Supporting Information

Stereochemically Defined Various Multi-substituted Alkenes Bearing a Tetrafluoroethylene (–CF_2CF_2–) Fragment

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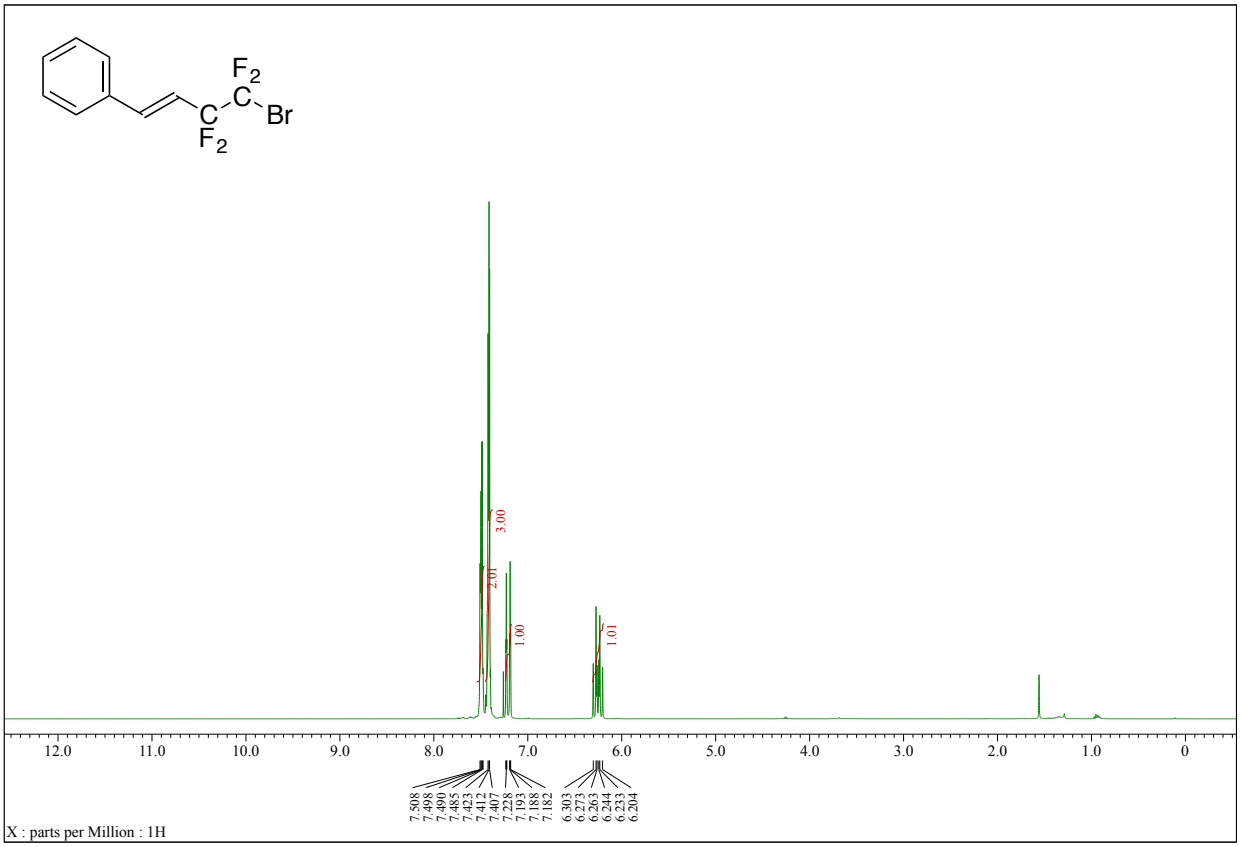
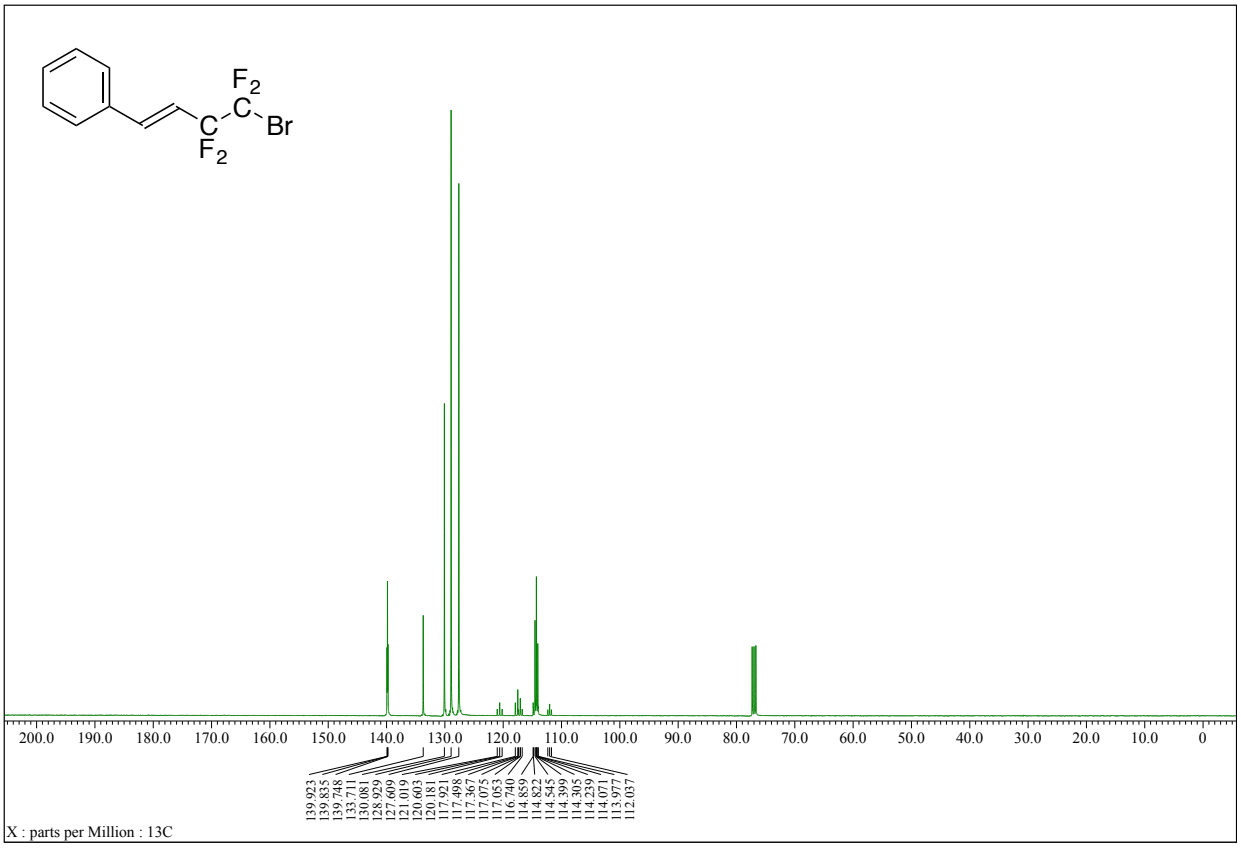
(E)-4-Bromo-3,3,4,4-tetrafluoro-1-phenylbut-1-ene (4a)

^{1}H NMR

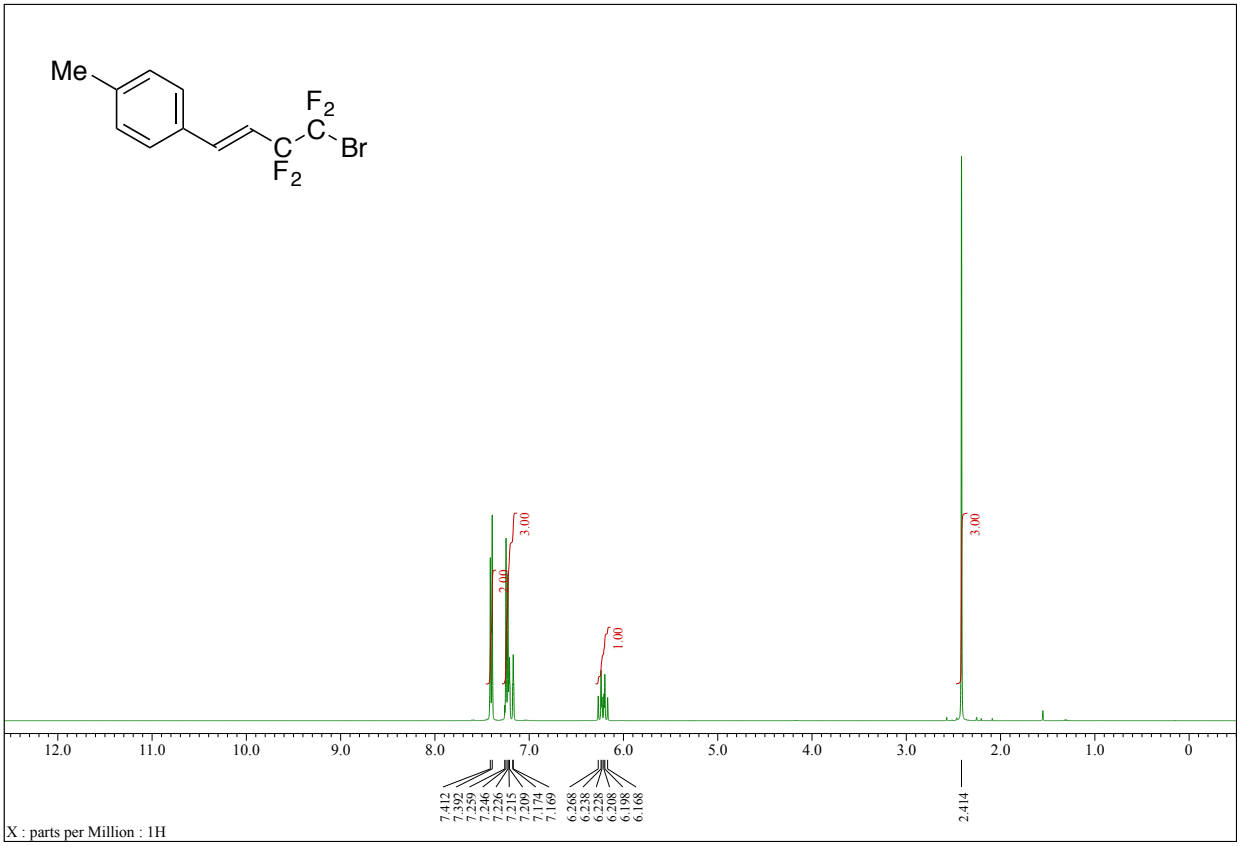


^{13}C NMR



(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(4-methylphenyl)but-1-ene (4b)

^{1}H NMR



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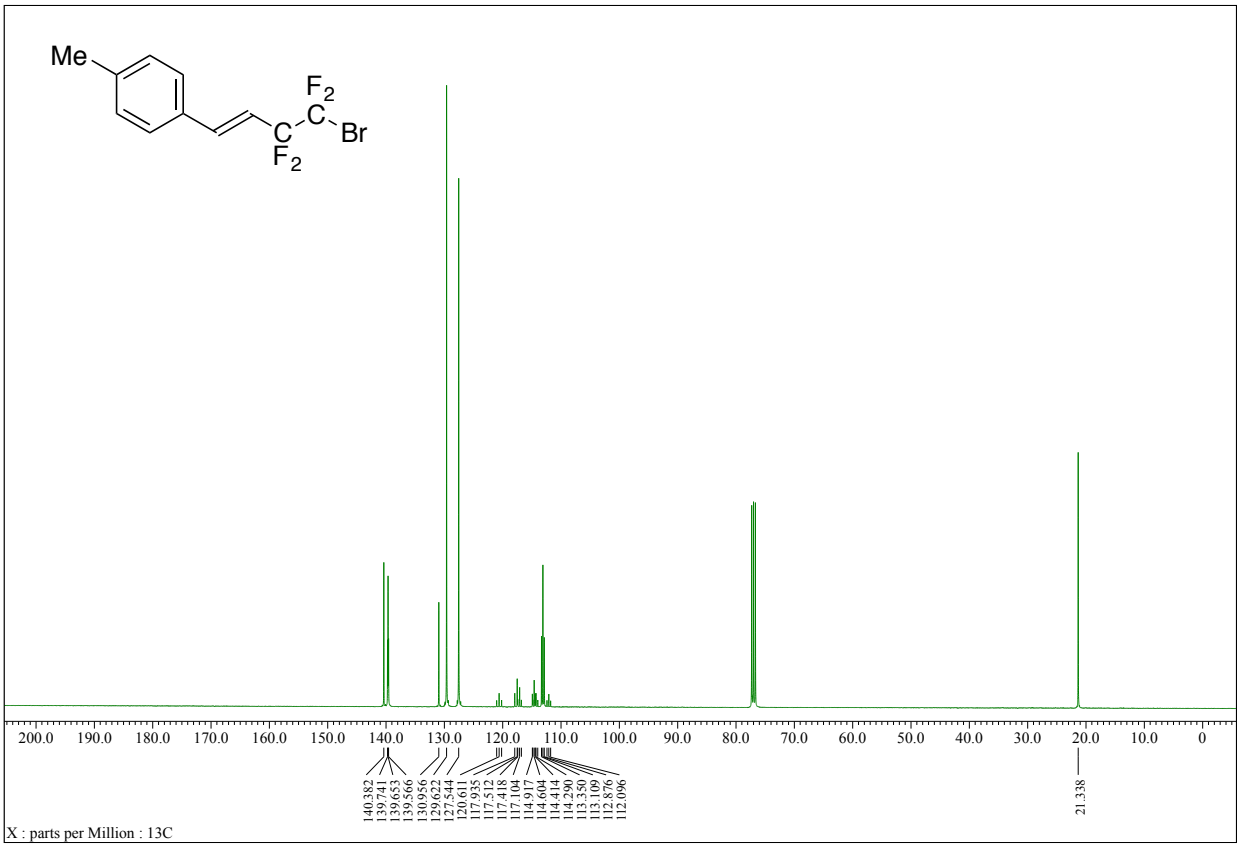
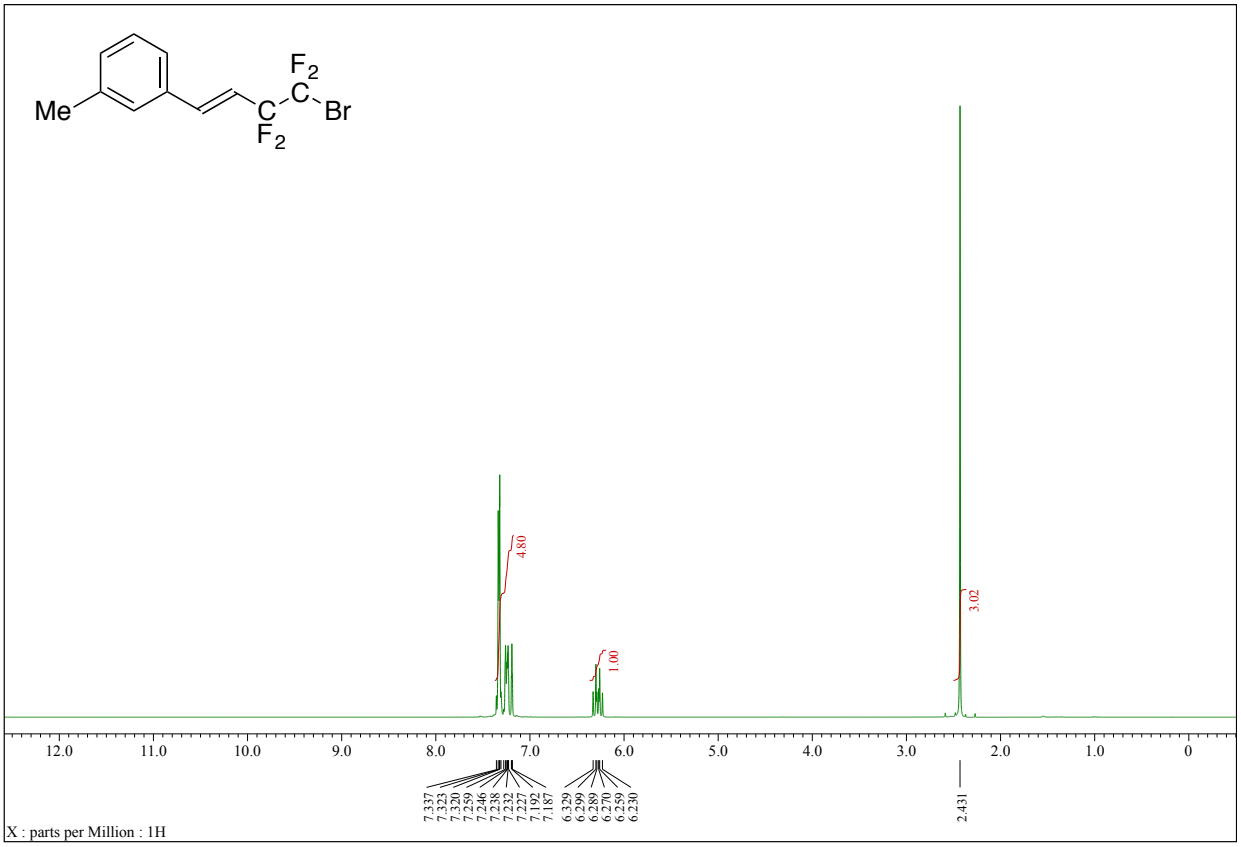


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(3-methylphenyl)but-1-ene (4c)

^{1}H NMR



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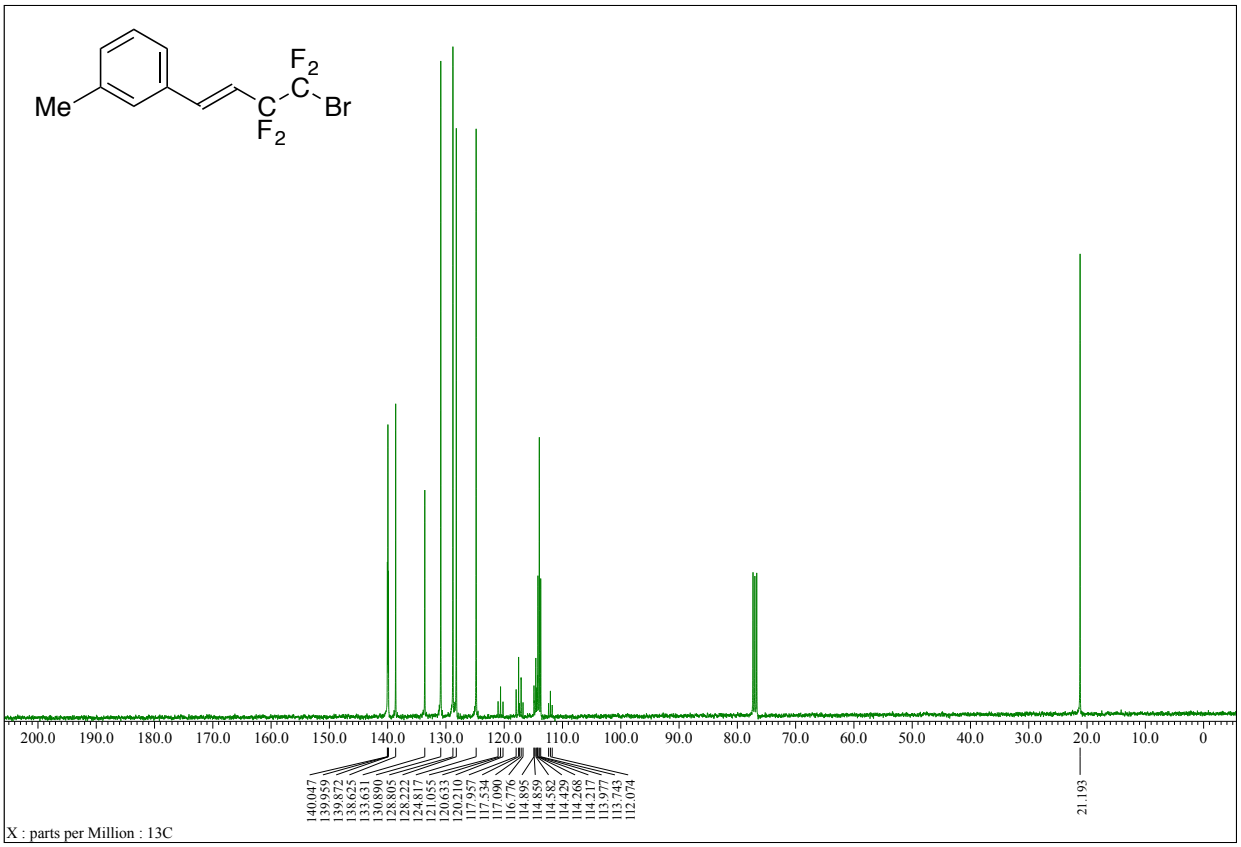
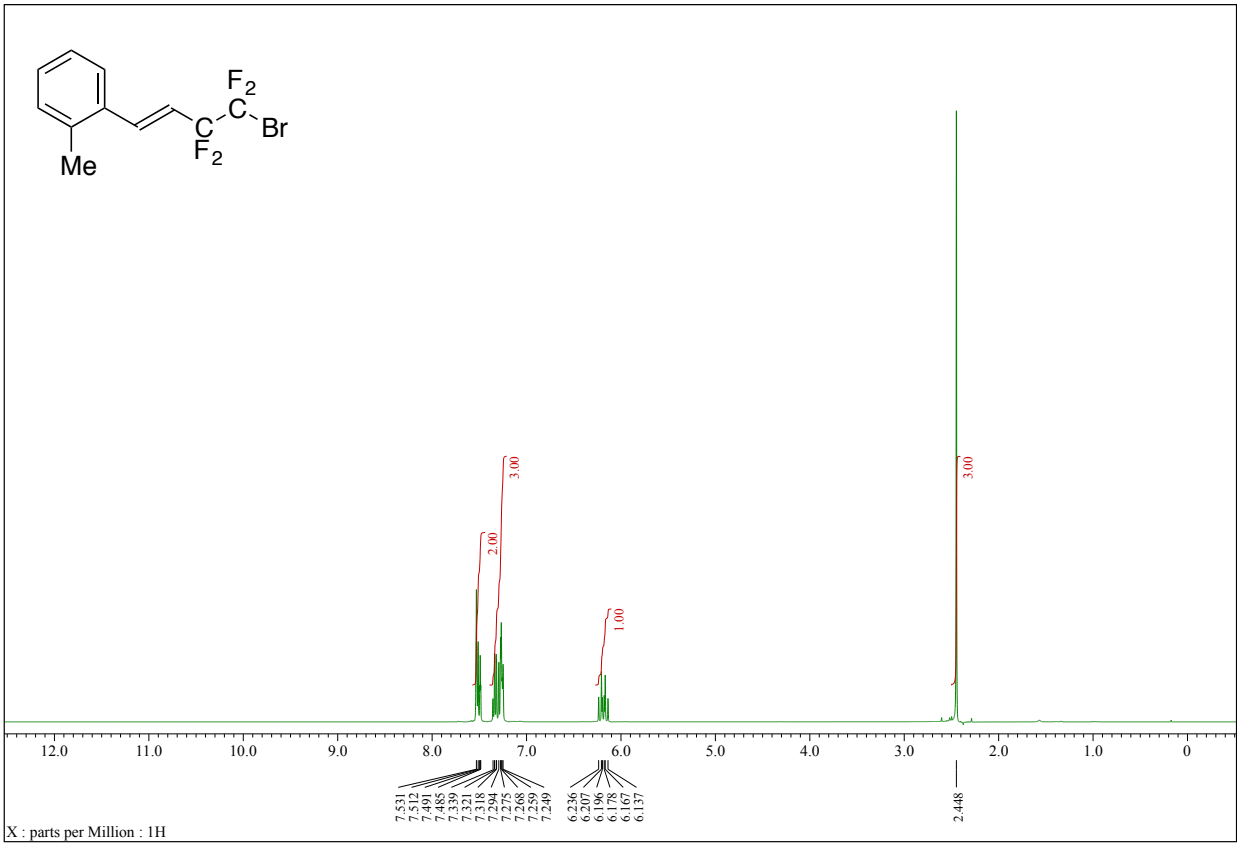


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(2-methylphenyl)but-1-ene (4d)

^{1}H NMR



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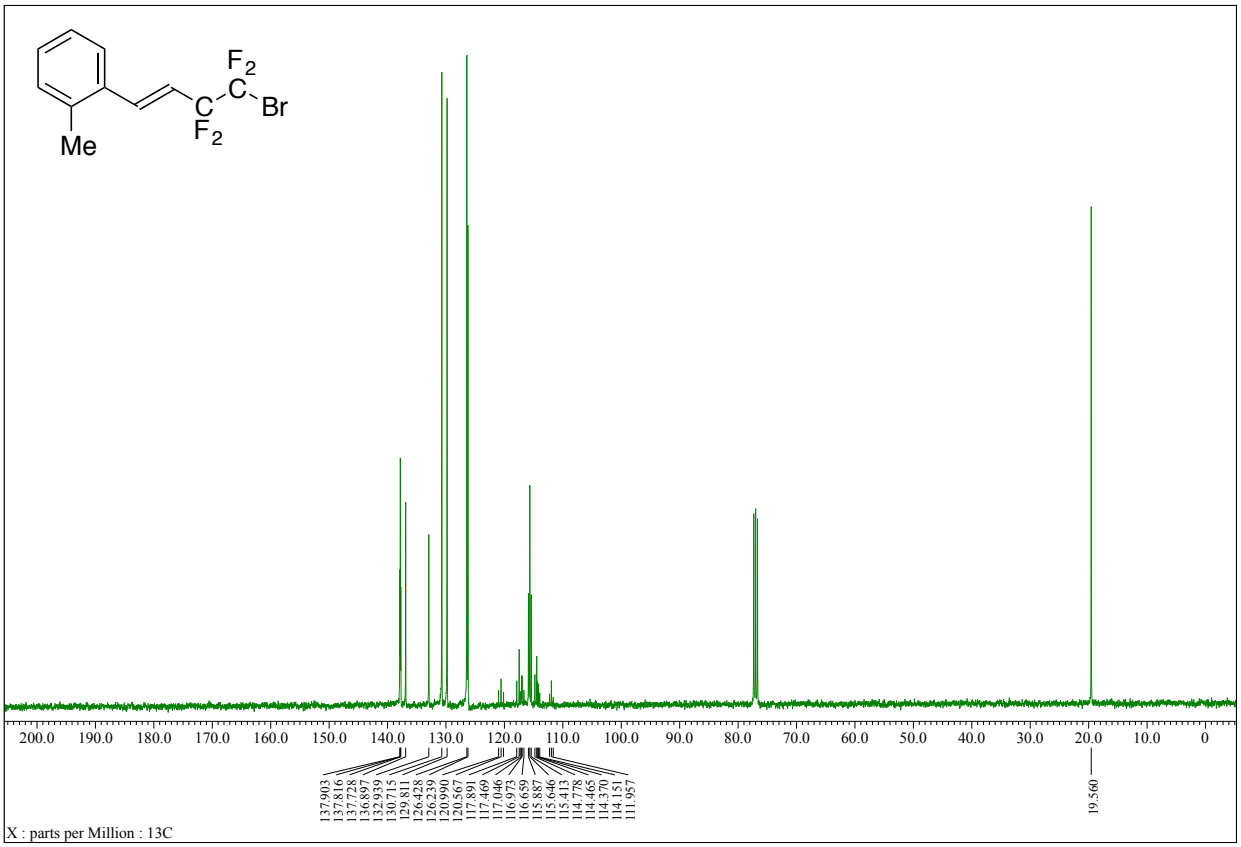
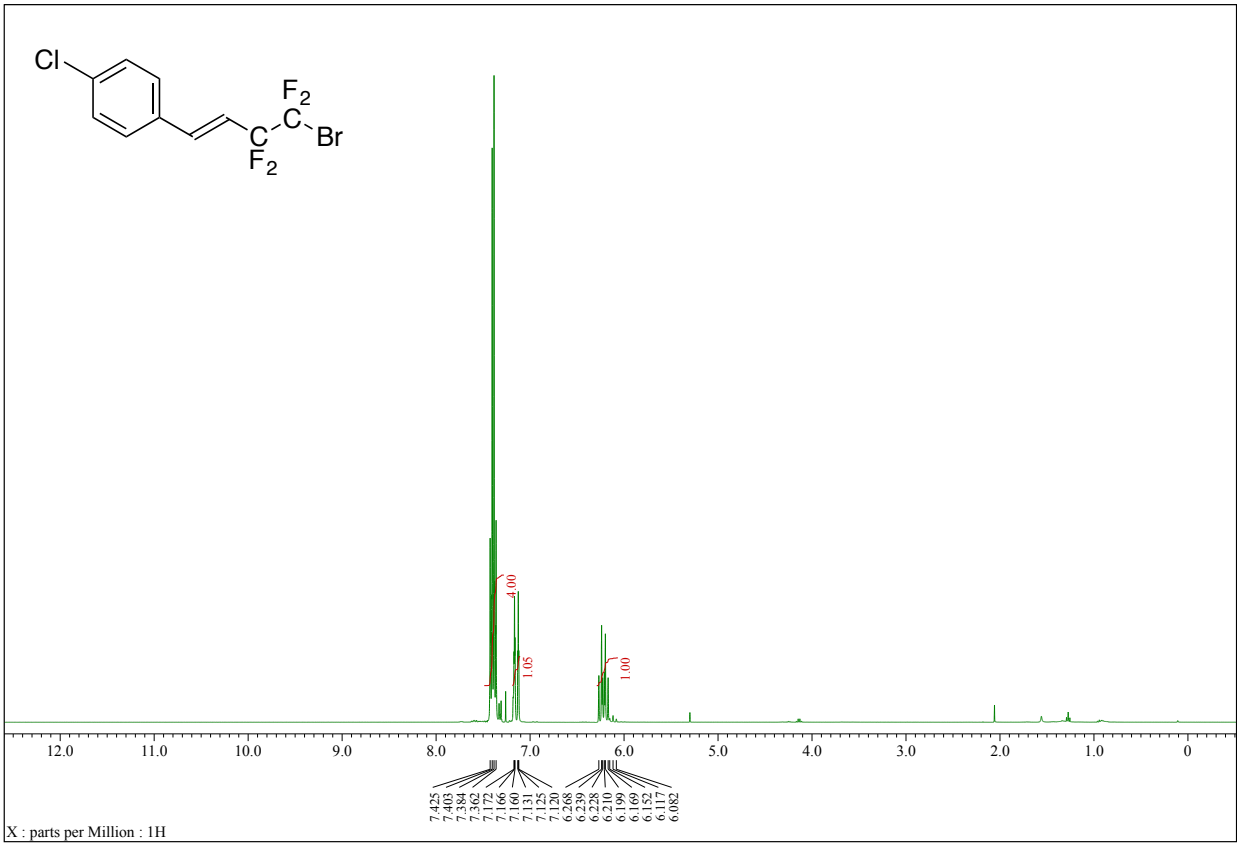


(E)-4-Bromo-1-(4-chlorophenyl)-3,3,4,4-tetrafluorobut-1-ene (4f)

