

Supporting information

Synthesis and biological activities of novel trifluoromethylpyridine amide derivatives containing sulfur moiety

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The ¹H, ¹³C, ¹⁹F NMR spectra of the title compounds

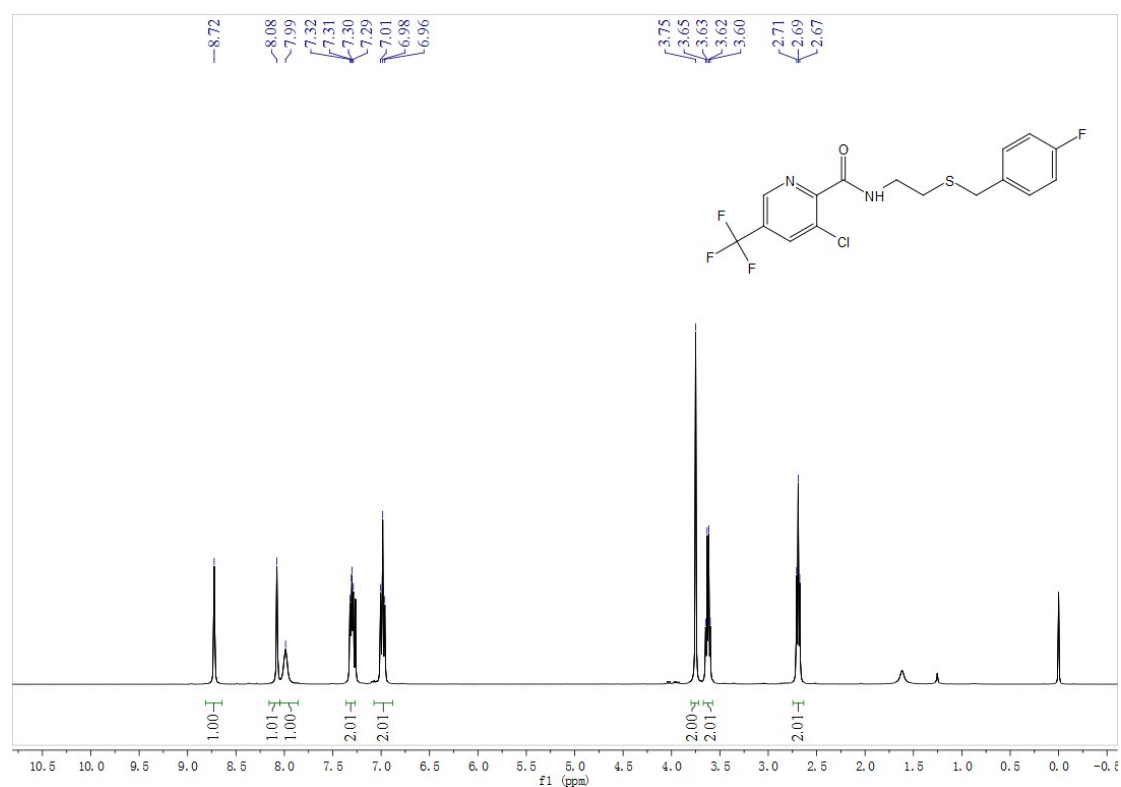


Fig. S1 ¹H NMR spectra of compound **E1**

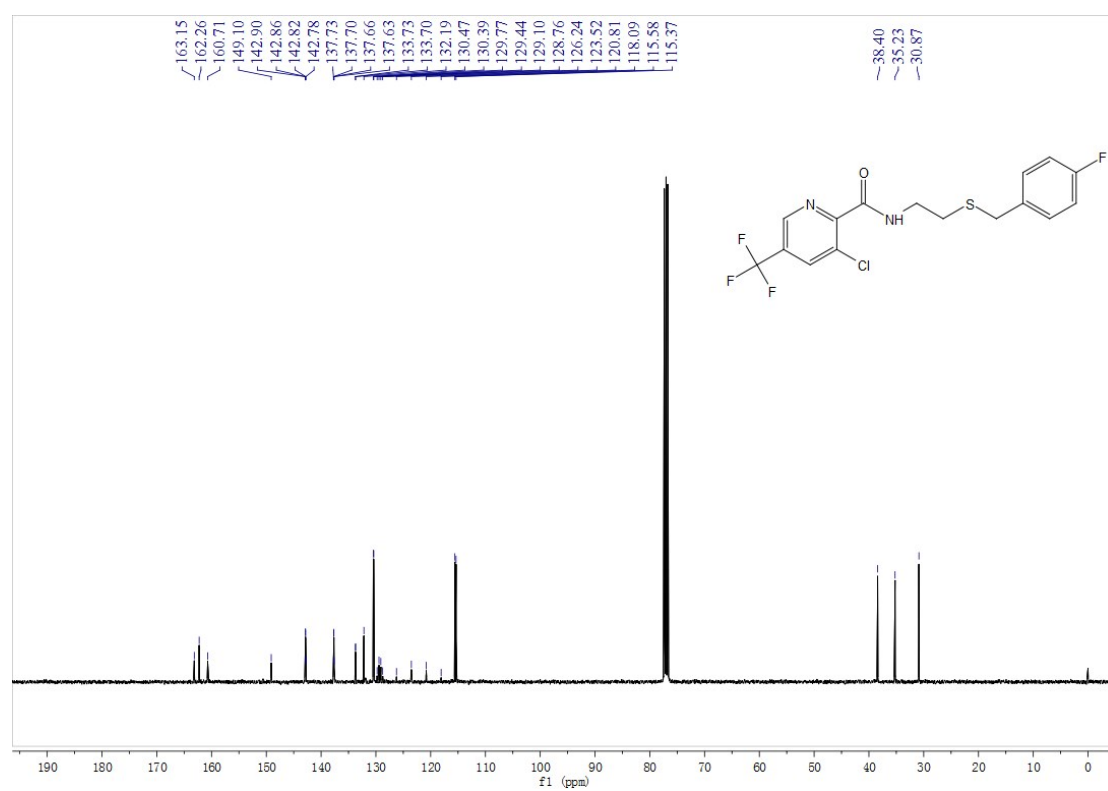


