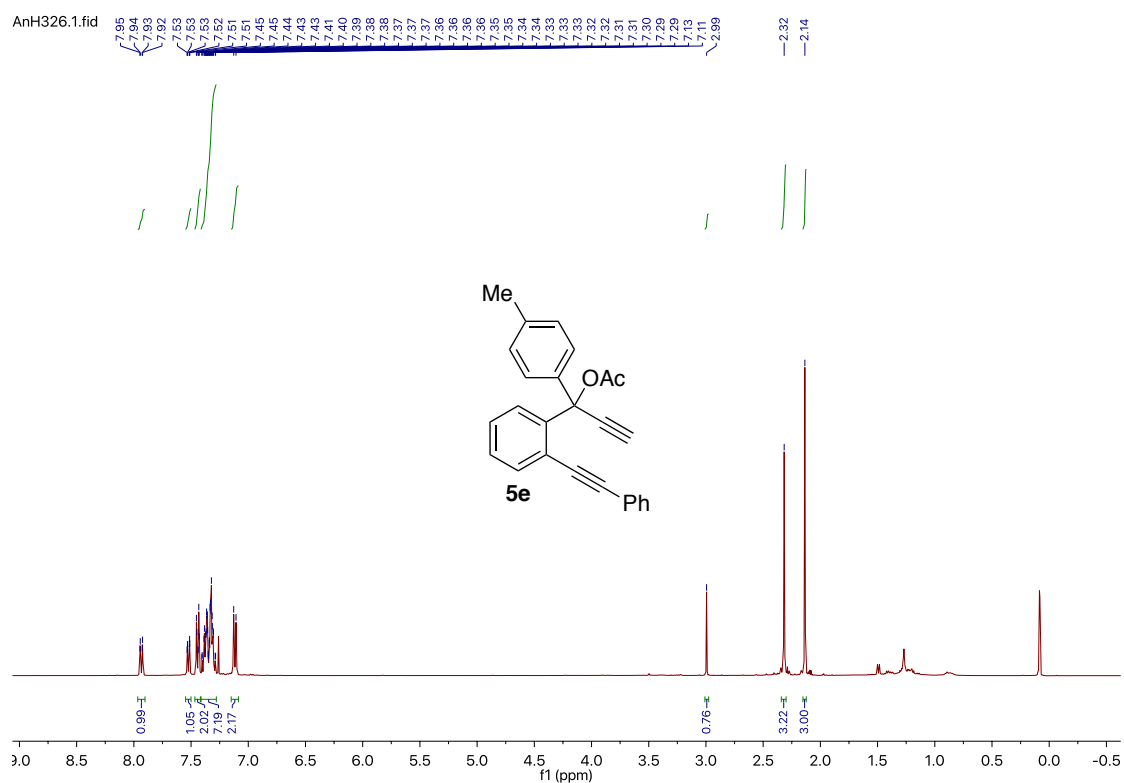


Figure S6. ^1H and ^{13}C NMR Spectra of 1-(4-Methoxyphenyl)-1-(2-(phenylethynyl)phenyl)prop-2-yn-1-yl Acetate (**5f**)

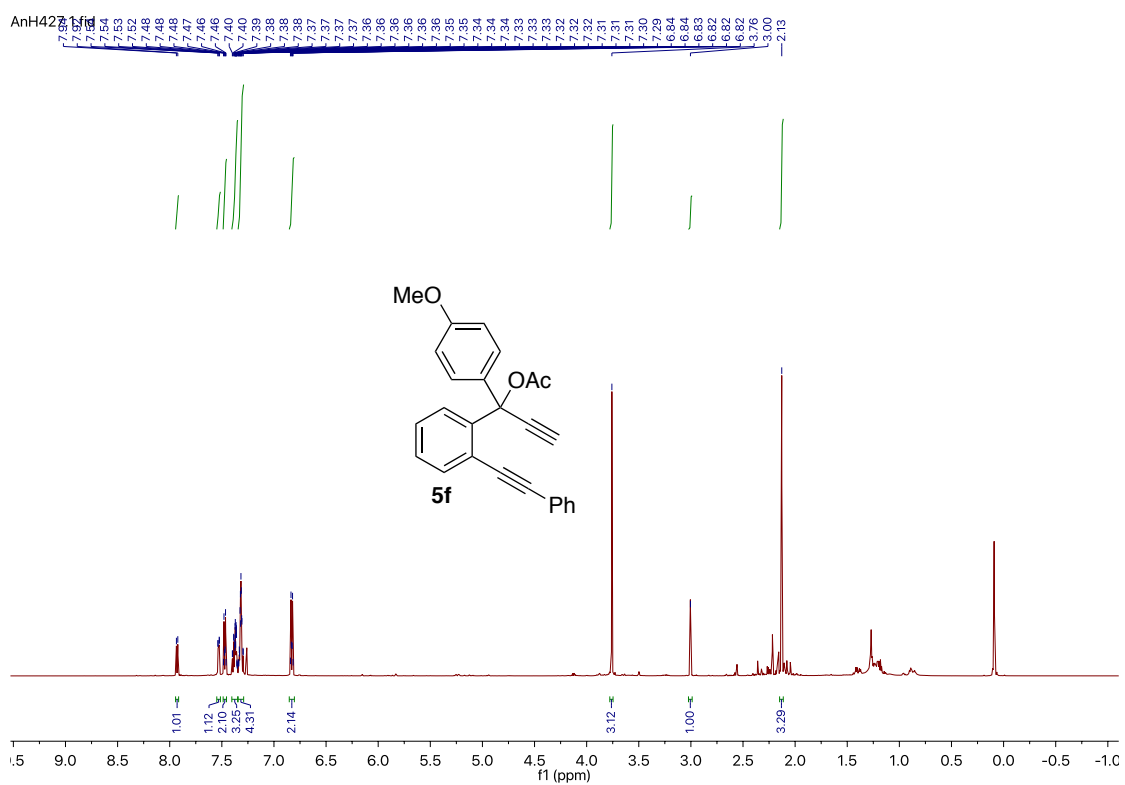


Figure S8. ^1H and ^{13}C NMR Spectra of 1-Phenyl-2-(2-(phenylethynyl)phenyl)but-3-yn-2-yl Acetate (**5h**)

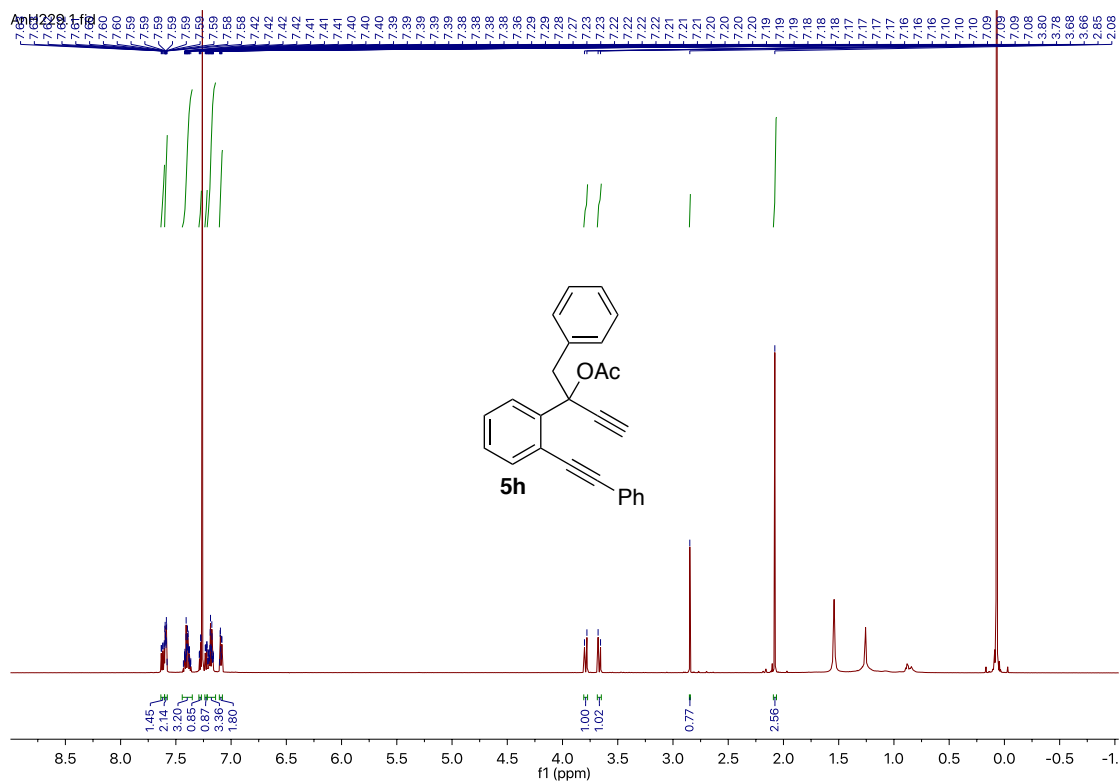


Figure S9. ^1H and ^{13}C NMR Spectra of 2-(2-(Phenylethynyl)phenyl)but-3-yn-2-yl Acetate

(5i)

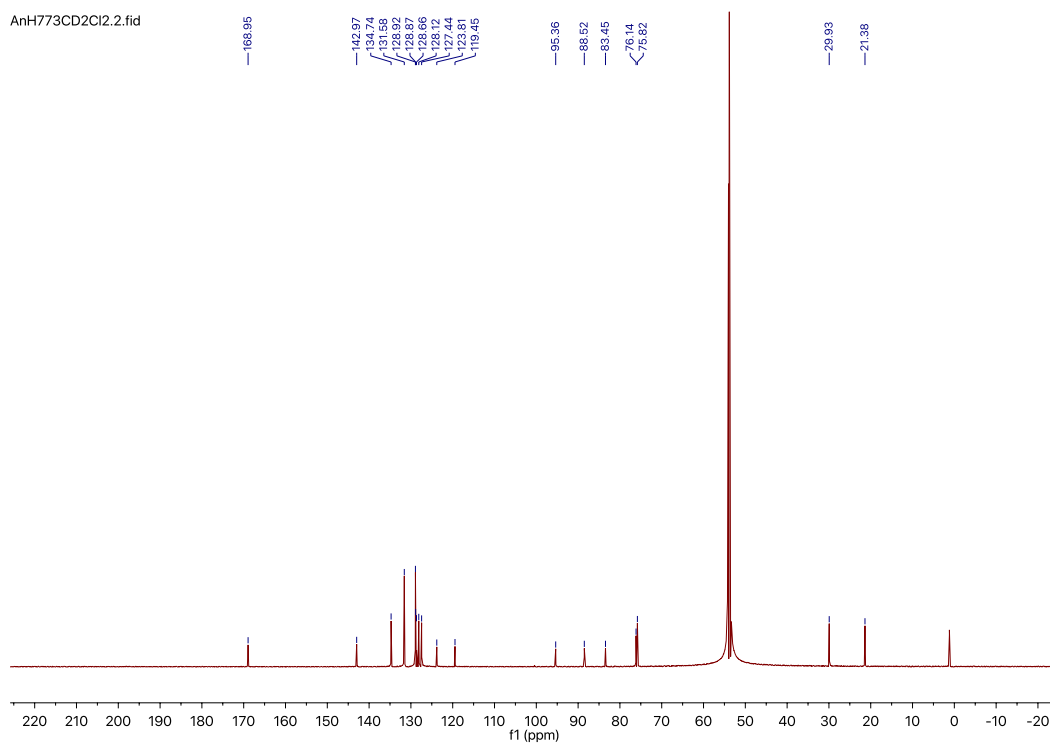
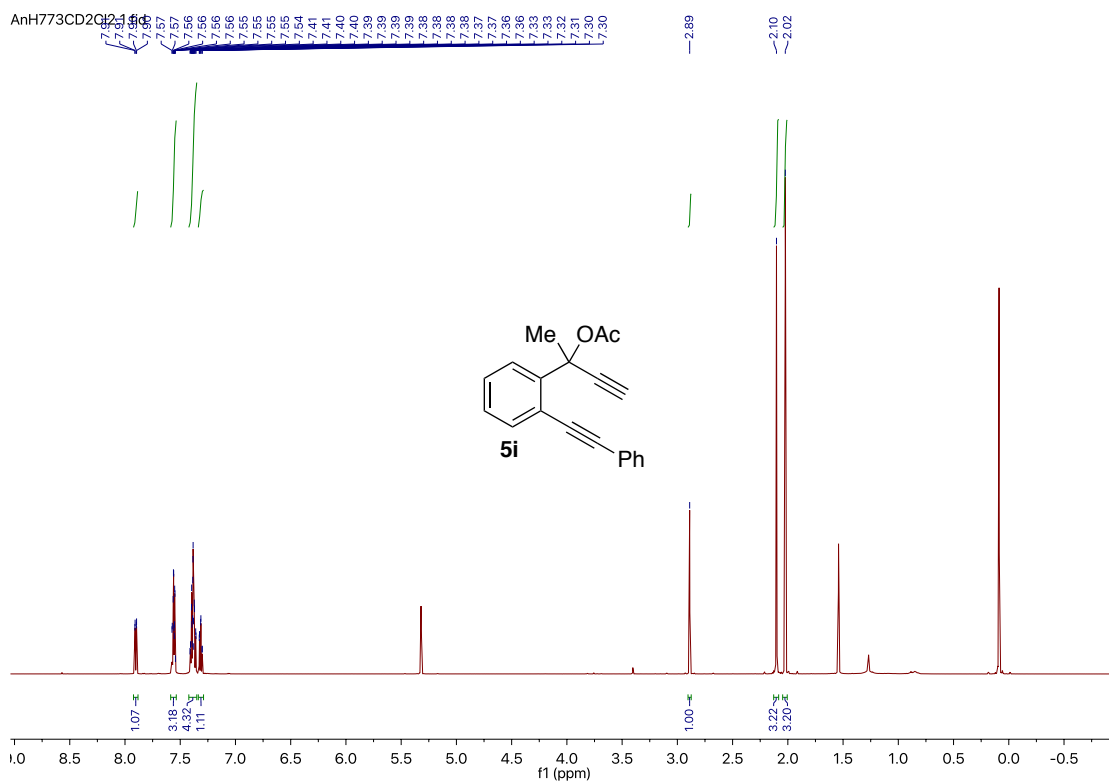


Figure S10. ^1H and ^{13}C NMR Spectra of 1-(2-((4-Bromophenyl)ethynyl)phenyl)-1-phenylprop-2-yn-1-yl Acetate (**5j**)