^{1}H NMR



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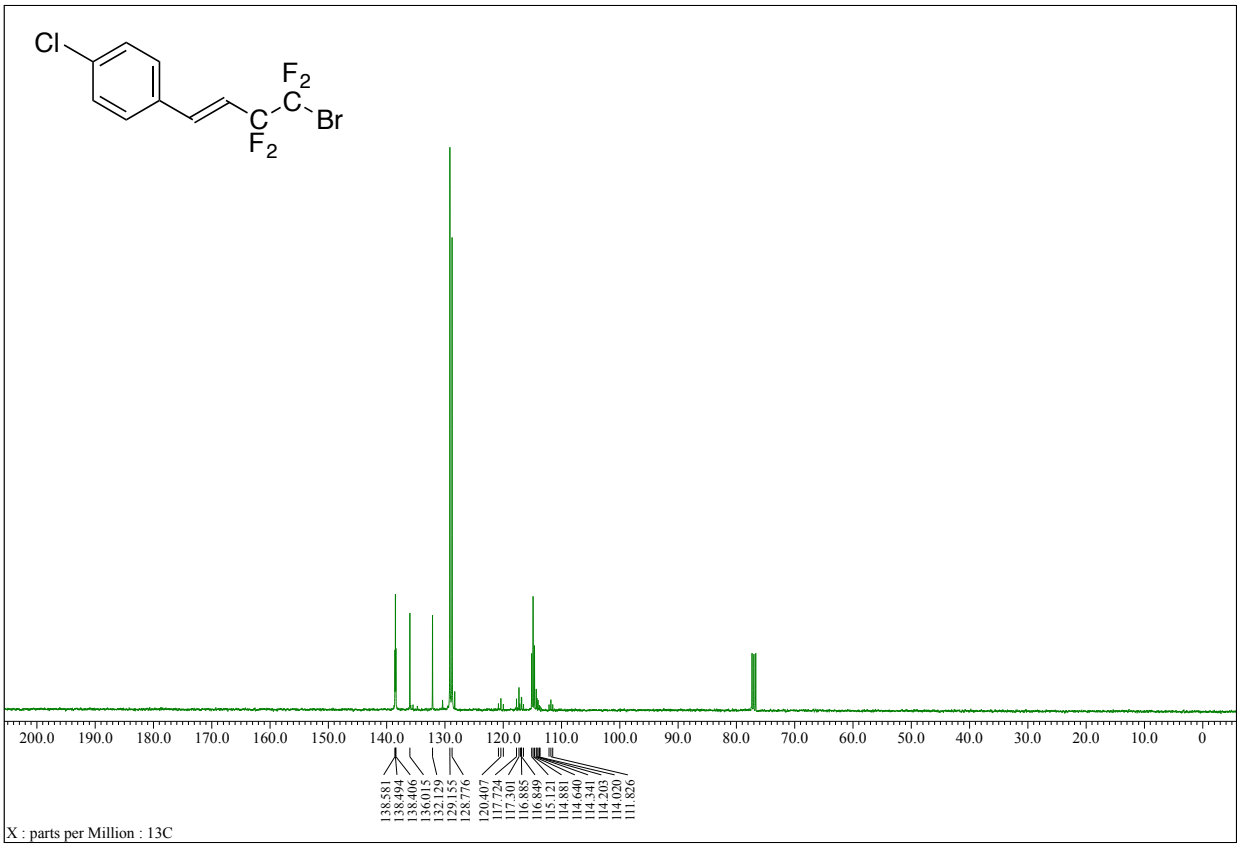
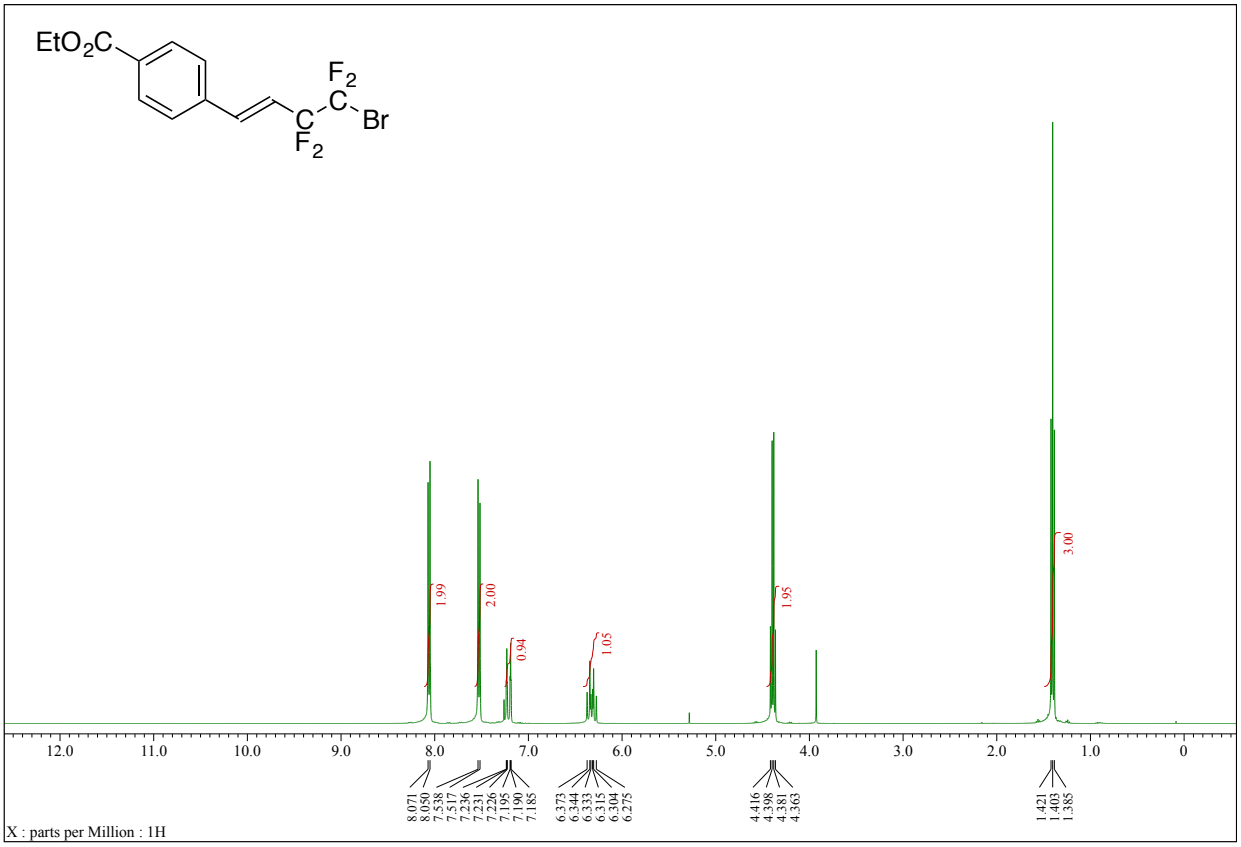


(E)-Ethyl 4-(4-bromo-3,3,4,4-tetrafluorobut-1-en-1-yl)benzoate (4g)

^{1}H NMR



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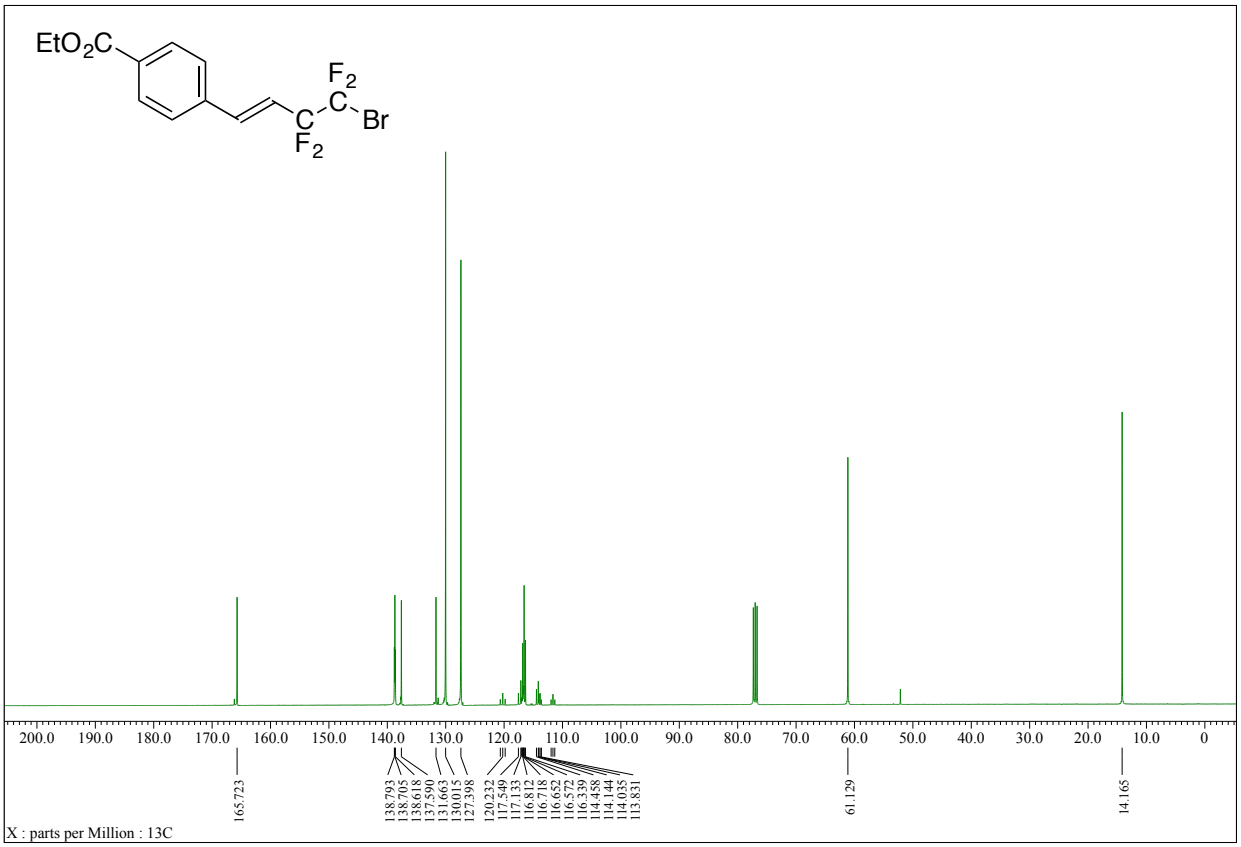
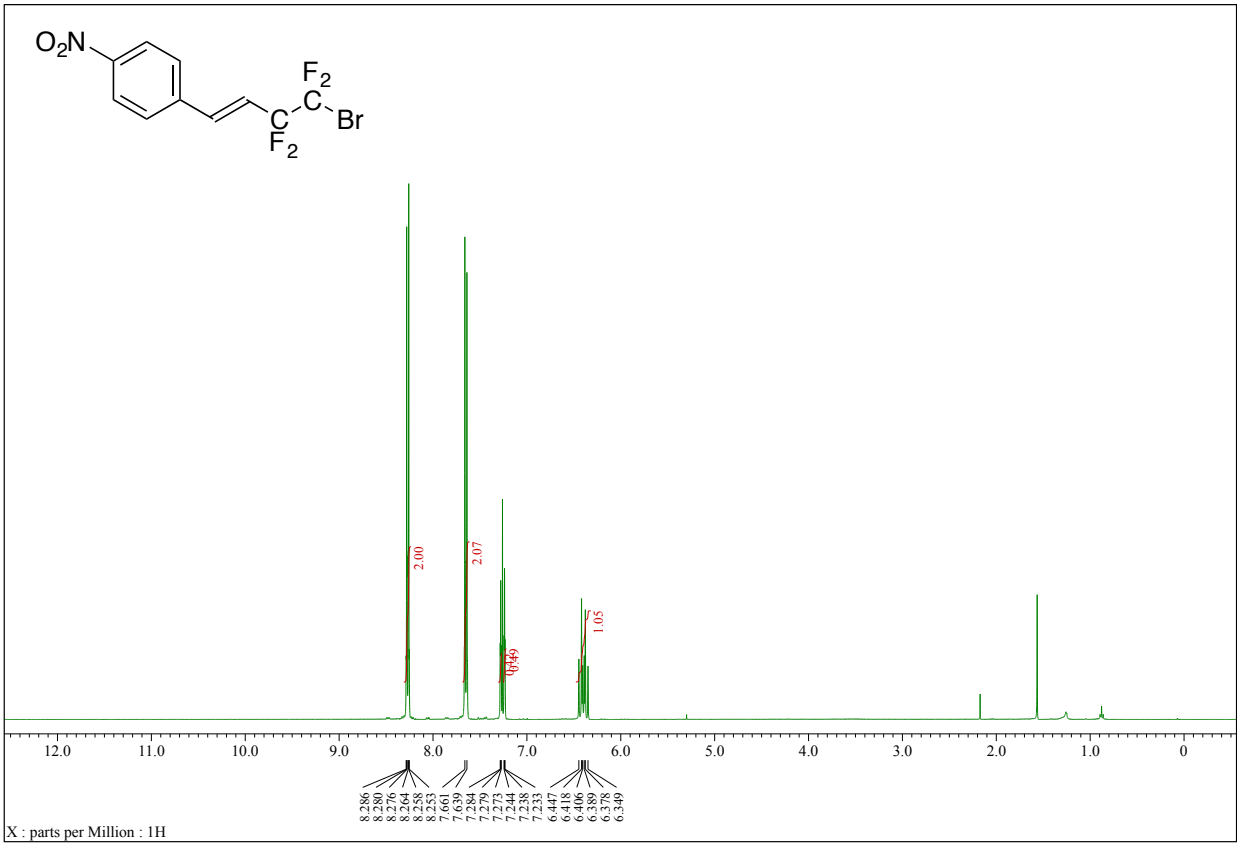


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(4-nitrophenyl)but-1-ene (4h)

^{1}H NMR



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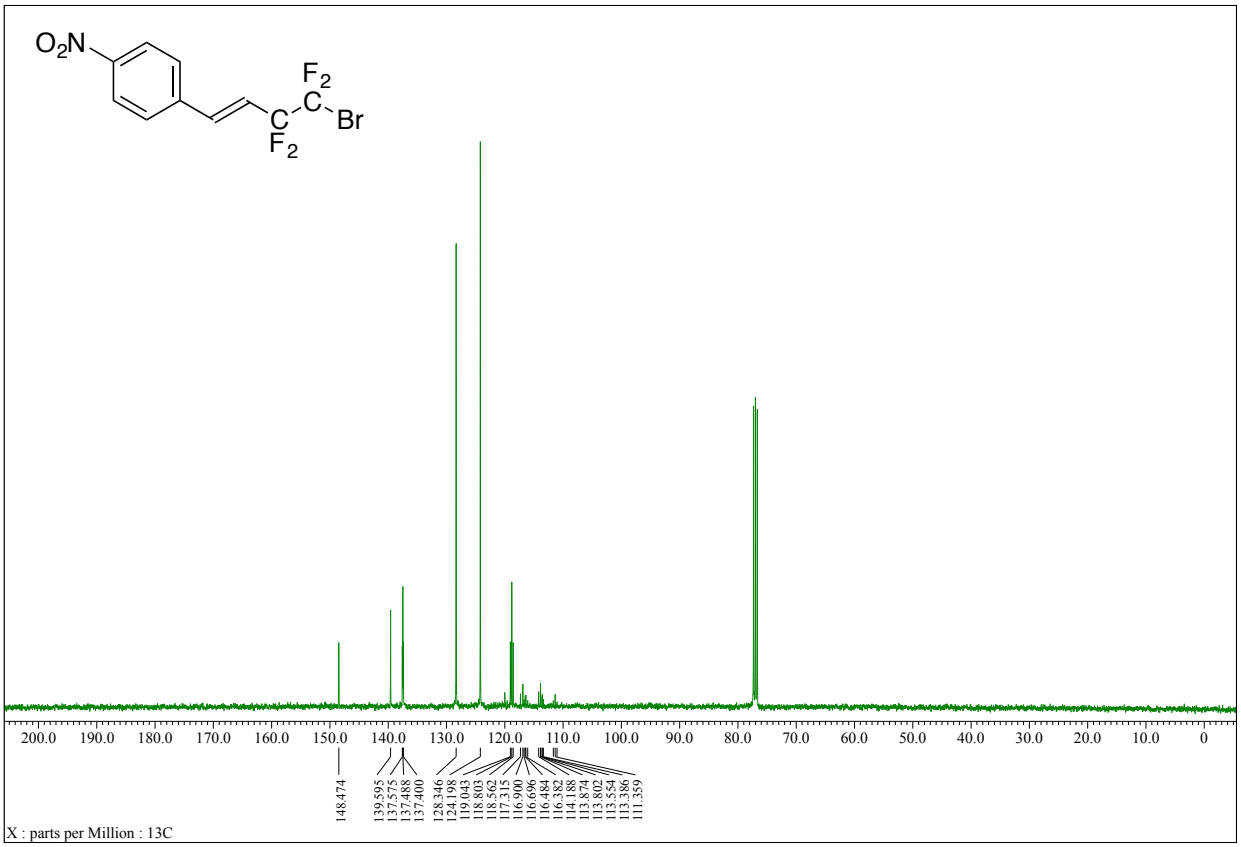
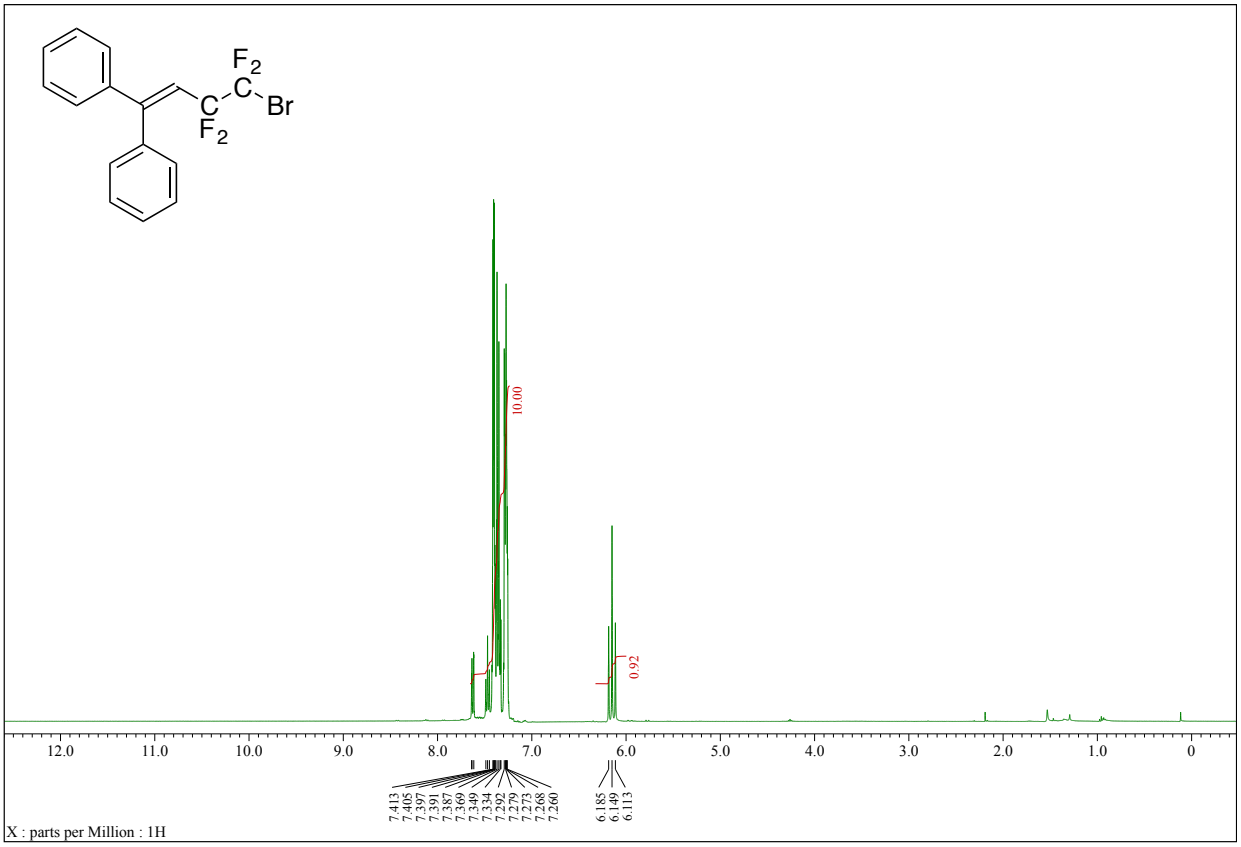


4-Bromo-3,3,4,4-tetrafluoro-1,1-diphenylbut-1-ene (5a)

^{1}H NMR



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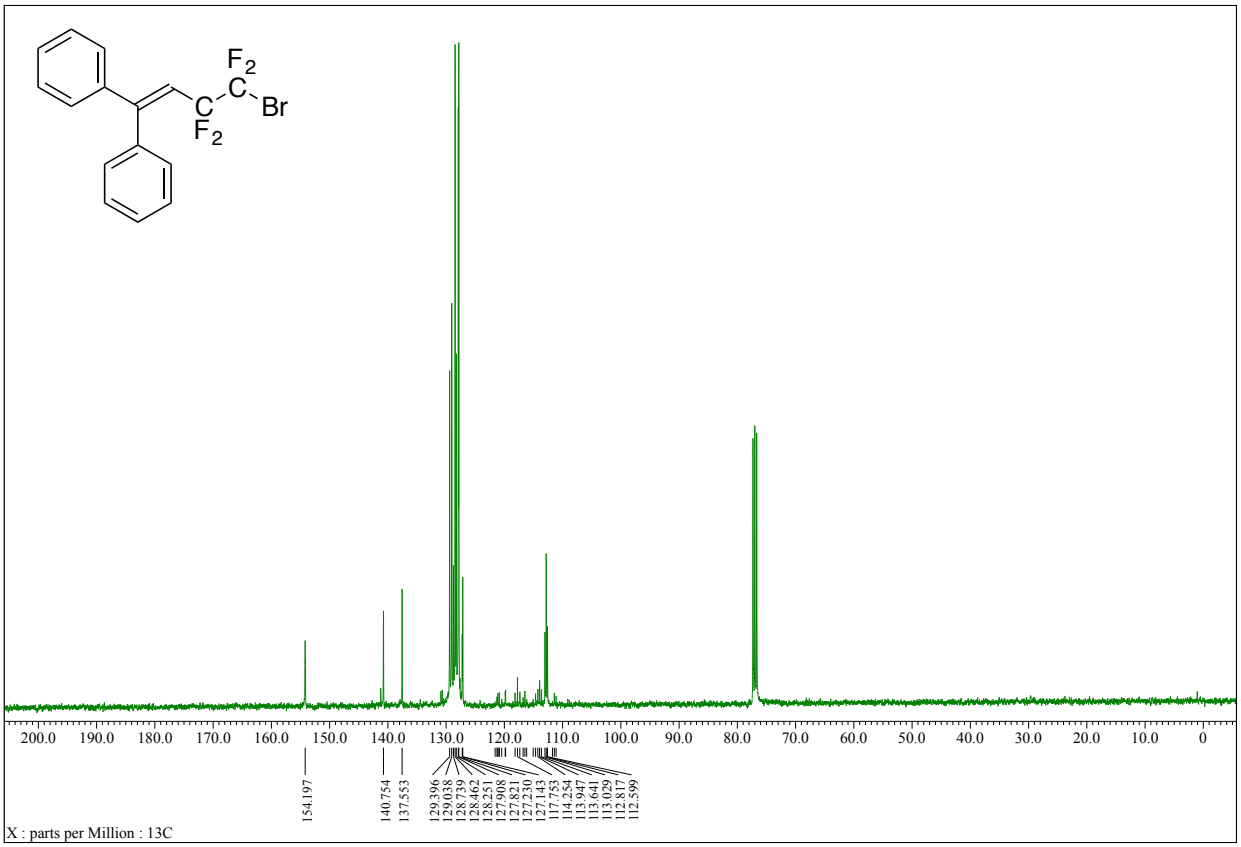
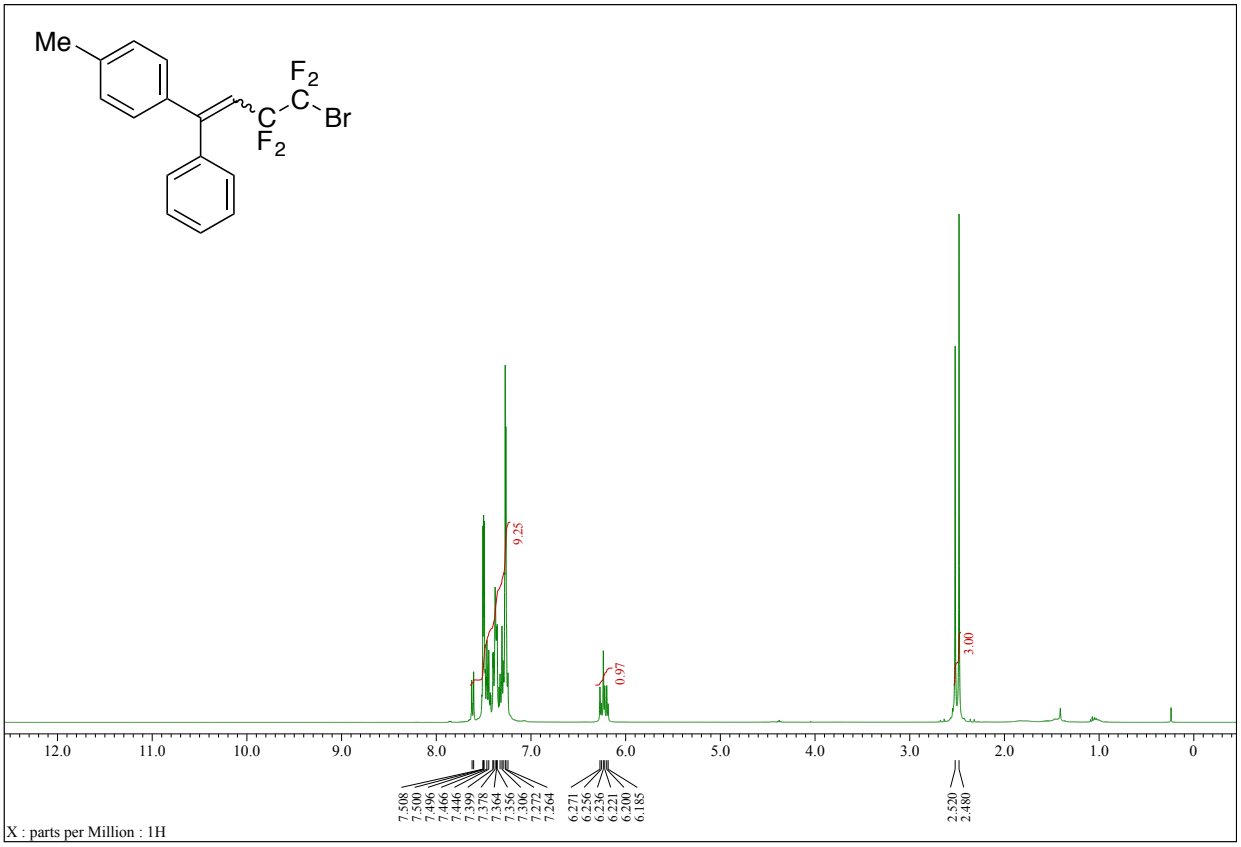


4-Bromo-3,3,4,4-tetrafluoro-1-(4-methylphenyl)-1-phenylbut-1-ene (5b)

^{1}H NMR



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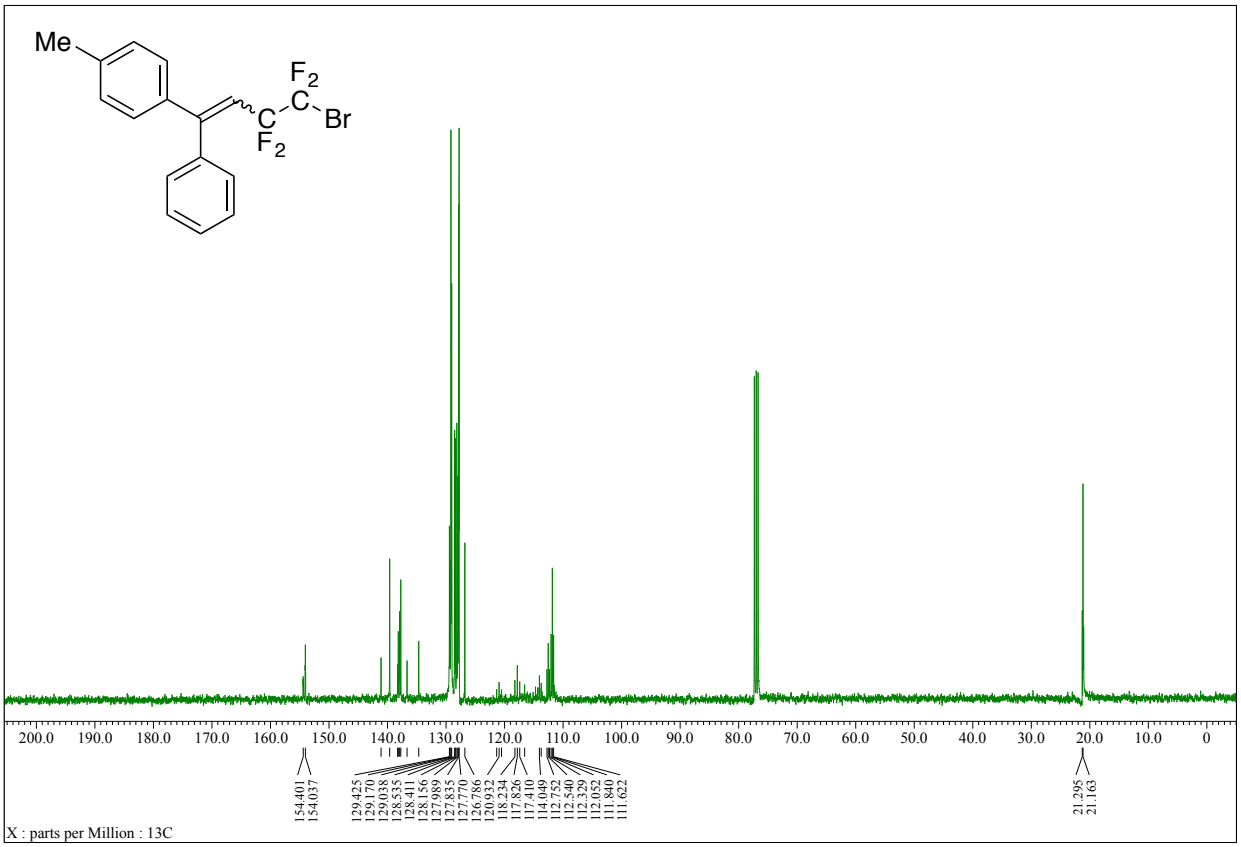
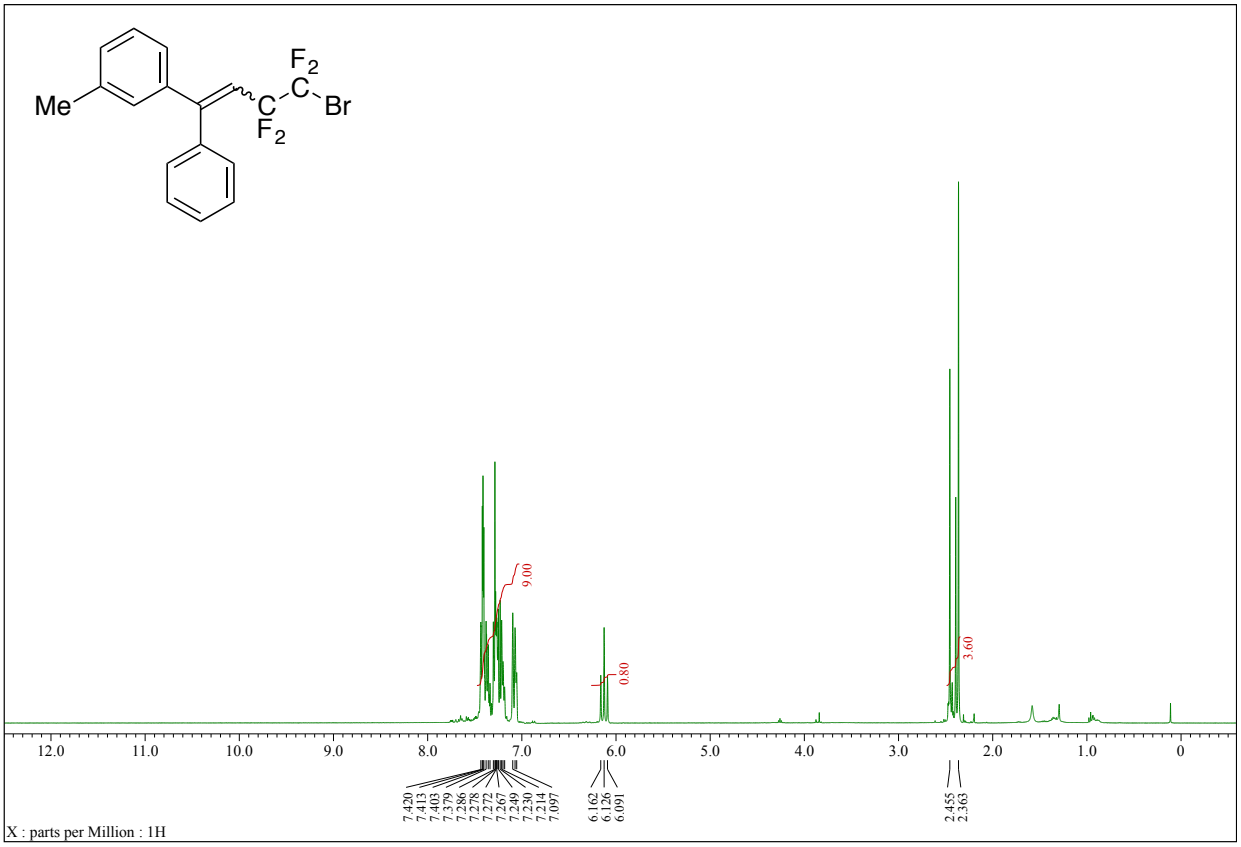


4-Bromo-3,3,4,4-tetrafluoro-1-(3-methylphenyl)-1-phenylbut-1-ene (5c)