Fig. S2 ¹³C NMR spectra of compound **E1**

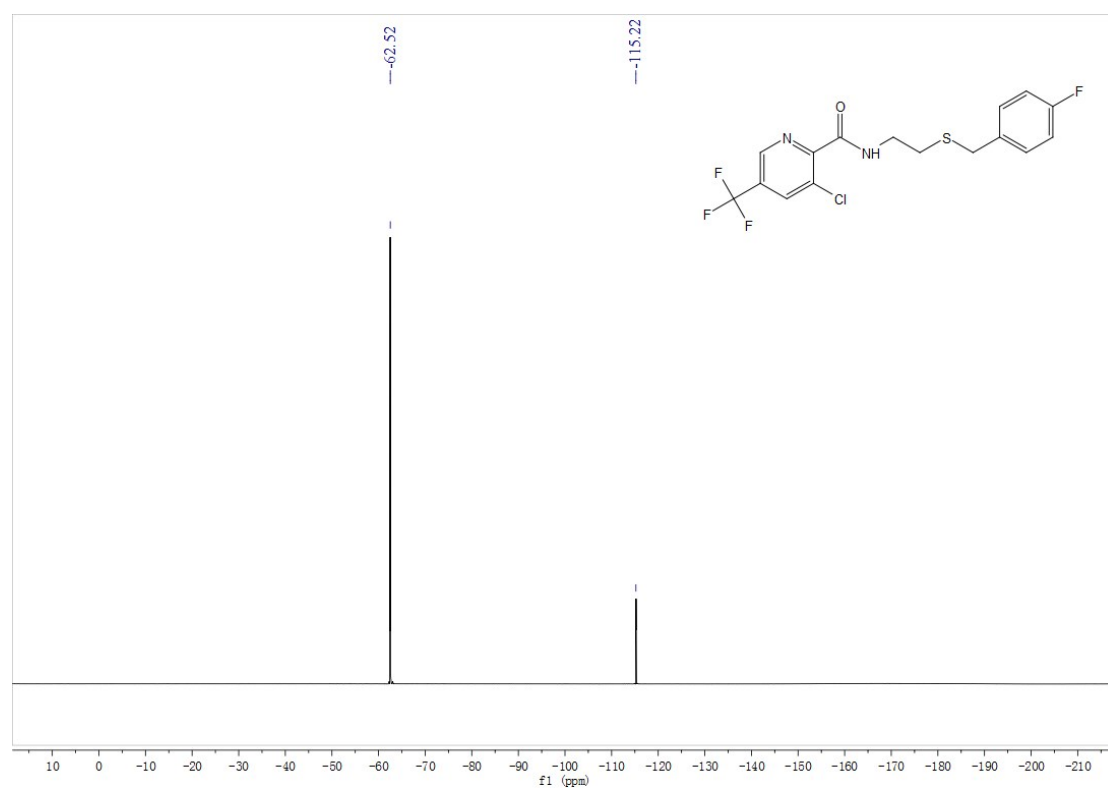


Fig. S3 ^{19}F NMR spectra of compound **E1**

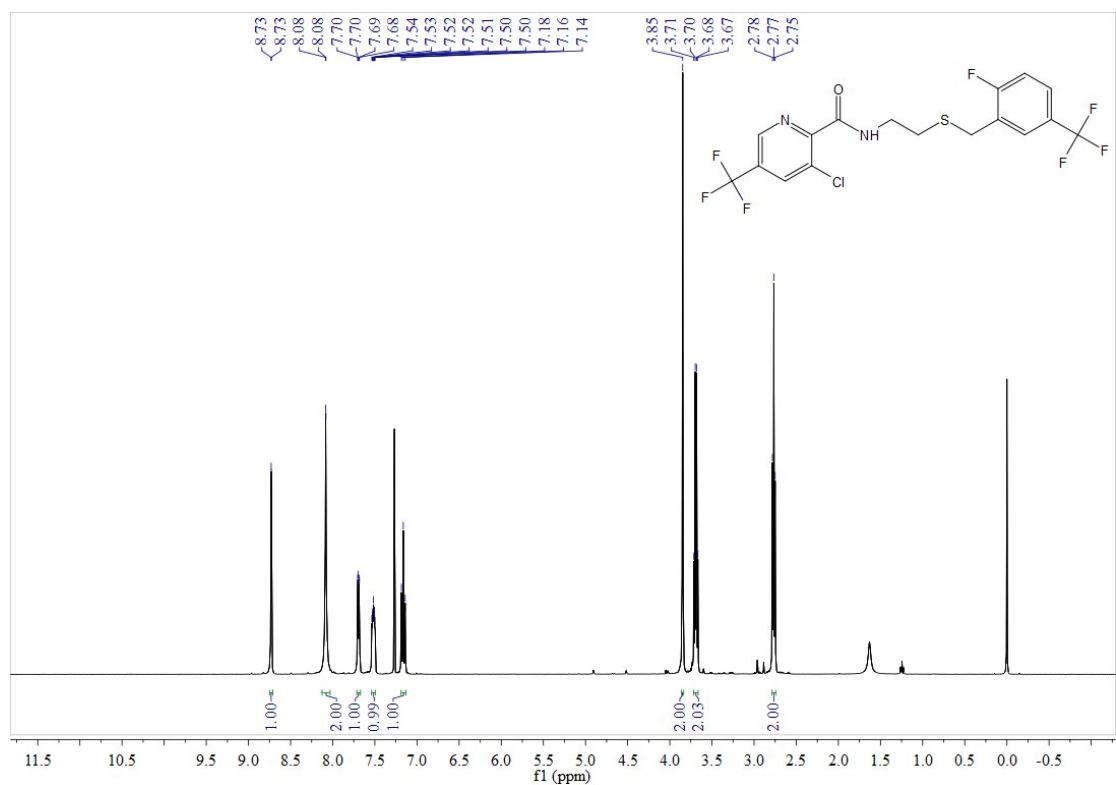


Fig. S4 ¹H NMR spectra of compound E2