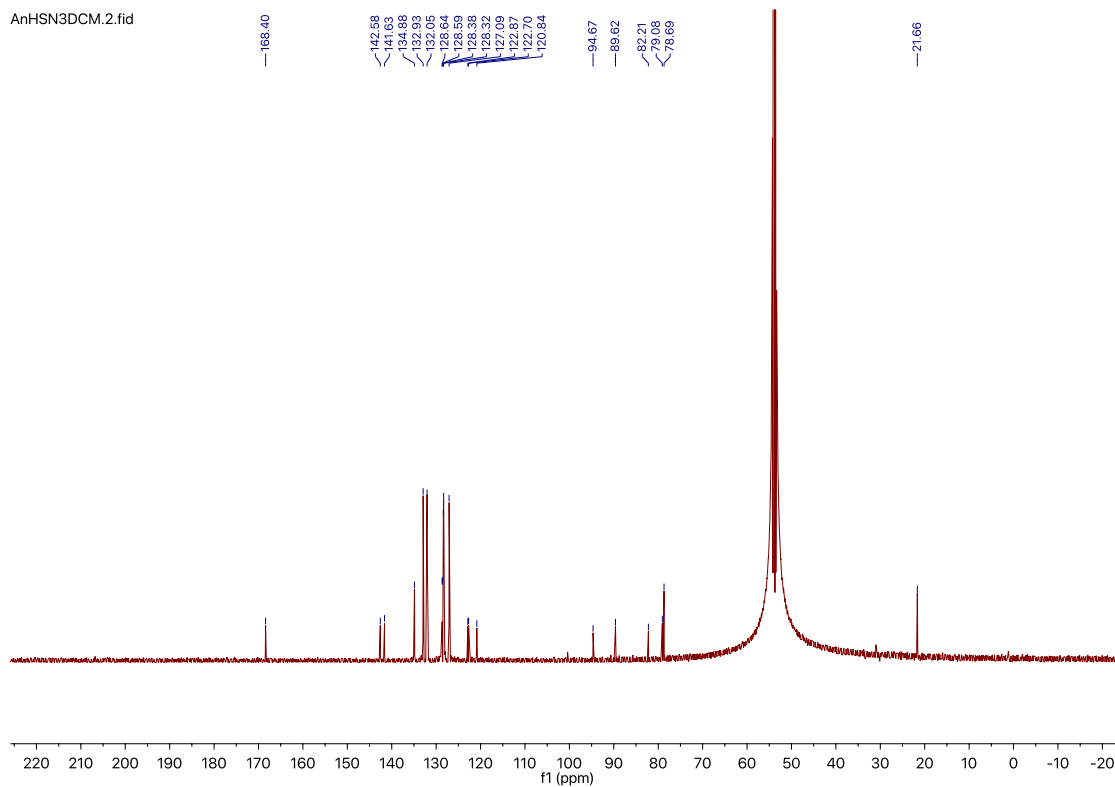
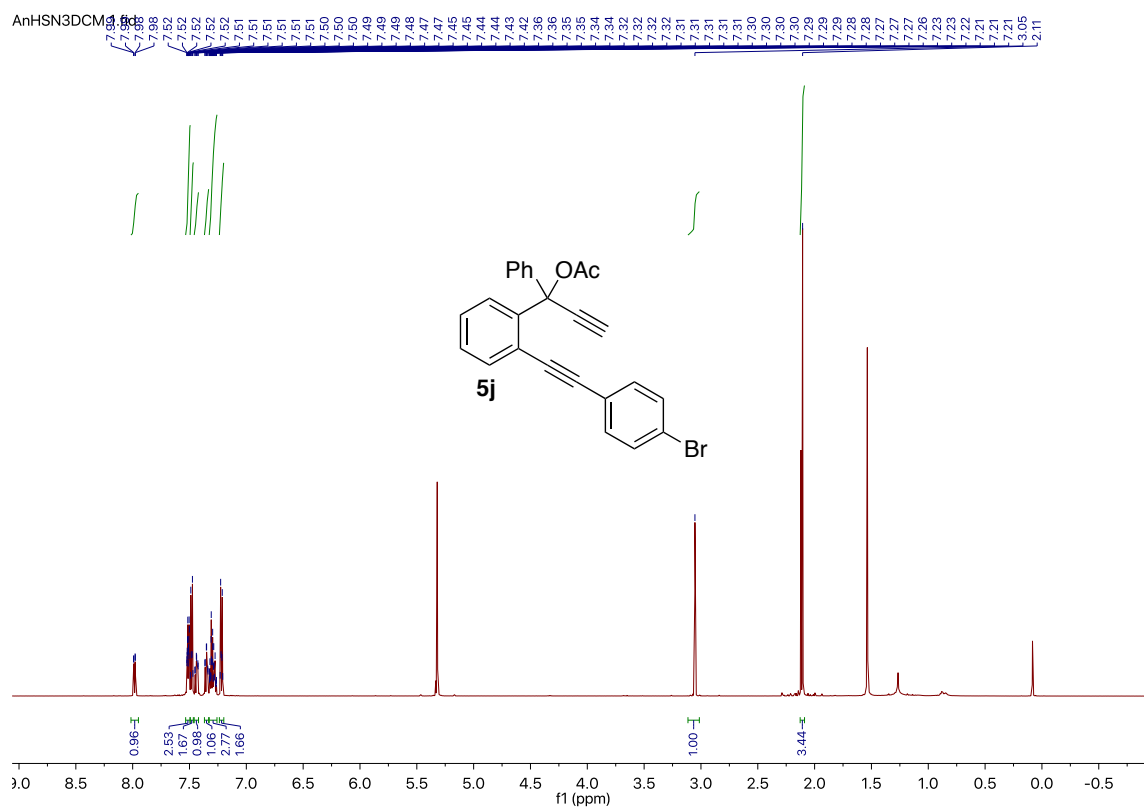


Figure S11. ^1H and ^{13}C NMR Spectra of 1-(2-((2-Chlorophenyl)ethynyl)phenyl)-1-phenylprop-2-yn-1-yl Acetate (**5k**)

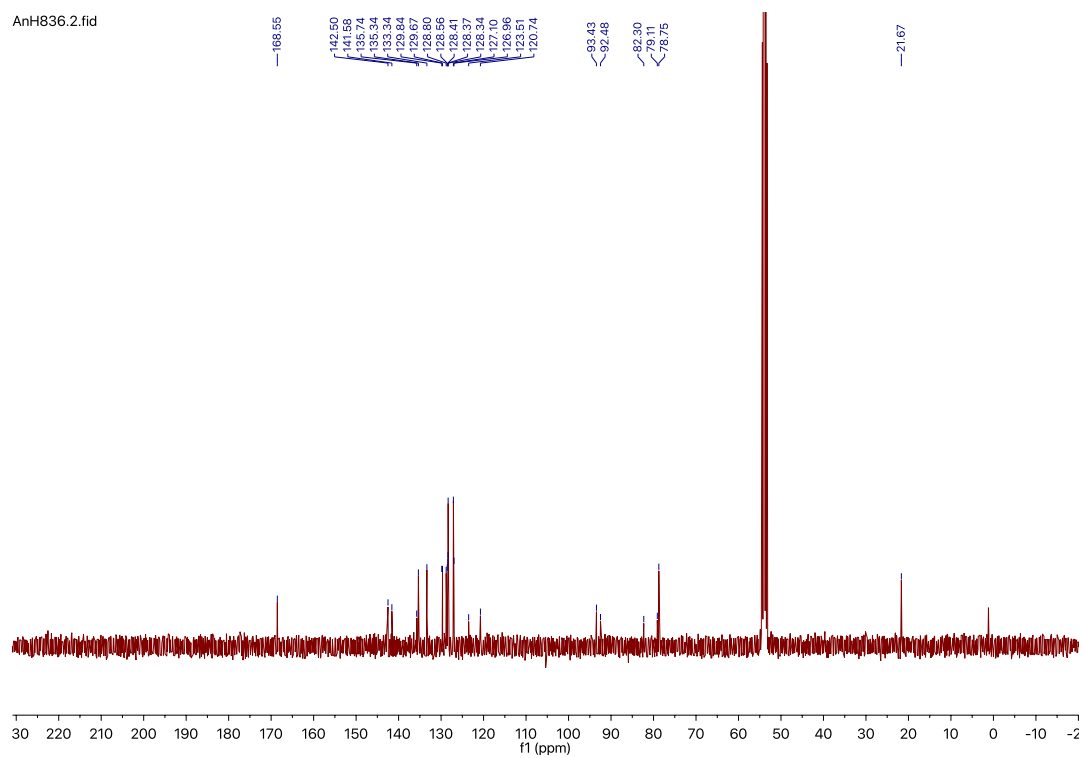
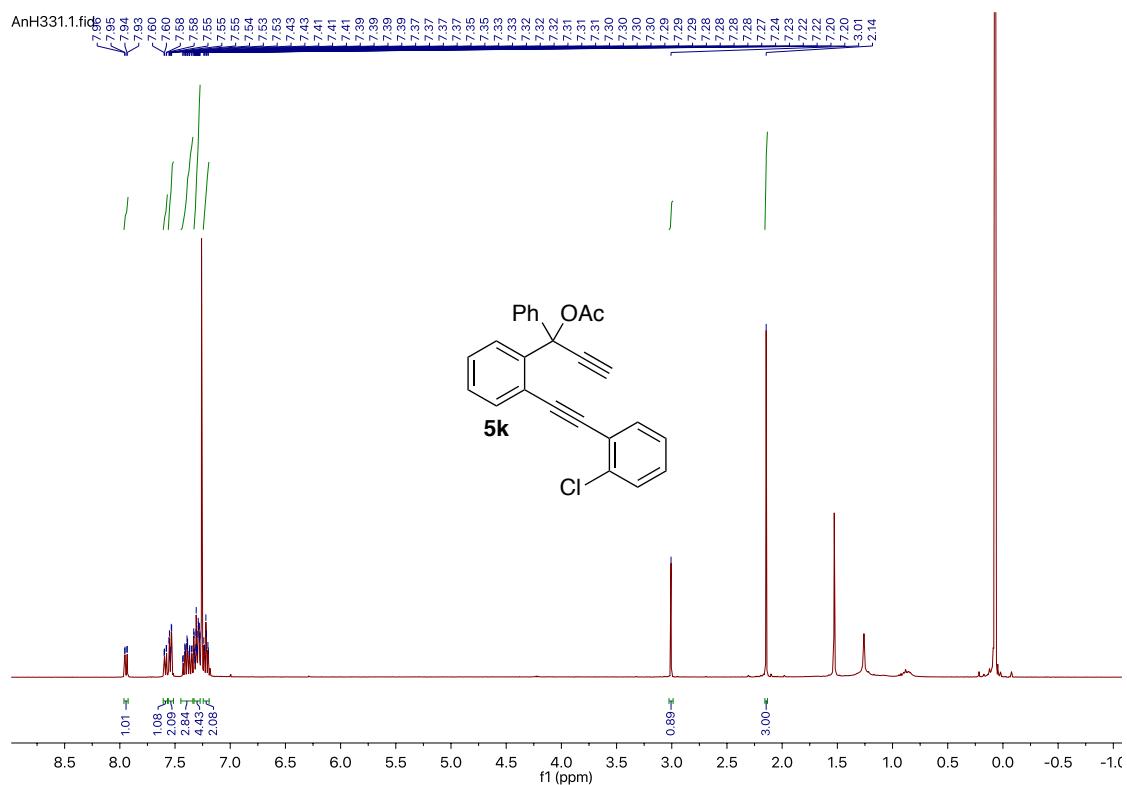


Figure S12. ^1H and ^{13}C NMR Spectra of 1-(2-([1,1'-Biphenyl]-4-ylethynyl)phenyl)-1-phenylprop-2-yn-1-yl Acetate (**5I**)

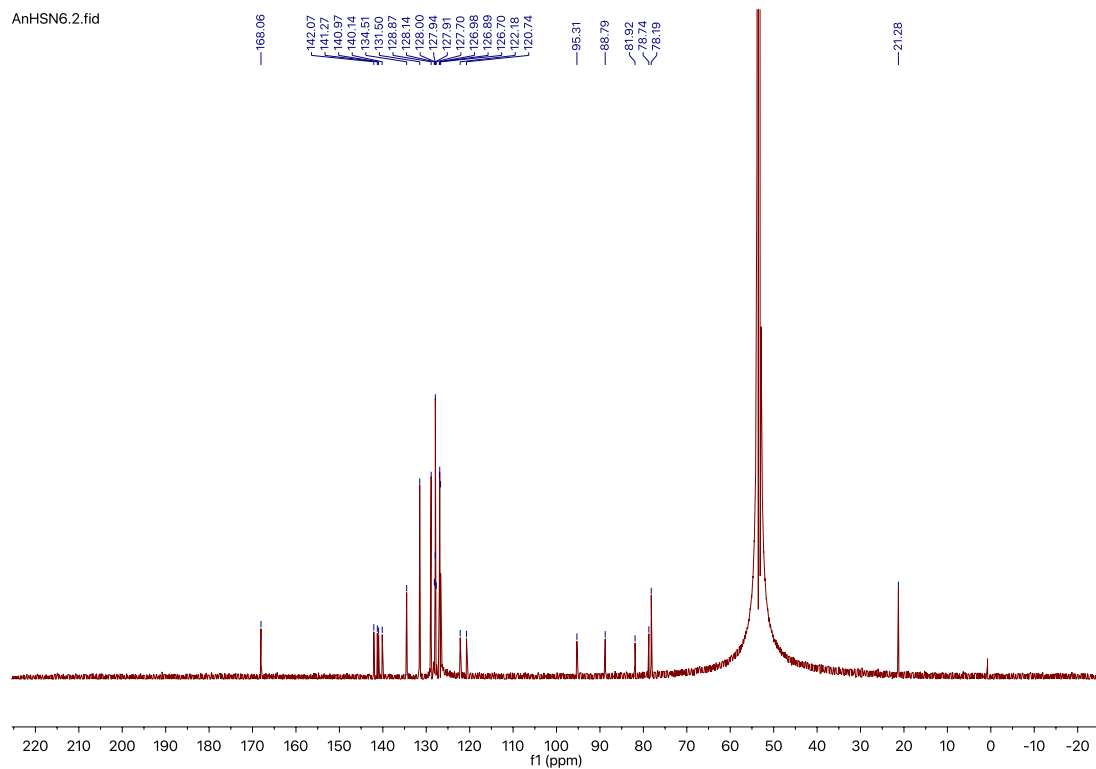
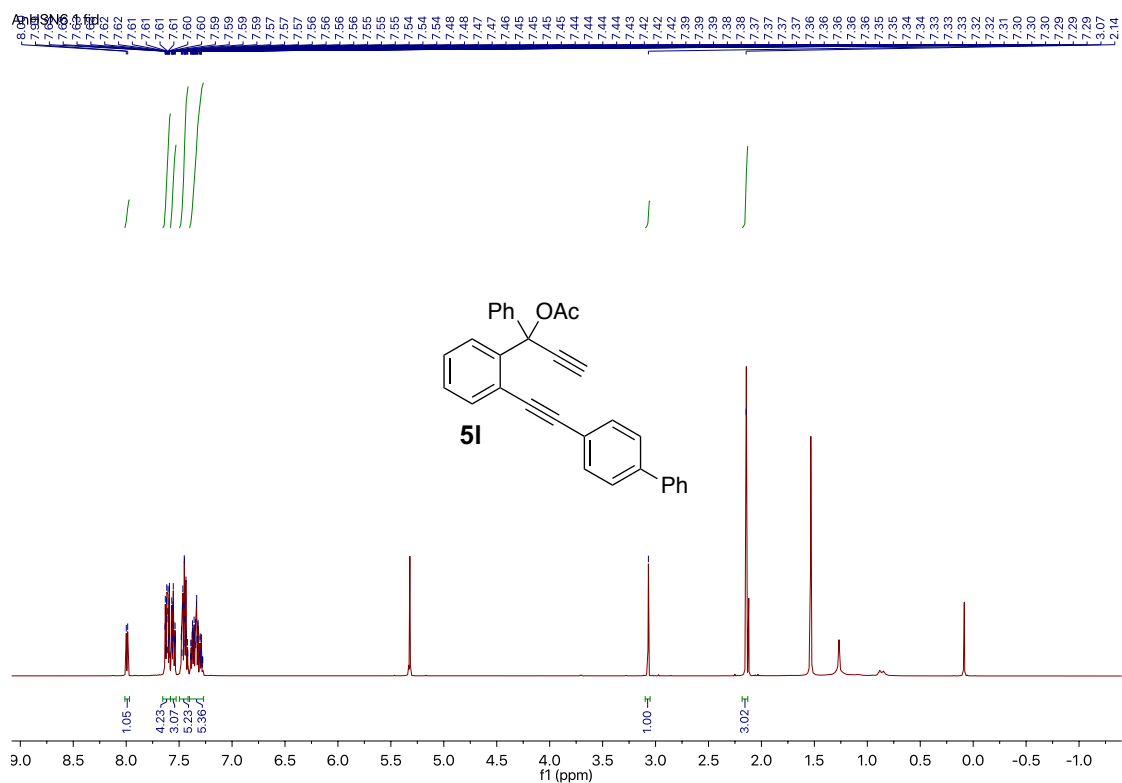


Figure S13. ^1H and ^{13}C NMR Spectra of 1-Phenyl-1-(2-(*p*-tolylethynyl)phenyl)prop-2-yn-1-yl Acetate (**5m**)