^{1}H NMR



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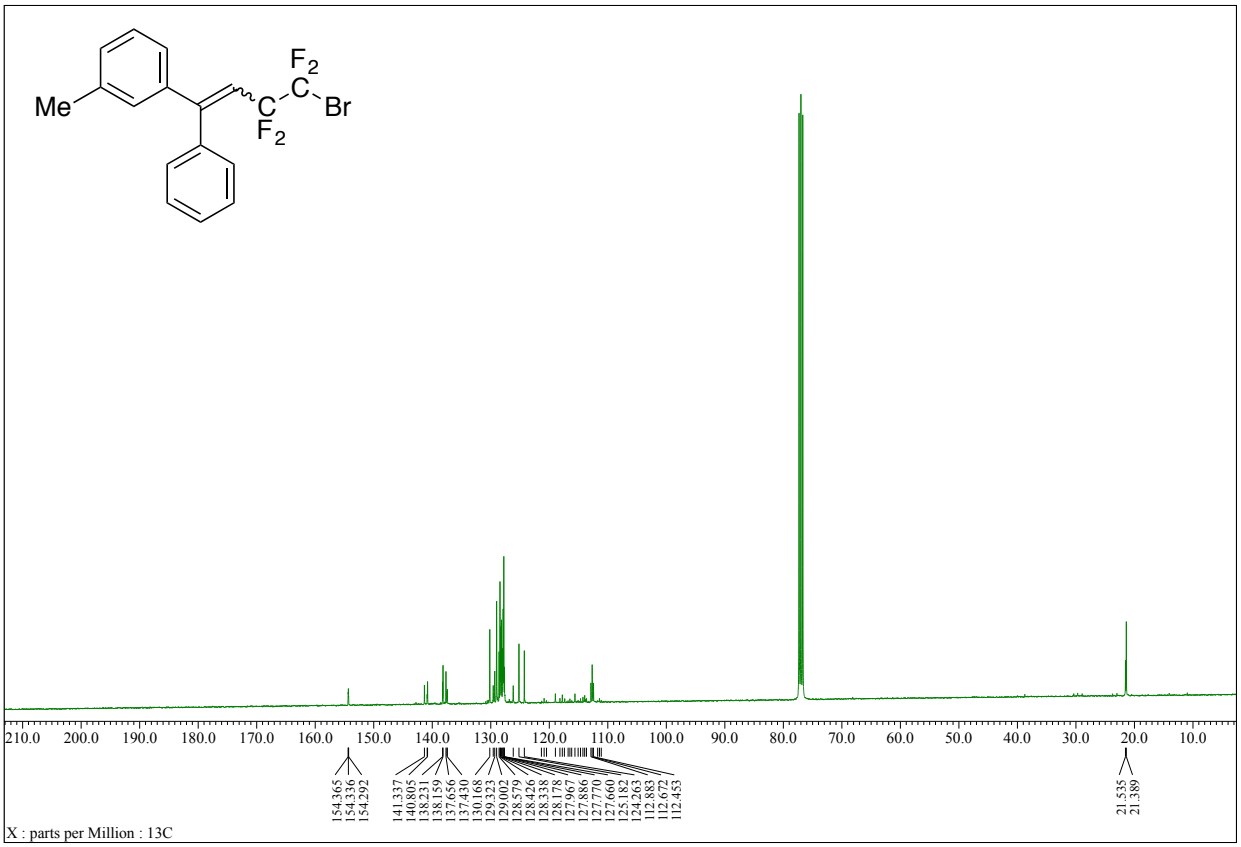
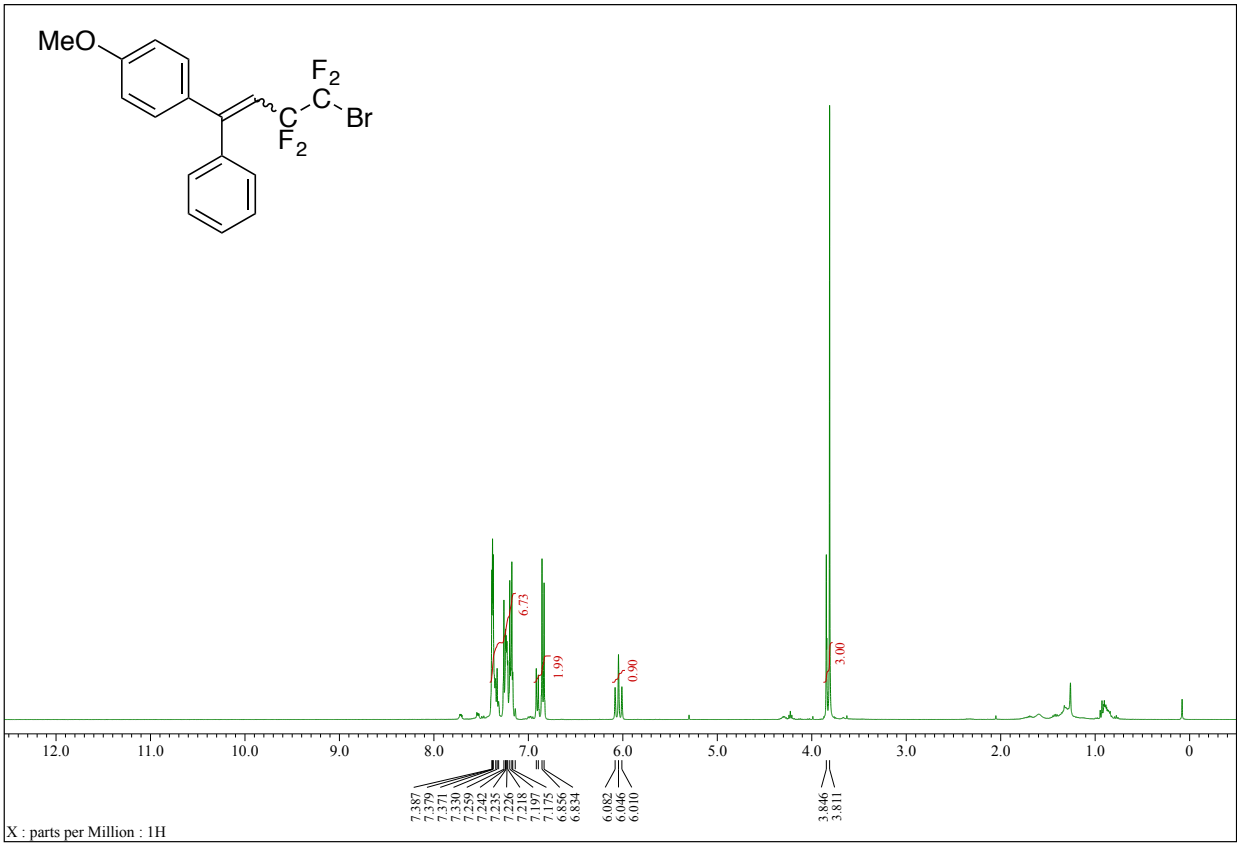


4-Bromo-3,3,4,4-tetrafluoro-1-(4-methoxyphenyl)-1-phenylbut-1-ene (5e)

^{1}H NMR



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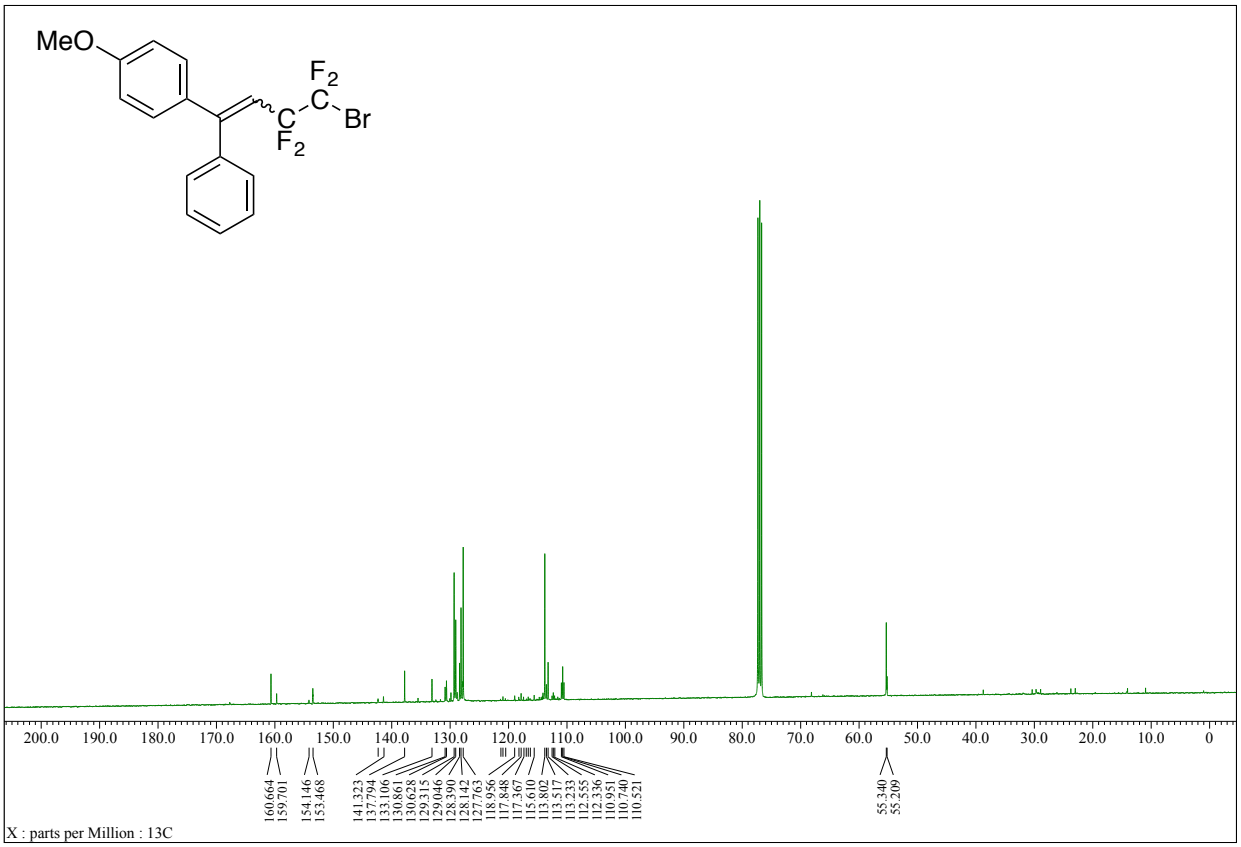
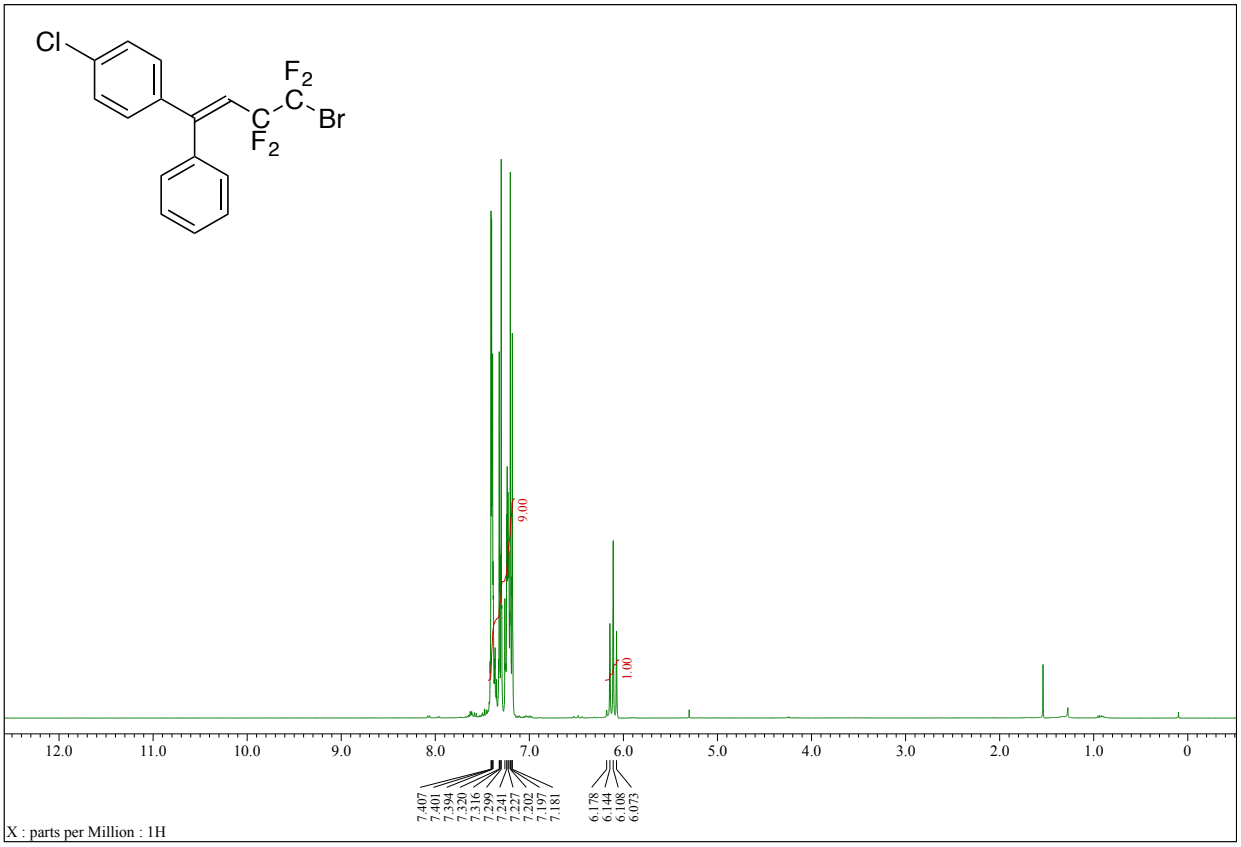


4-Bromo-1-(4-chlorophenyl)-3,3,4,4-tetrafluoro-1-phenylbut-1-ene (5f)

^{1}H NMR



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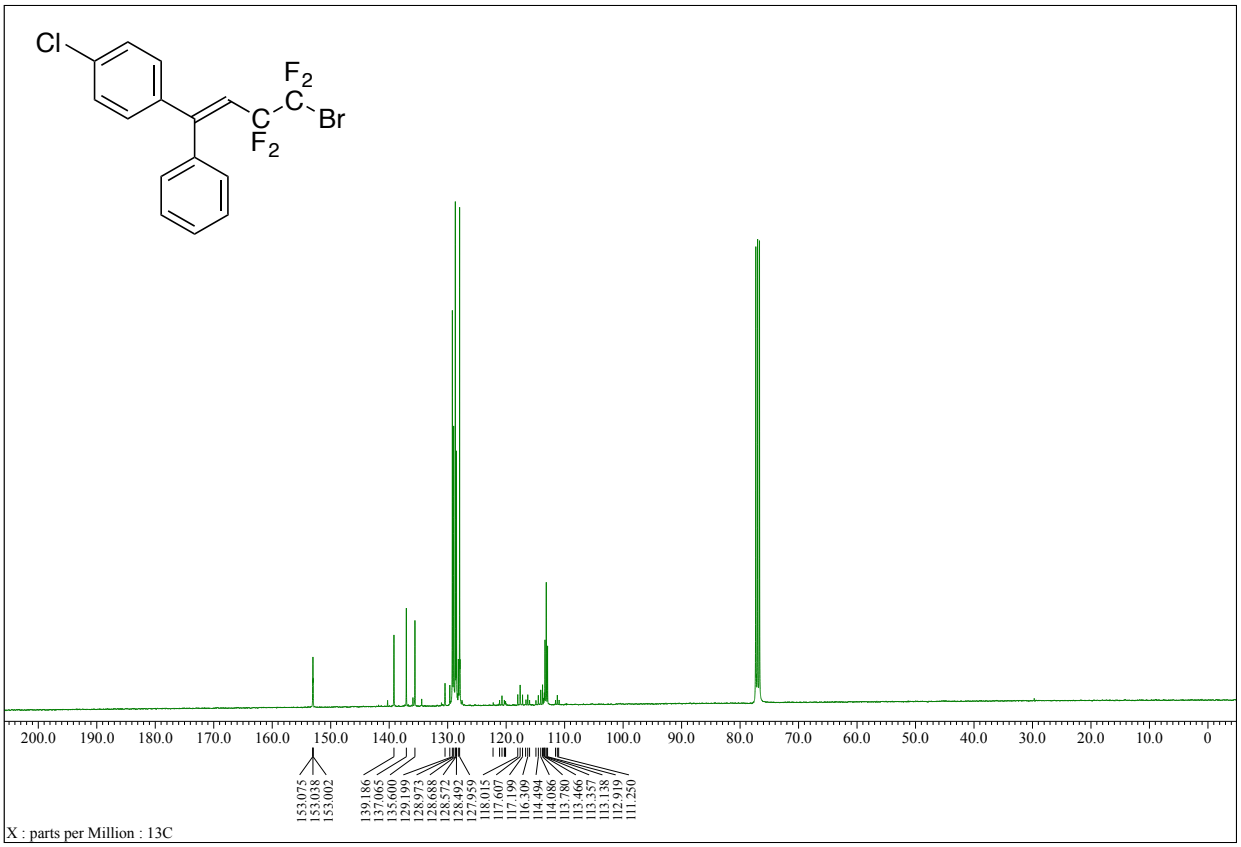
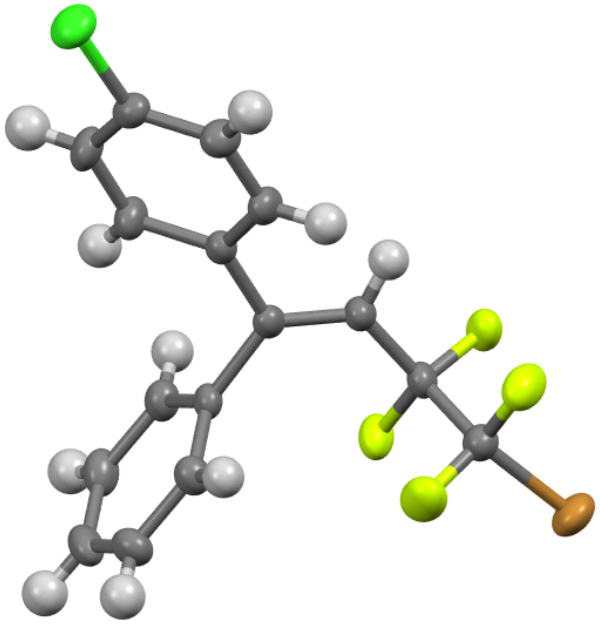
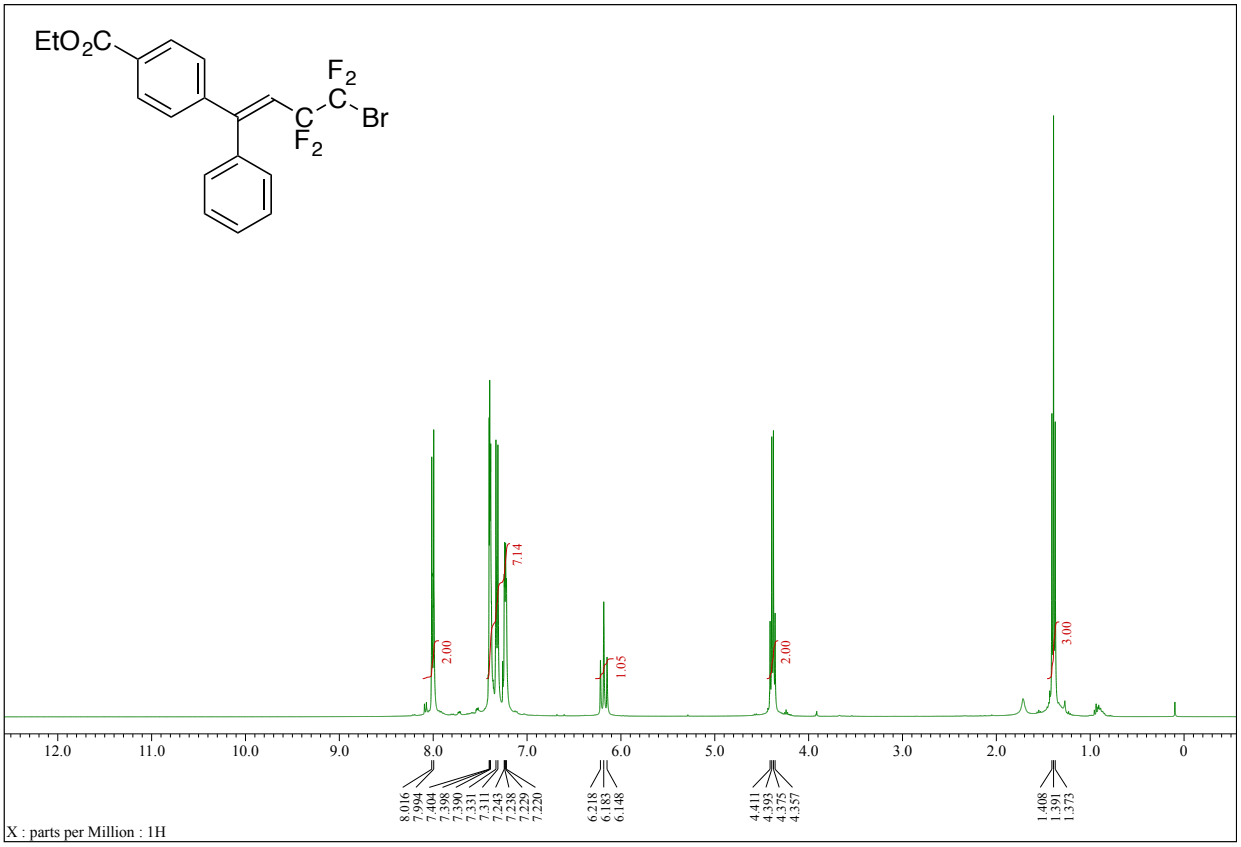




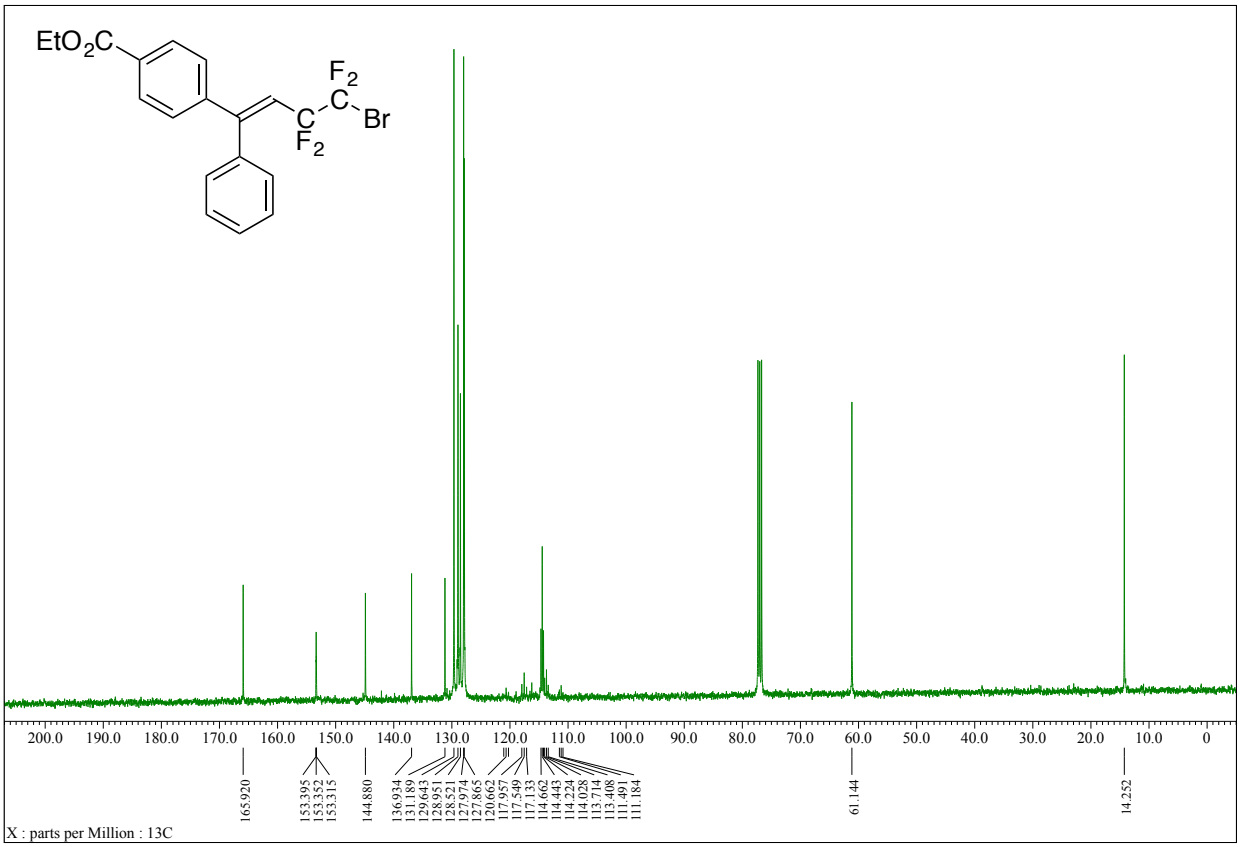
Crystal structure of **(*E*)-5f**, which is shown as 50% of the elipsoid contour probability level.

Ethyl 4-[(4-bromo-3,3,4,4-tetrafluoro-1-phenyl)but-1-en-1-yl]benzoate (5g)

^{1}H NMR

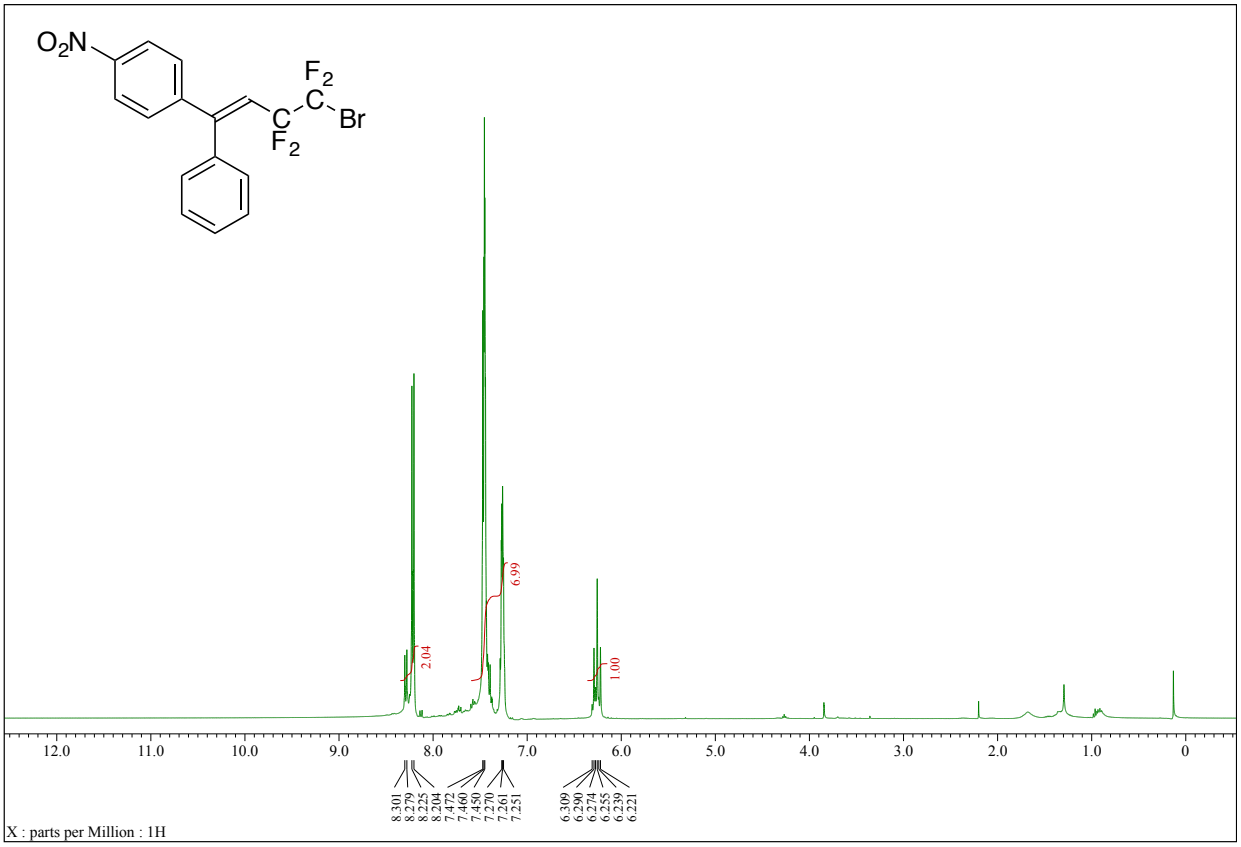


^{13}C NMR

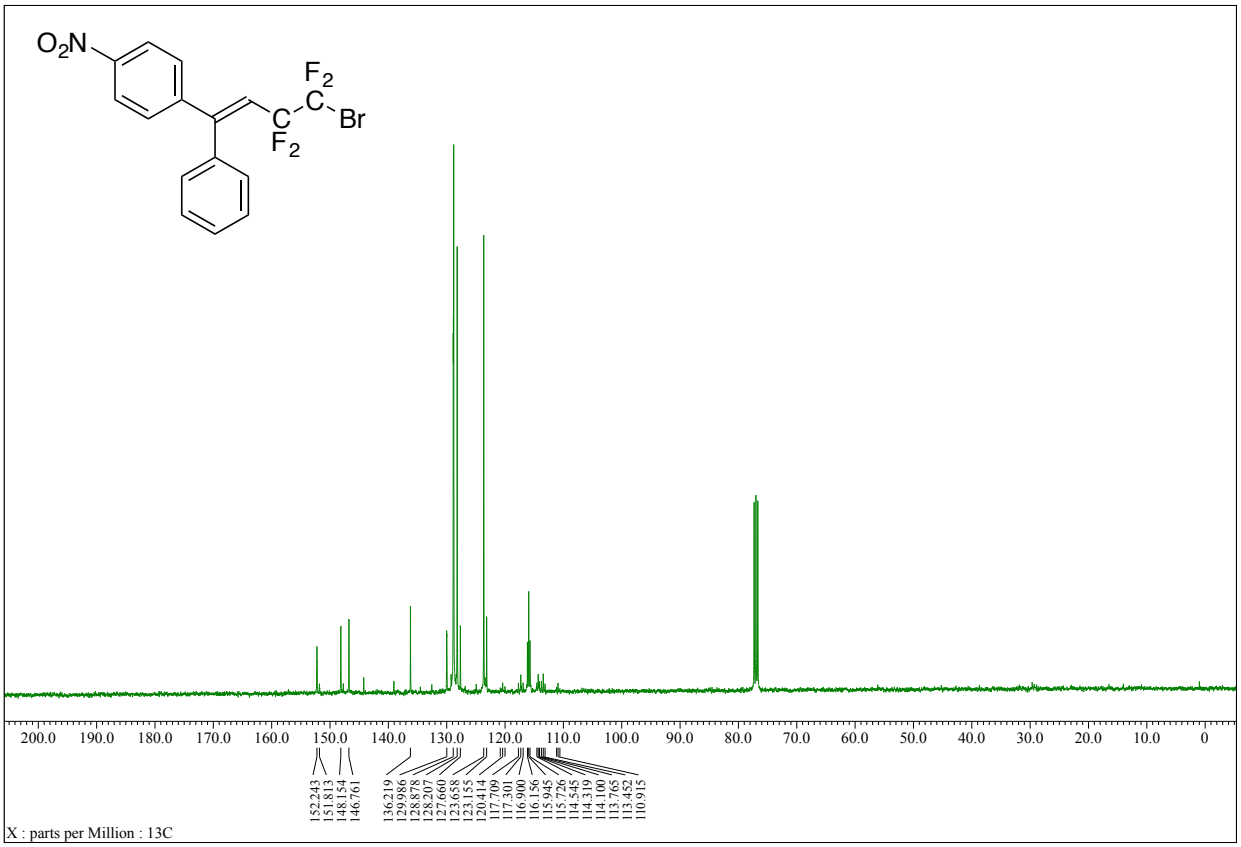


4-Bromo-3,3,4,4-tetrafluoro-1-(4-nitrophenyl)-1-phenylbut-1-ene (5h)

^{1}H NMR

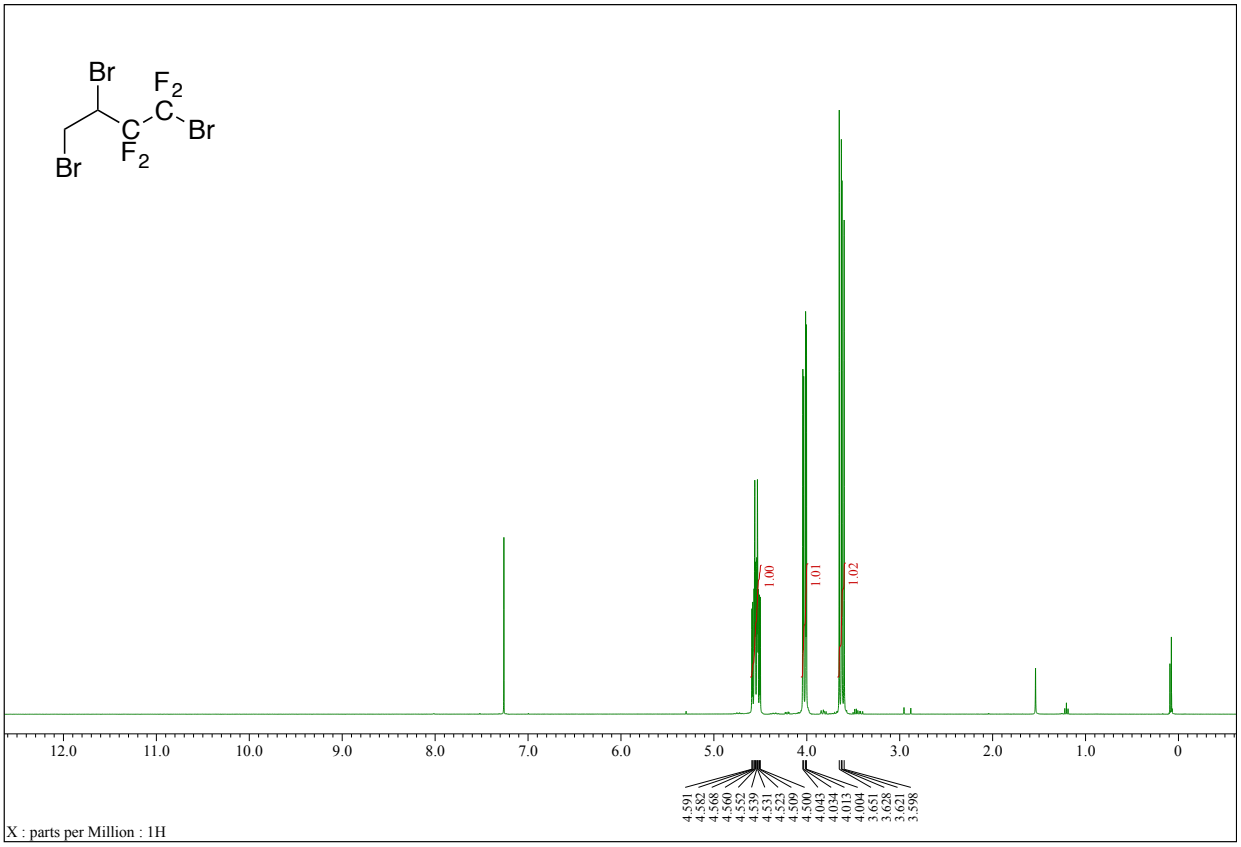


^{13}C NMR



1,2,4-Tribromo-3,3,4,4-tetrafluorobutane (6)