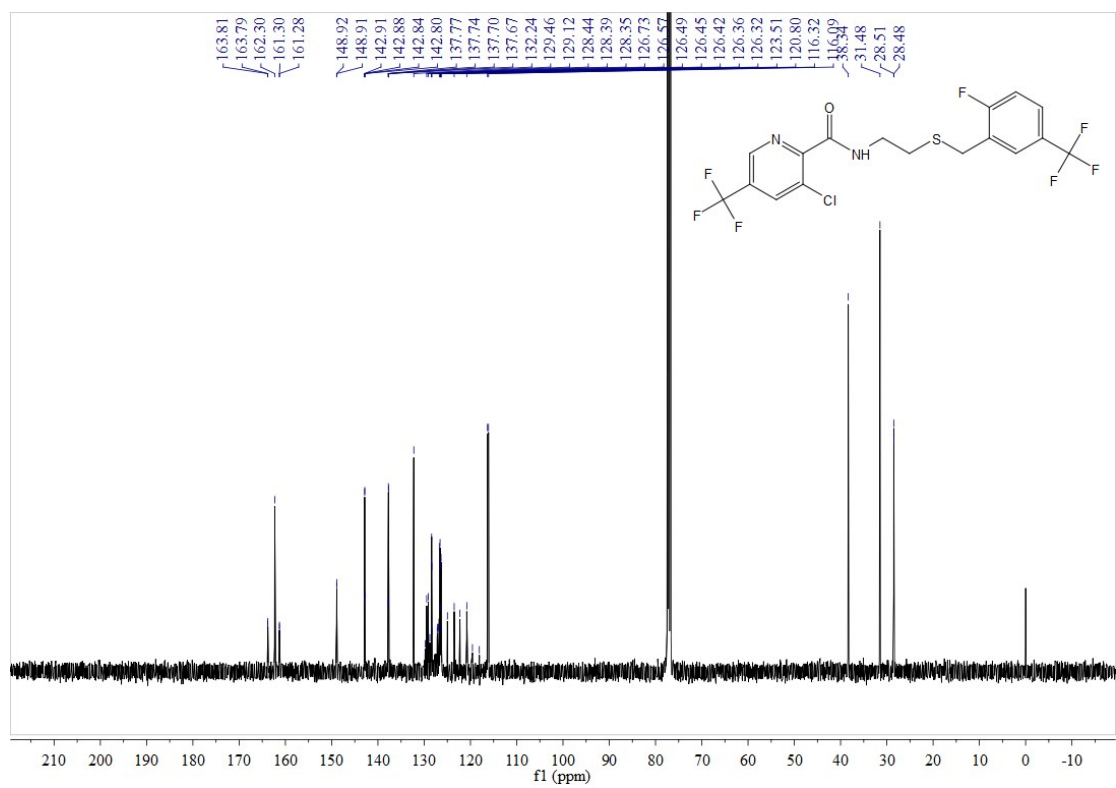


Fig. S5 ¹³C NMR spectra of compound E2

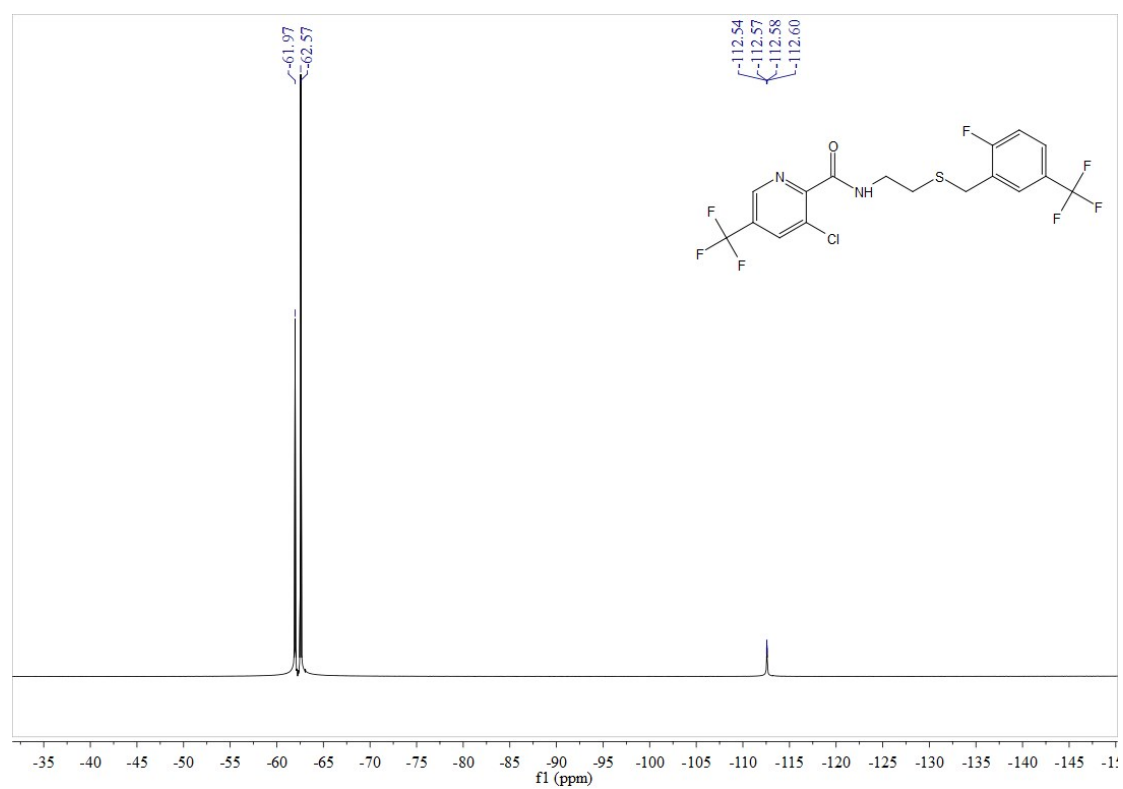


Fig. S6 ^{19}F NMR spectra of compound **E2**