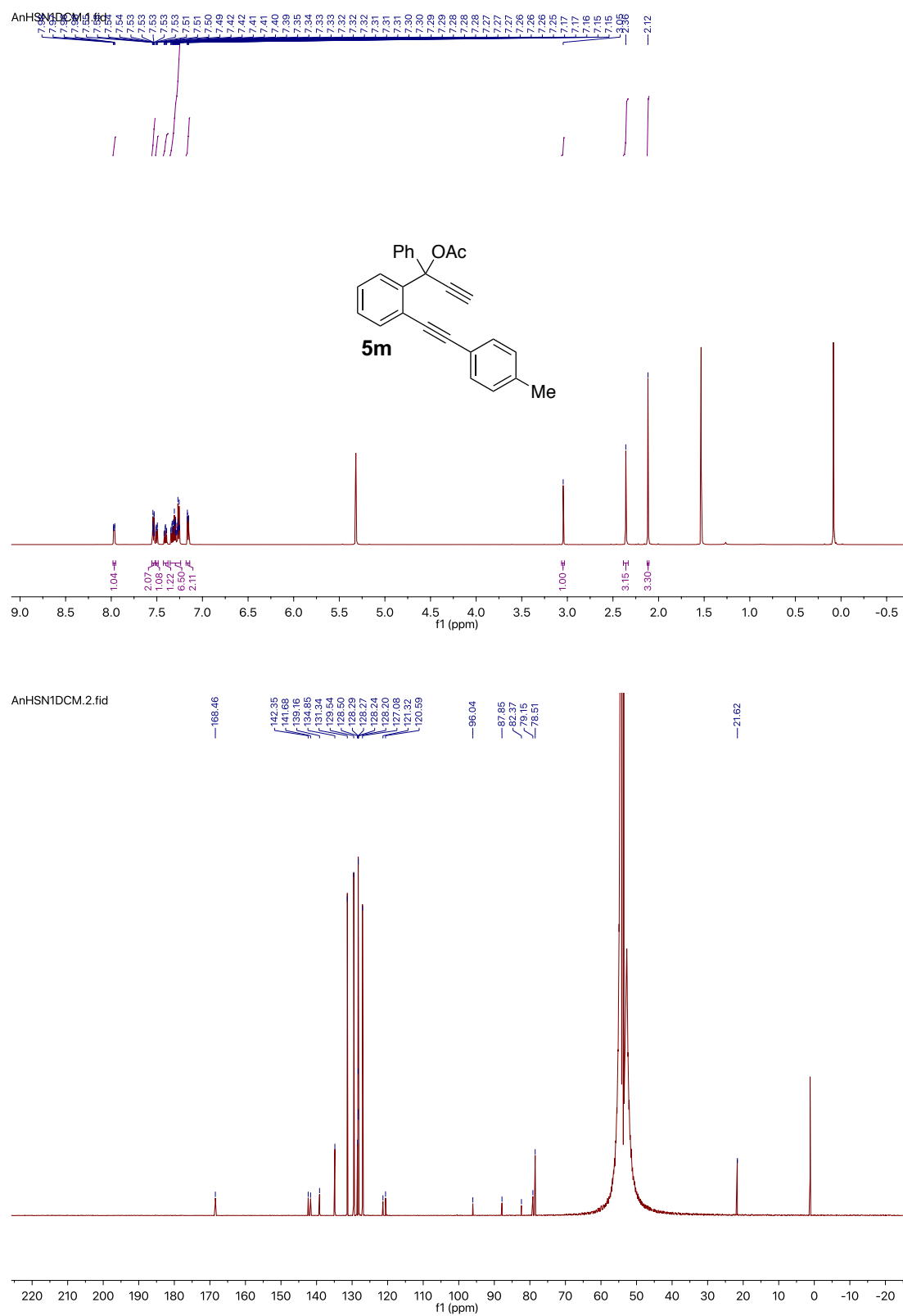


Figure S17. ^1H and ^{13}C NMR Spectra of 1-(2-(Naphthalen-1-ylethynyl)phenyl)-1-phenylprop-2-yn-1-yl Acetate (**5q**)

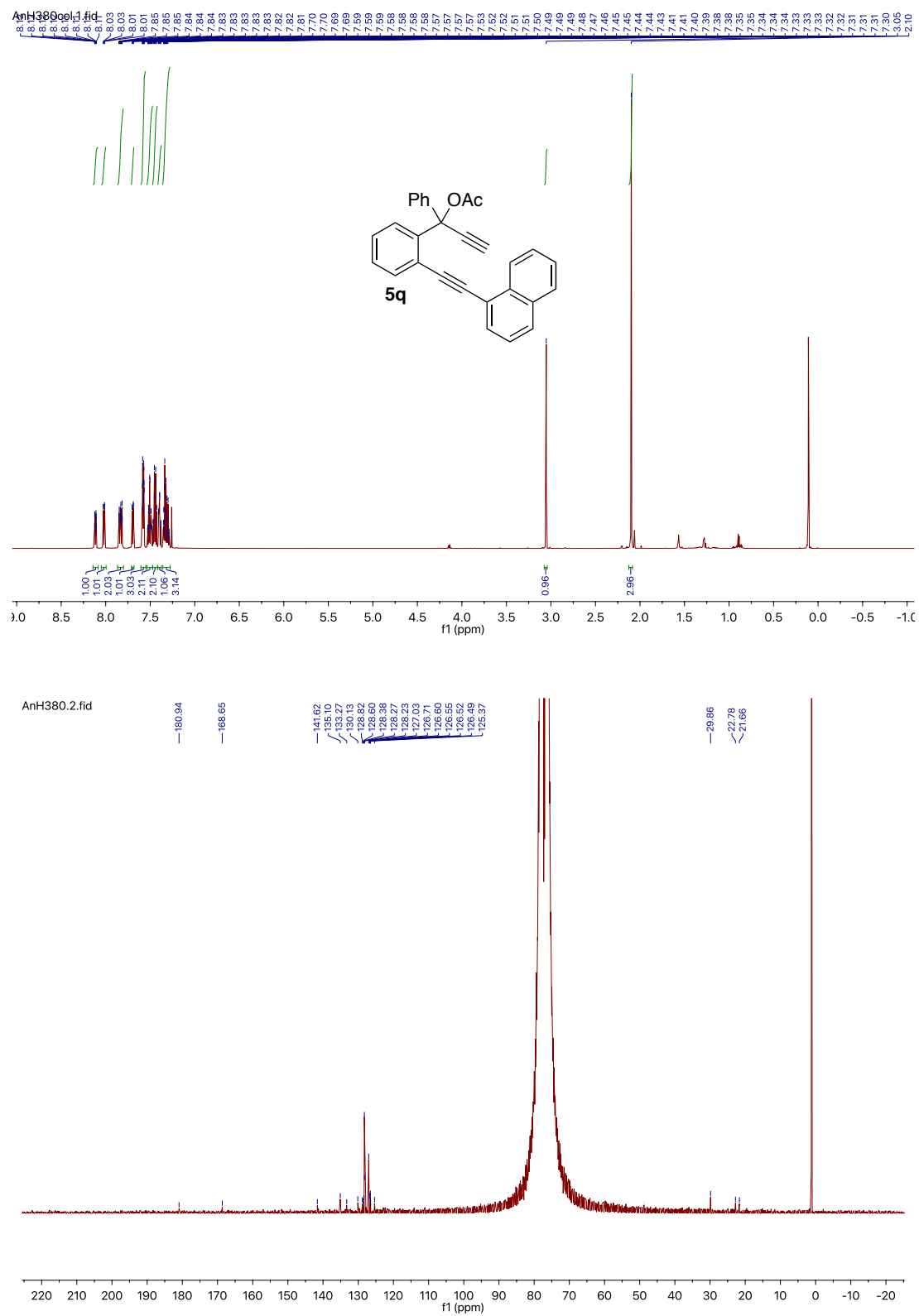


Figure S18. ^1H and ^{13}C NMR Spectra of 1-(2-(*p*-Tolylethynyl)phenyl)-1-(4-(trifluoromethyl)phenyl)prop-2-yn-1-yl Acetate (**5r**)

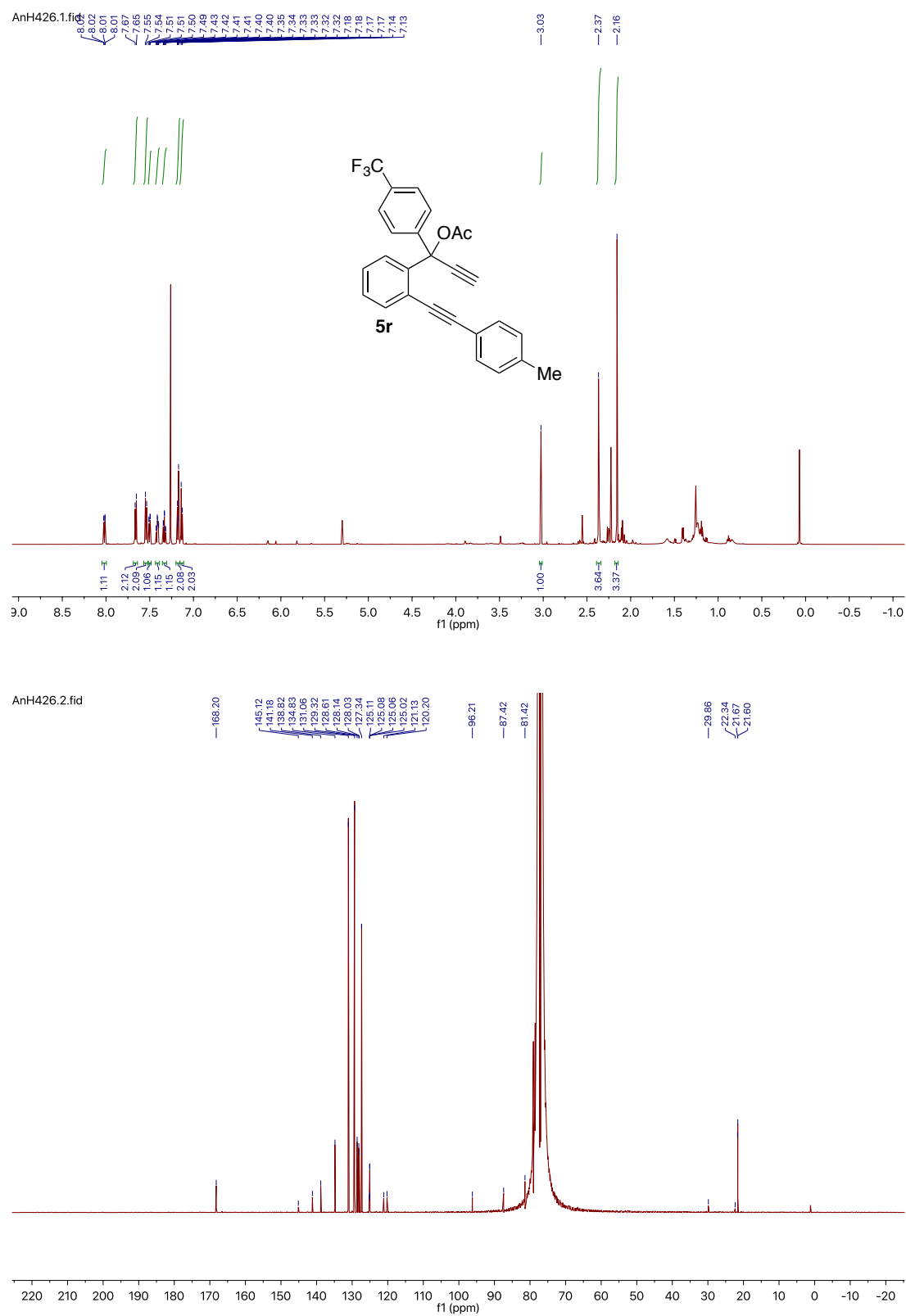


Figure S19. ^1H and ^{13}C NMR Spectra of 1-(4-Methoxy-2-(phenylethynyl)phenyl)-1-phenylprop-2-yn-1-yl Acetate (**5s**)

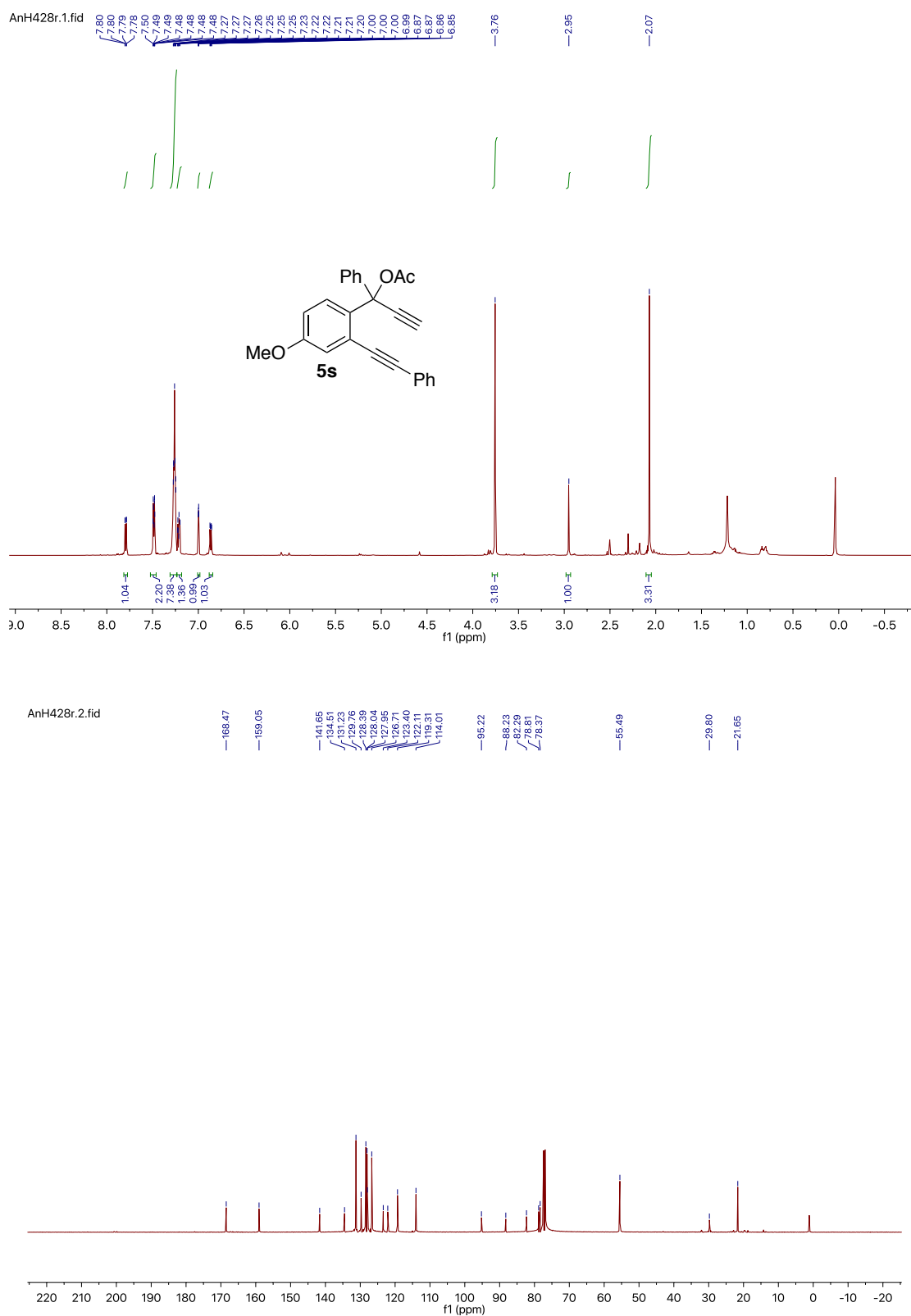


Figure S21. ¹H and ¹³C NMR Spectra of 4-Benzoyl-1-phenylnaphthalen-2-yl Acetate (**6a**)