^{1}H NMR



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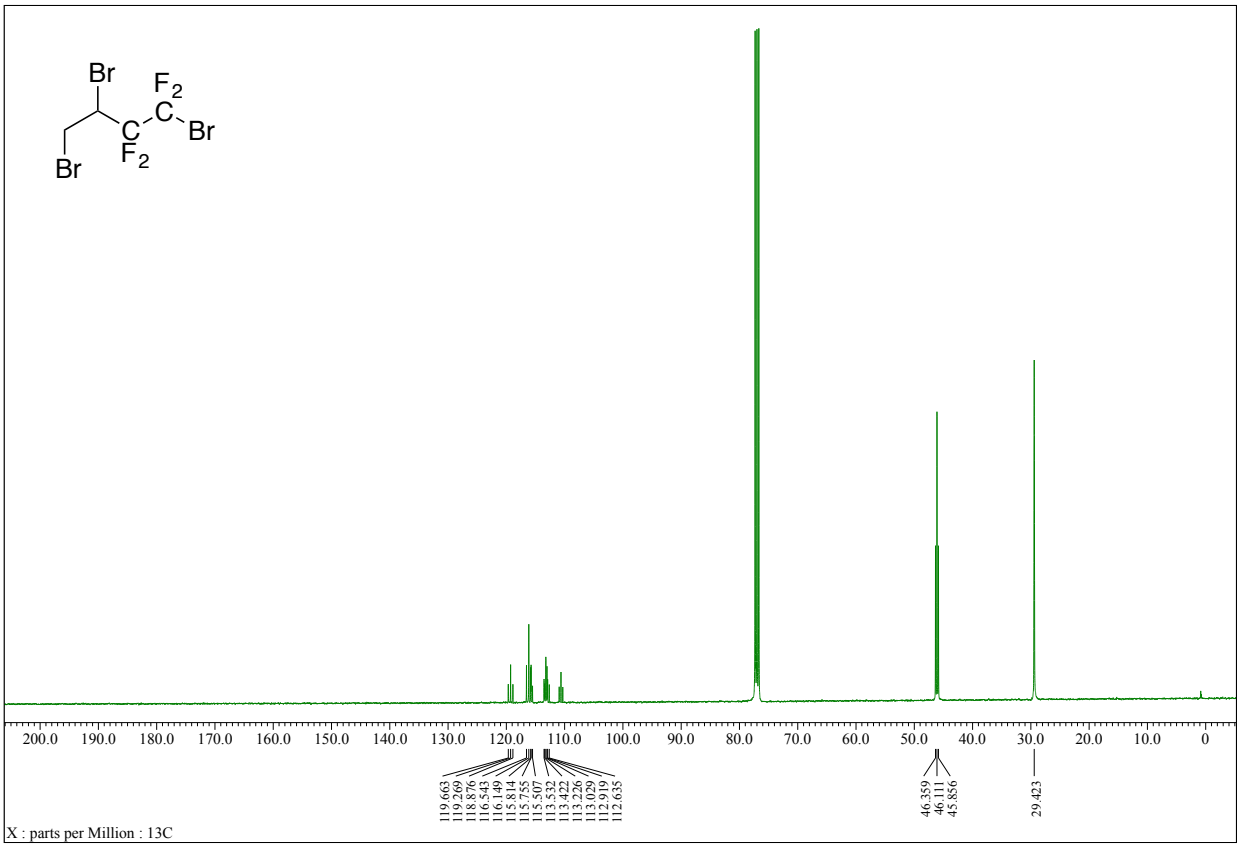
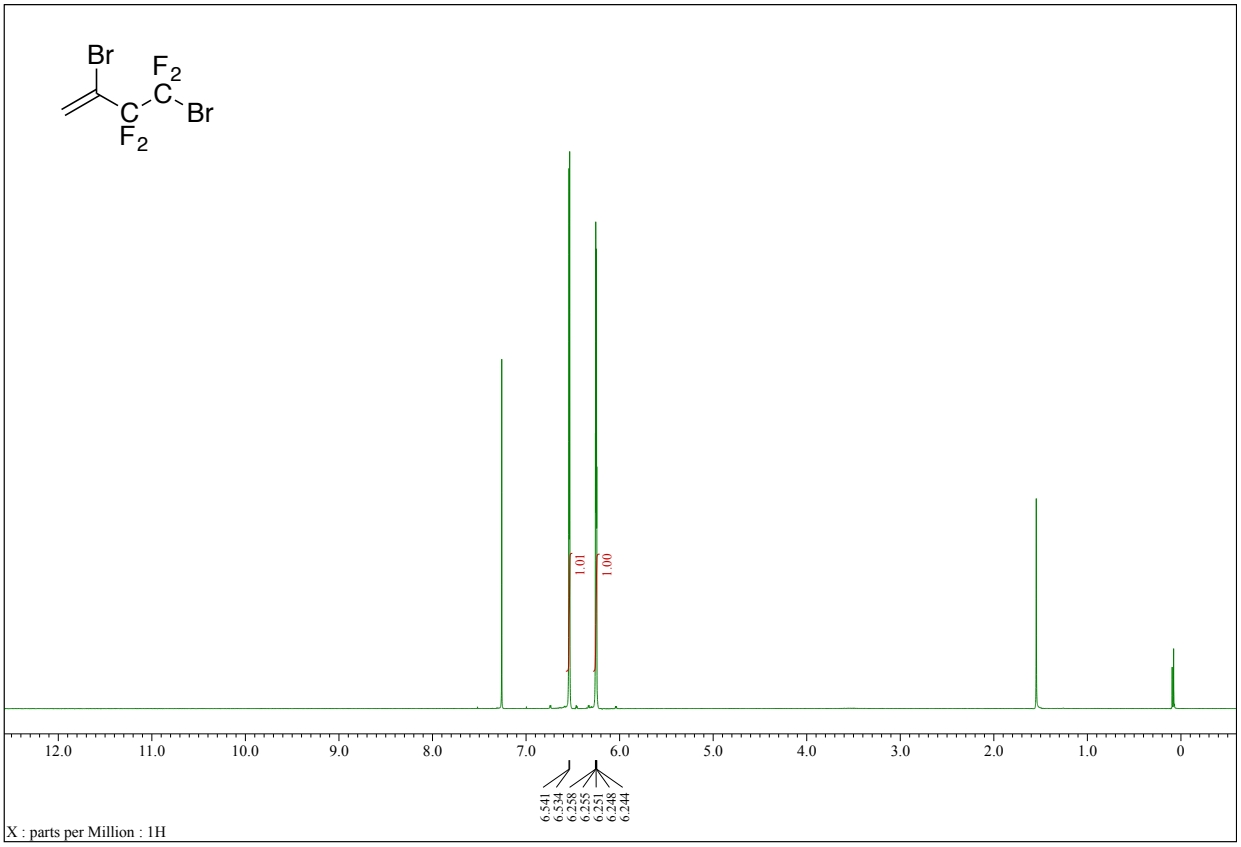


2,4-Dibromo-3,3,4,4-tetrafluorobut-1-ene (7)

^{1}H NMR



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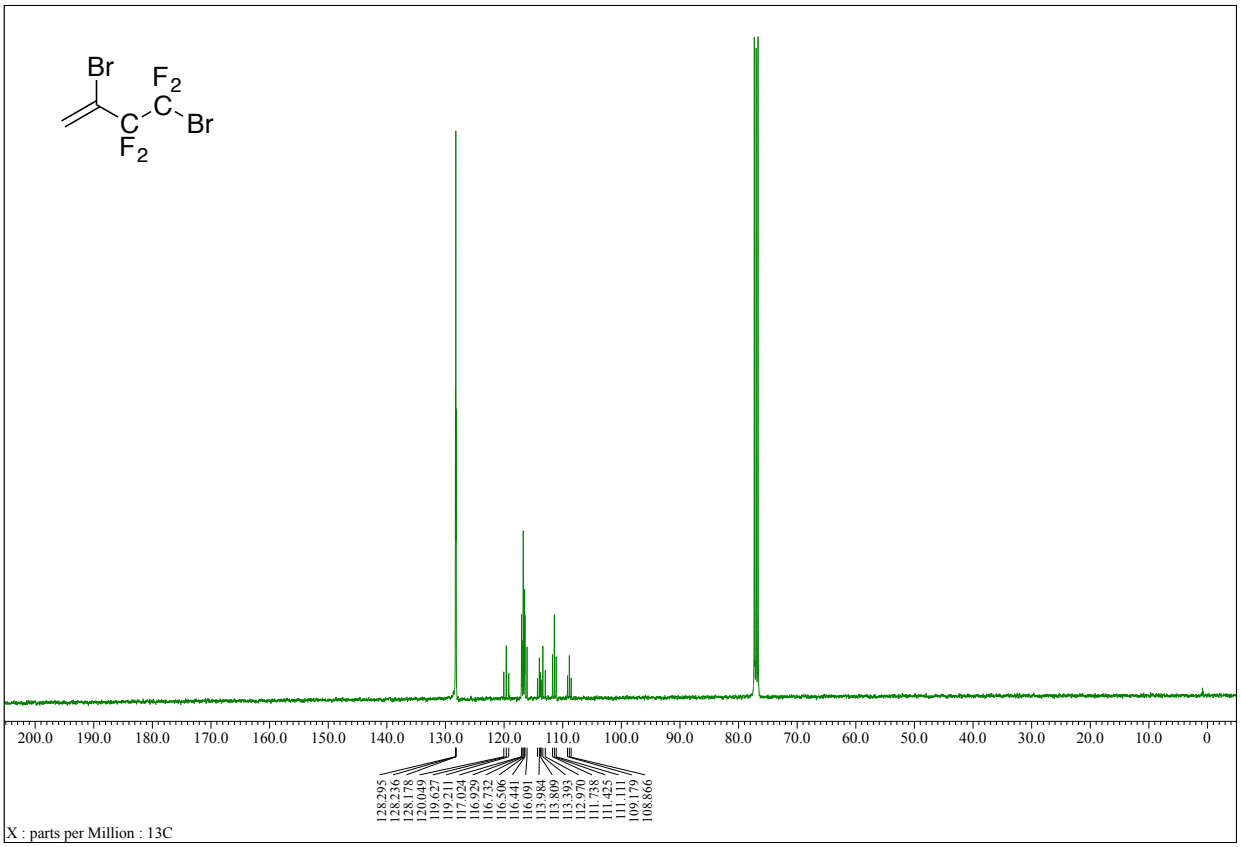
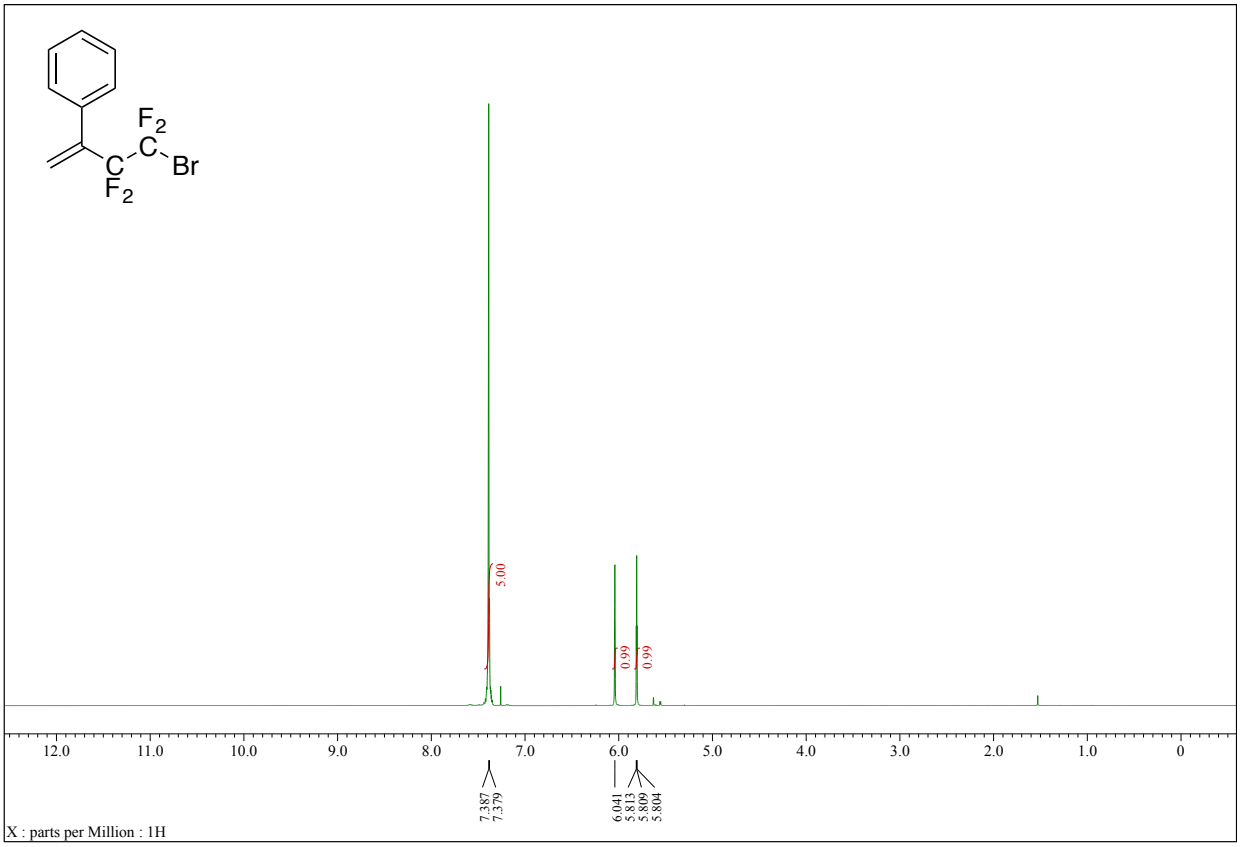


4-Bromo-3,3,4,4-tetrafluoro-2-phenylbut-1-ene (8a)

^{1}H NMR



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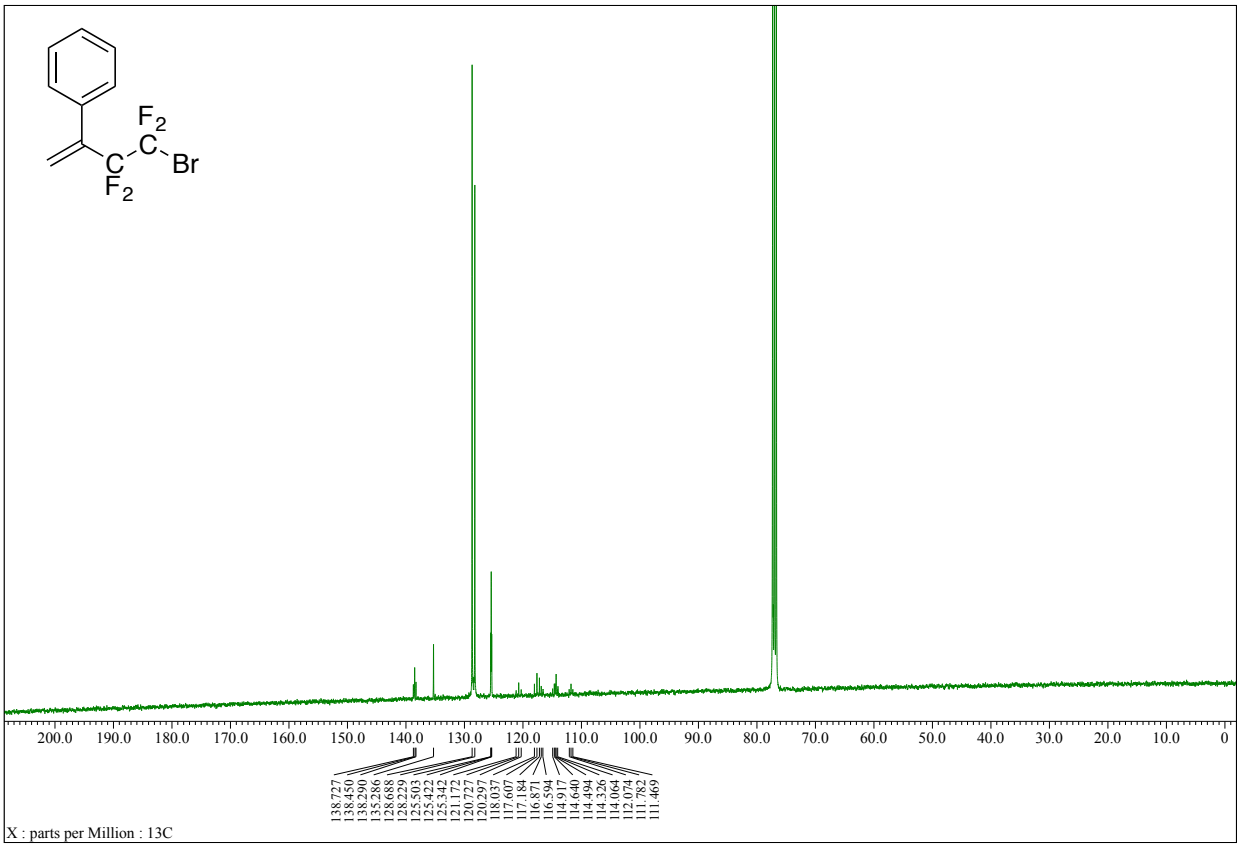
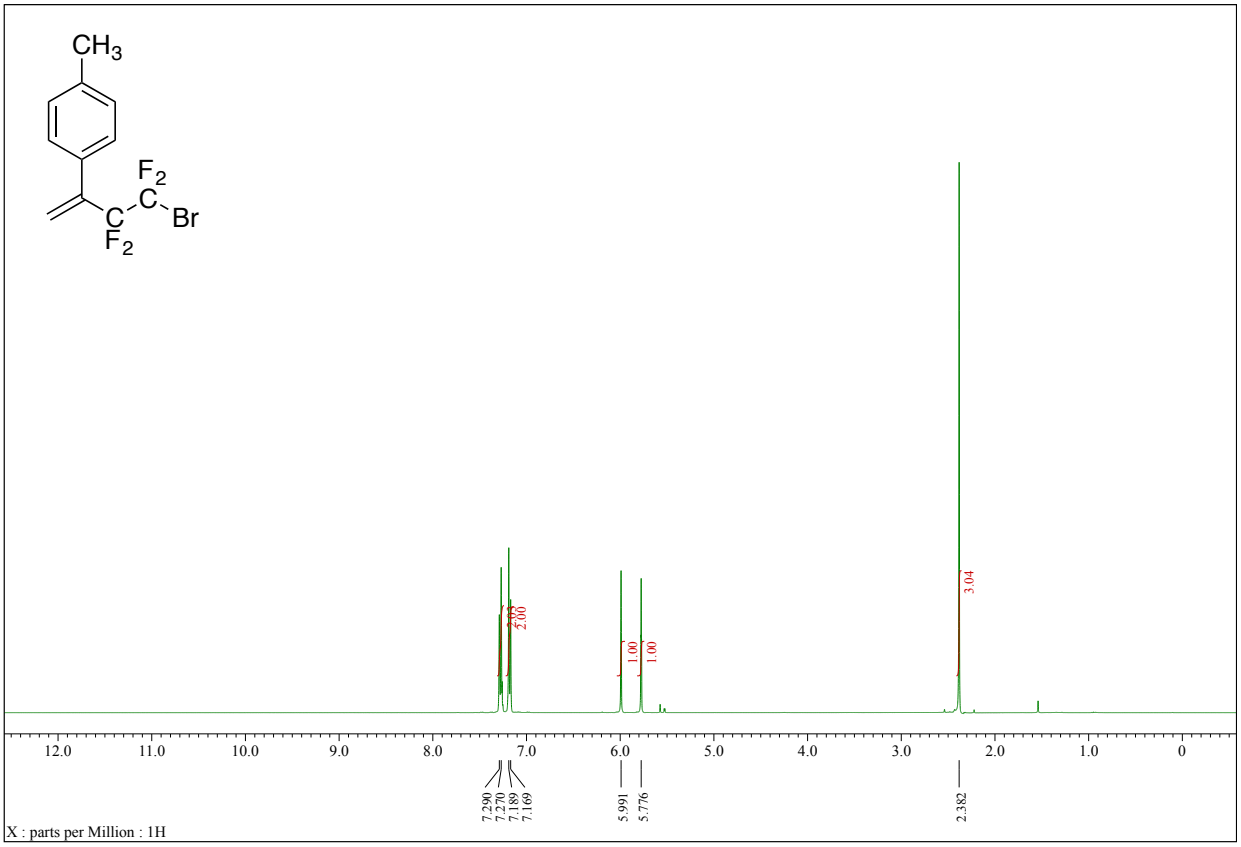


4-Bromo-3,3,4,4-tetrafluoro-2-(4-methylphenyl)but-1-ene (8b)

^{1}H NMR



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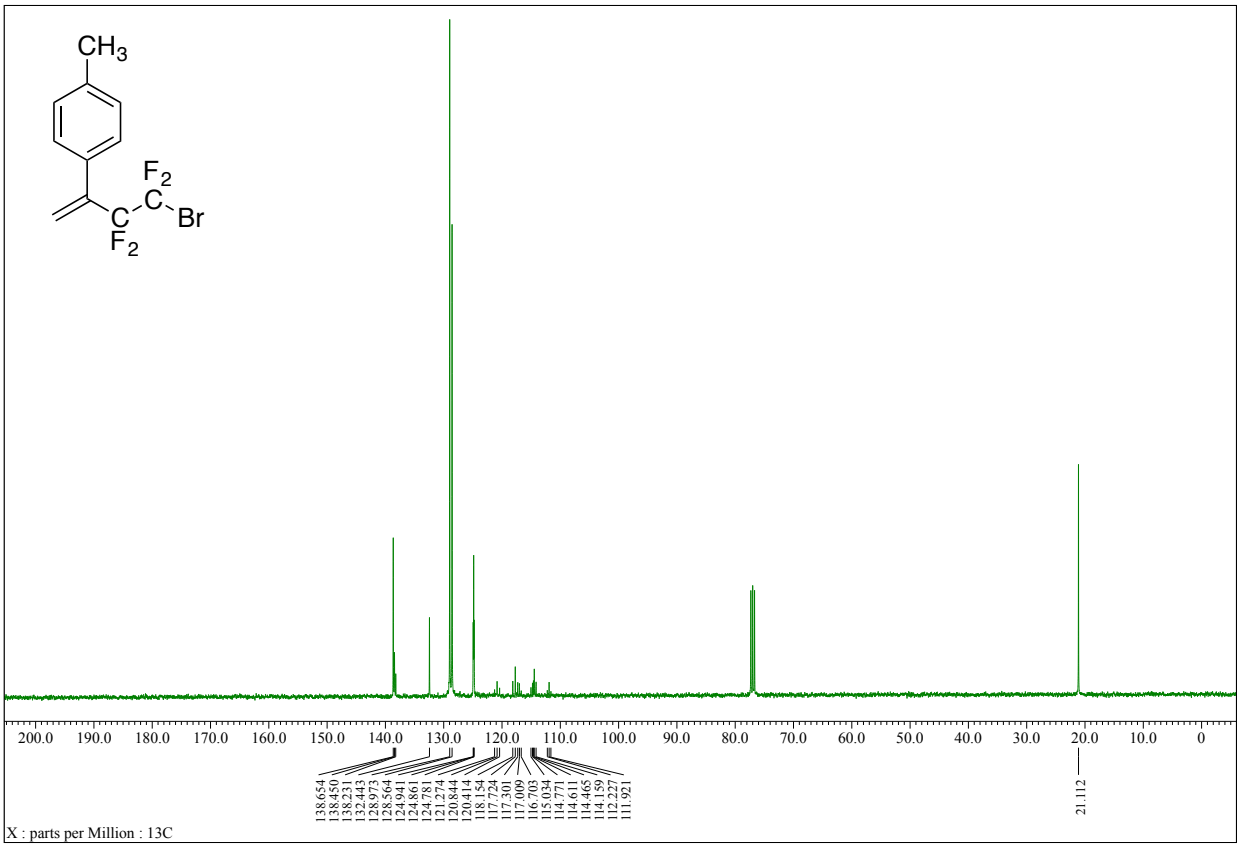
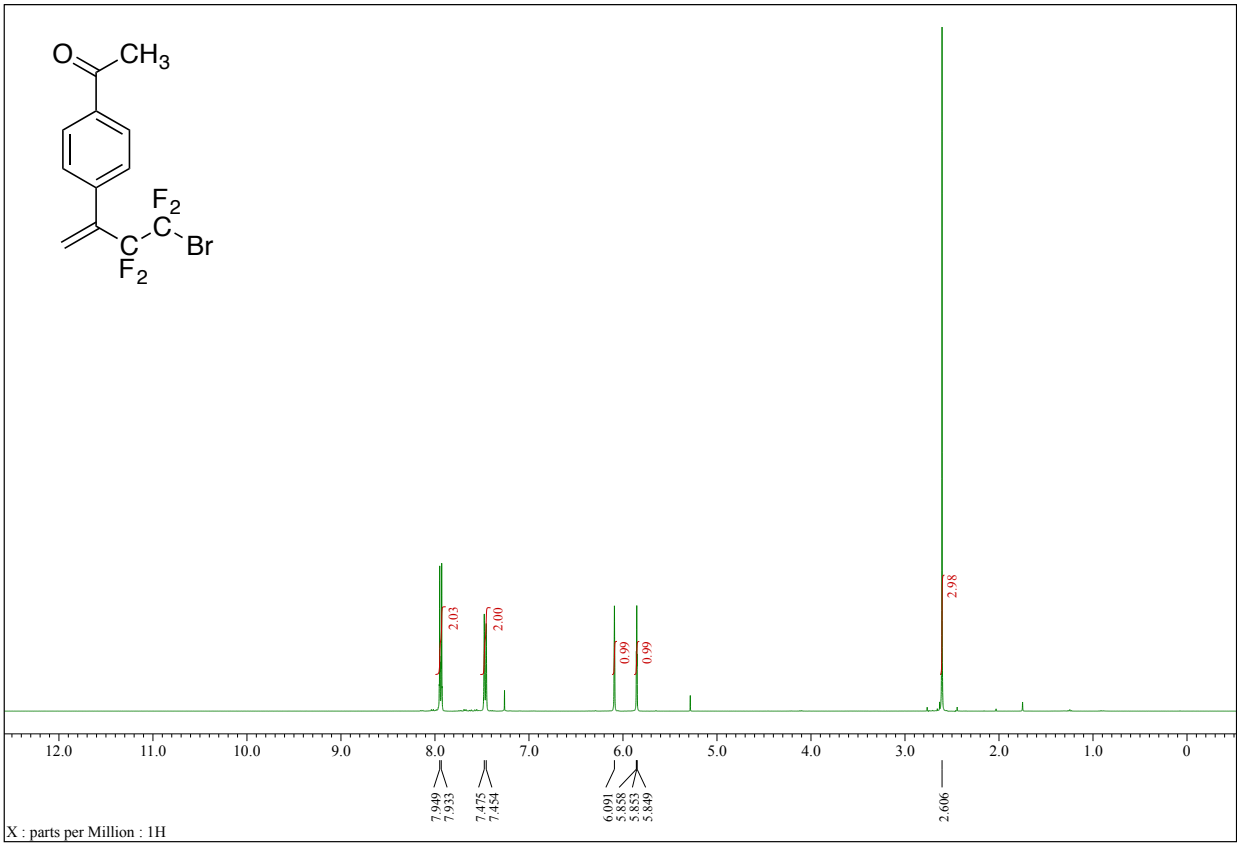


4-(4-Bromo-3,3,4,4-tetrafluorobut-1-en-2-yl)phenyl methyl ketone (8c)

^{1}H NMR



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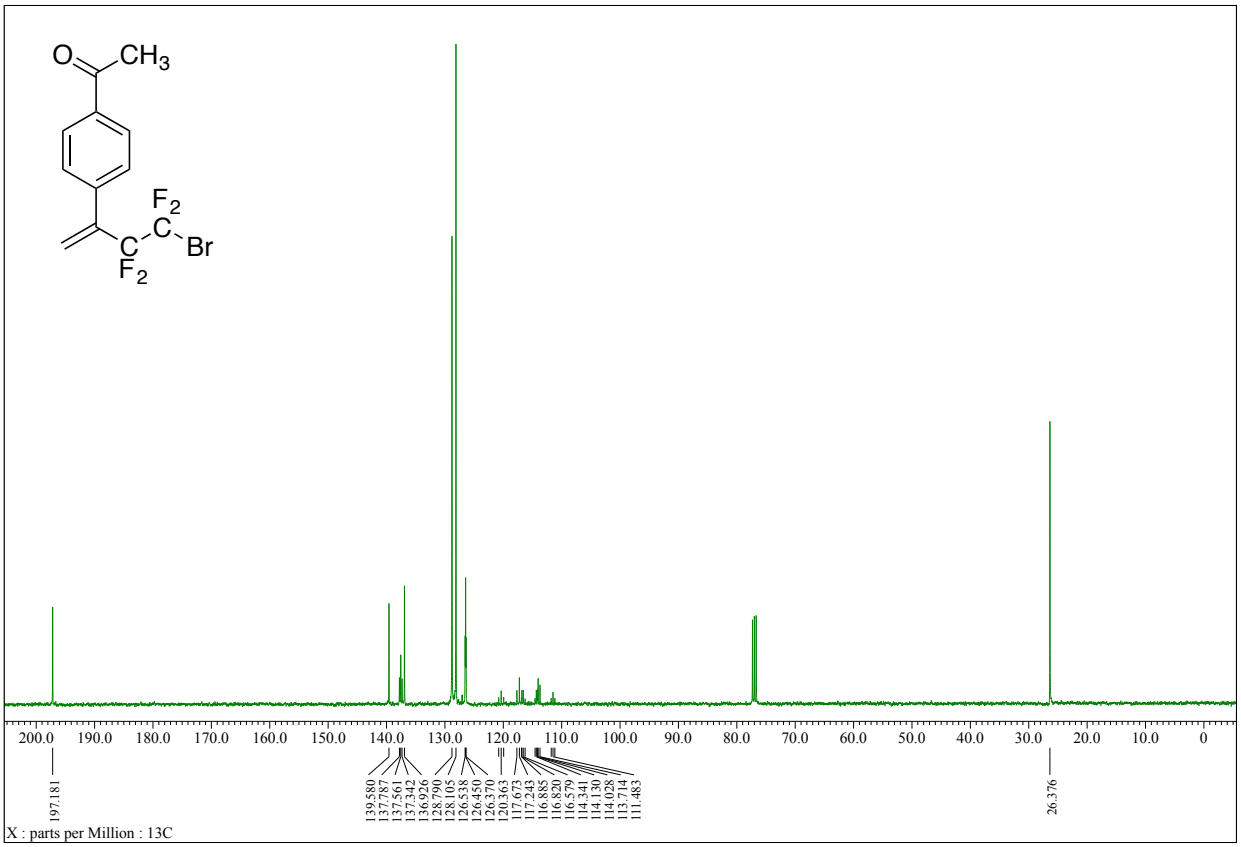
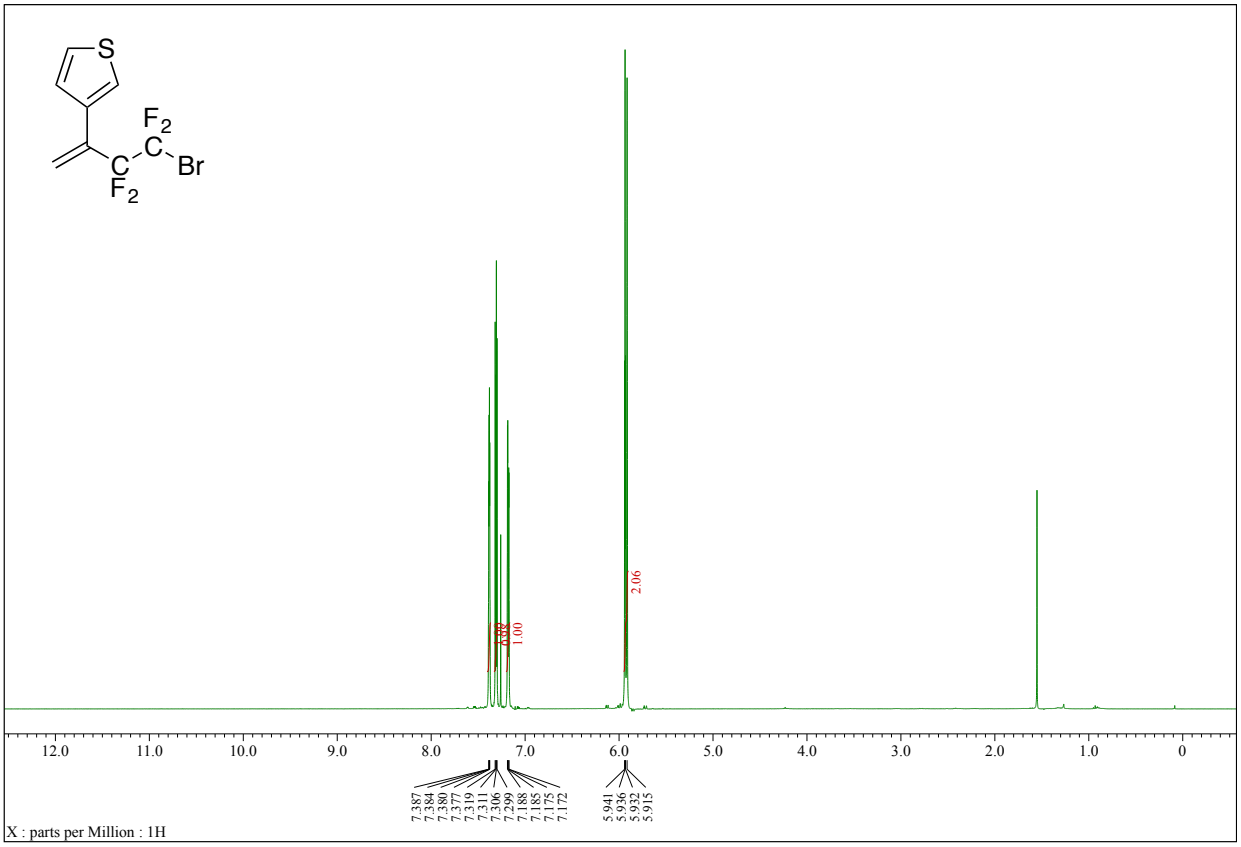