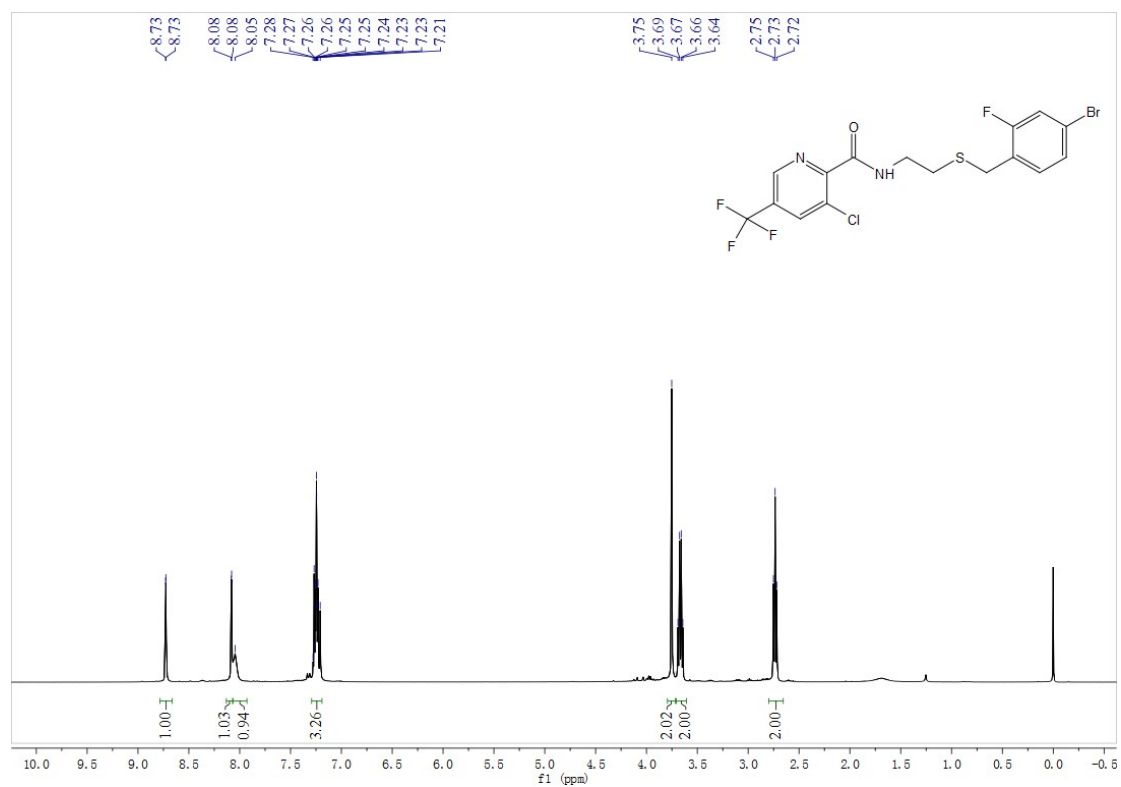


Fig. S7 ¹H NMR spectra of compound E3

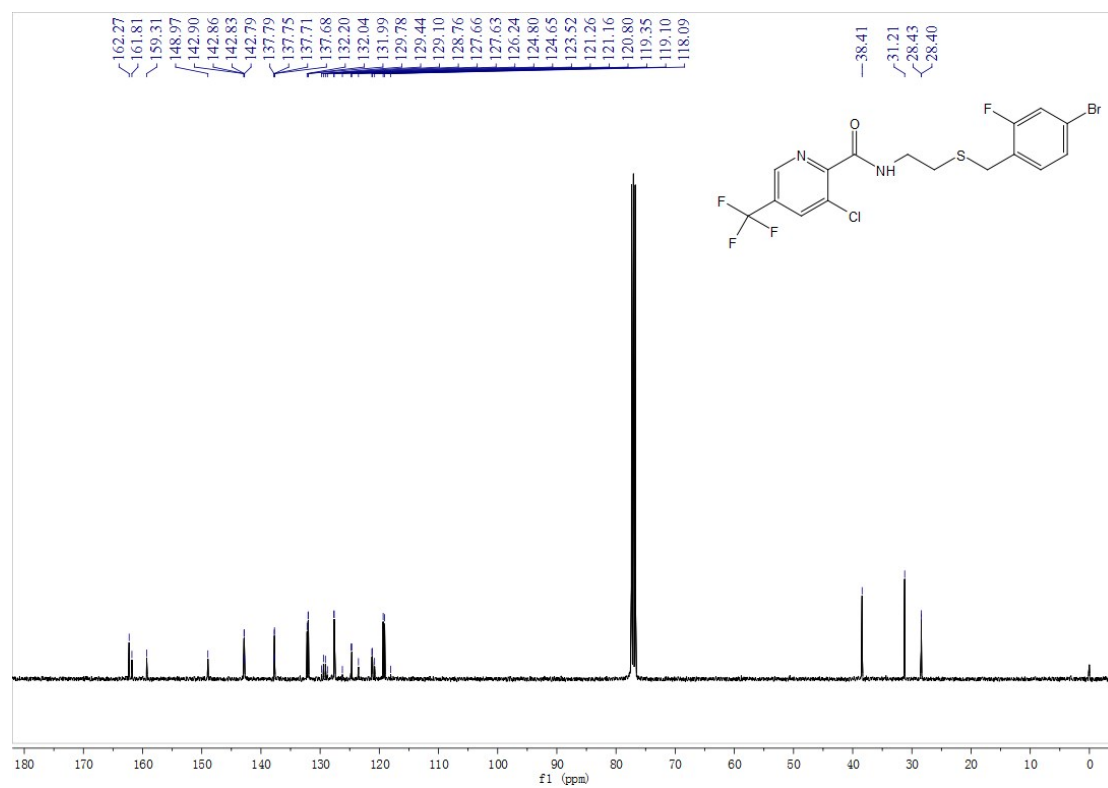


Fig. S8 ¹³C NMR spectra of compound E3

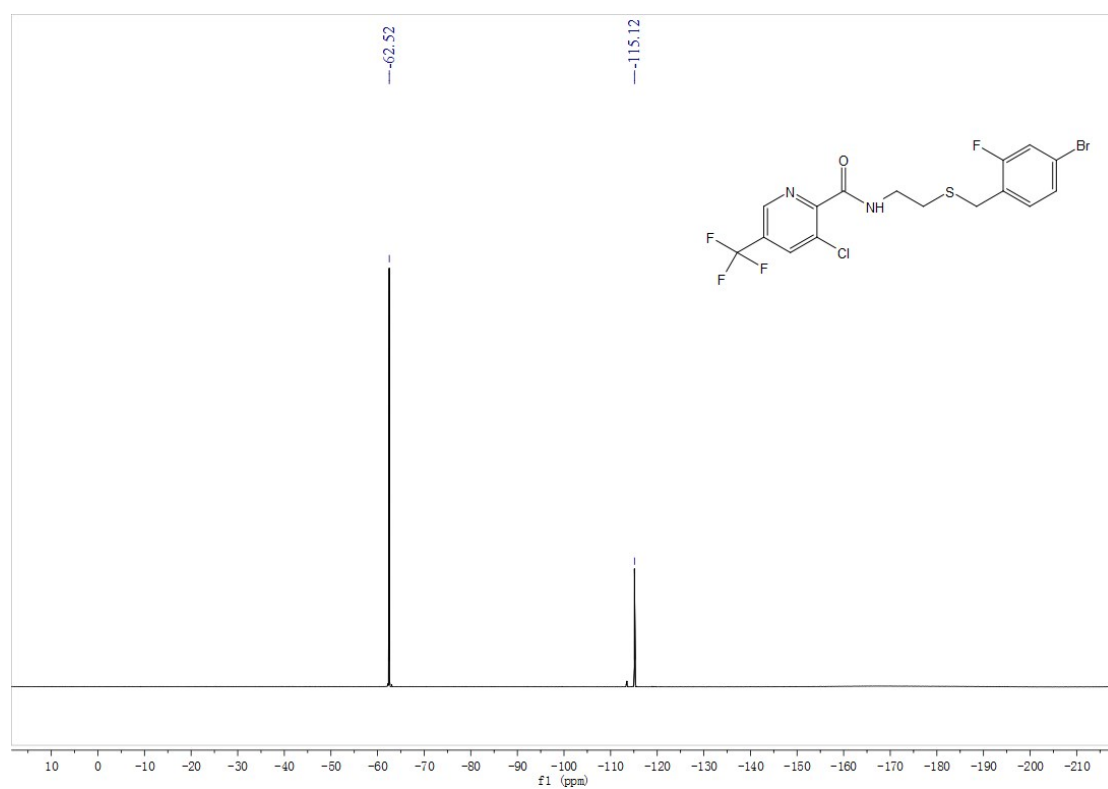