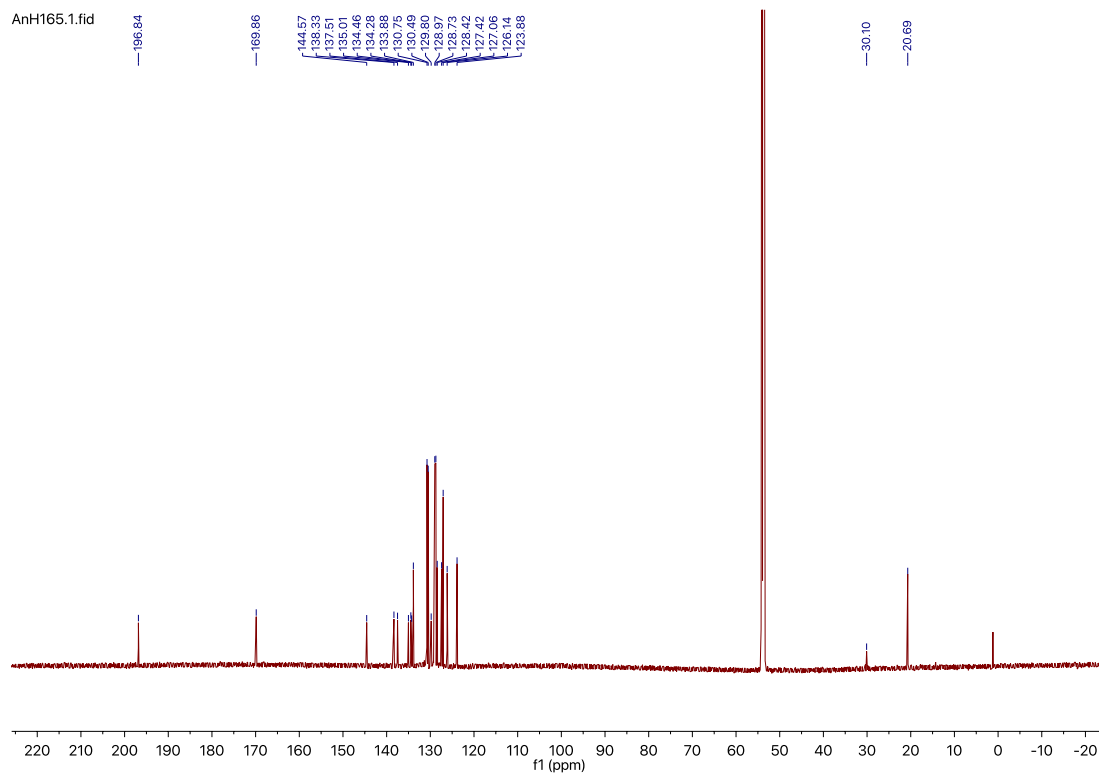
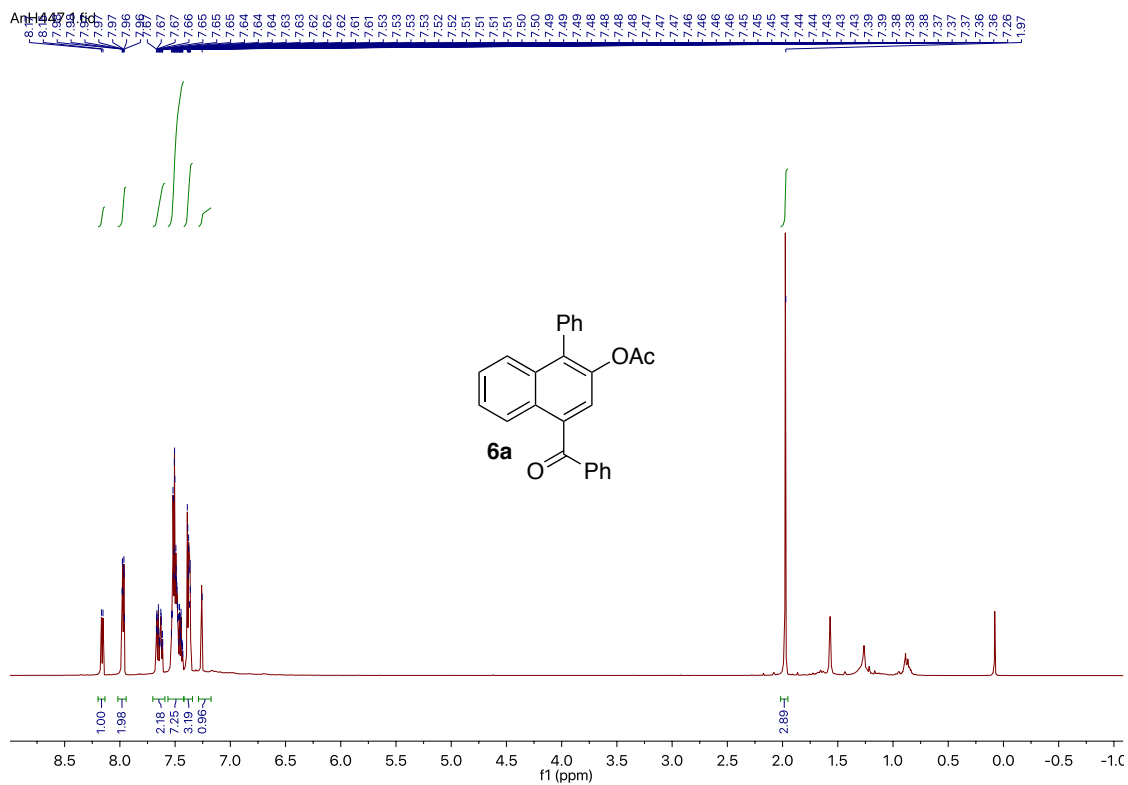


Figure S22. ^1H and ^{13}C NMR Spectra of 4-Benzoyl-1-(4-chlorophenyl)naphthalen-2-yl Acetate (**6b**)

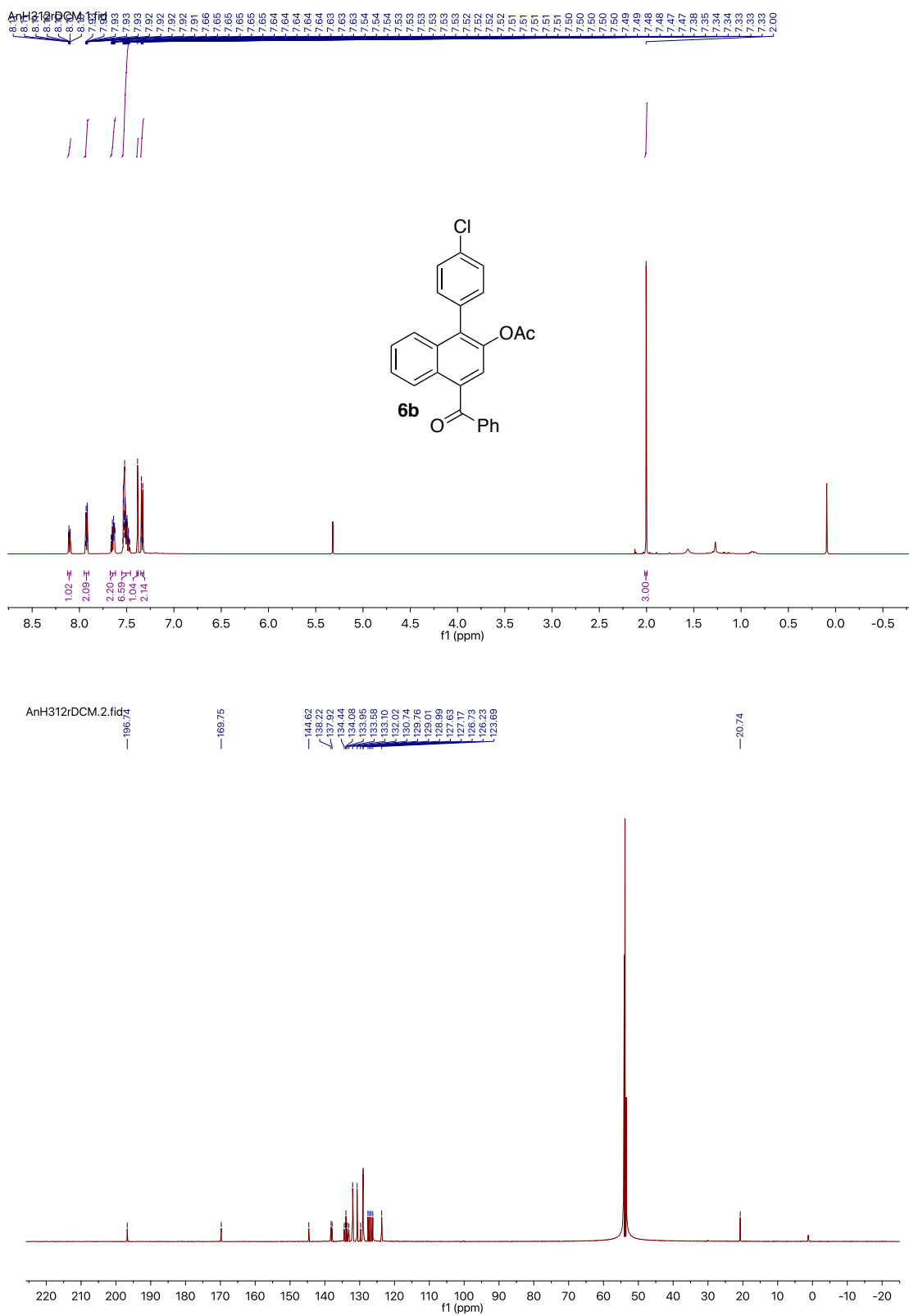


Figure S24. ^1H and ^{13}C NMR Spectra of 4-Benzoyl-1-(*o*-tolyl)naphthalen-2-yl Acetate (**6d**)

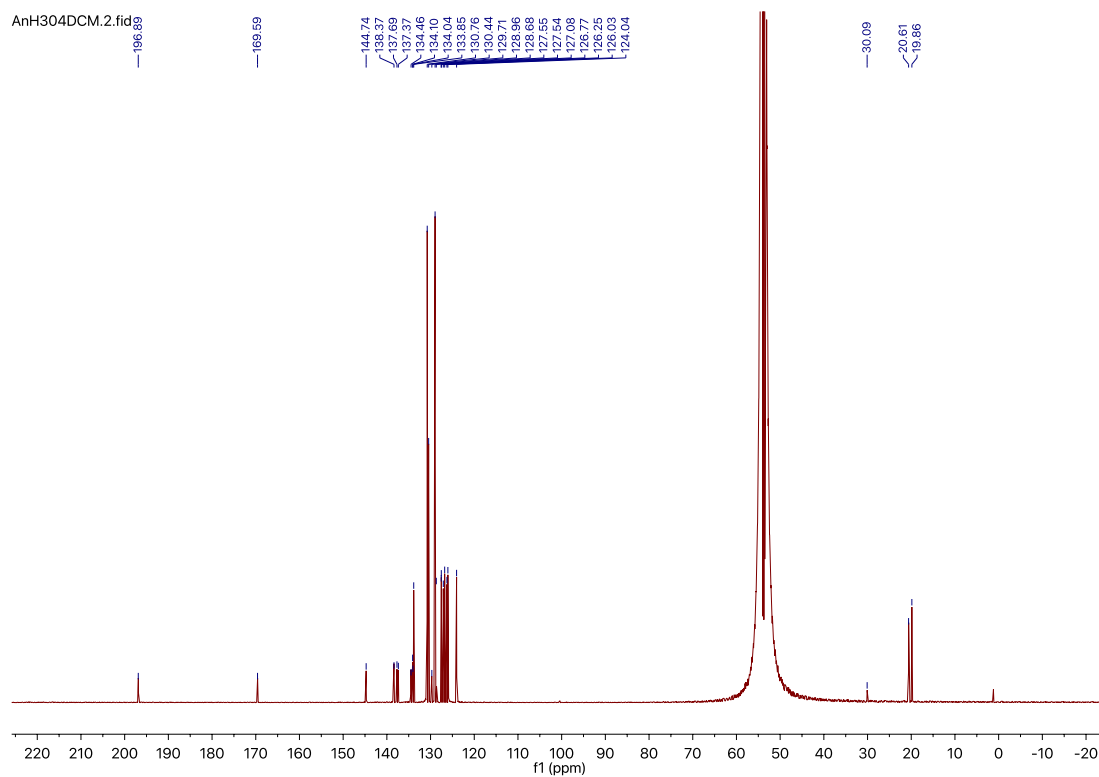
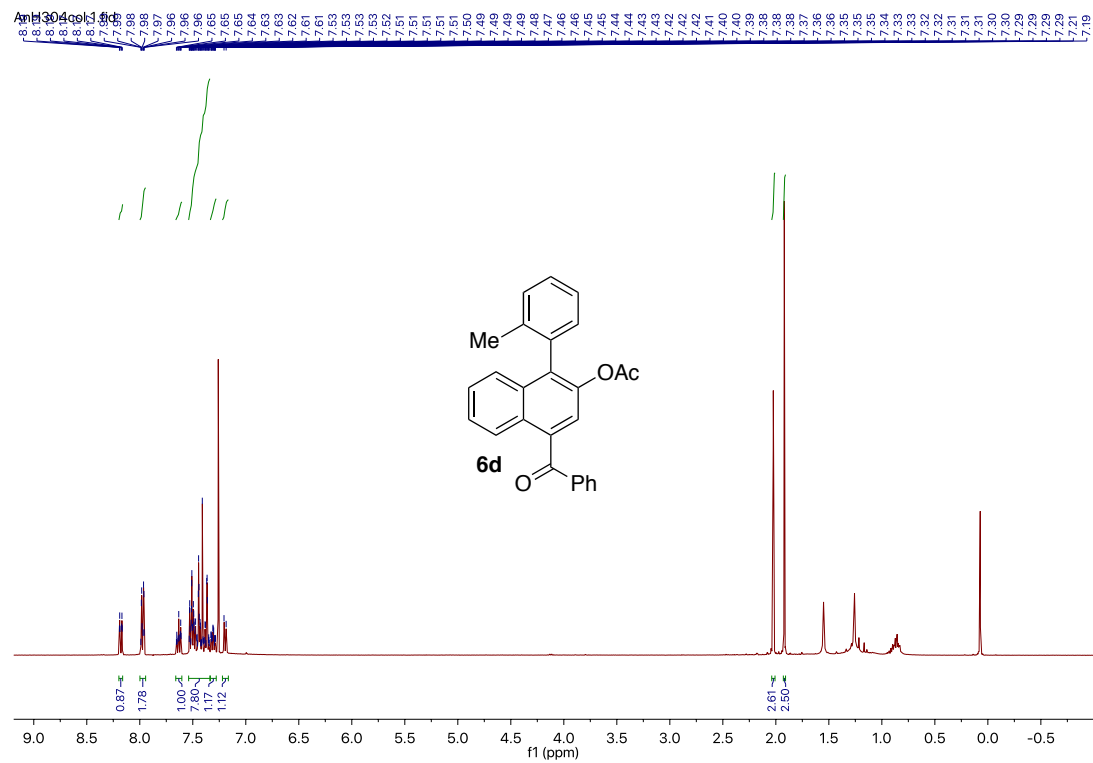


Figure S25. ¹H and ¹³C NMR Spectra of 4-Benzoyl-1-(*p*-tolyl)naphthalen-2-yl Acetate (**6e**)