4-Bromo-3,3,4,4-tetrafluoro-2-(3-thienyl)but-1-ene (8d)

^{1}H NMR



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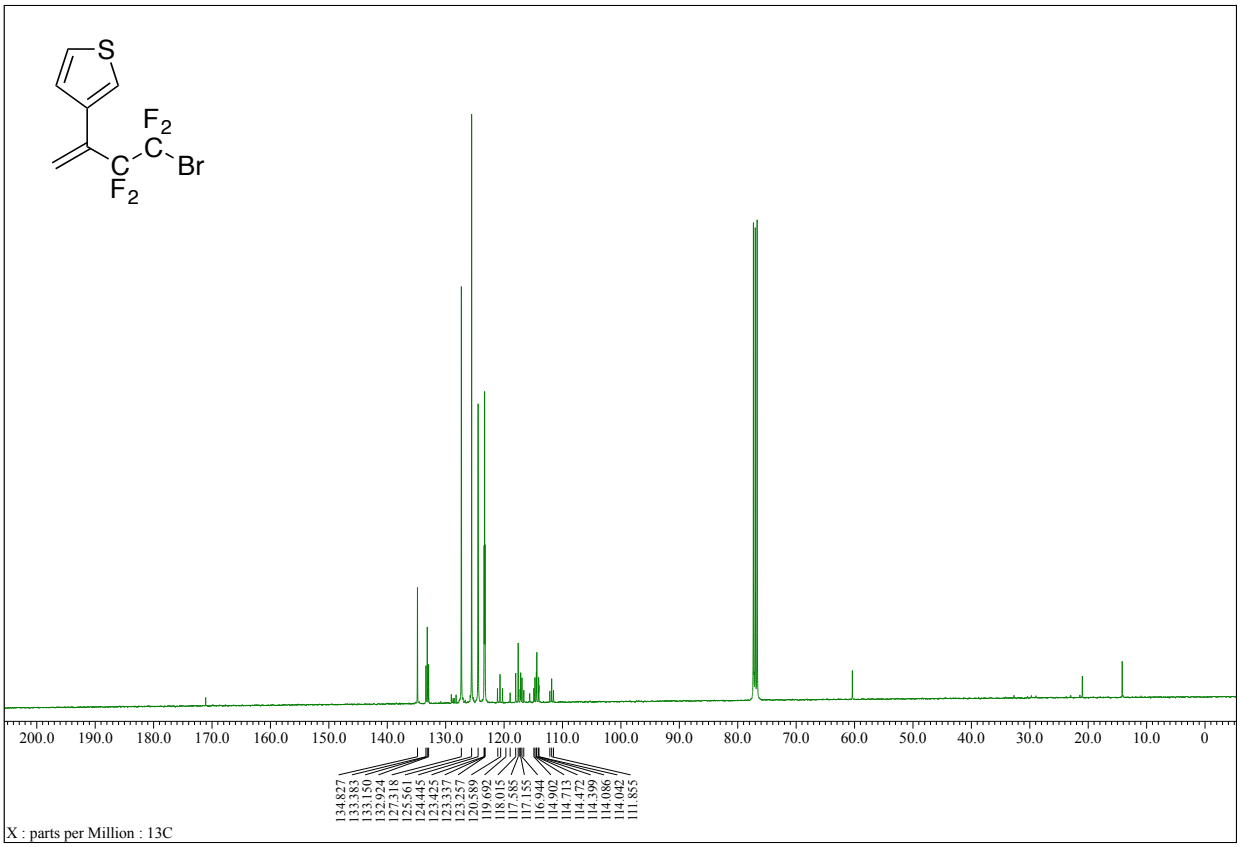
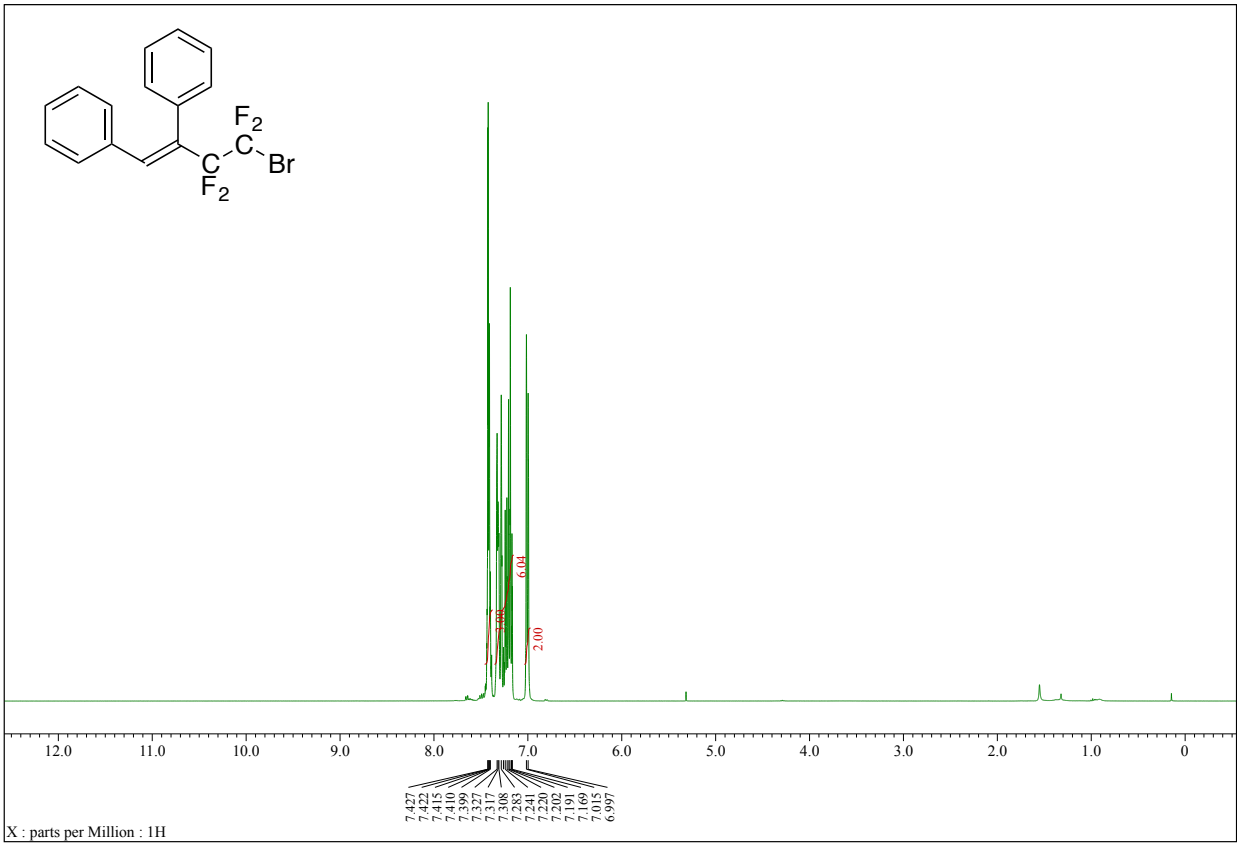


(E)-4-Bromo-3,3,4,4-tetrafluoro-1,2-diphenylbut-1-ene (E-10a)

^{1}H NMR



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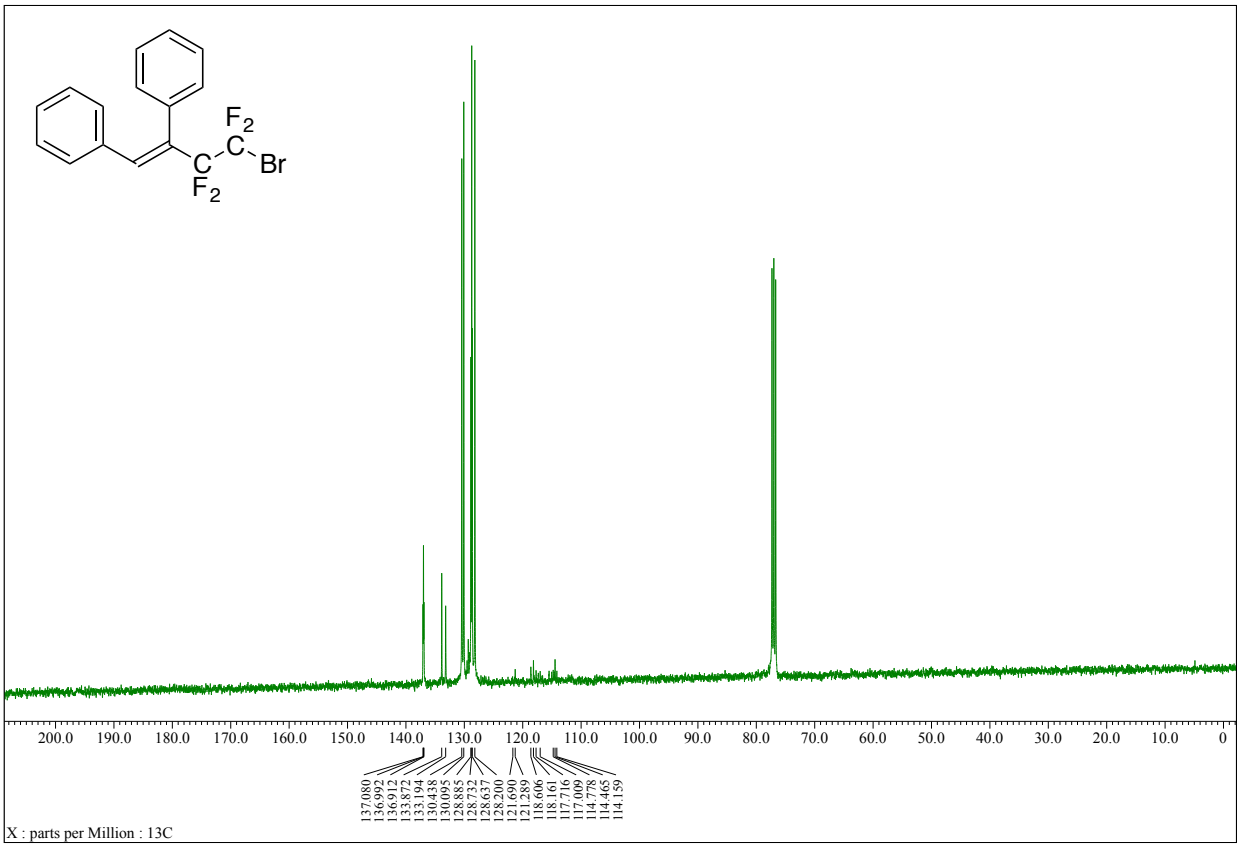
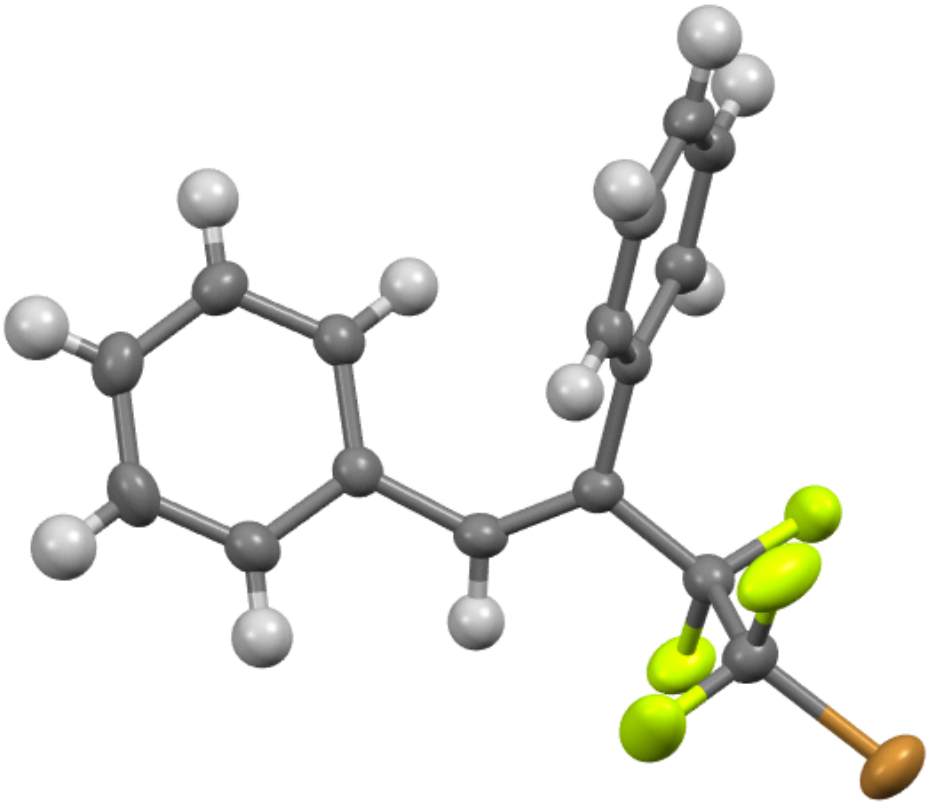
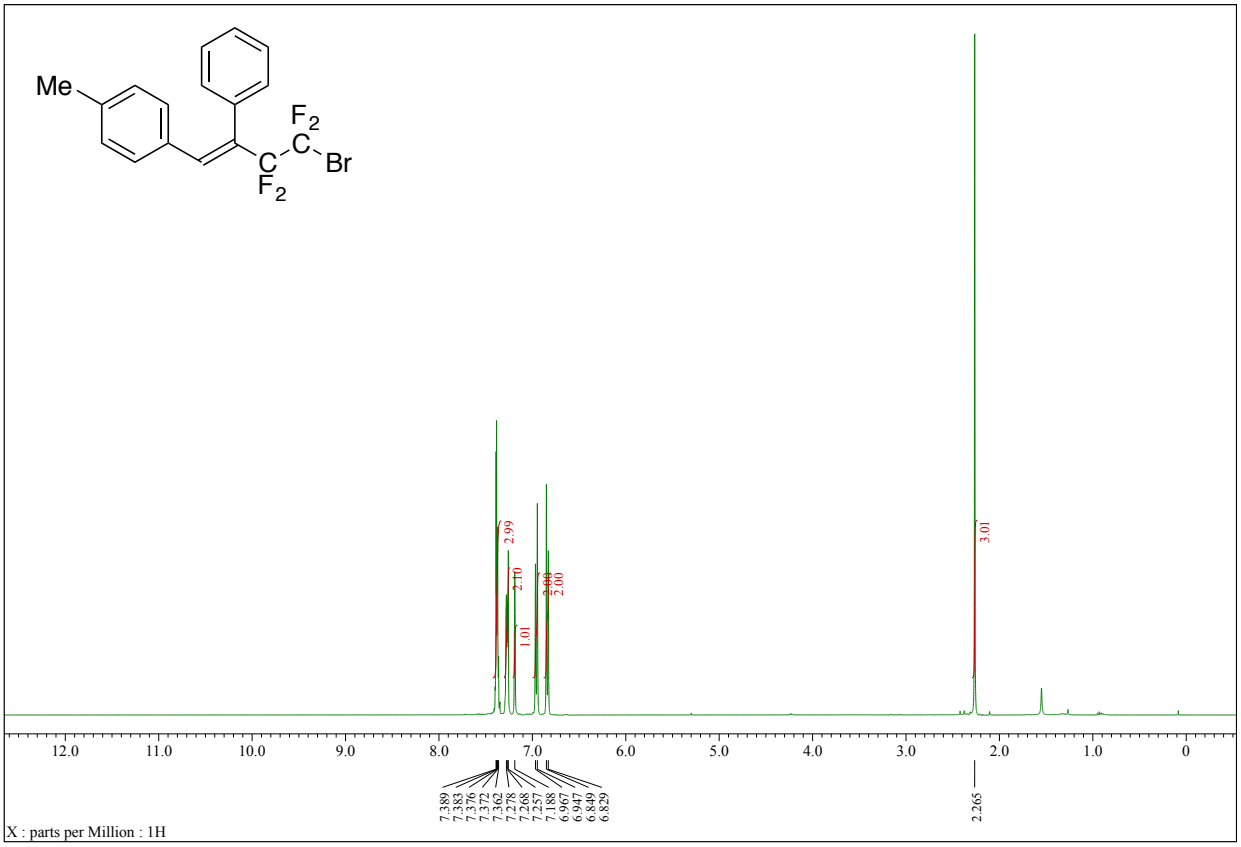




Crystal structure of **(*E*)-10a**, which is shown as 50% of the elipsoid contour probability level.

(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(4-methylphenyl)-2-phenylbut-1-ene (E-10b)

^{1}H NMR



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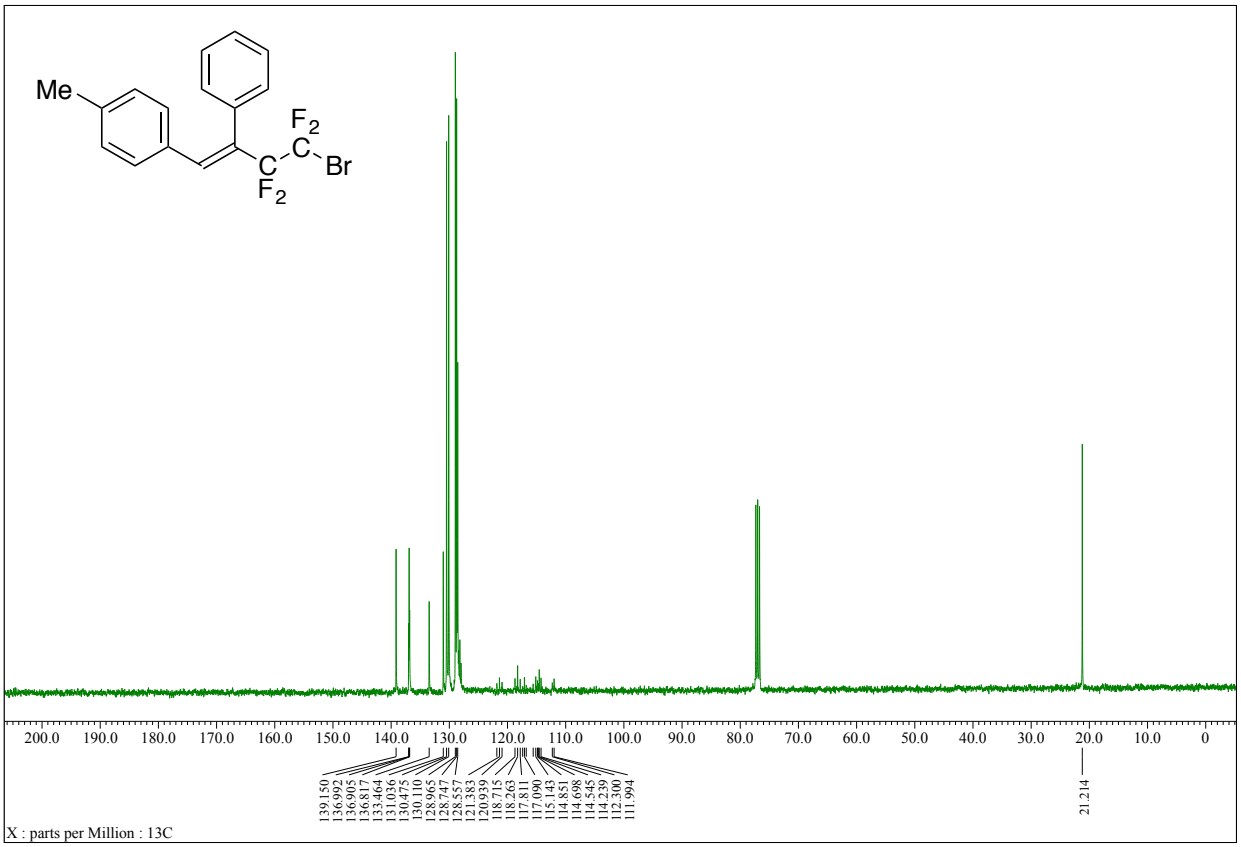
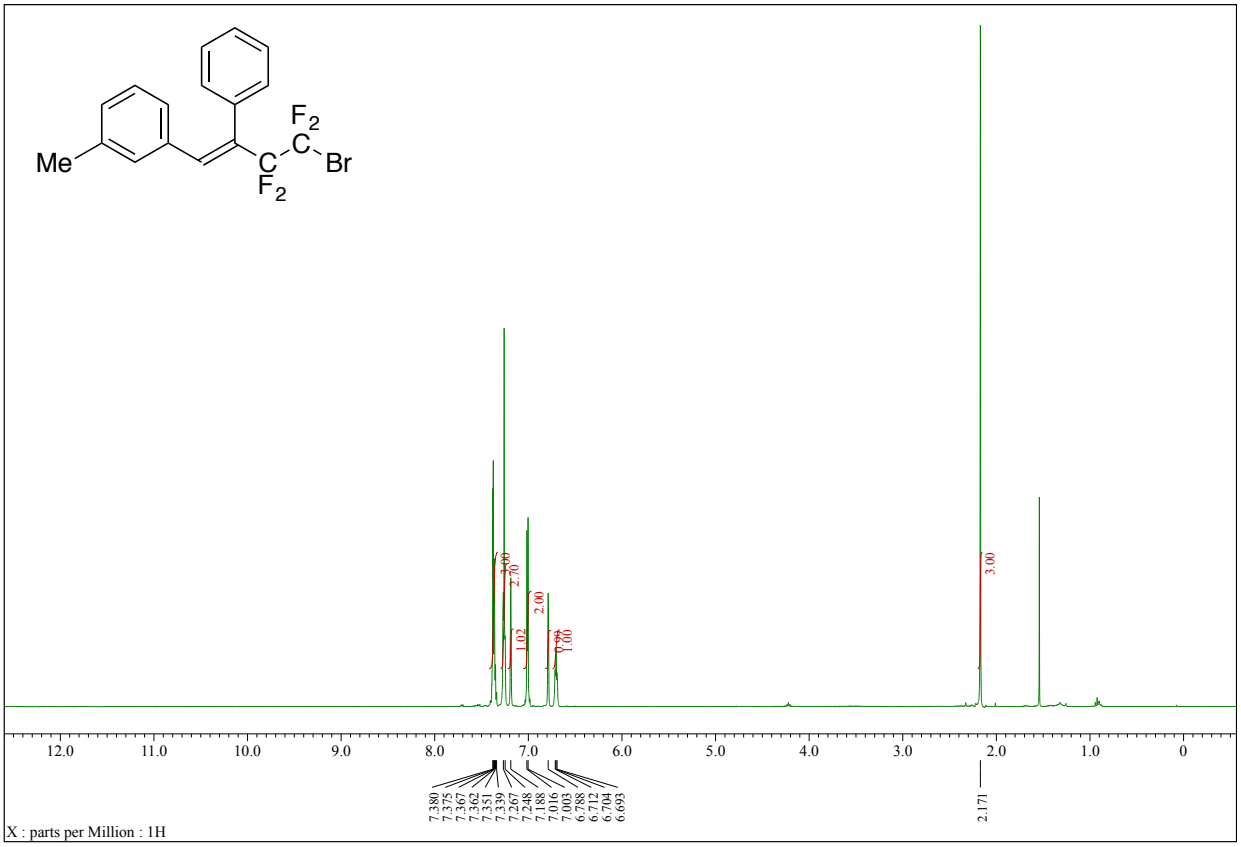
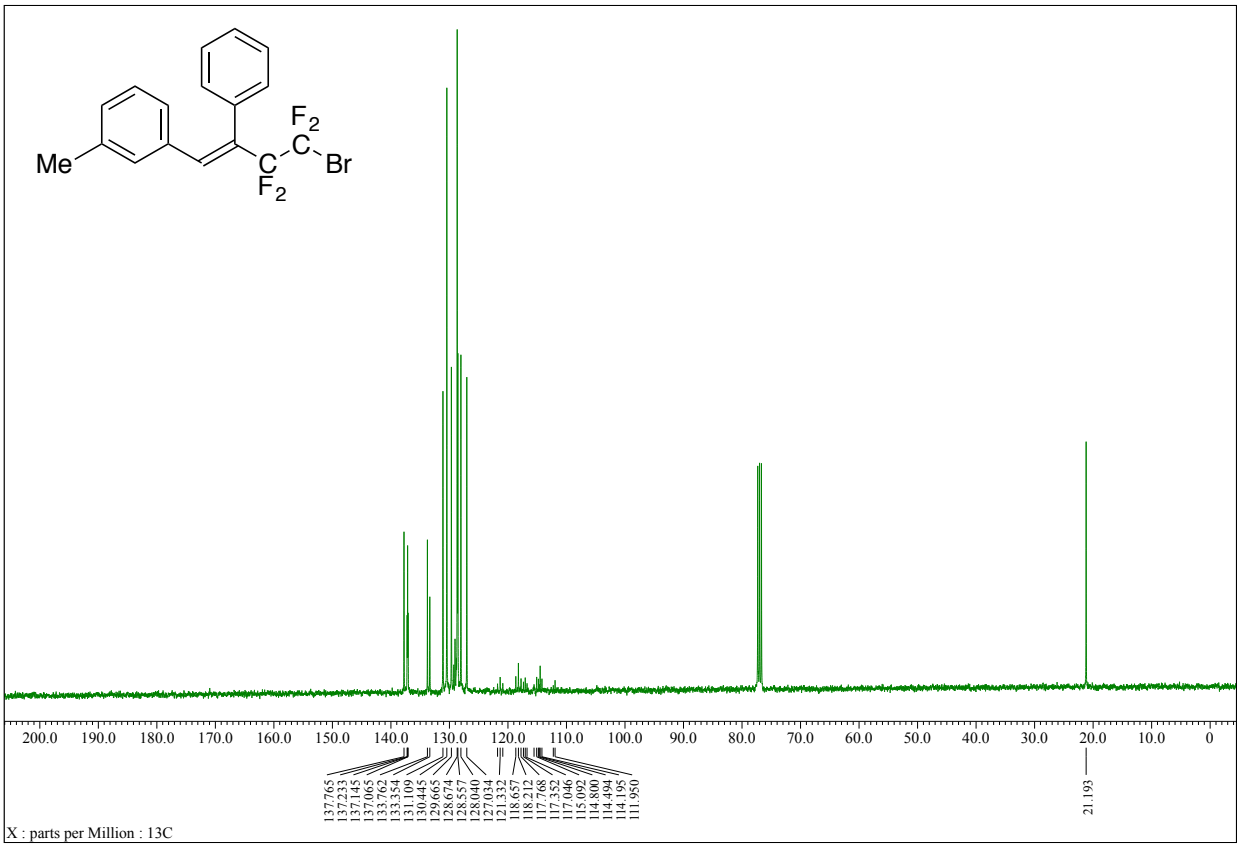


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(3-methylphenyl)-2-phenylbut-1-ene (E-10c)

^{1}H NMR

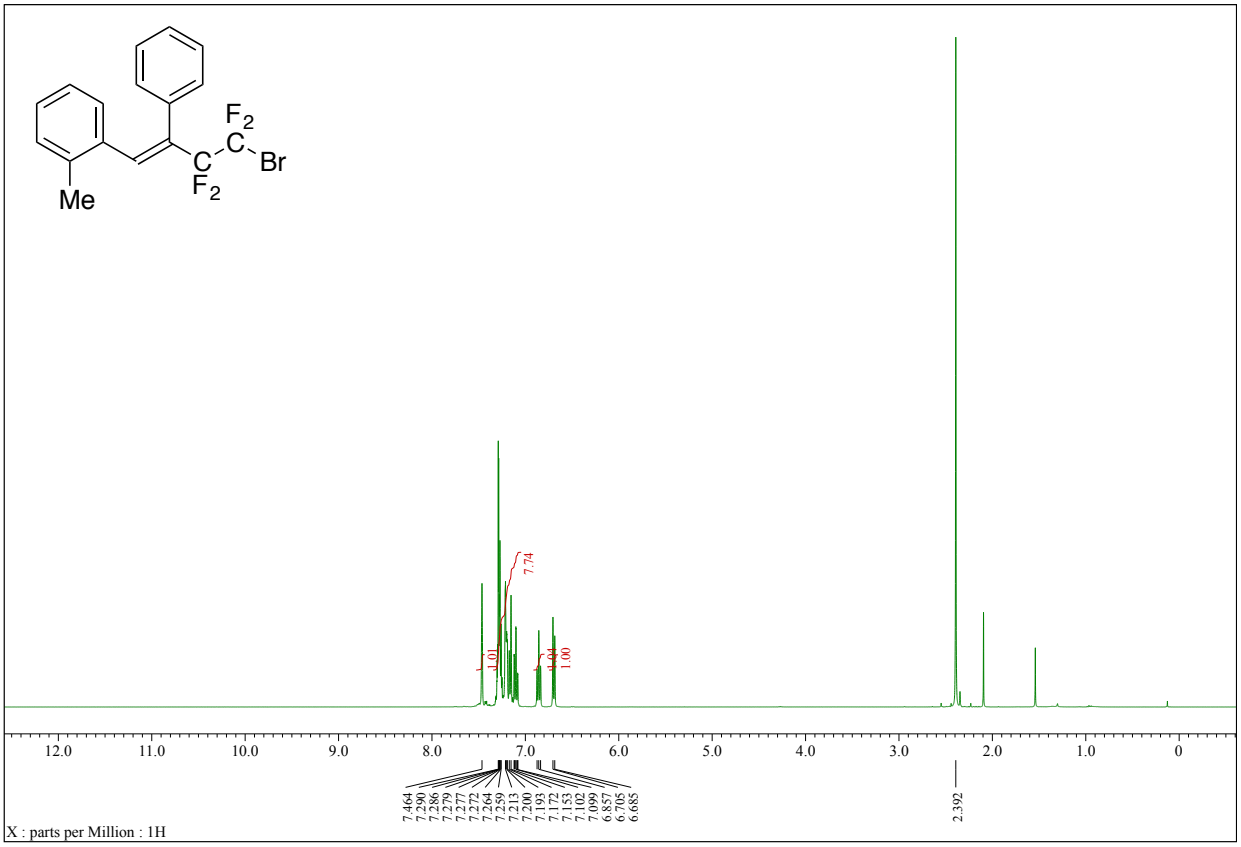


^{13}C NMR



(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(2-methylphenyl)-2-phenylbut-1-ene (E-10d)