Fig. S9 ^{19}F NMR spectra of compound **E3**

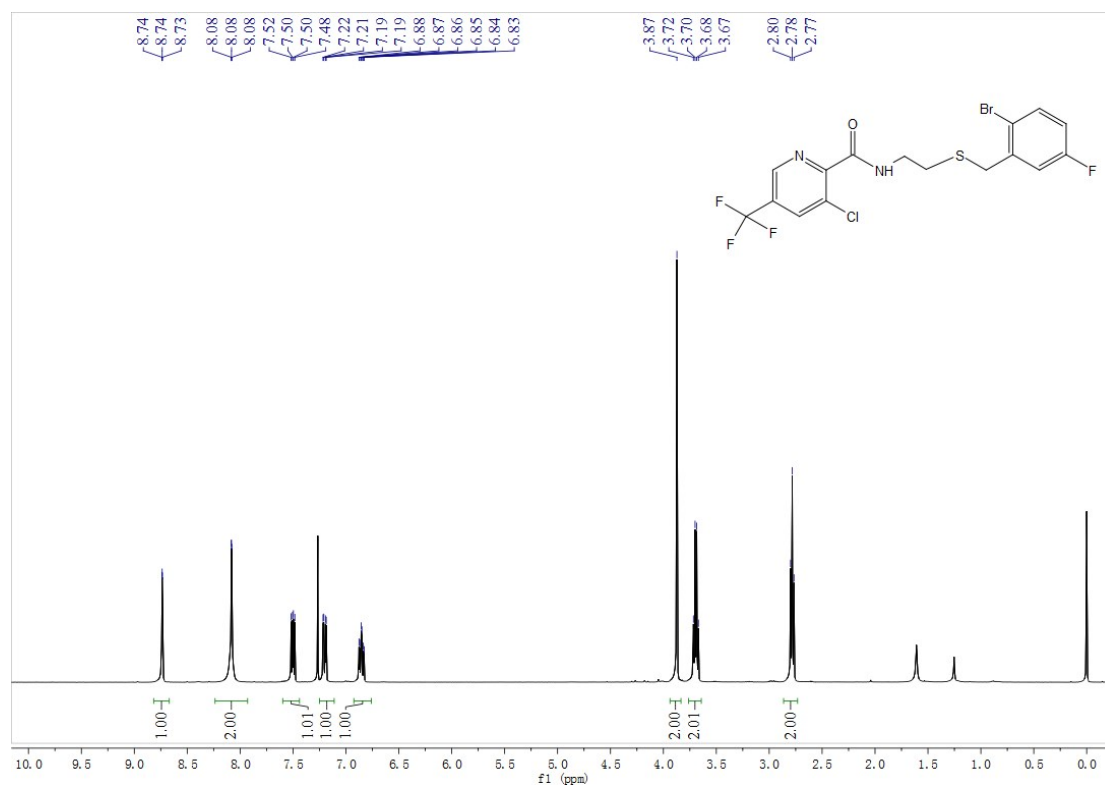


Fig. S10 ¹H NMR spectra of compound **E4**

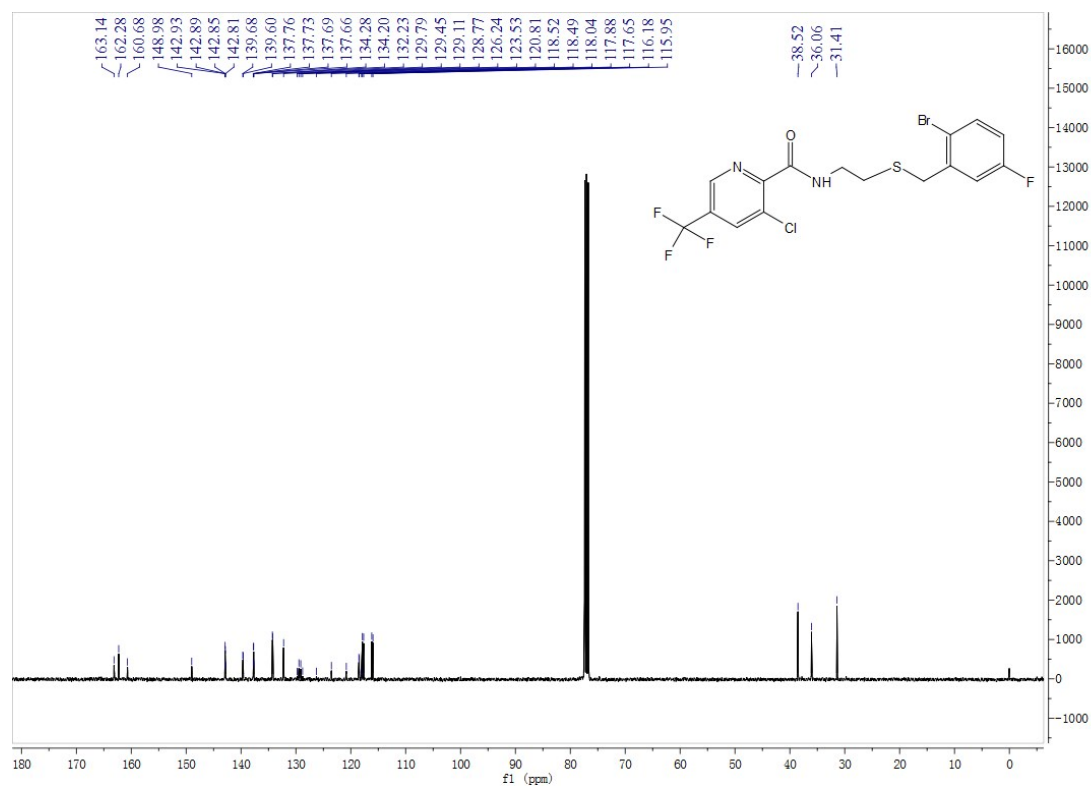