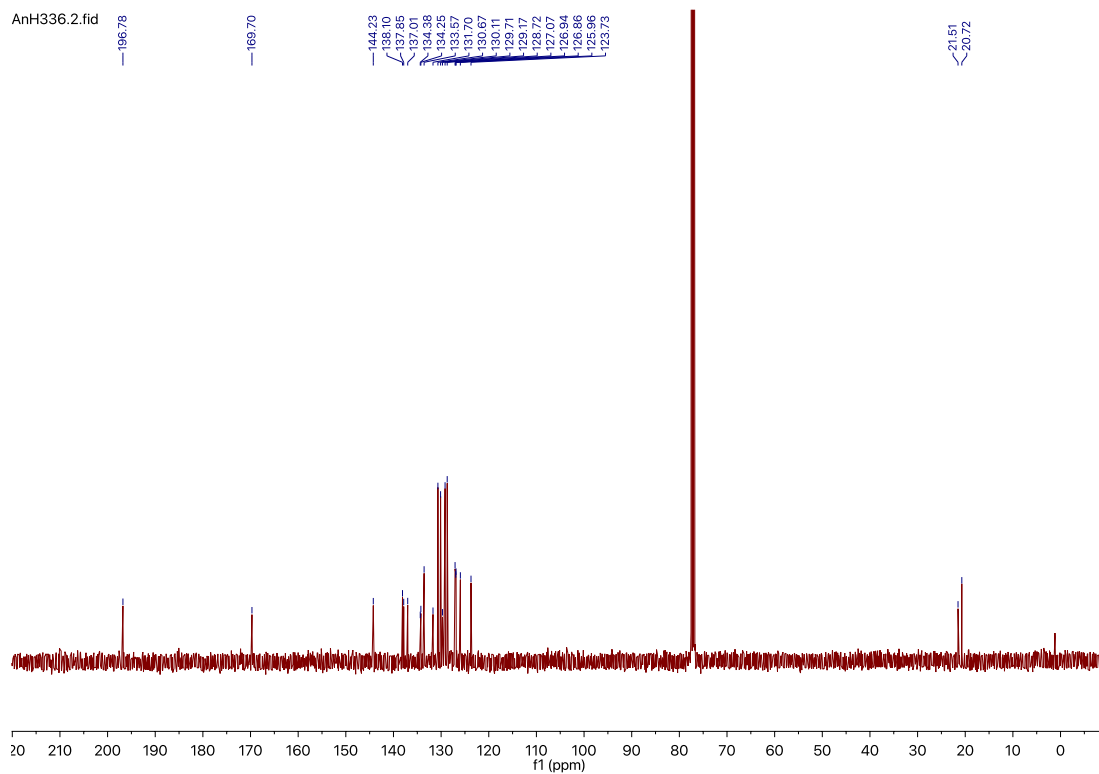
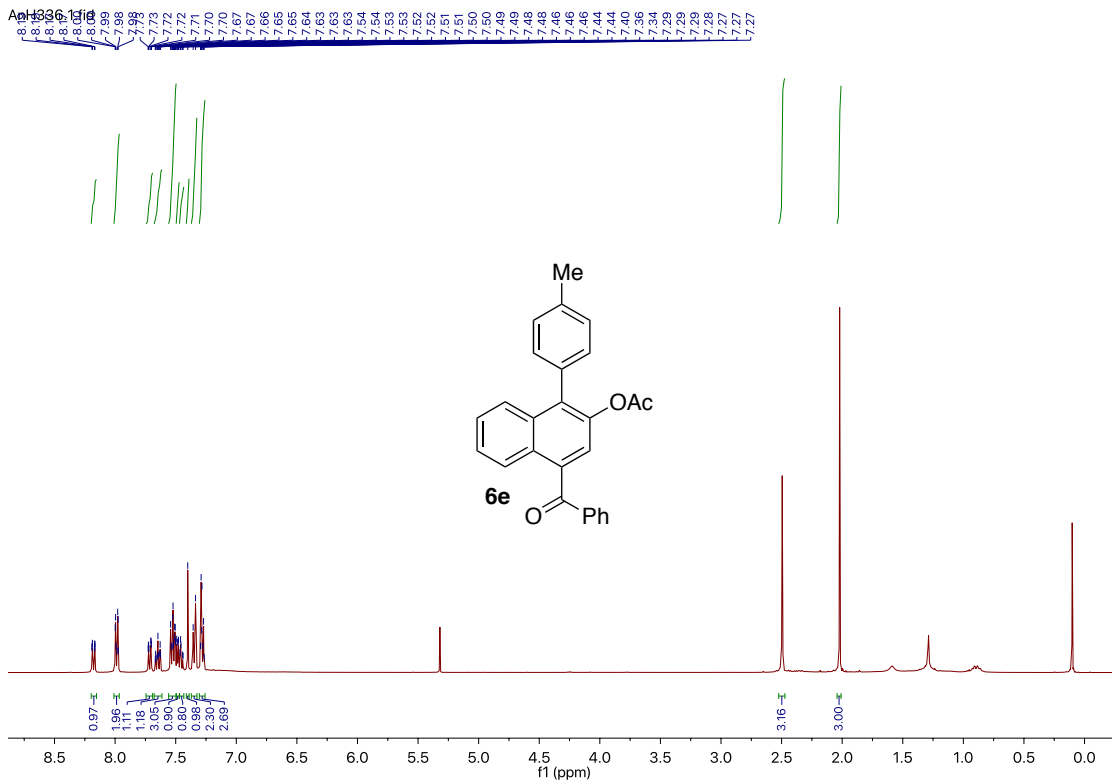


Figure S26. ^1H and ^{13}C NMR Spectra of 4-Benzoyl-1-(4-methoxyphenyl)naphthalen-2-yl Acetate (**6f**)

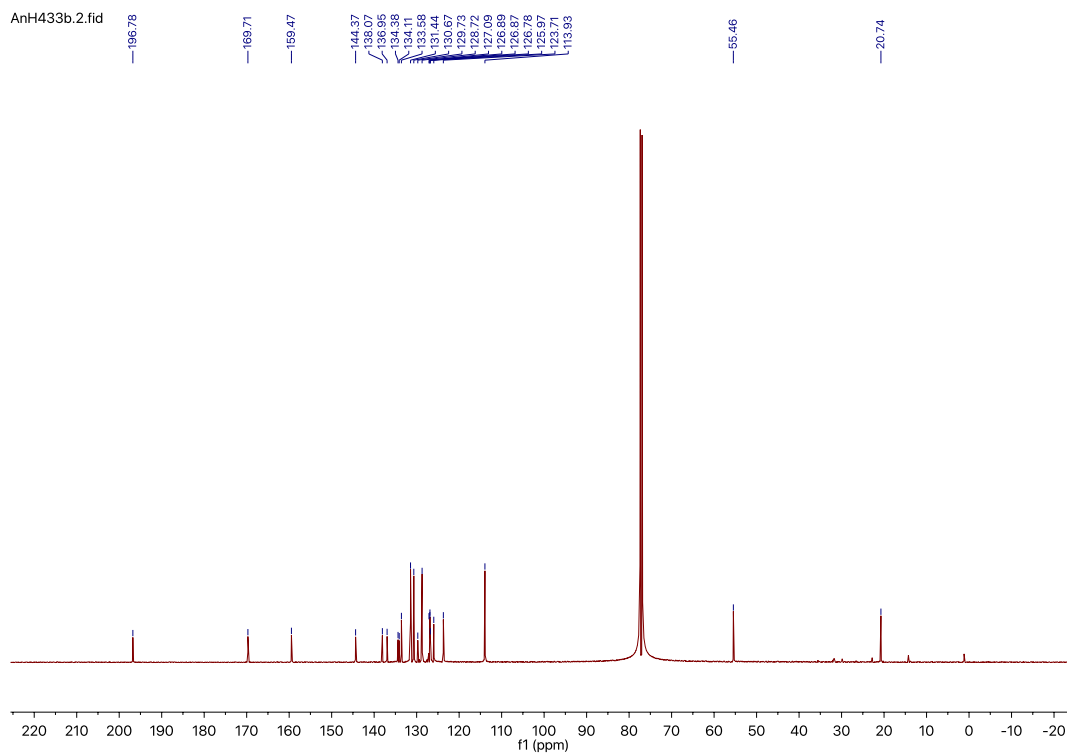
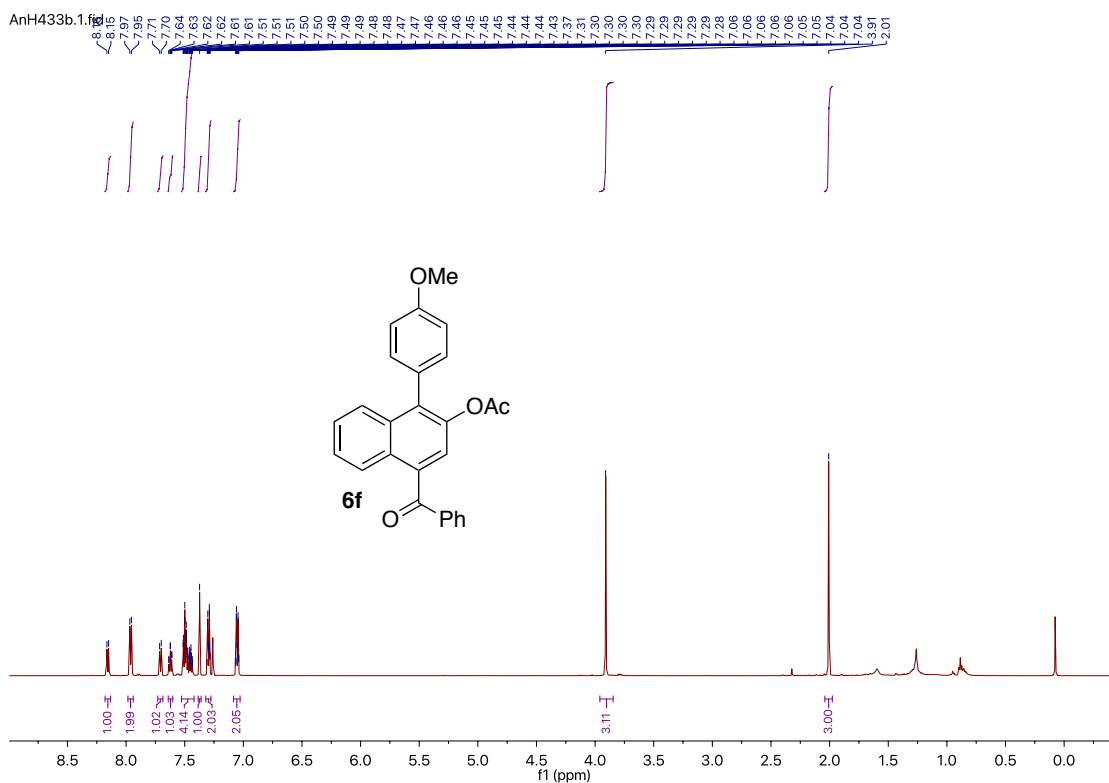


Figure S27. ¹H and ¹³C NMR Spectra of 4-Benzoyl-[1,1'-binaphthalen]-2-yl Acetate (**6g**)

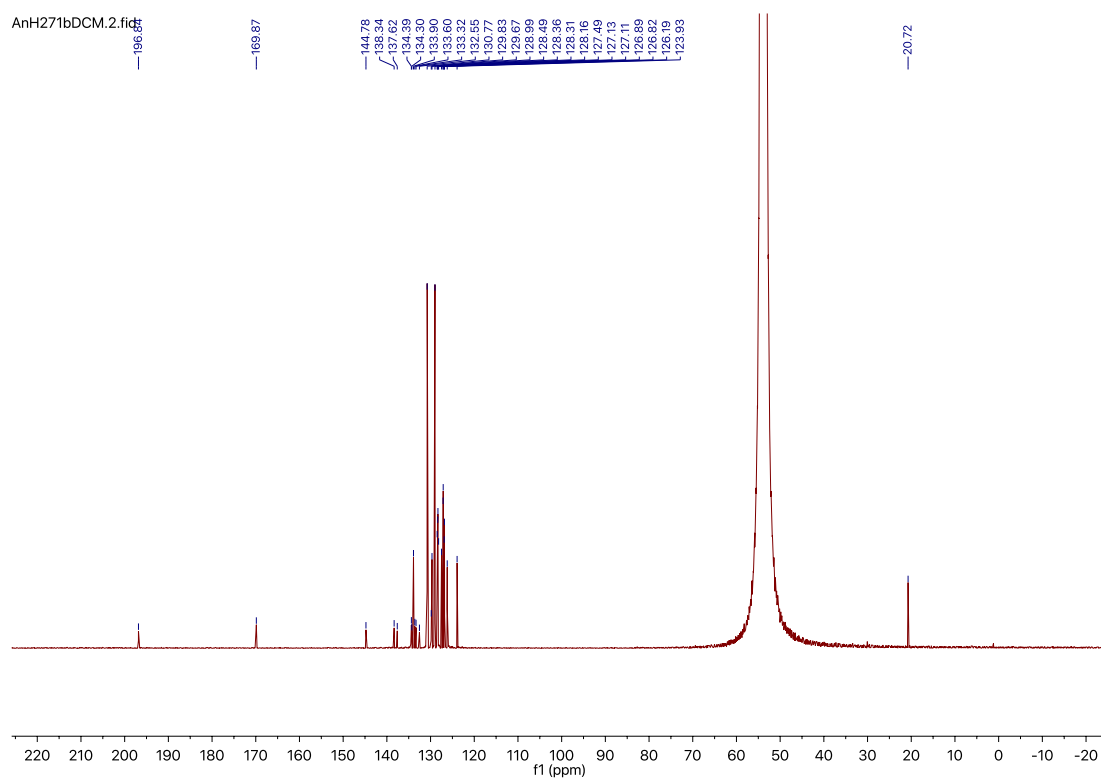
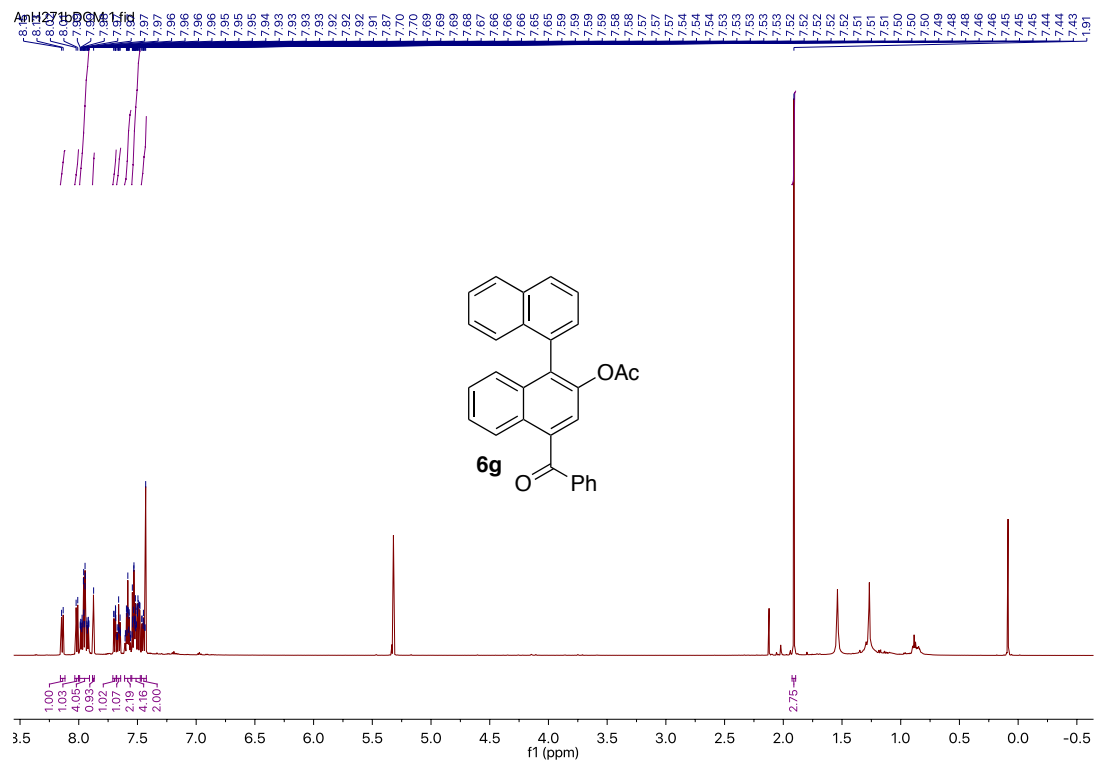