^{1}H NMR



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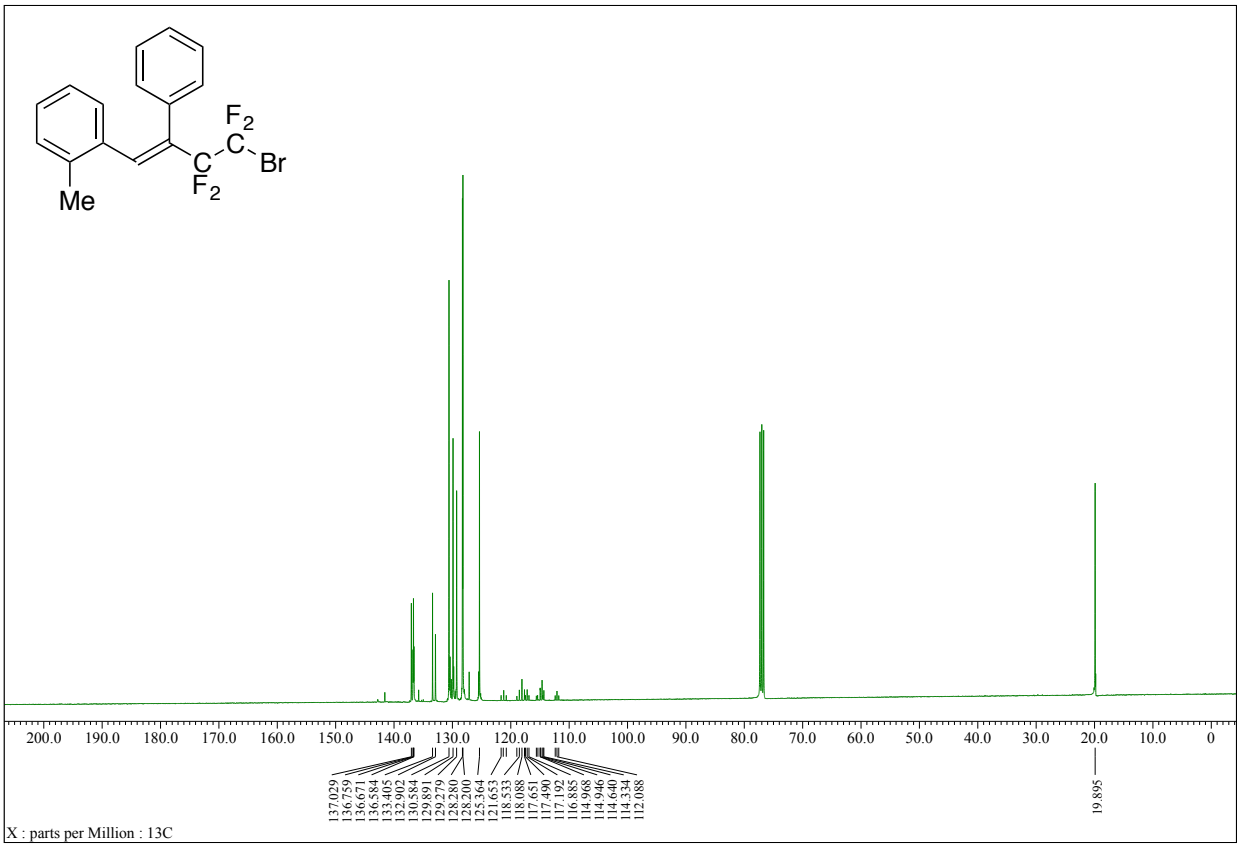
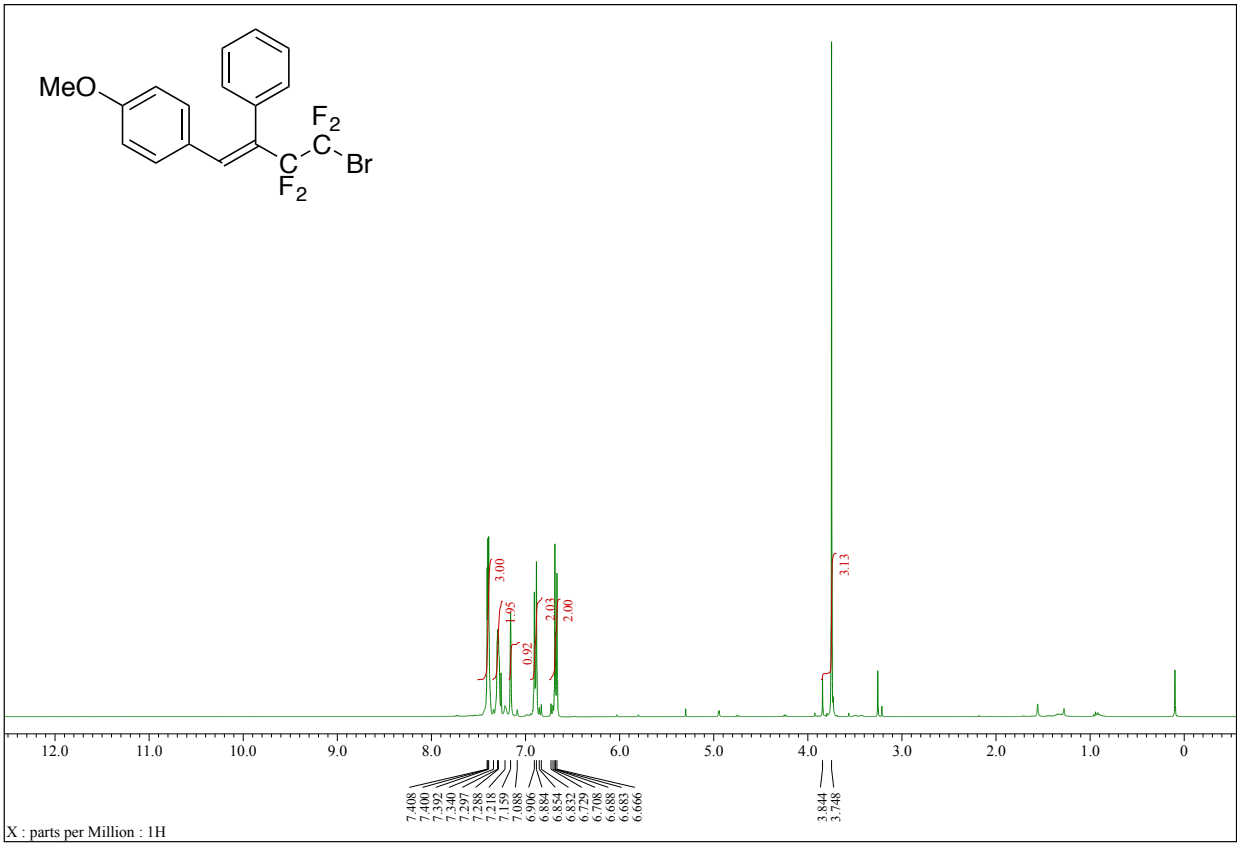
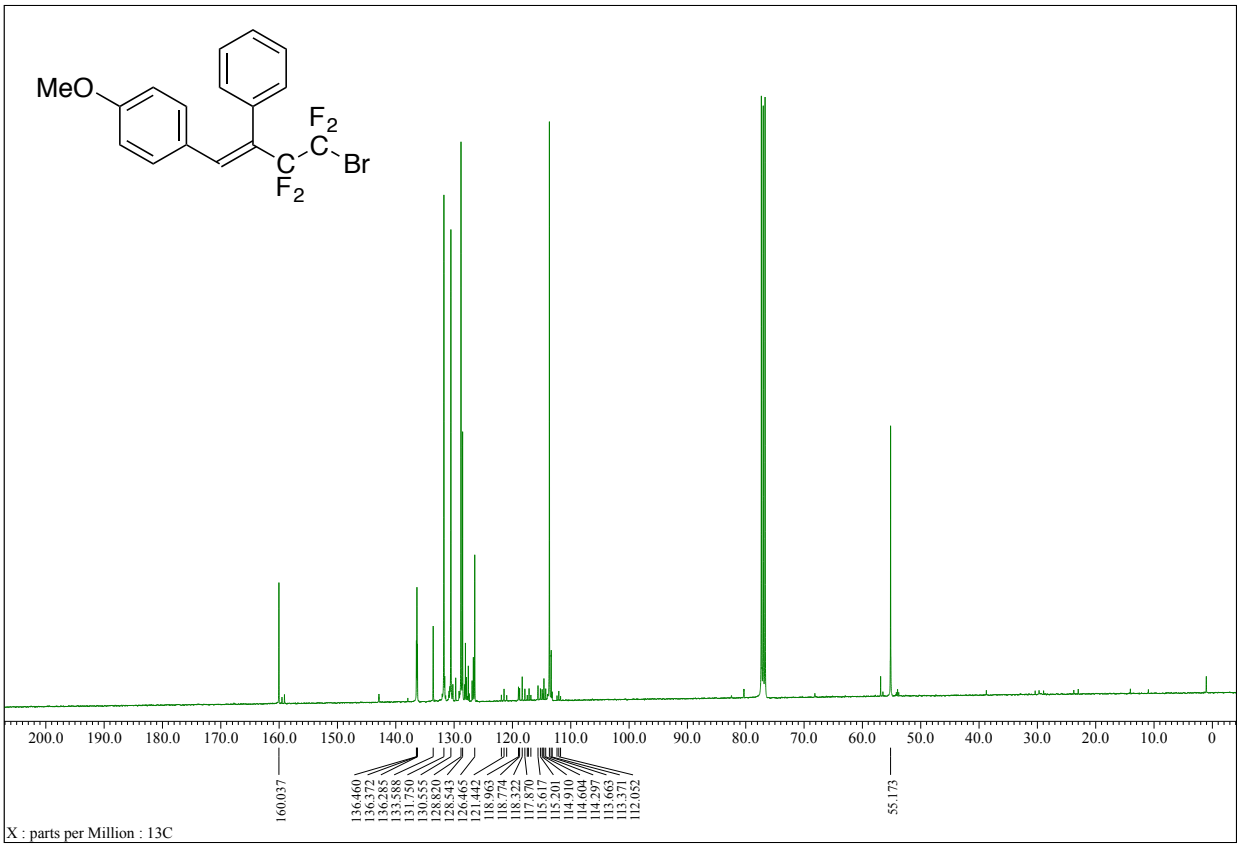


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(4-methoxyphenyl)-2-phenylbut-1-ene (E-10e)

^{1}H NMR

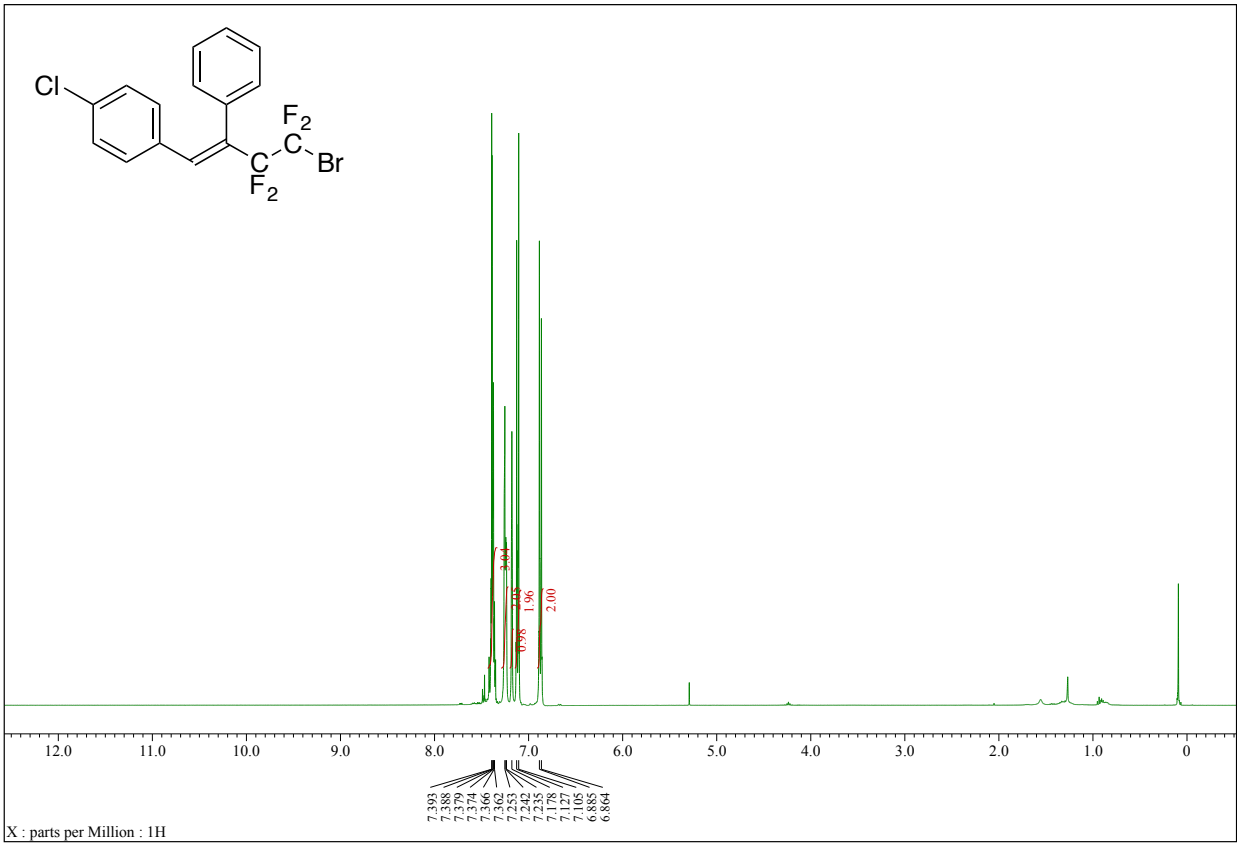


^{13}C NMR

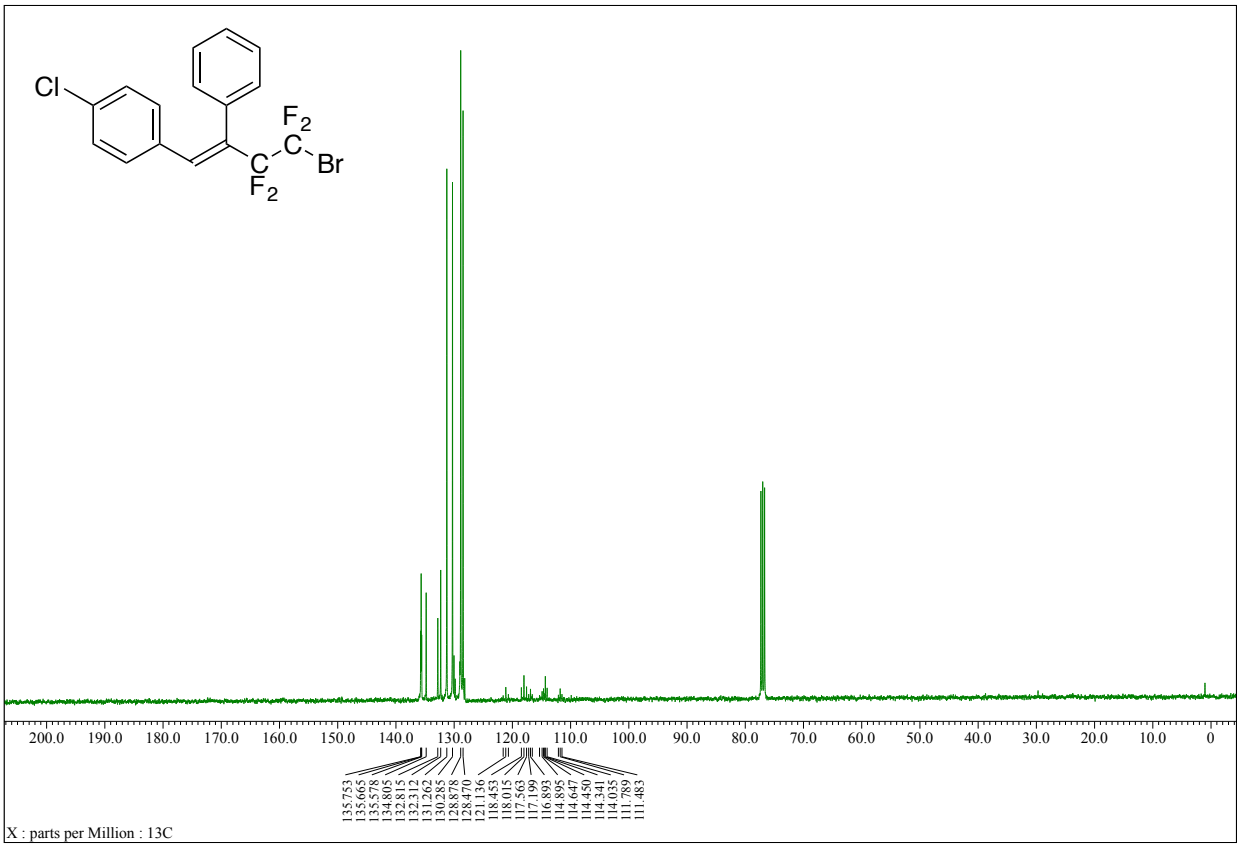


(E)-4-Bromo-1-(4-chlorophenyl)-3,3,4,4-tetrafluoro-2-phenylbut-1-ene (E-10f)

^{1}H NMR

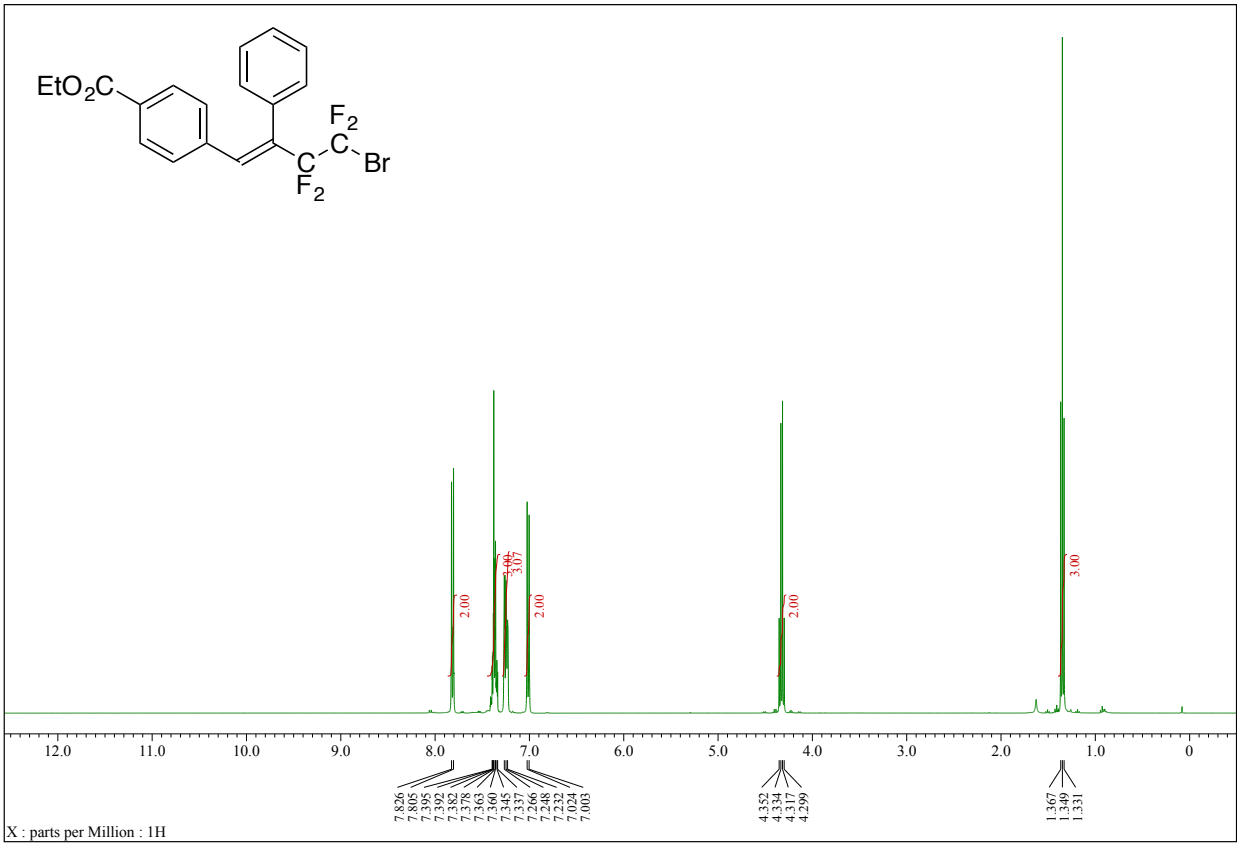


13C NMR

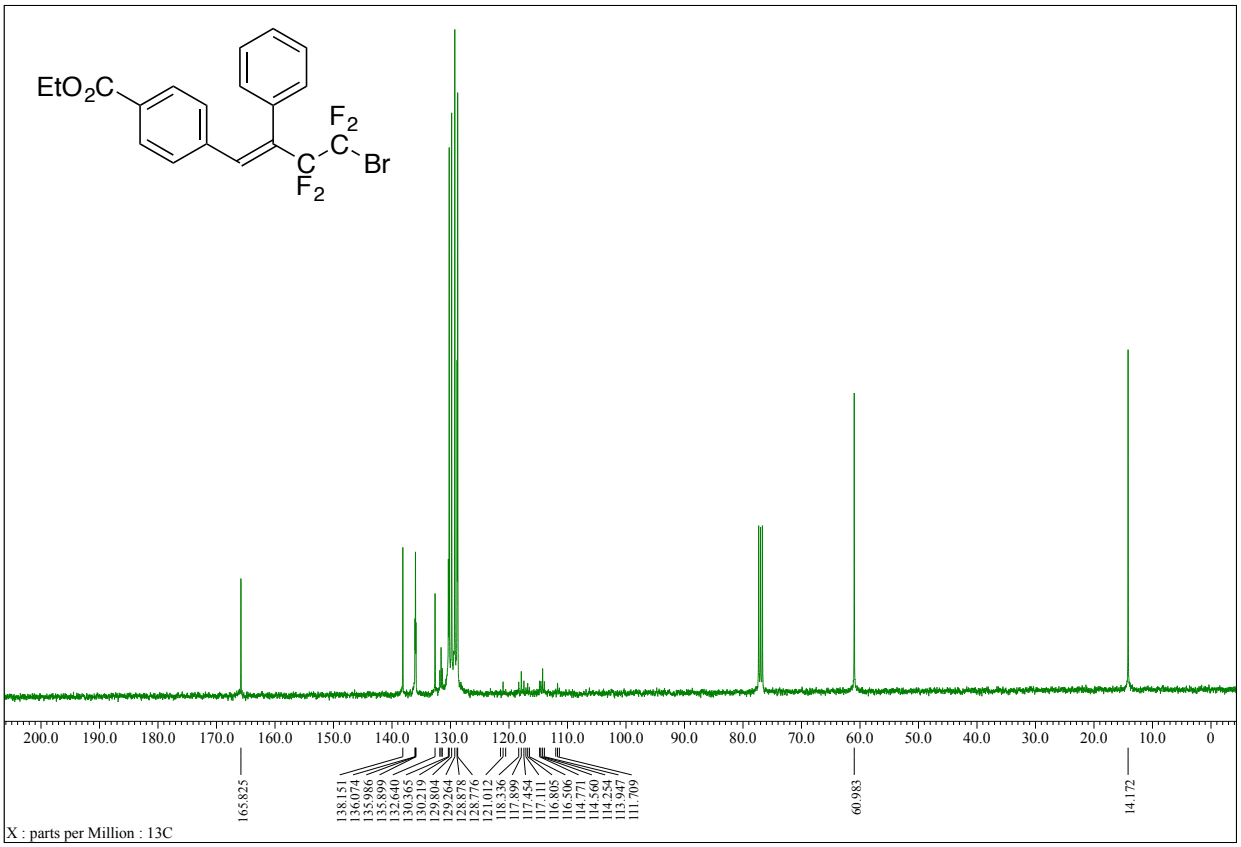


(E)-Ethyl 4-(4-bromo-3,3,4,4-tetrafluoro-2-phenylbut-1-en-1-yl)benzoate (E-10g)

^{1}H NMR

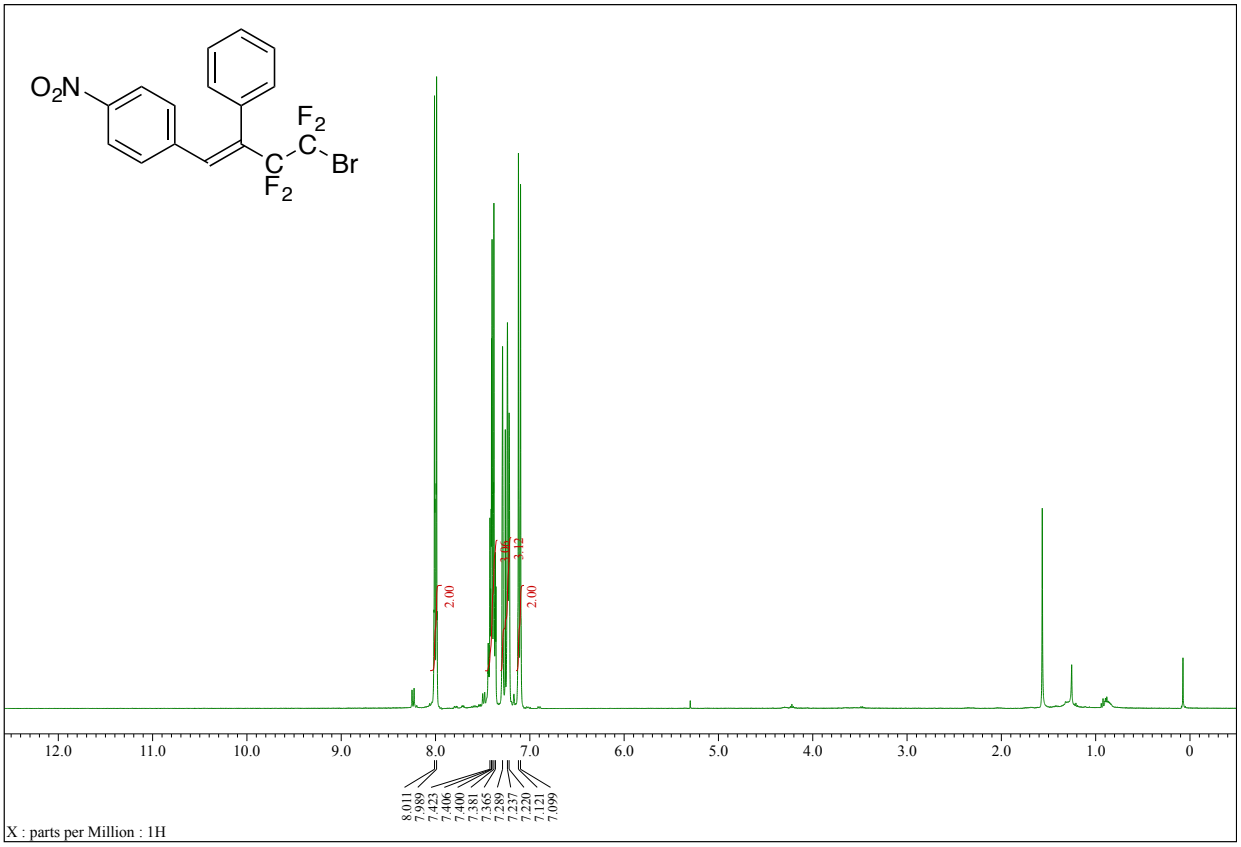


^{13}C NMR

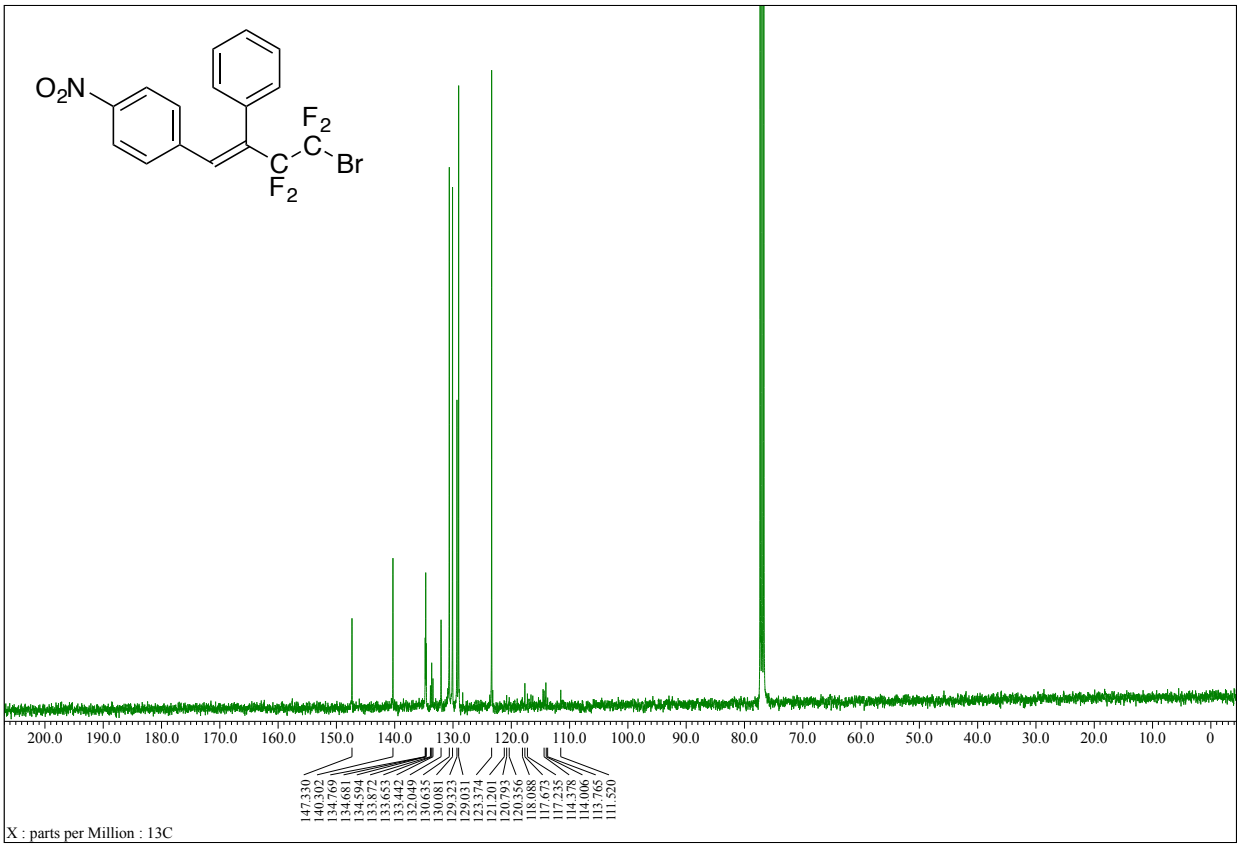


(E)-4-Bromo-3,3,4,4-tetrafluoro-1-(4-nitrophenyl)-2-phenylbut-1-ene (E-10h)

^{1}H NMR

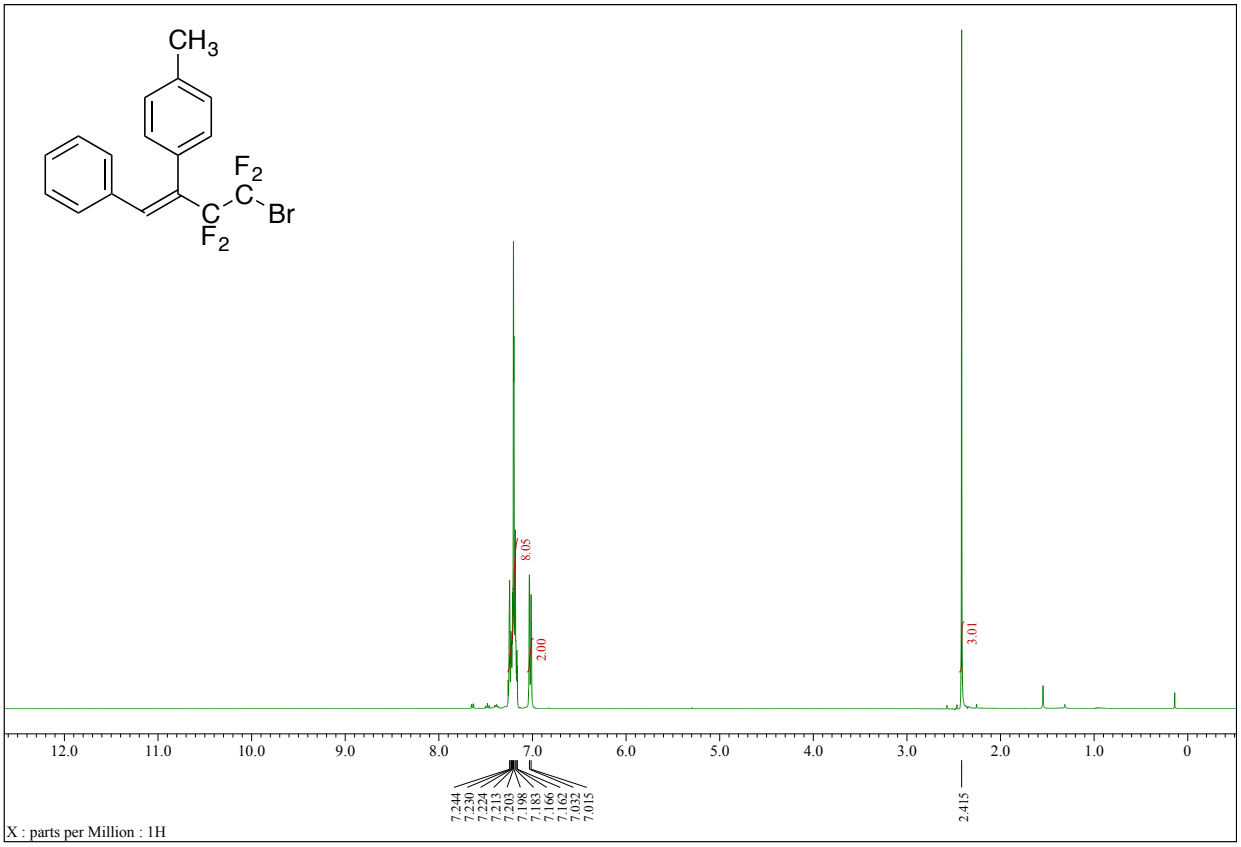


^{13}C NMR

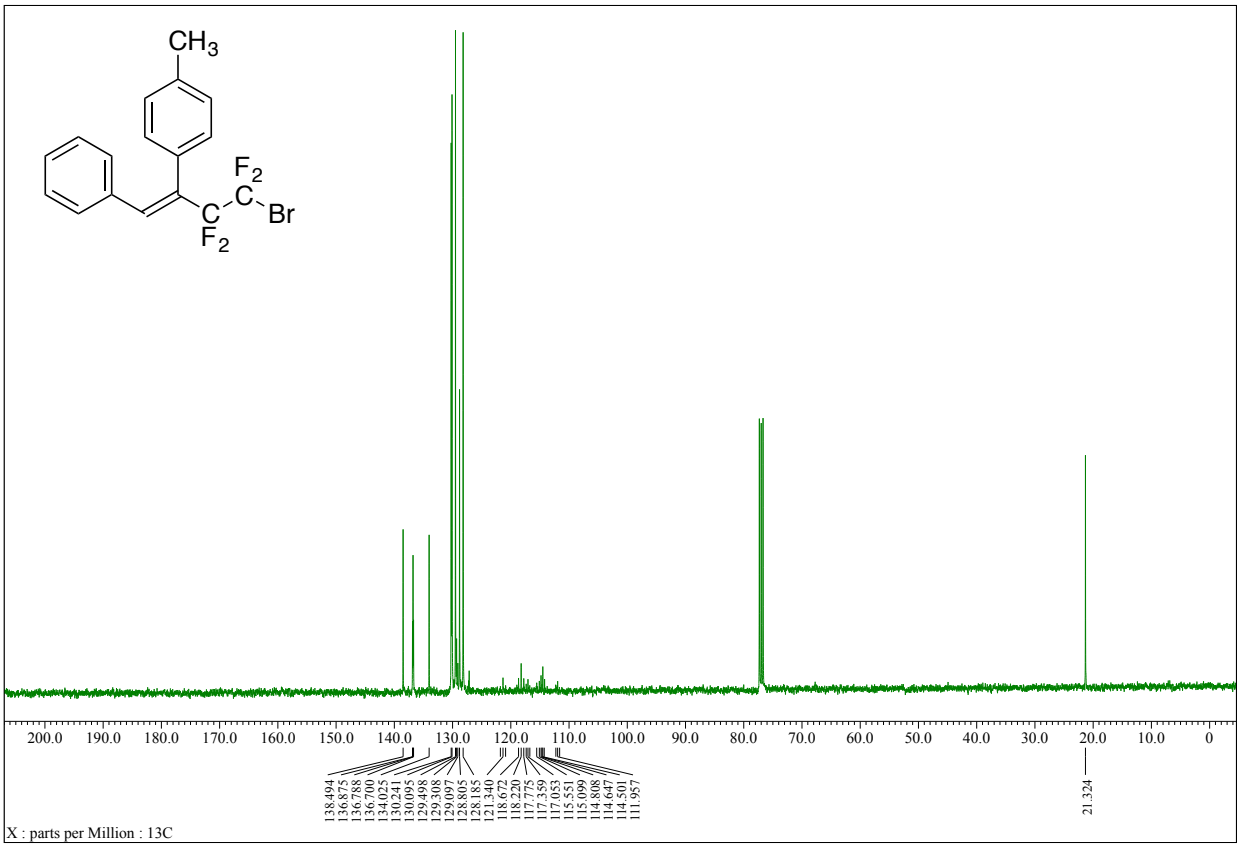


(E)-4-Bromo-3,3,4,4-tetrafluoro-2-(4-methylphenyl)-1-phenylbut-1-ene (E-10i)