Fig. S11 ¹³C NMR spectra of compound **E4**

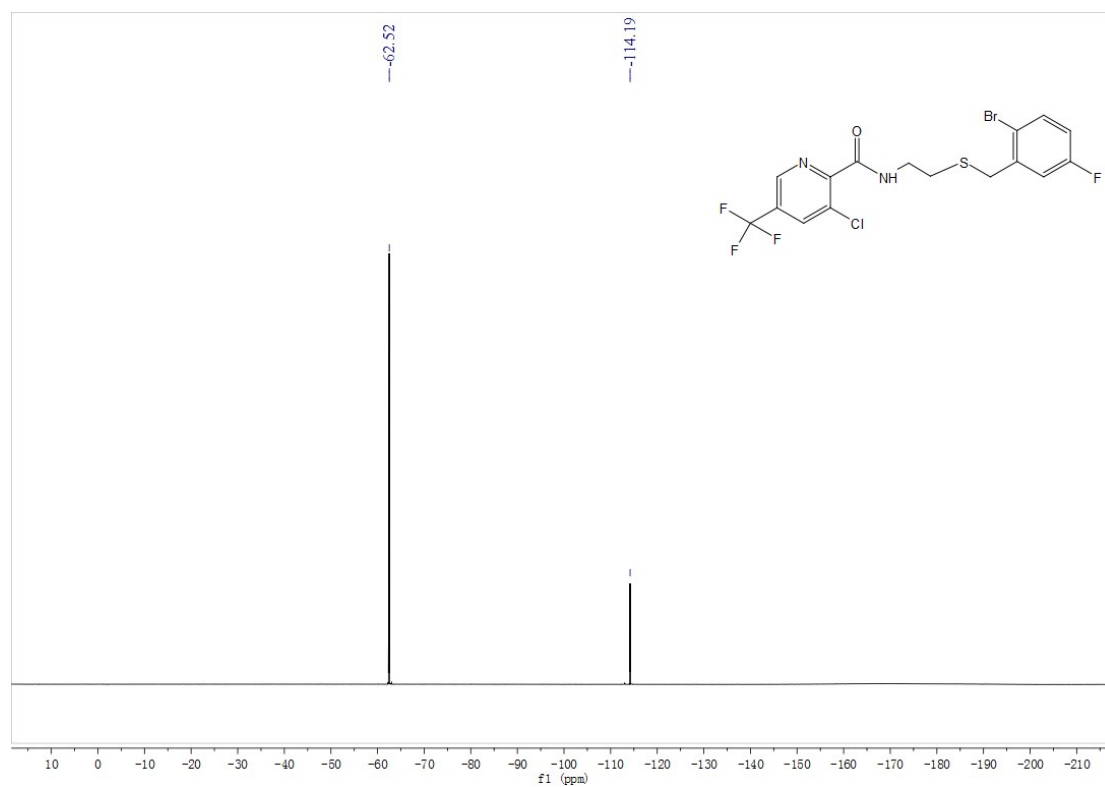


Fig. S12 ^{19}F NMR spectra of compound **E4**

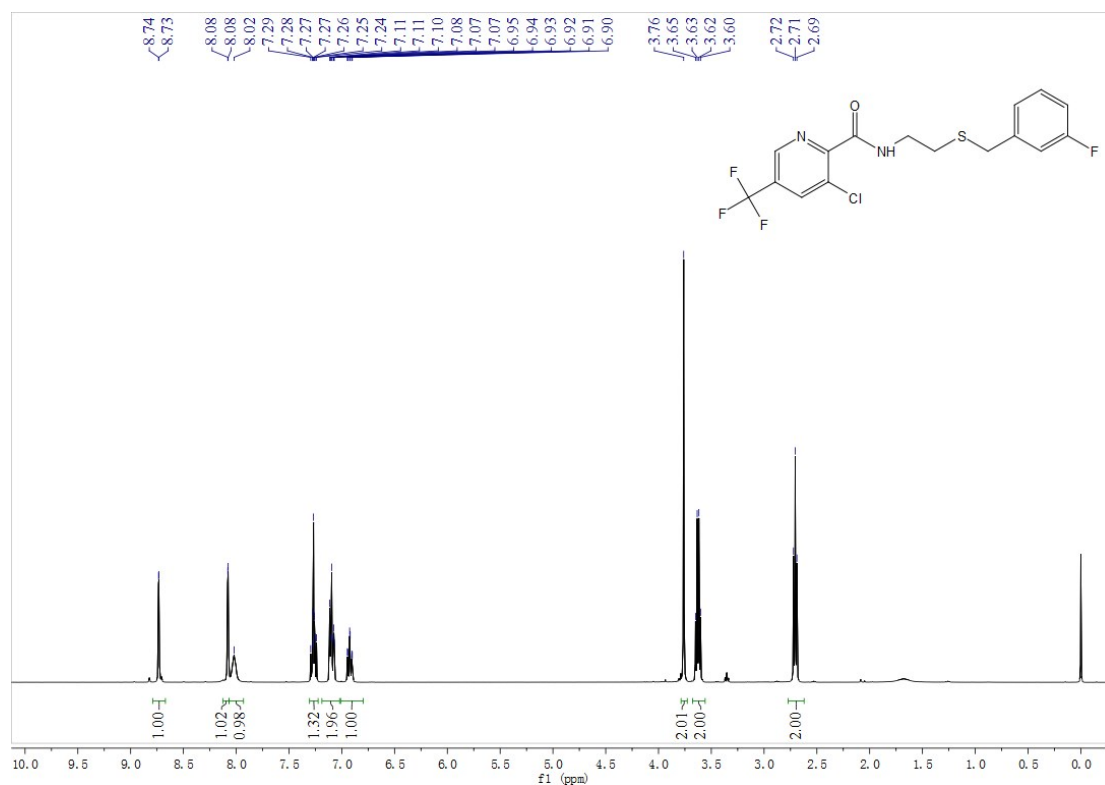


Fig. S13 ¹H NMR spectra of compound E5