Figure S28. ¹H and ¹³C NMR Spectra of 4-Benzoyl-1-benzyl-naphthalen-2-yl Acetate (**6h**)

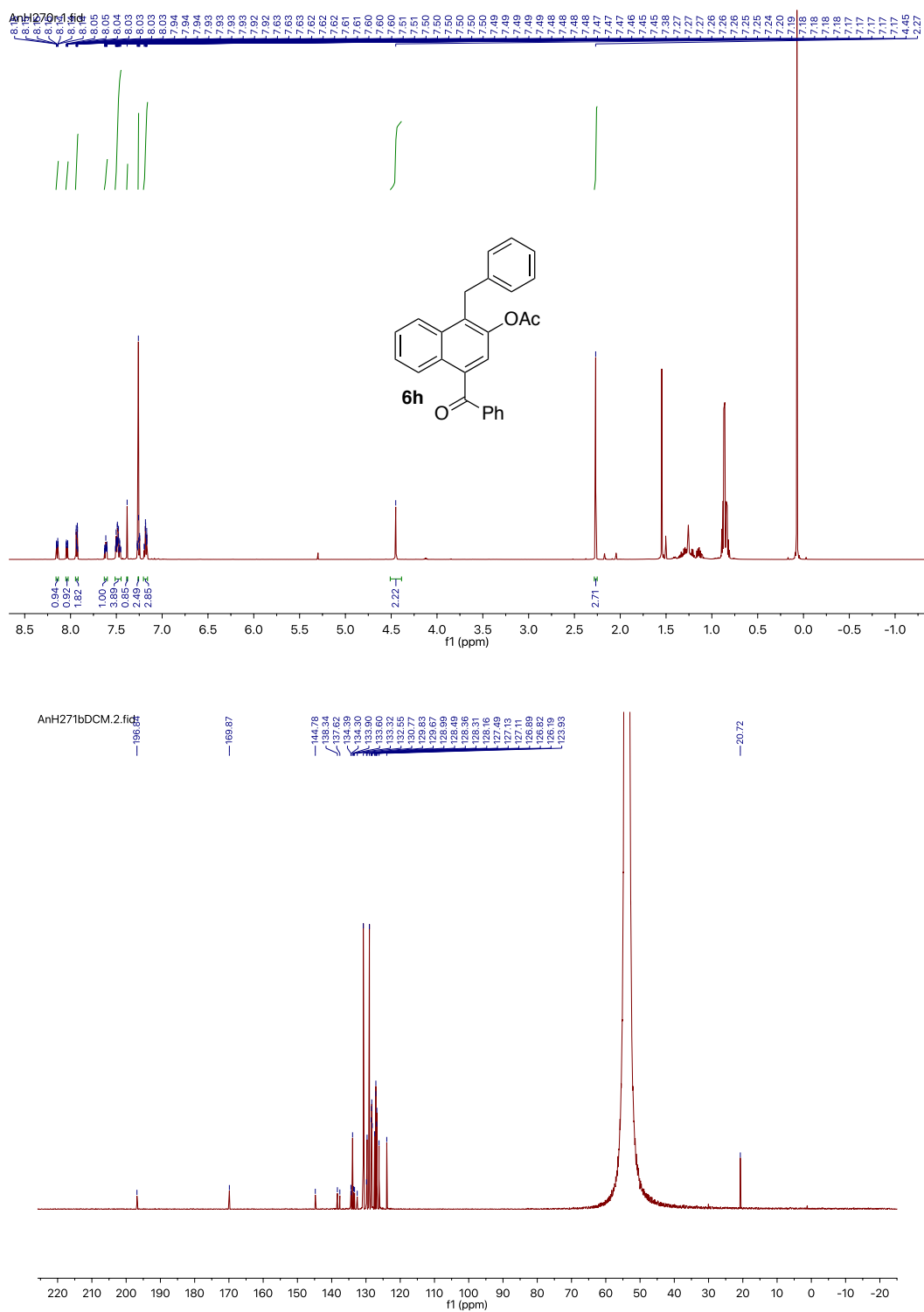


Figure S29. ¹H and ¹³C NMR Spectra of 4-Benzoyl-1-methylnaphthalen-2-yl Acetate (**6i**)

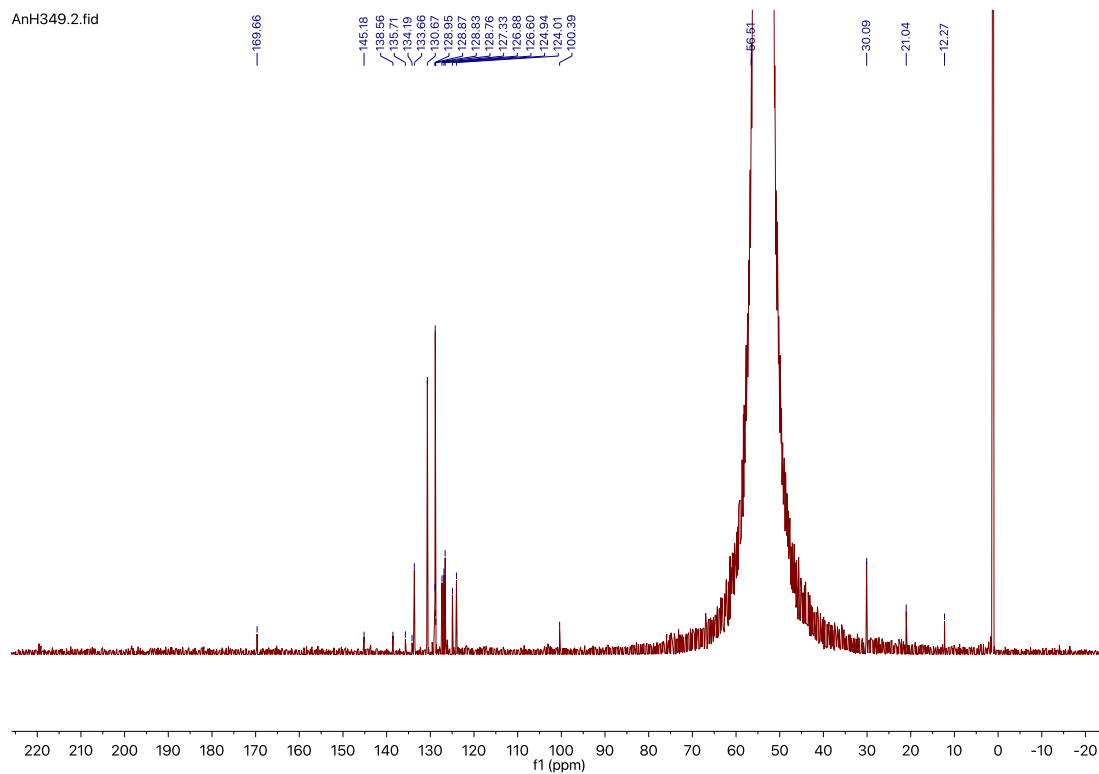
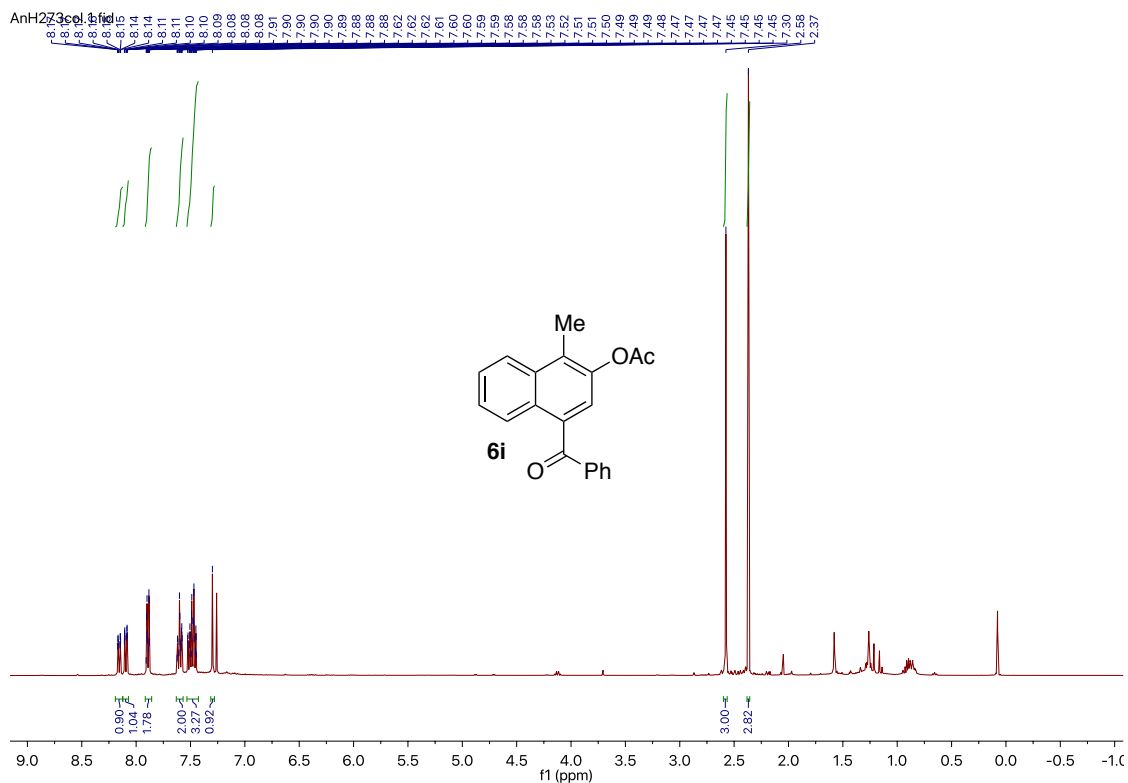


Figure S30. ^1H and ^{13}C NMR Spectra of 4-(4-Bromobenzoyl)-1-phenylnaphthalen-2-yl Acetate (**6j**)

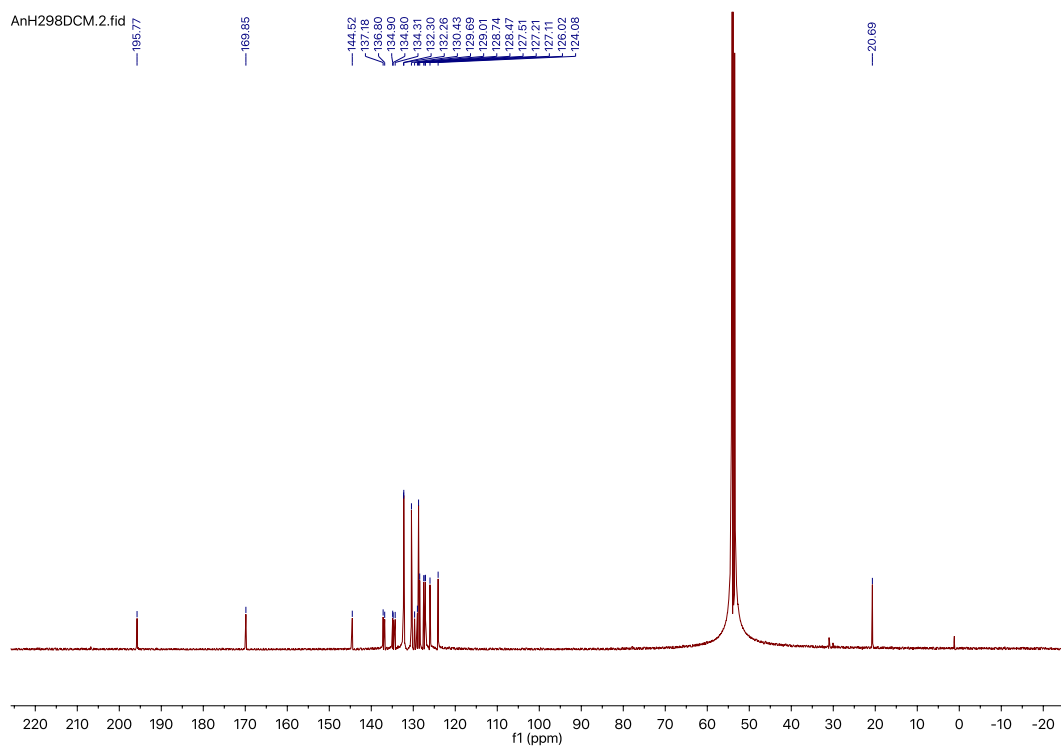
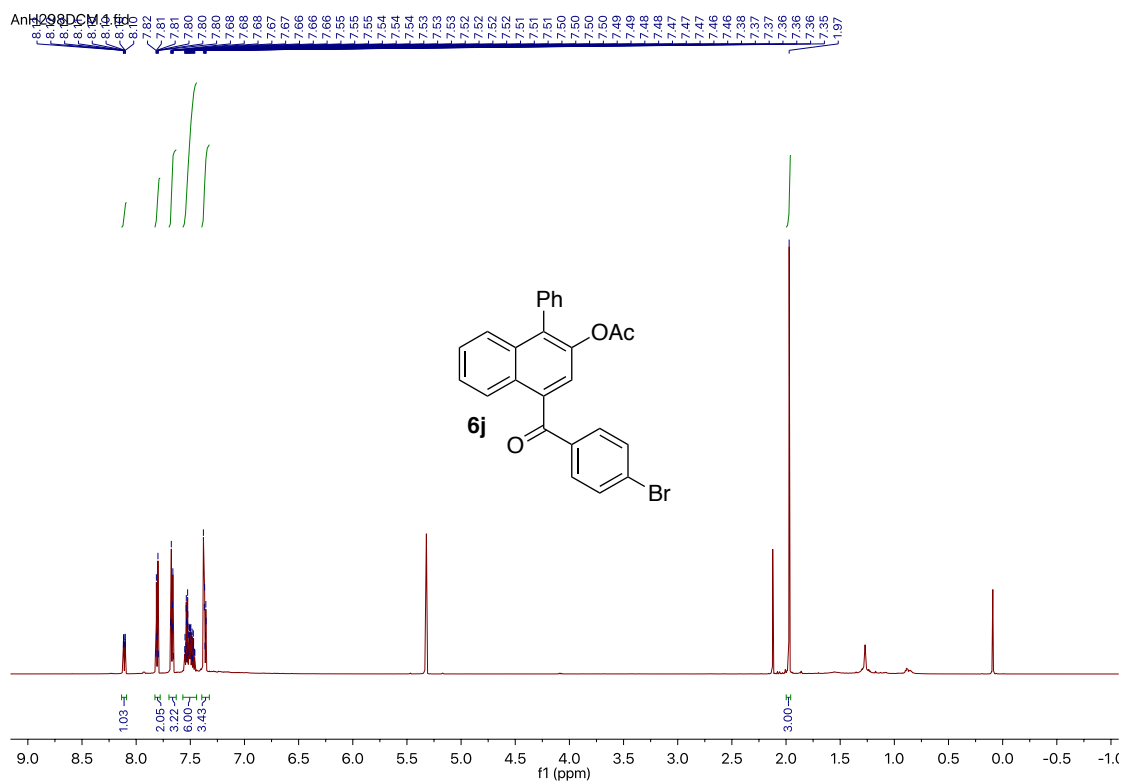


Figure S32. ^1H and ^{13}C NMR Spectra of 4-([1,1'-Biphenyl]-4-carbonyl)-1-phenylnaphthalen-2-yl Acetate (**6l**)