^{1}H NMR

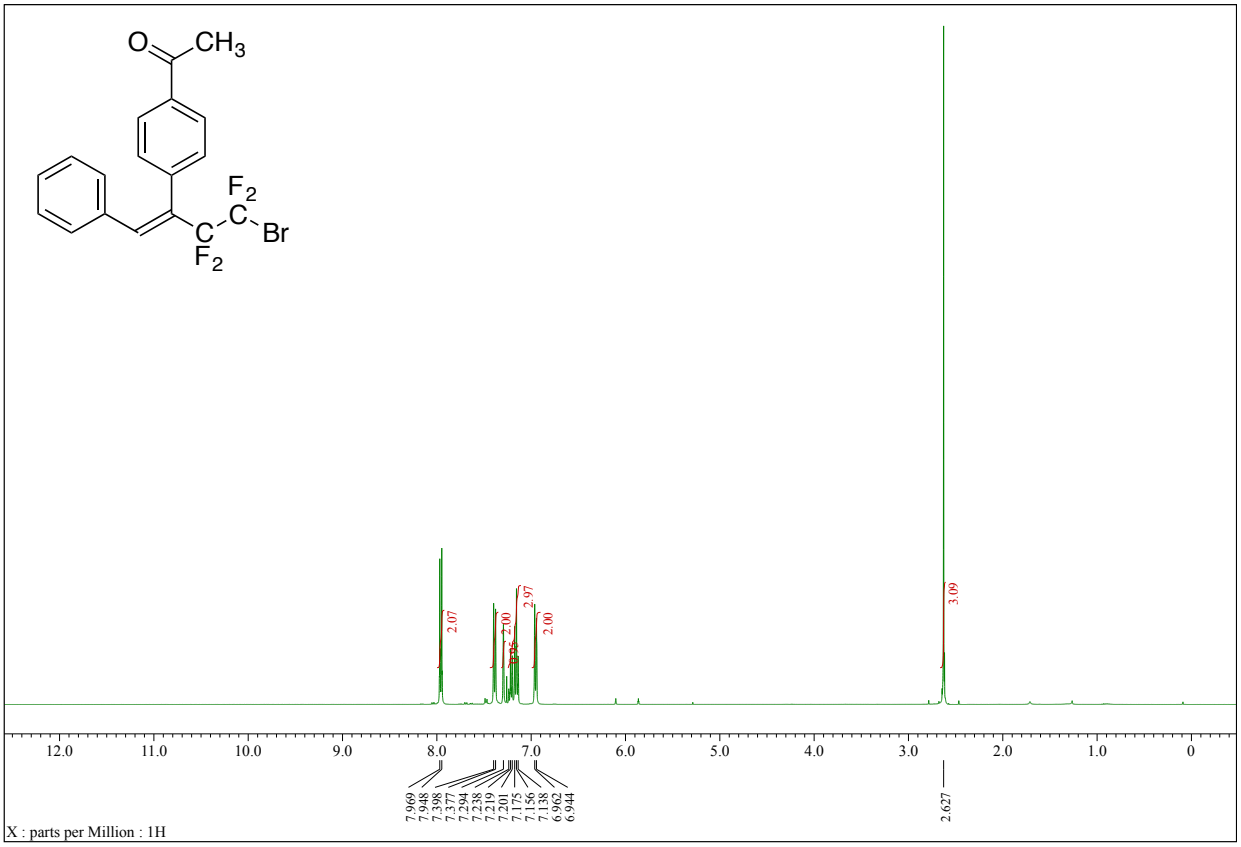


^{13}C NMR

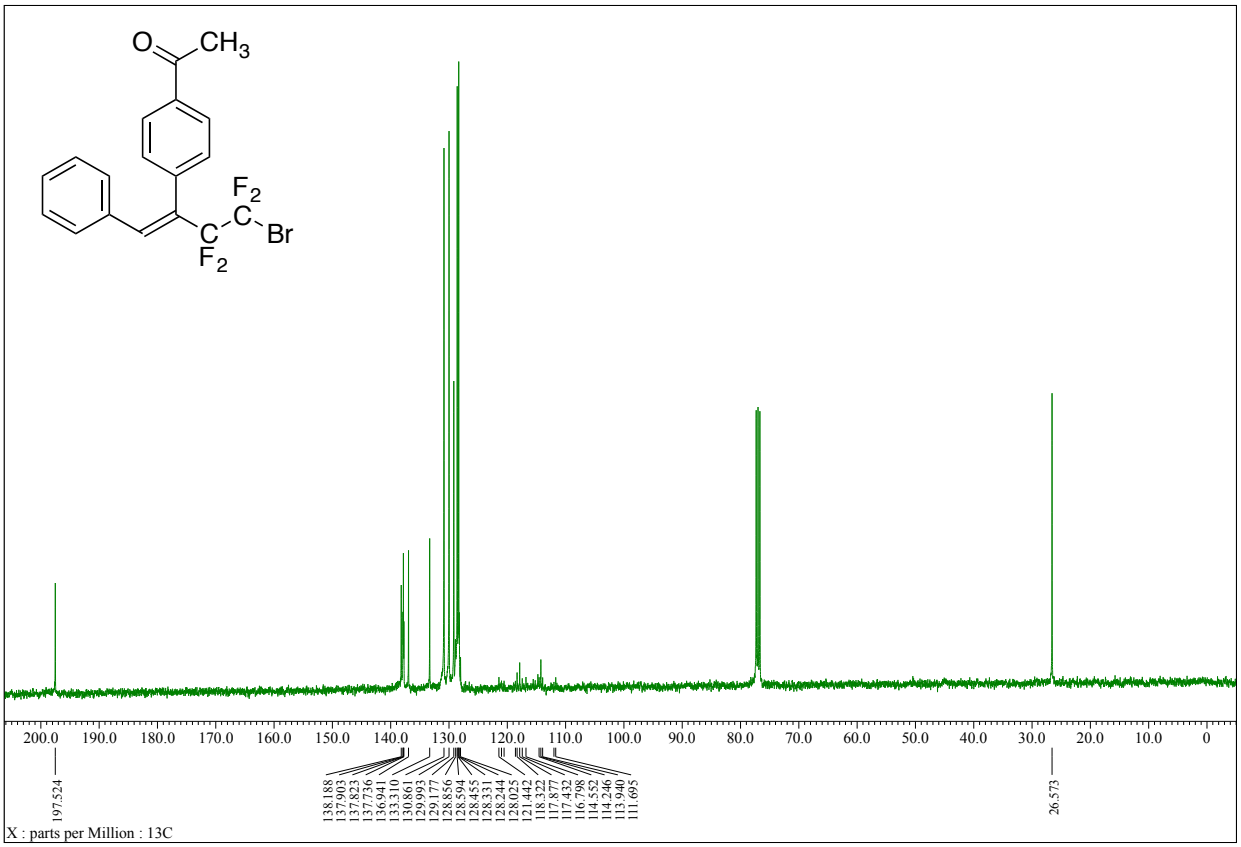


(E)-(4-Bromo-3,3,4,4-tetrafluoro-1-phenylbut-1-en-2-yl)phenyl methyl ketone (E-10j)

^{1}H NMR

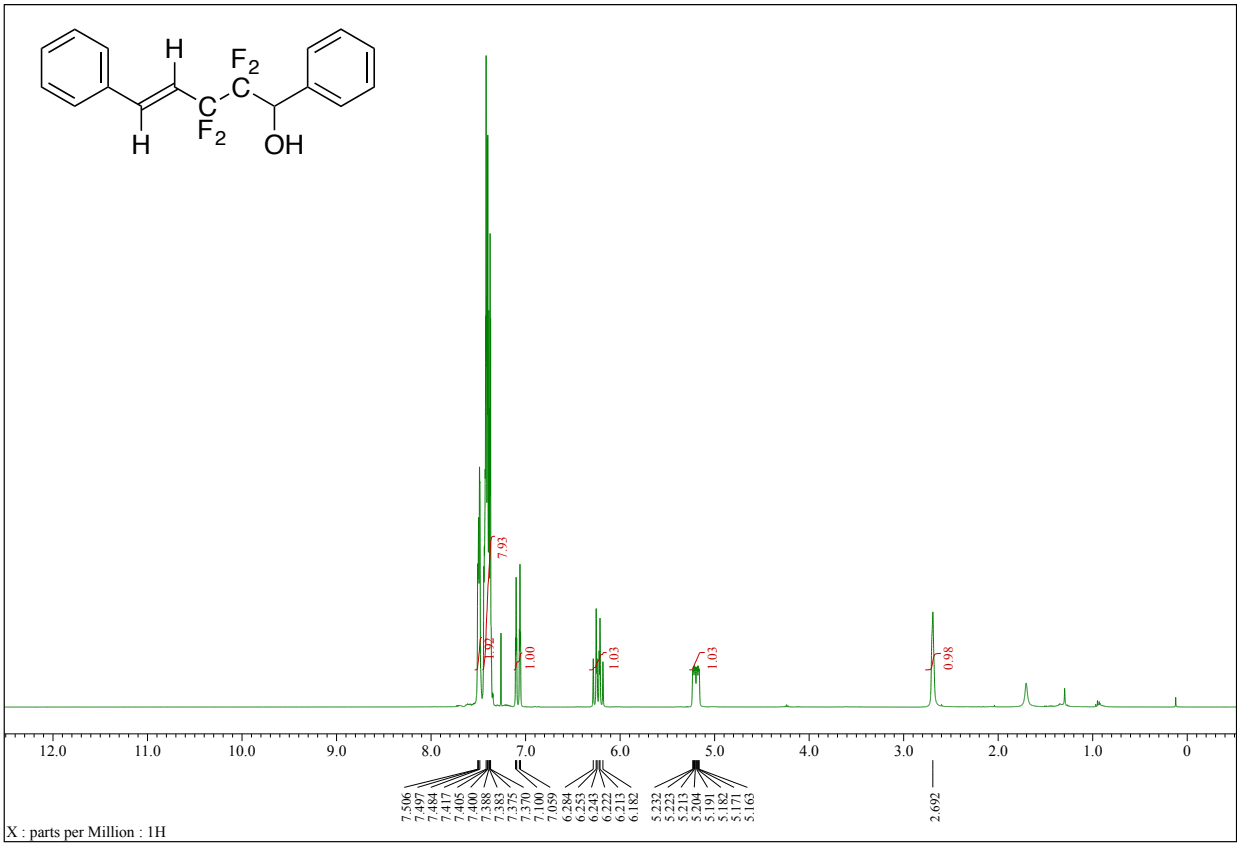


^{13}C NMR

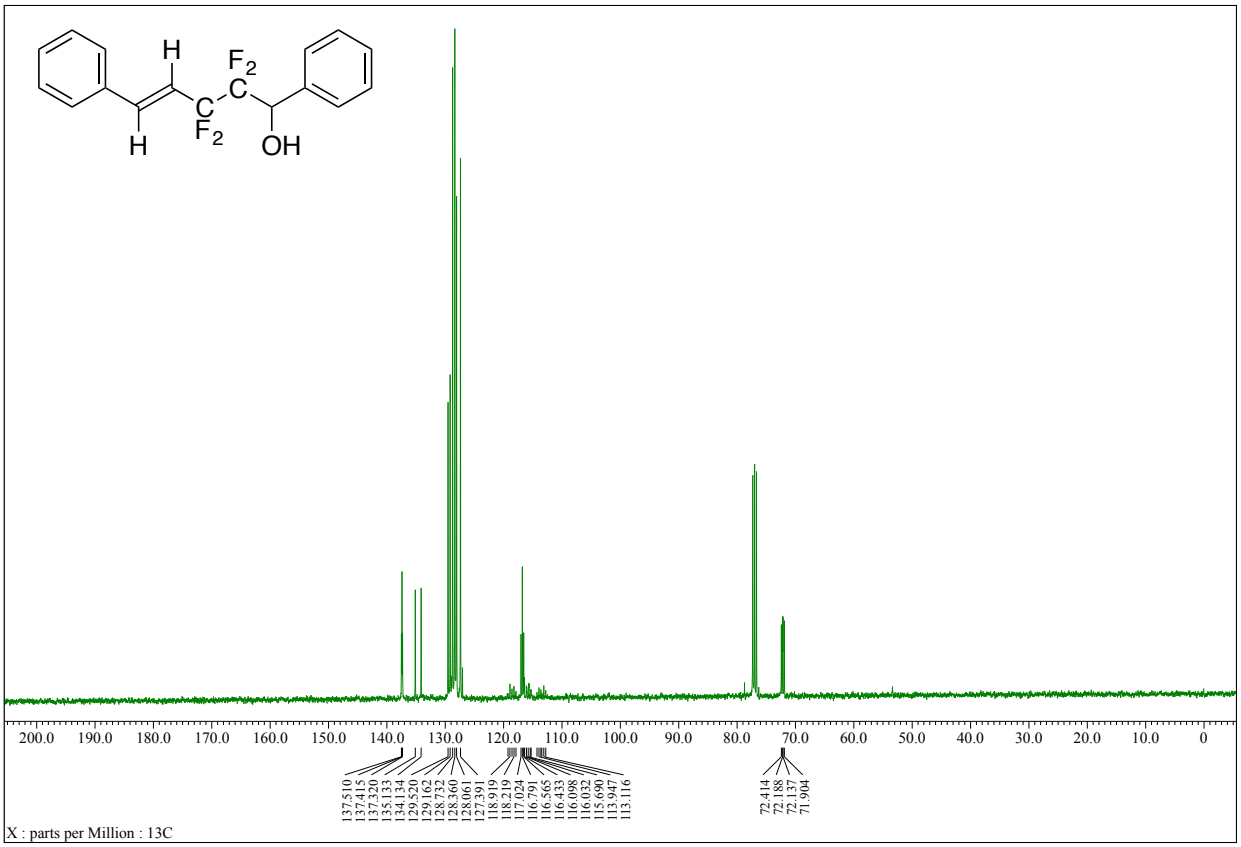


(E)-2,2,3,3-Tetrafluoro-1,5-diphenylpent-4-en-1-ol (11a)

^{1}H NMR

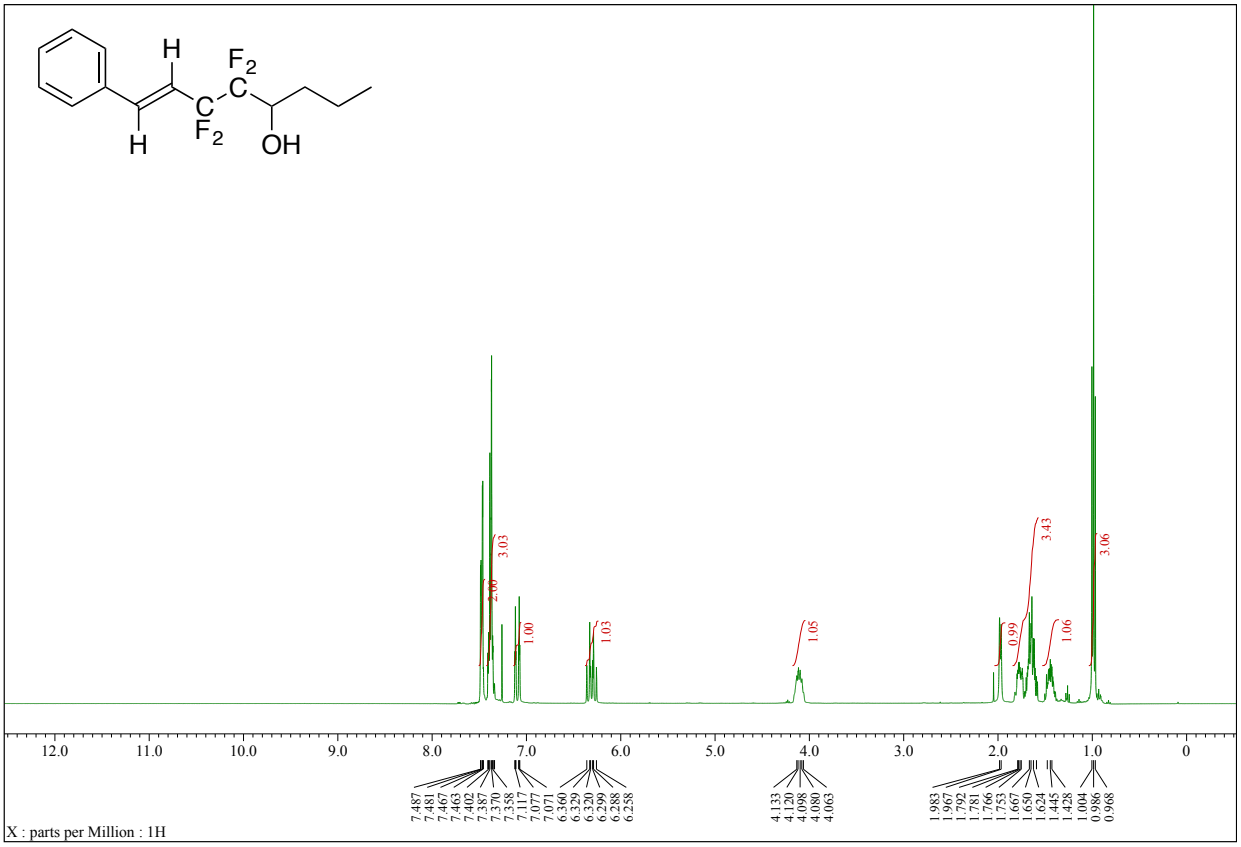


^{13}C NMR

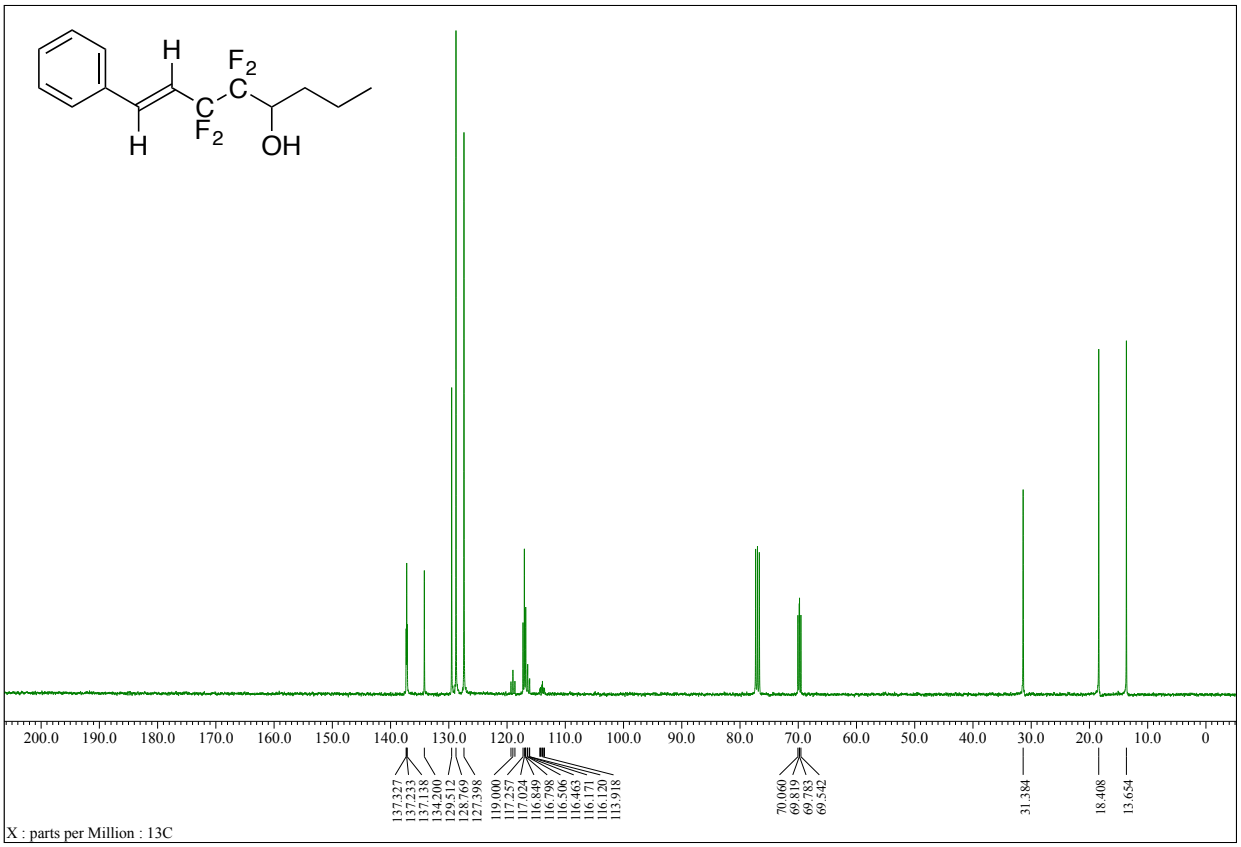


(E)-5,5,6,6-Tetrafluoro-8-phenyl-oct-7-en-4-ol (11b)

^{1}H NMR

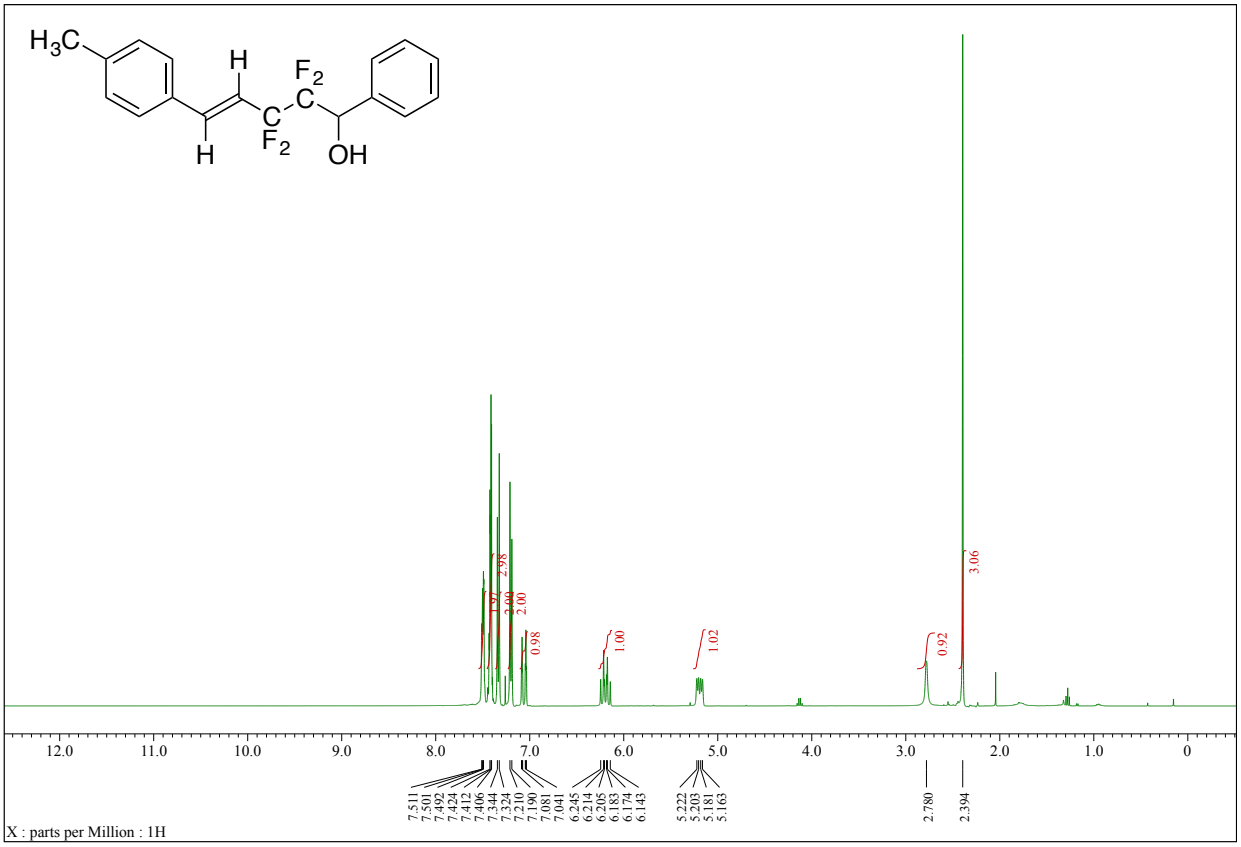


^{13}C NMR

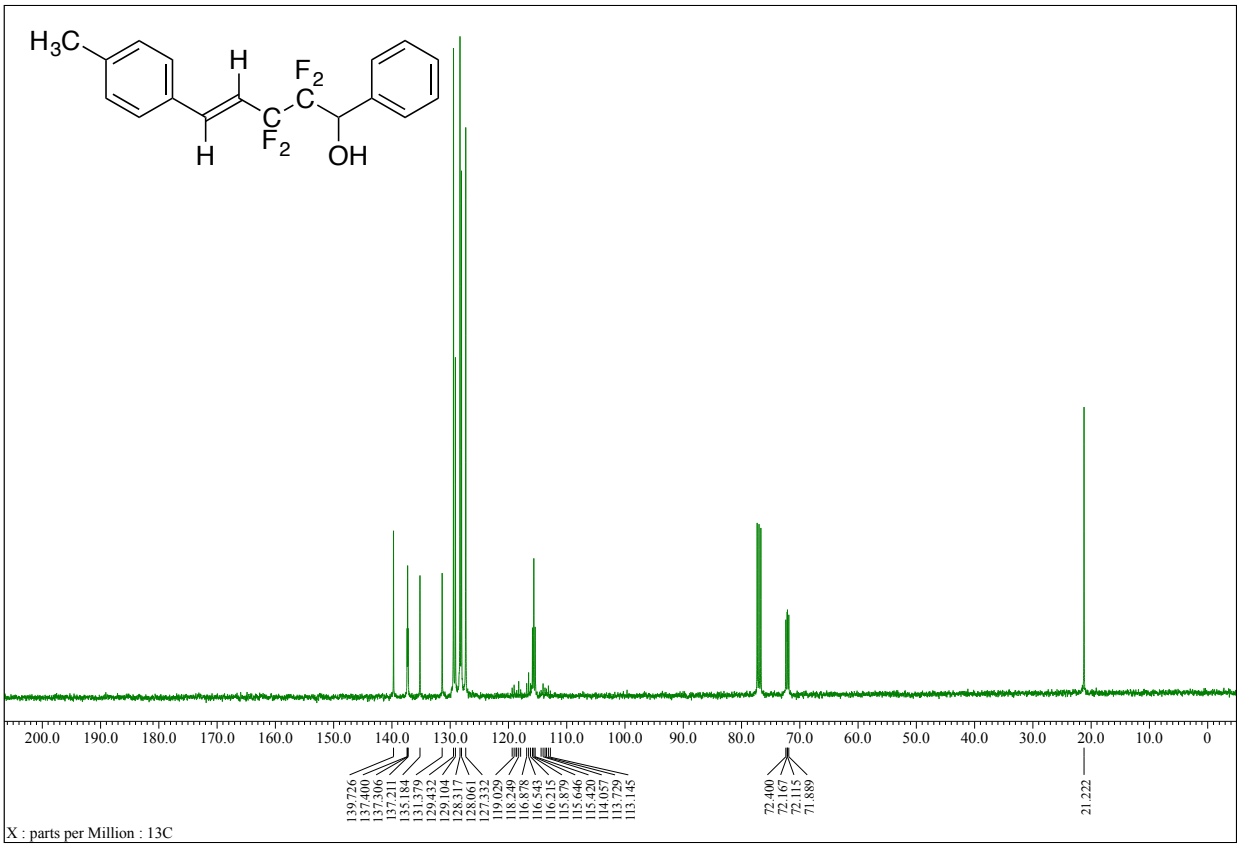


(E)-2,2,3,3-Tetrafluoro-5-(4-methylphenyl)-1-phenylpent-4-en-1-ol (11c)

^{1}H NMR

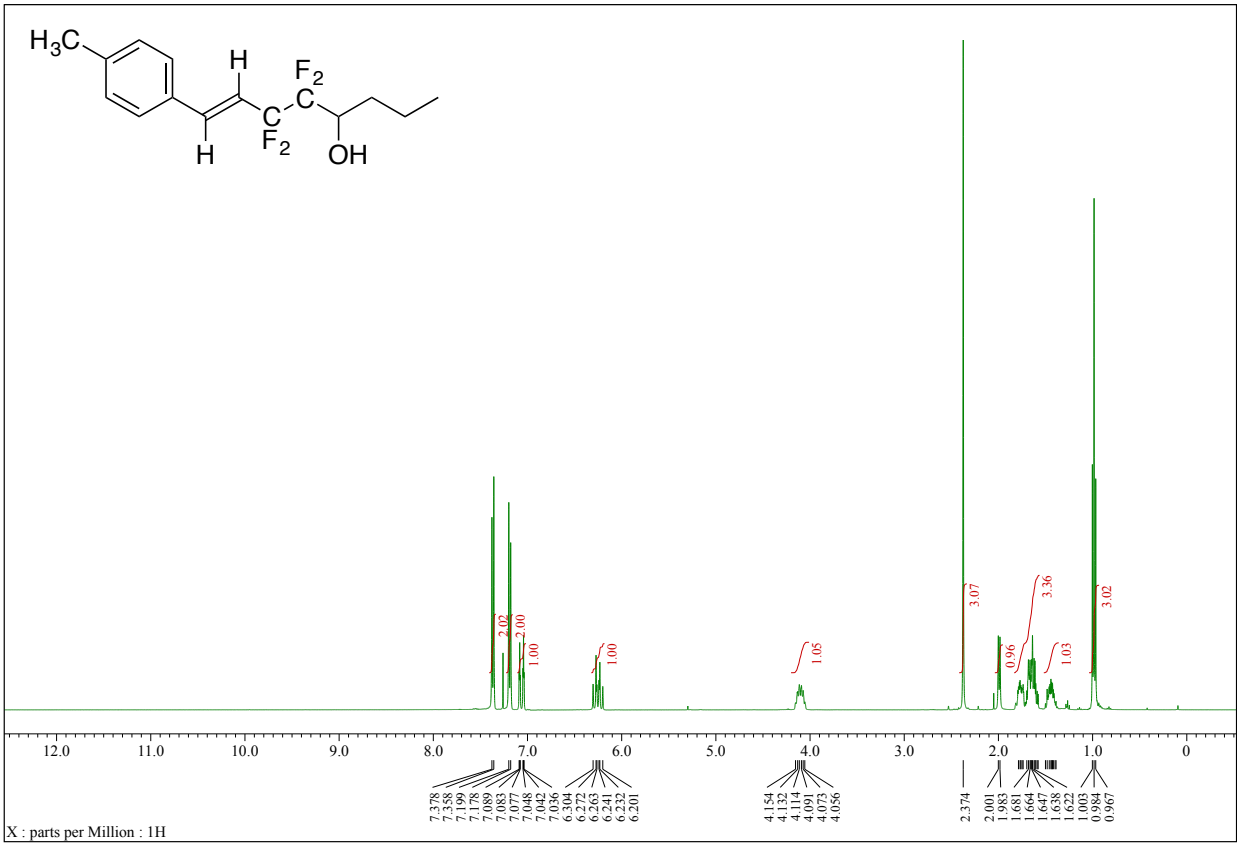


^{13}C NMR

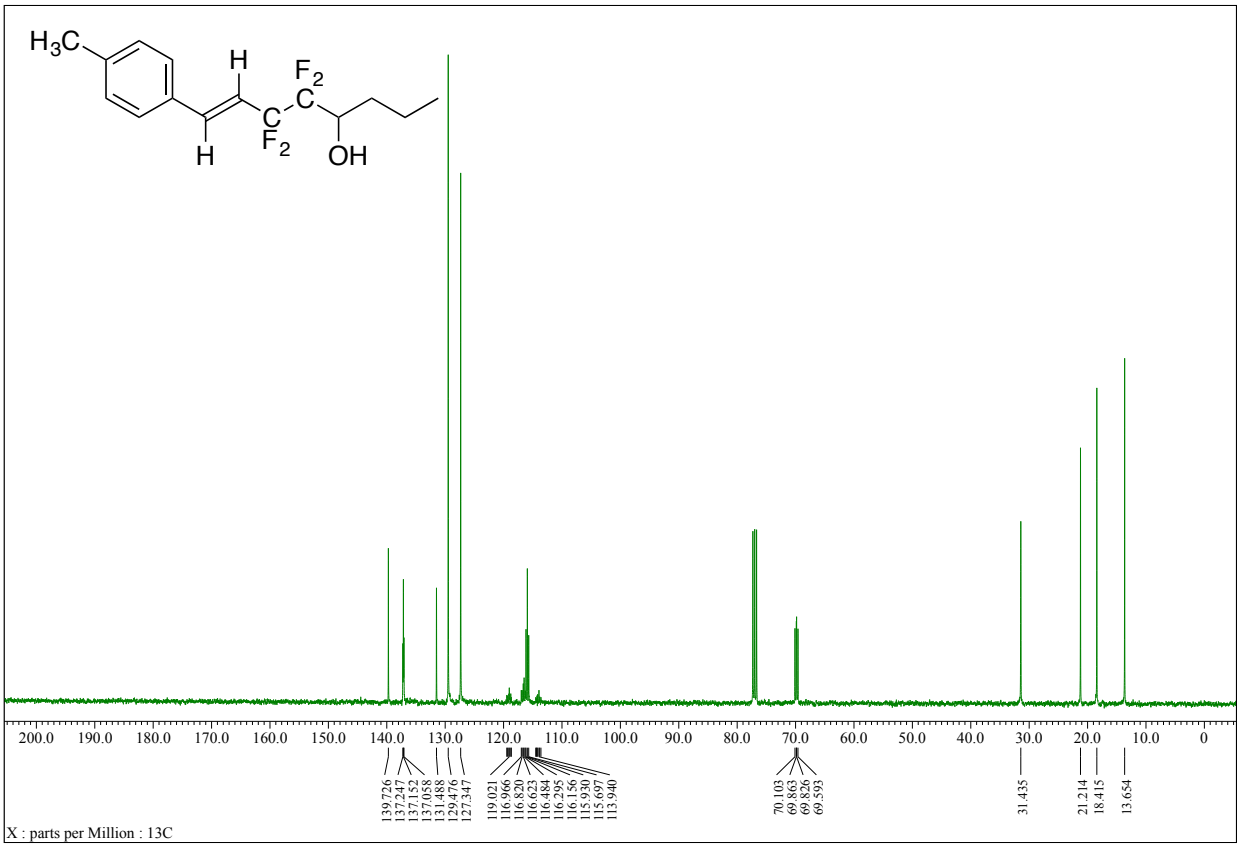


(E)-5,5,6,6-Tetrafluoro-8-(4-methylphenyl)oct-7-en-4-ol (11d)

^{1}H NMR

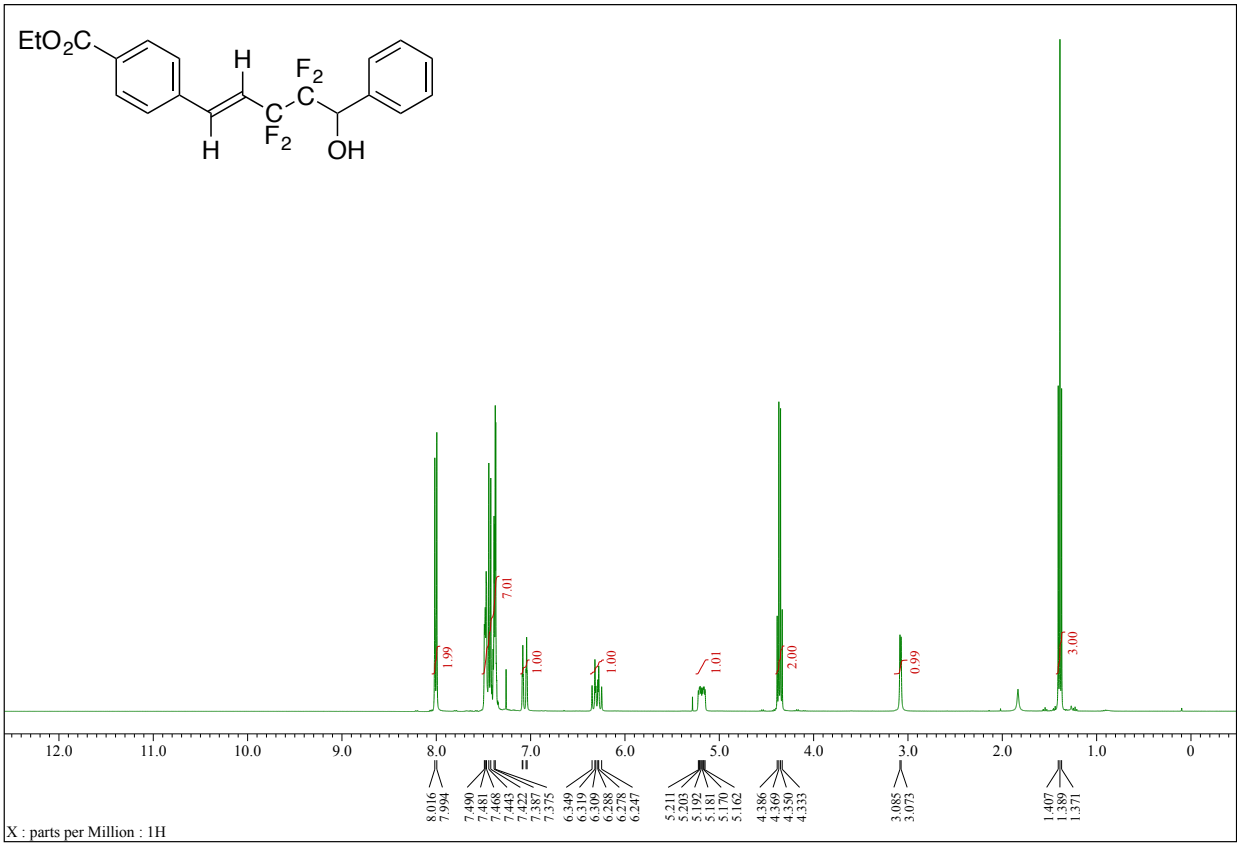


^{13}C NMR

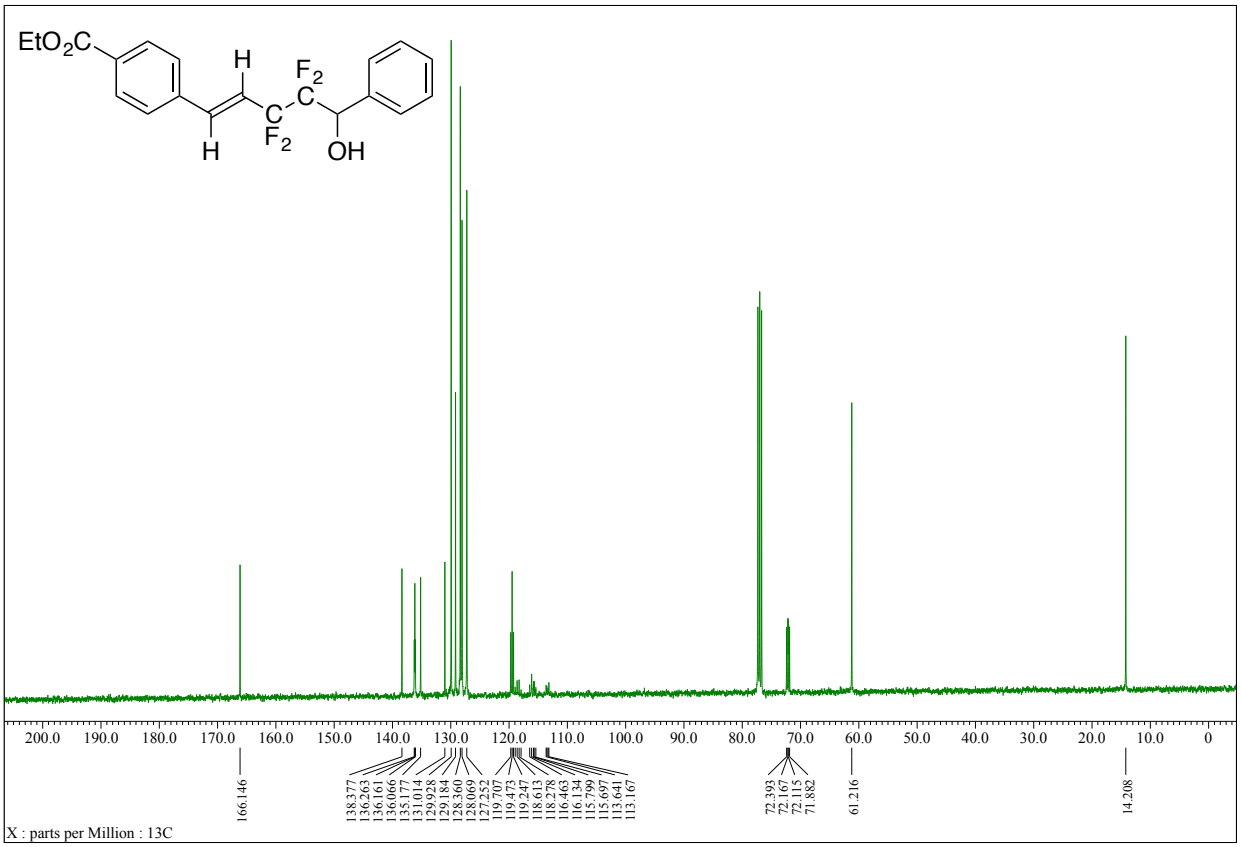


(E)-Ethyl 4-(3,3,4,4-tetrafluoro-5-hydroxy-5-phenylpent-1-en-yl)benzoate (11e)

^{1}H NMR

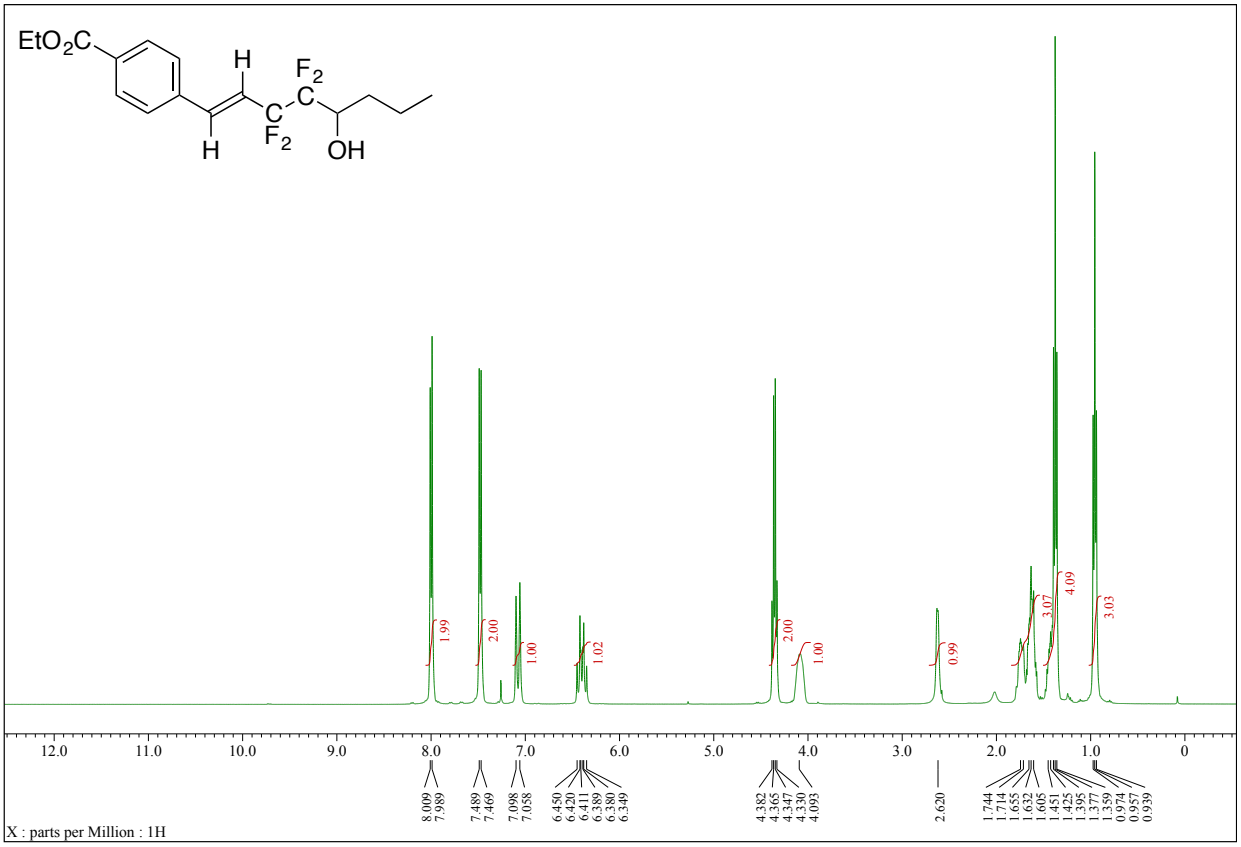


^{13}C NMR

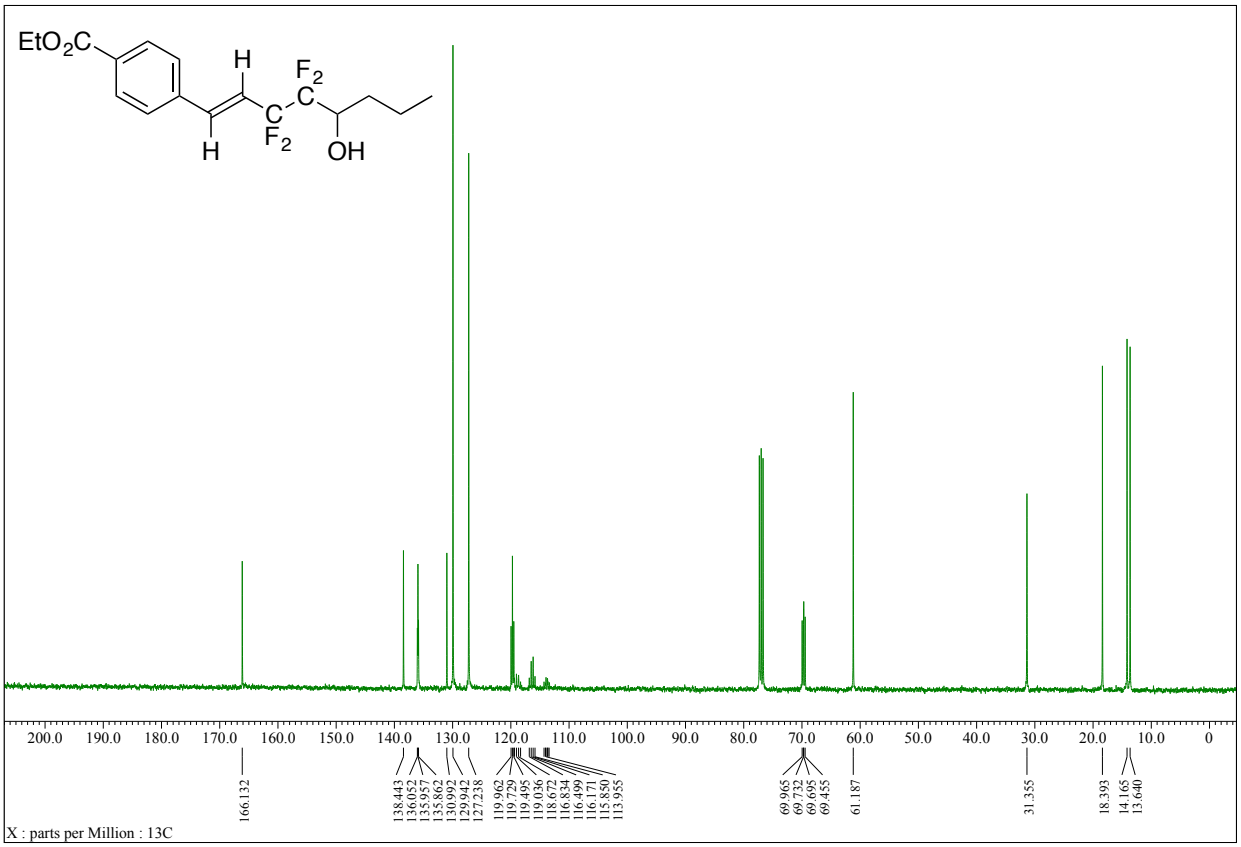


(E)-Ethyl 4-(3,3,4,4-tetrafluoro-5-hydroxyoct-4-en-1-yl)benzoate (11f)

^{1}H NMR

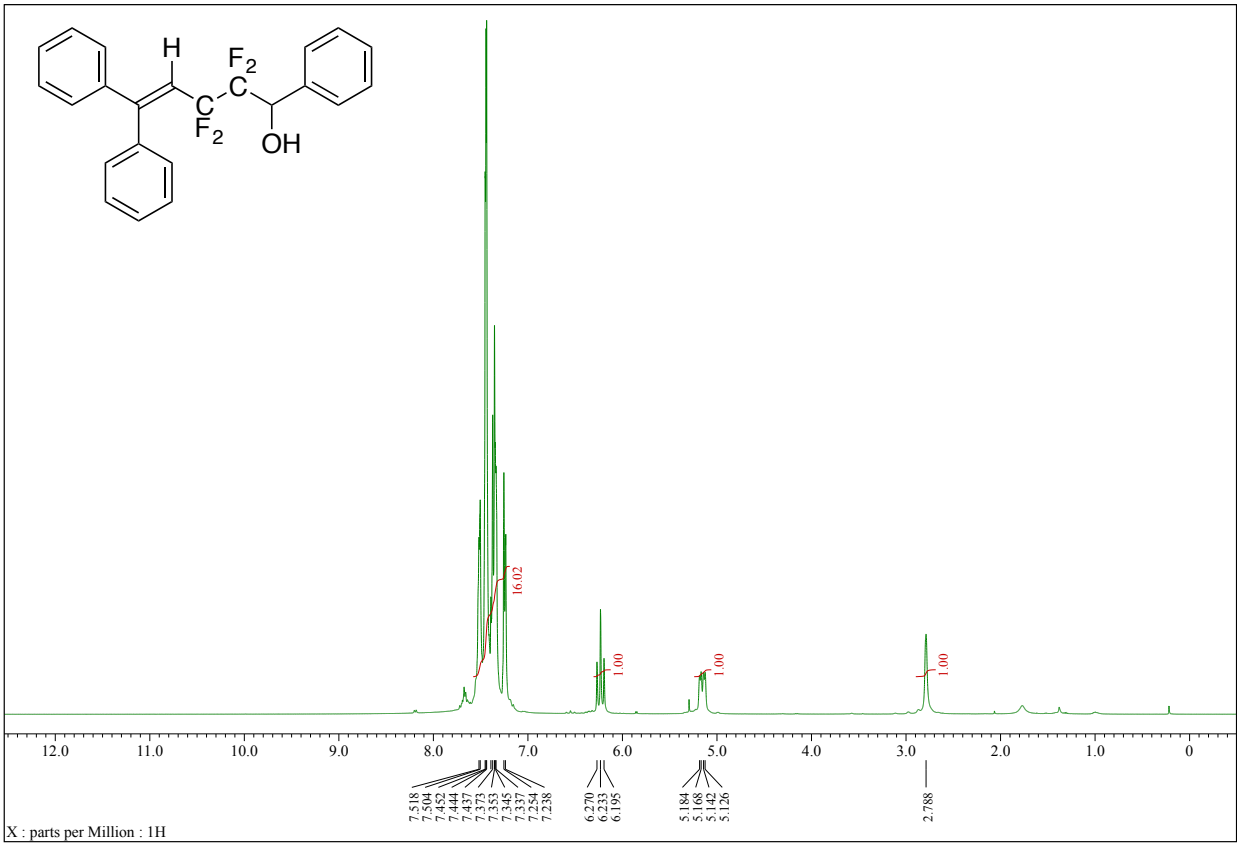


^{13}C NMR

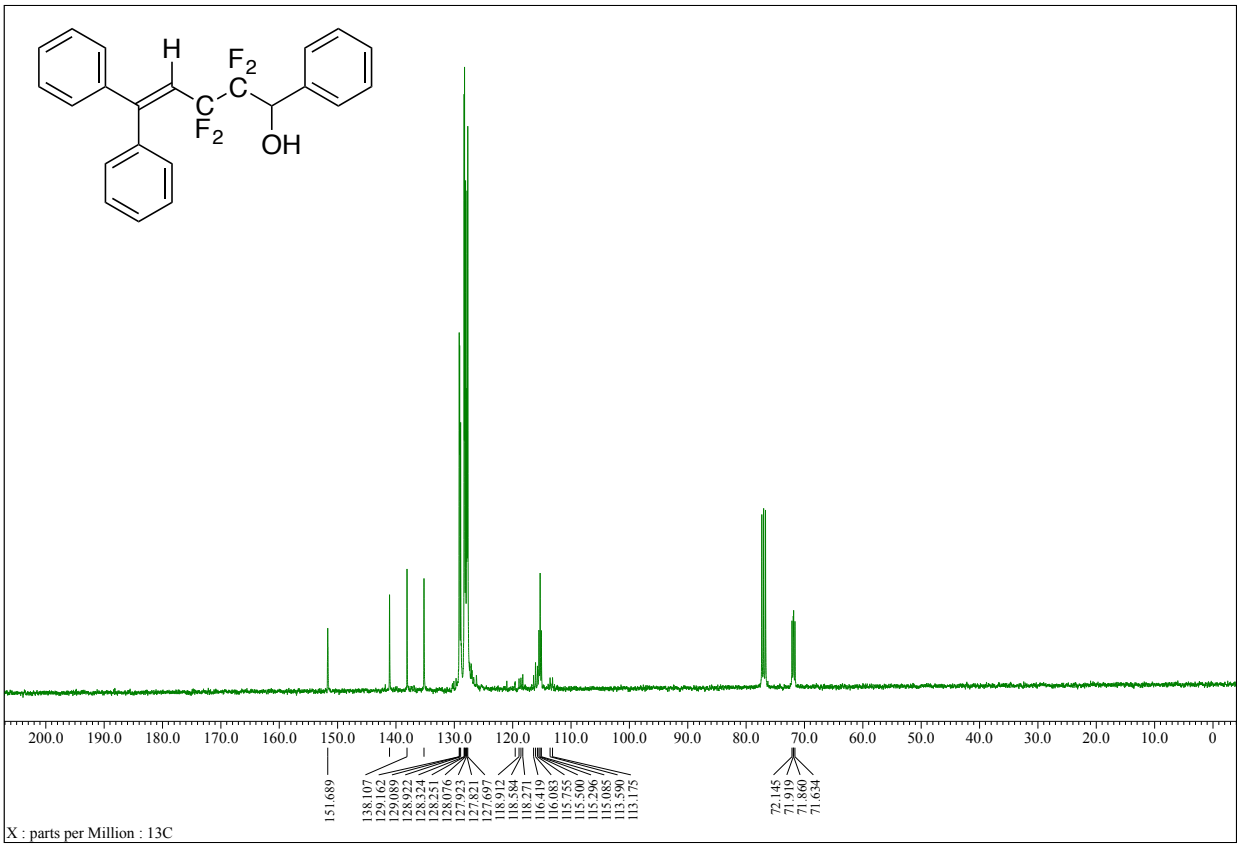


2,2,3,3-Tetrafluoro-1,5,5-triphenylpent-4-en-1-ol (11g)

^{1}H NMR

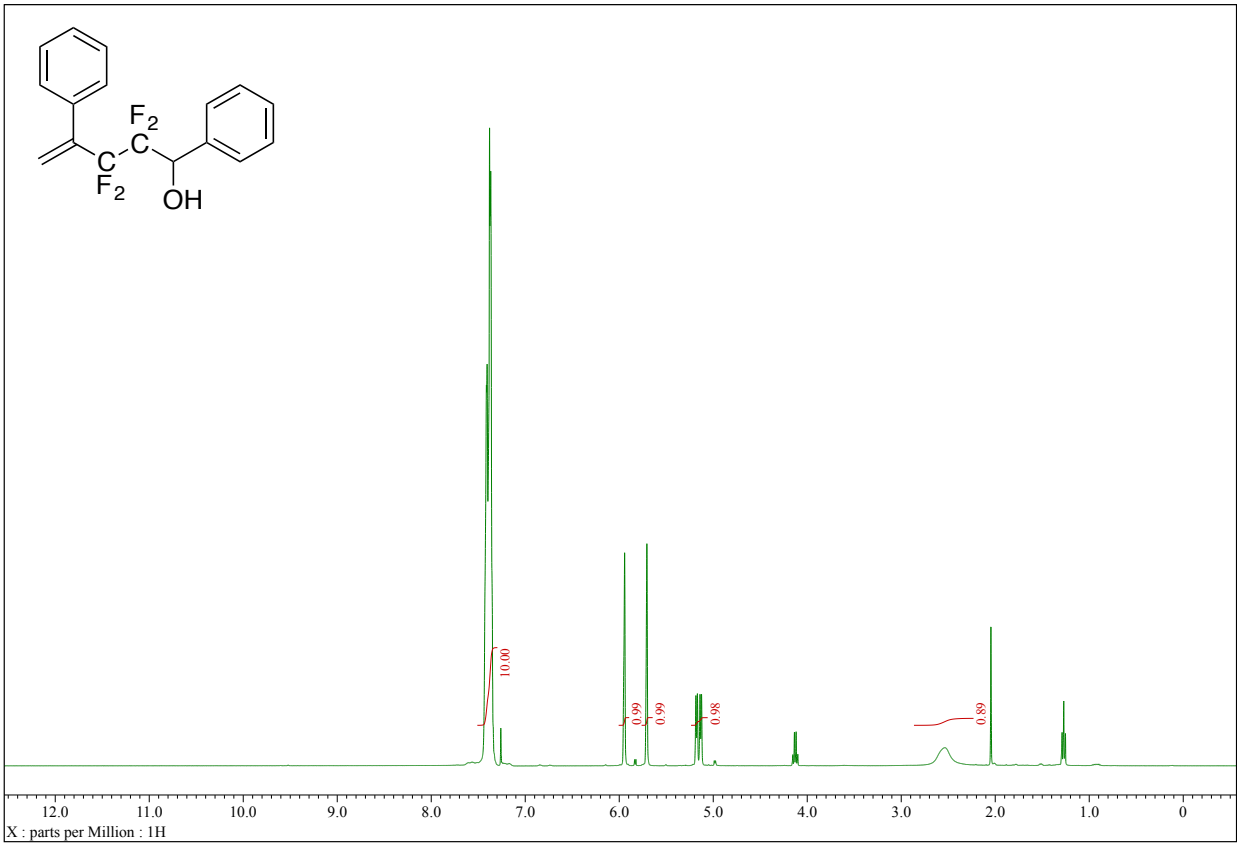


^{13}C NMR

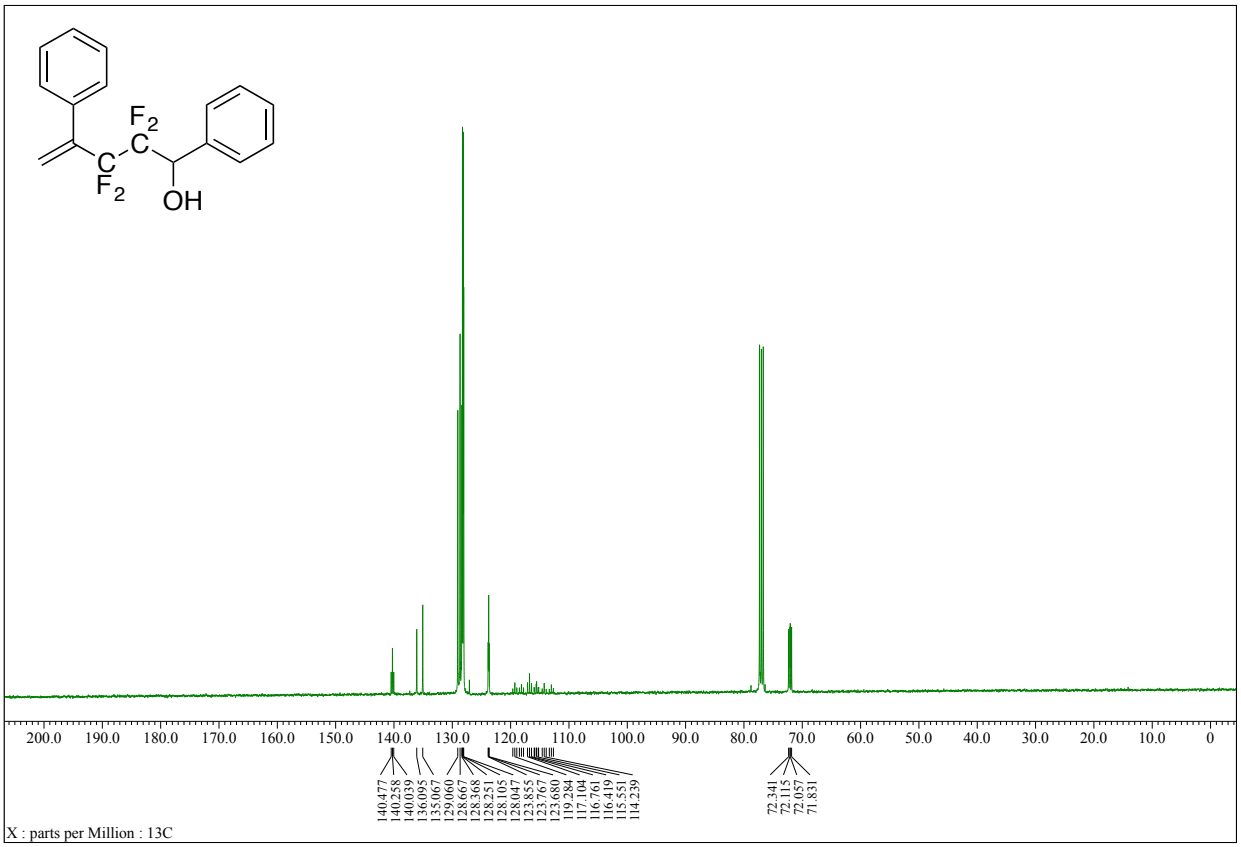


2,2,3,3-Tetrafluoro-1,4-diphenylpent-4-en-1-ol (11h)

^{1}H NMR

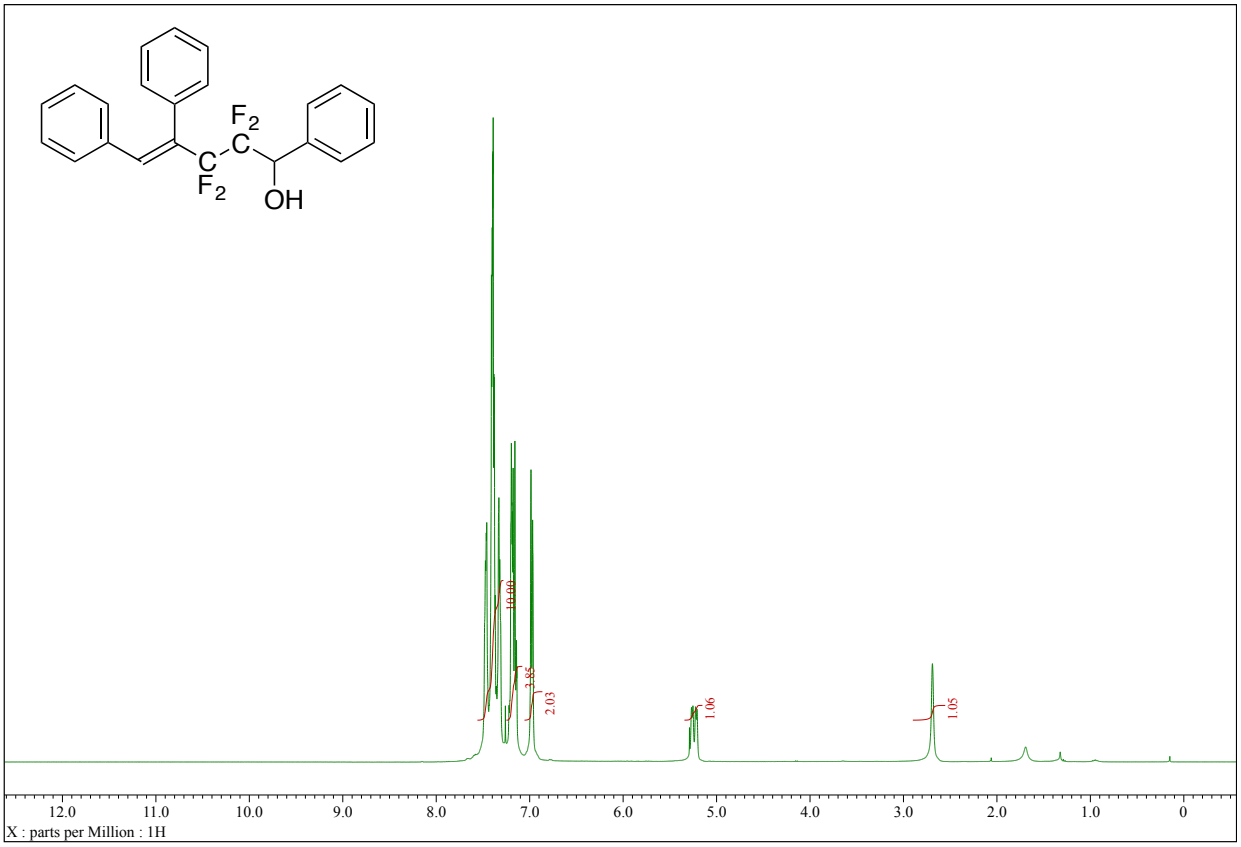


^{13}C NMR



(E)-2,2,3,3-Tetrafluoro-1,4,5-triphenylpent-4-en-1-ol (11i)

^{1}H NMR



^{13}C NMR