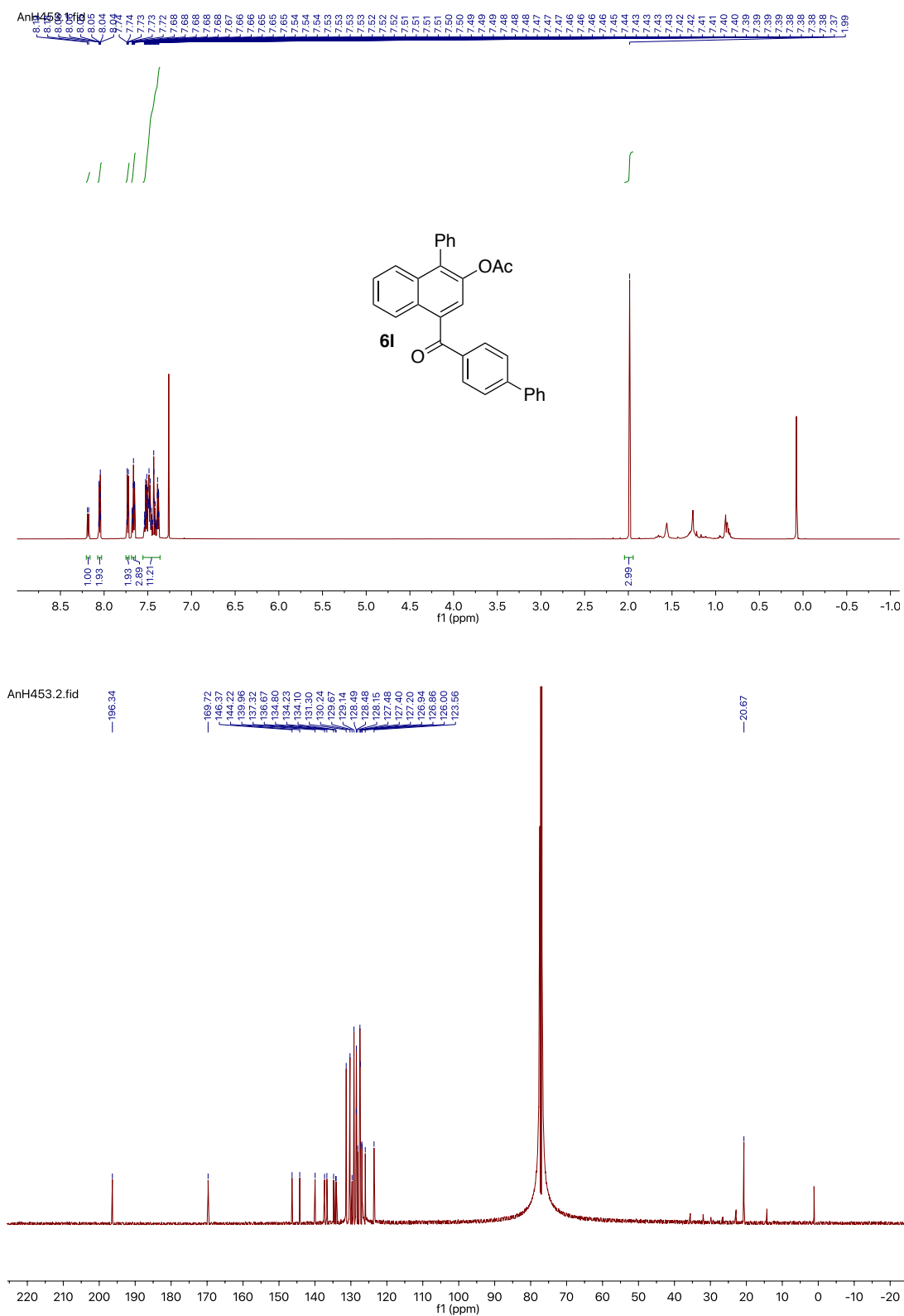


Figure S33. ^1H and ^{13}C NMR Spectra of 4-(4-Methylbenzoyl)-1-phenylnaphthalen-2-yl Acetate (**6m**)

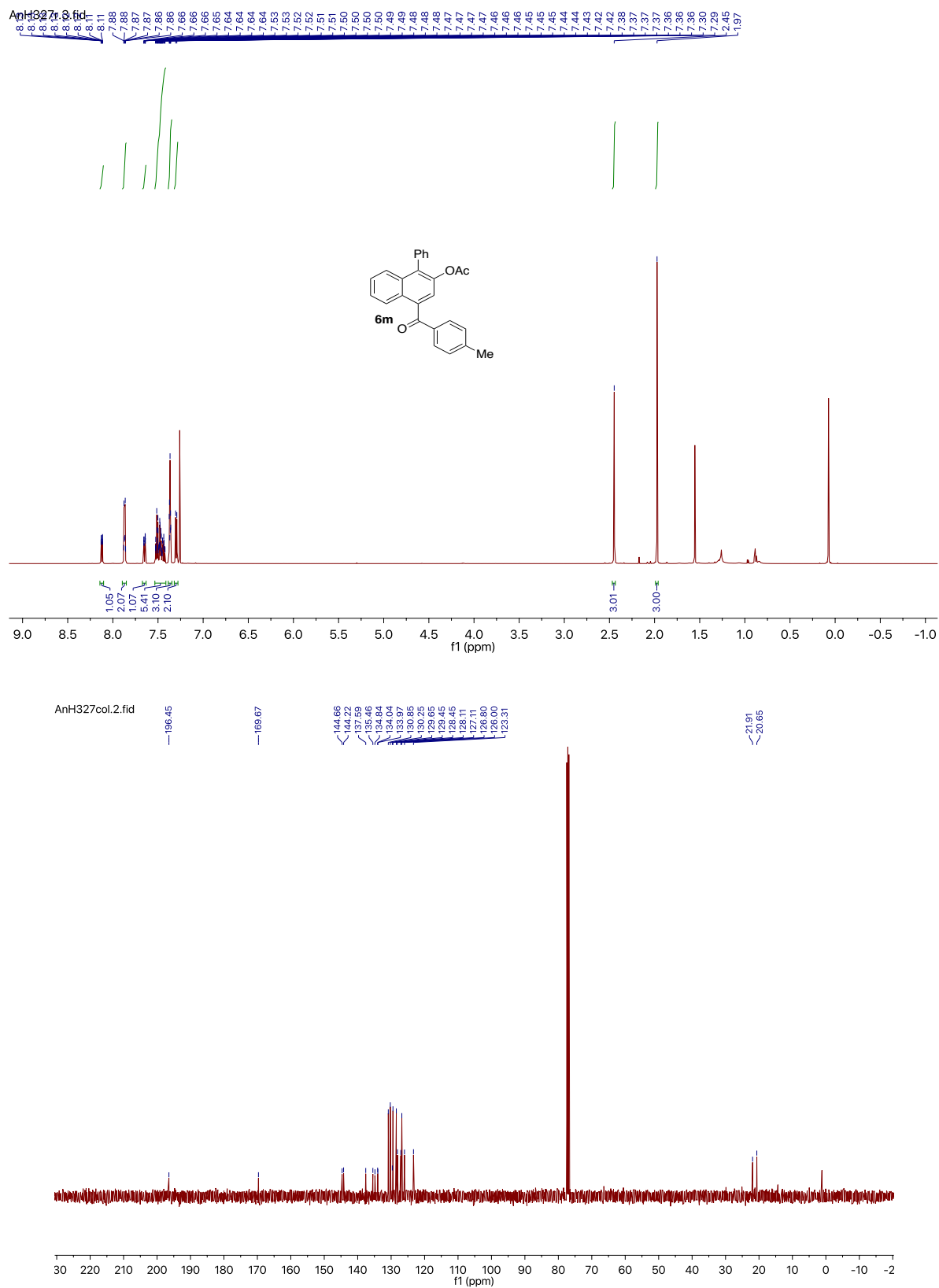


Figure S35. ^1H and ^{13}C NMR Spectra of 4-(4-Methoxybenzoyl)-1-phenylnaphthalen-2-yl Acetate (**6o**)

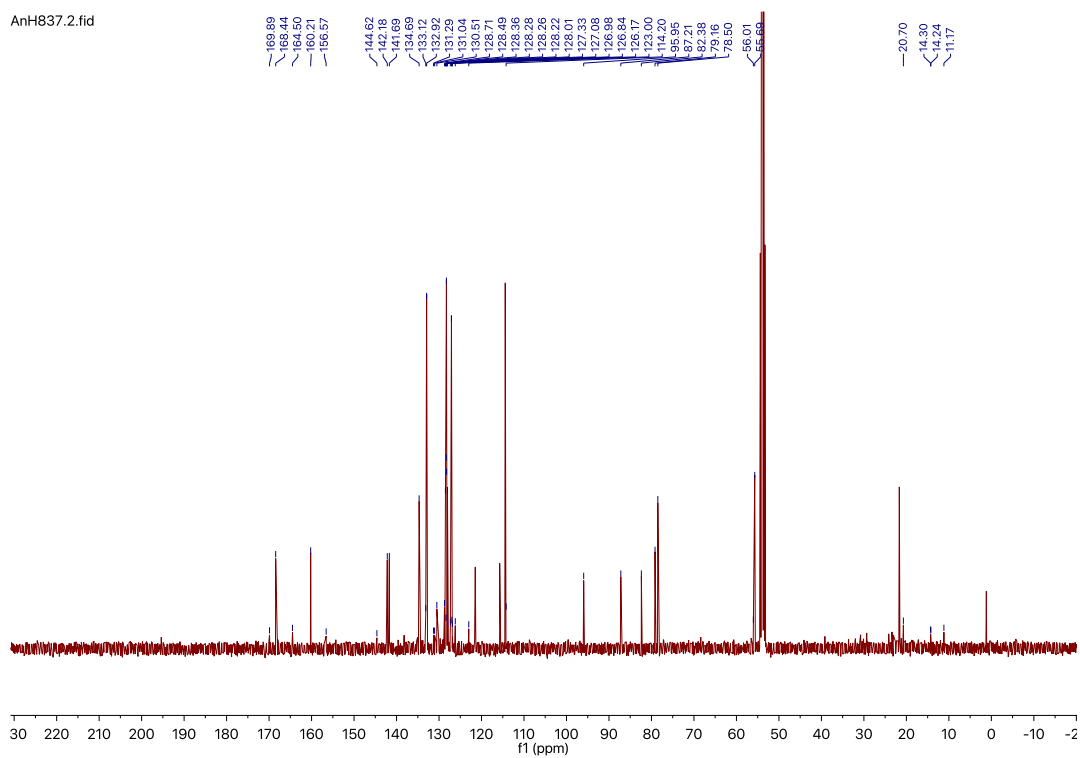
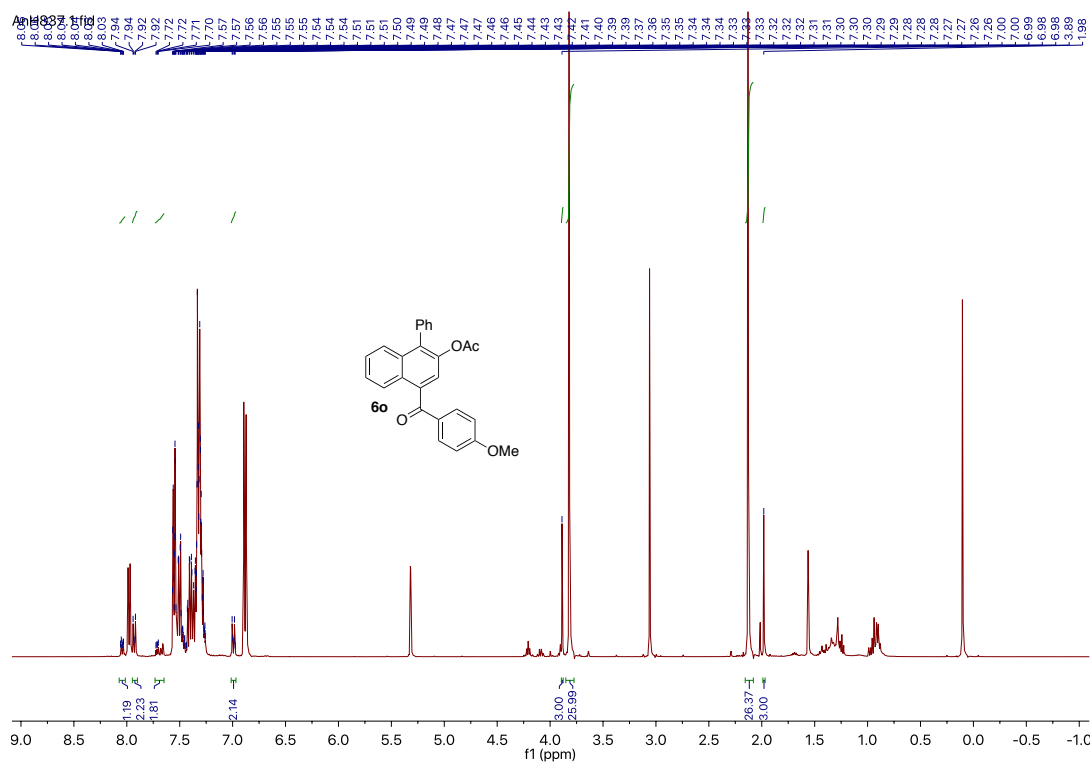


Figure S36. ¹H and ¹³C NMR Spectra of 4-(1-Naphthoyl)-1-phenylnaphthalen-2-yl Acetate

(6q)

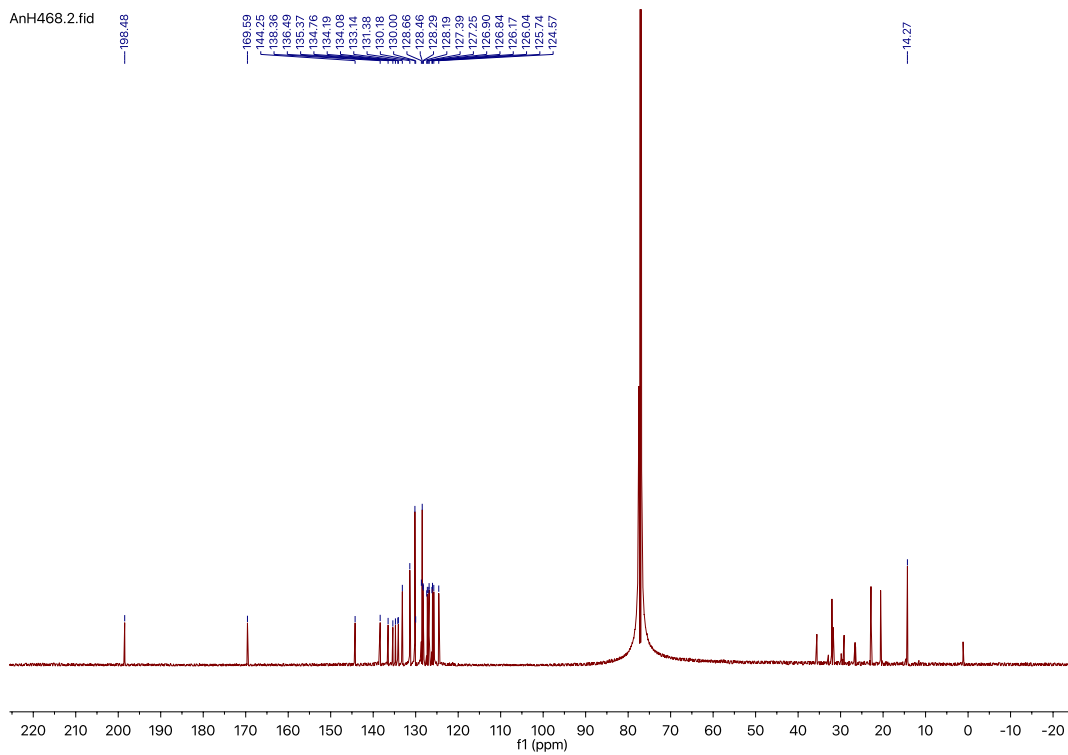
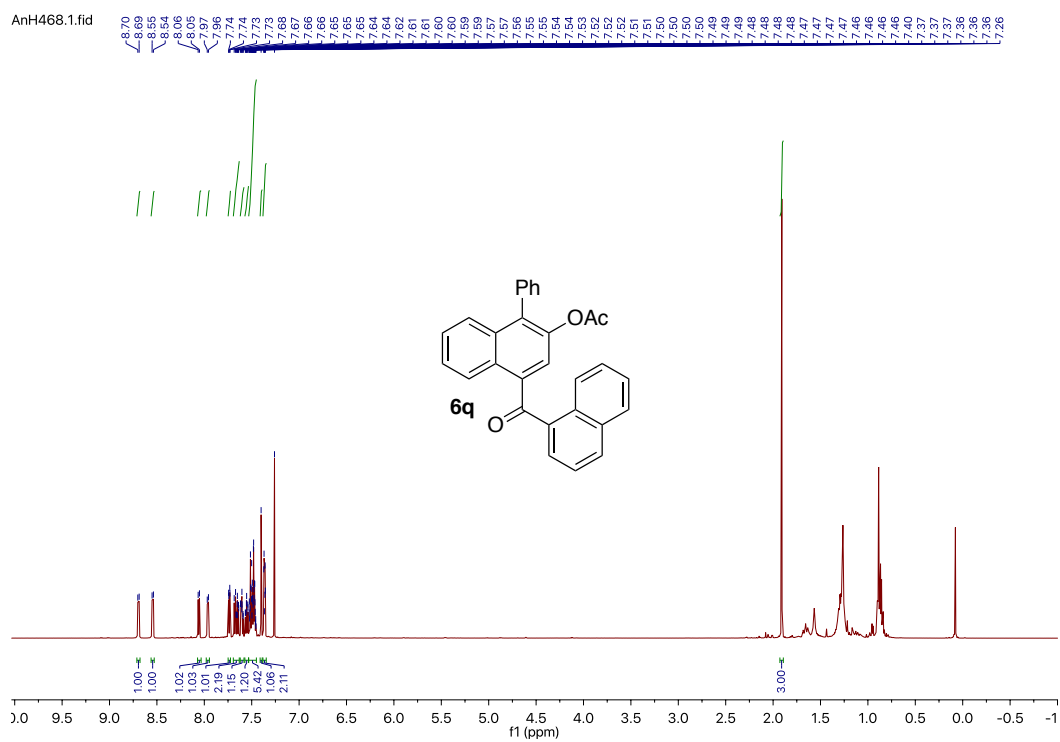


Figure S37. ^1H and ^{13}C NMR Spectra of 4-(4-Methylbenzoyl)-1-(4-(trifluoromethyl)phenyl)naphthalen-2-yl Acetate (**6r**)

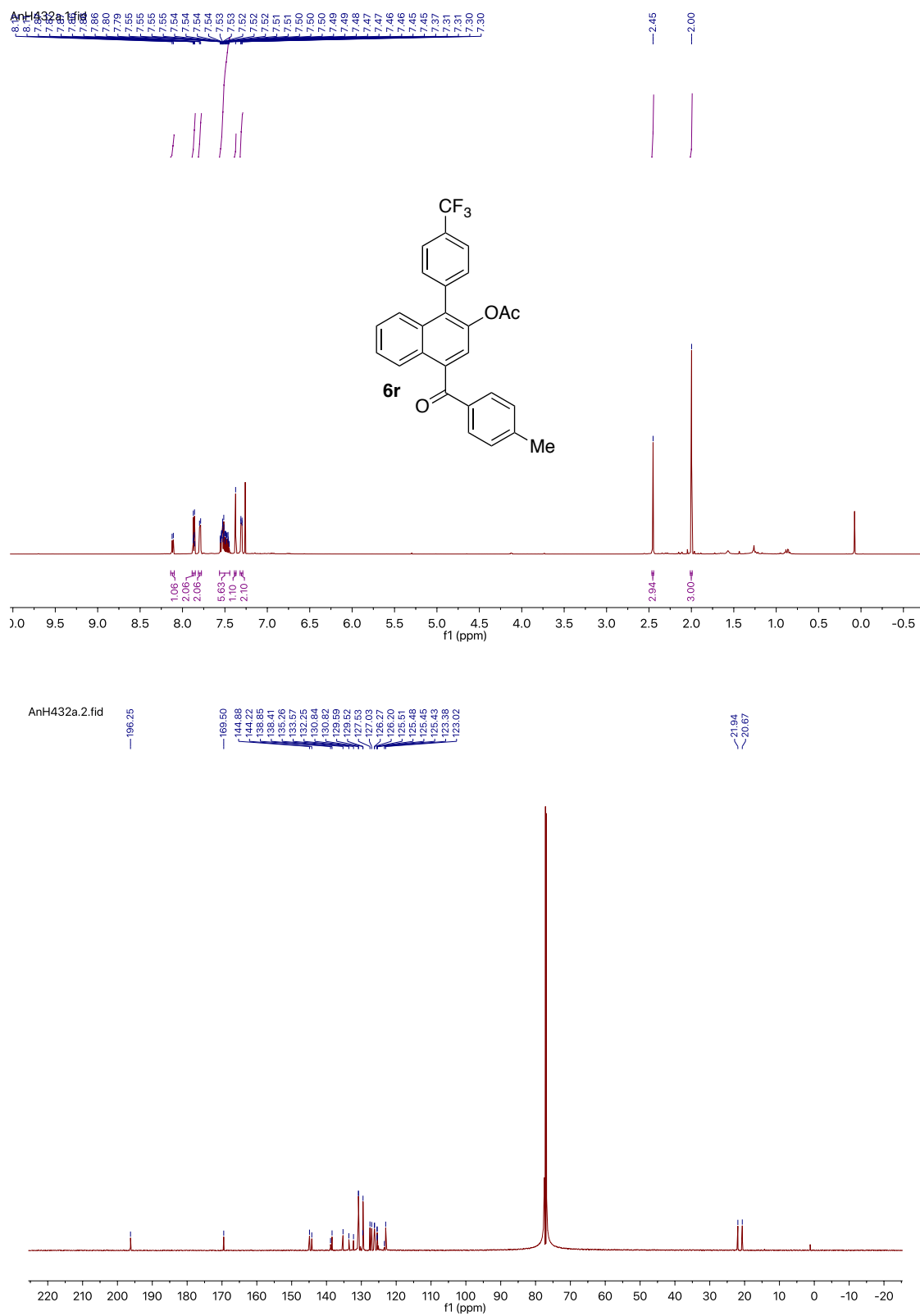


Figure S38. ^1H and ^{13}C NMR Spectra of 4-Benzoyl-6-methoxy-1-phenylnaphthalen-2-yl Acetate (**6s**)

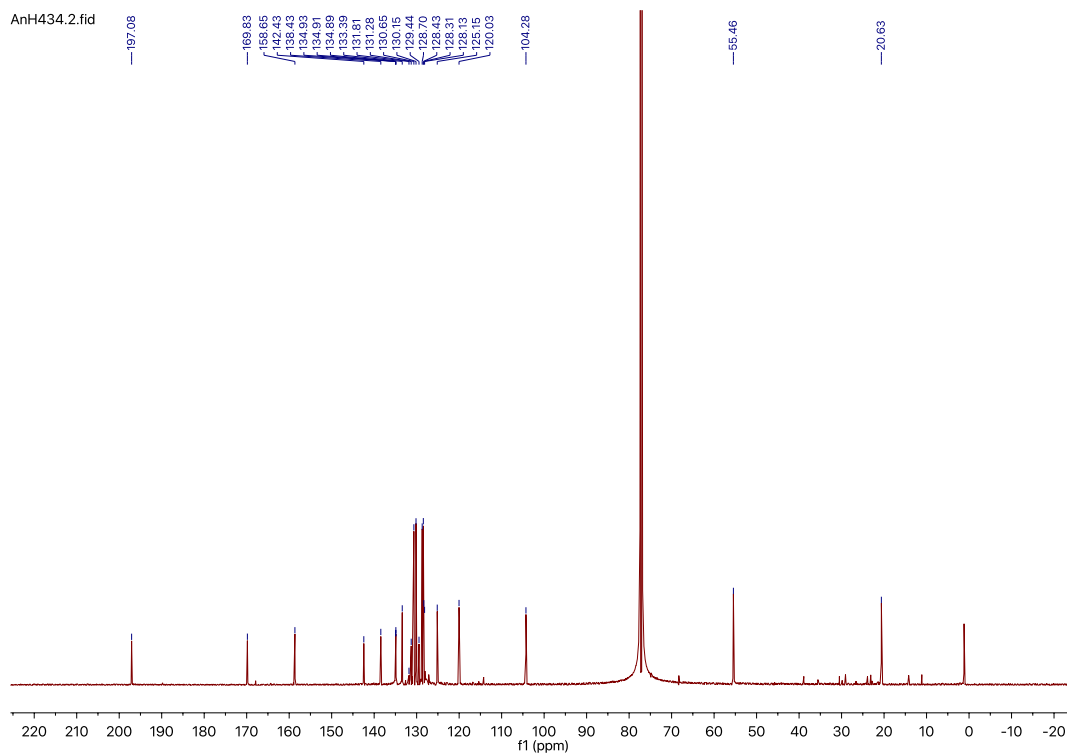
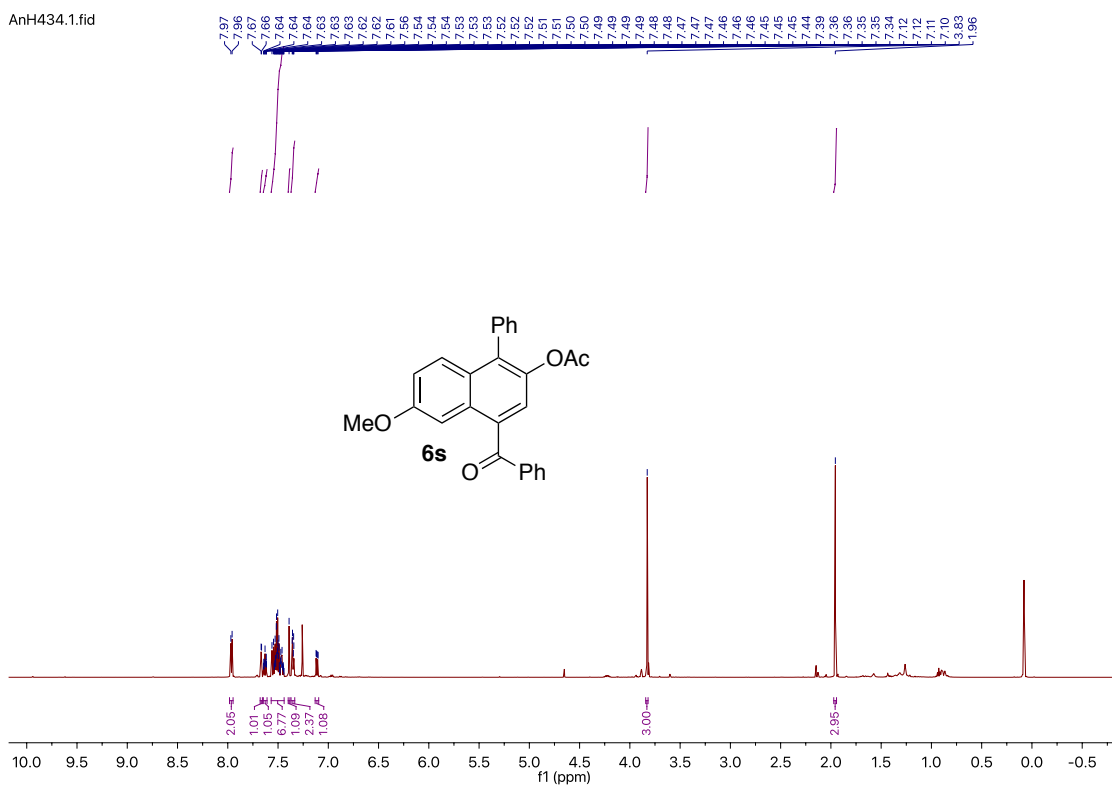


Figure S39. ¹H and ¹³C NMR Spectra of 4-Benzoyl-1-phenylanthracen-2-yl Acetate (**6t**)

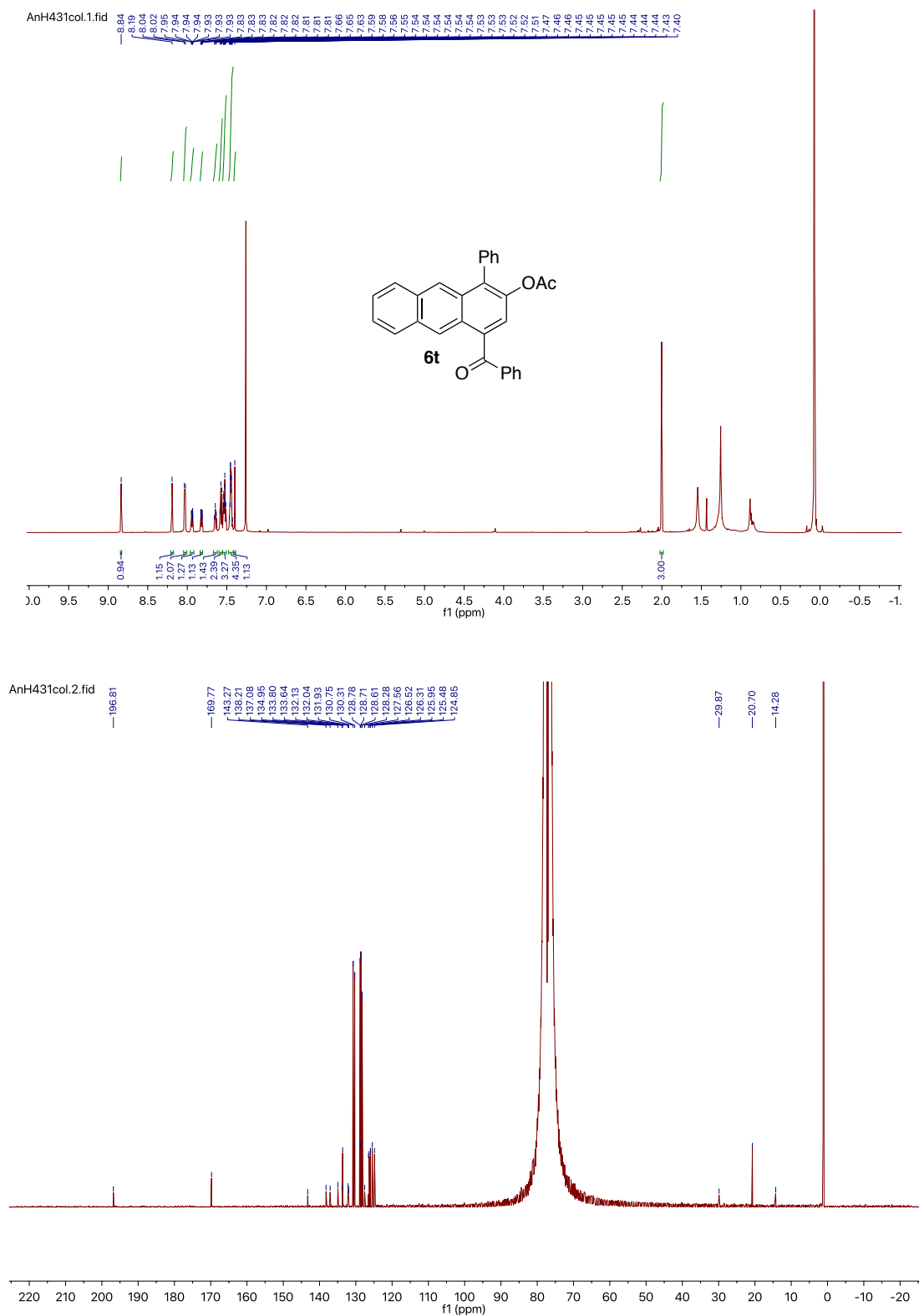


Figure S40. Mass Spectrum of 4-Benzoyl-1-phenylnaphthalen-2-yl Acetates (**6a**) and (**6a'**)