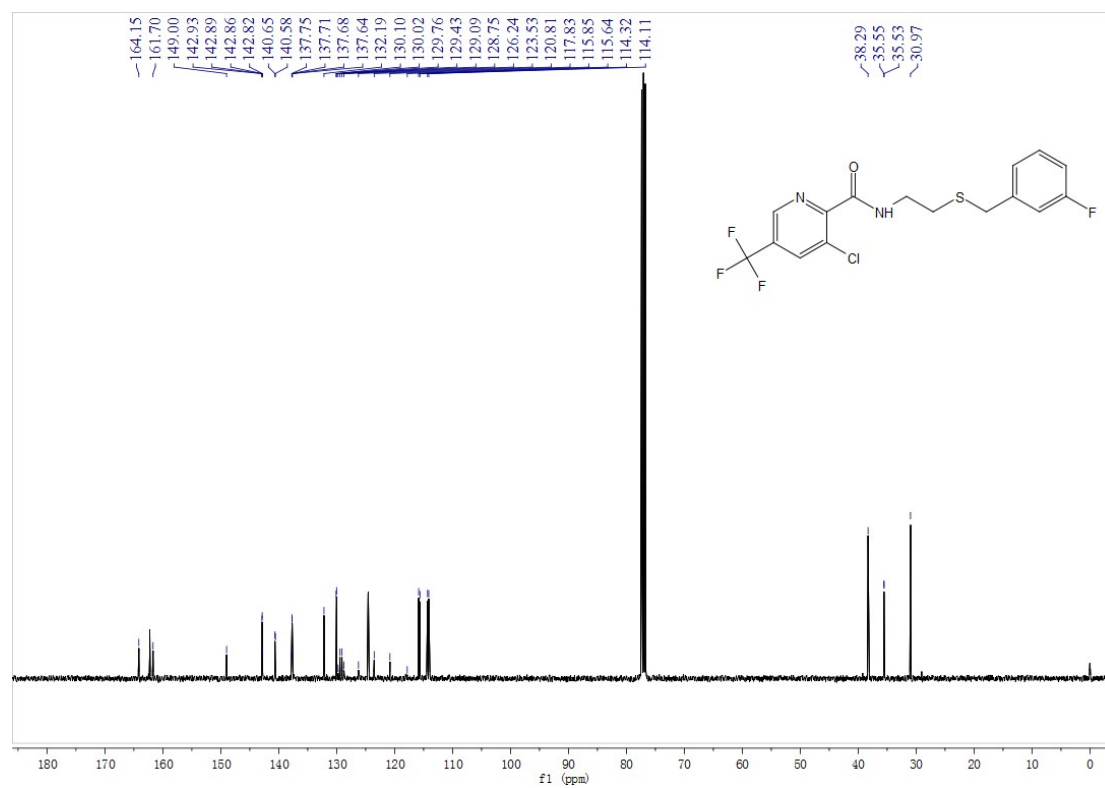


Fig. S14 ¹³C NMR spectra of compound E5

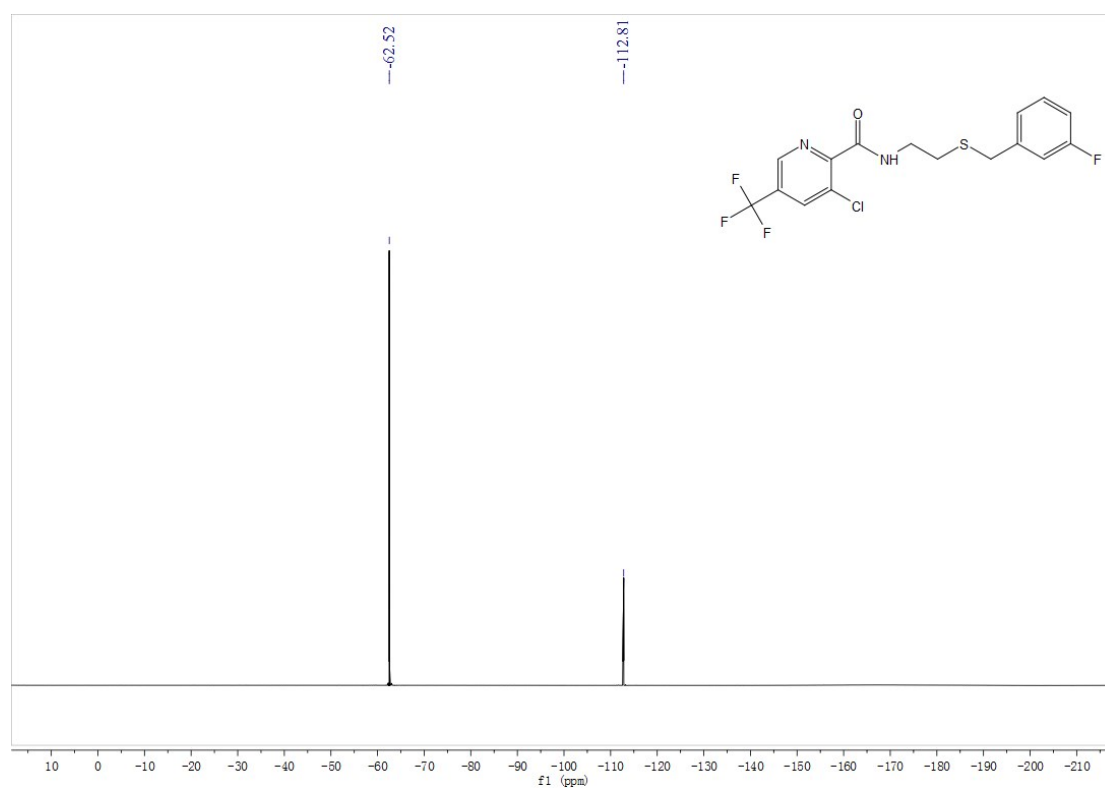


Fig. S15 ^{19}F NMR spectra of compound **E5**

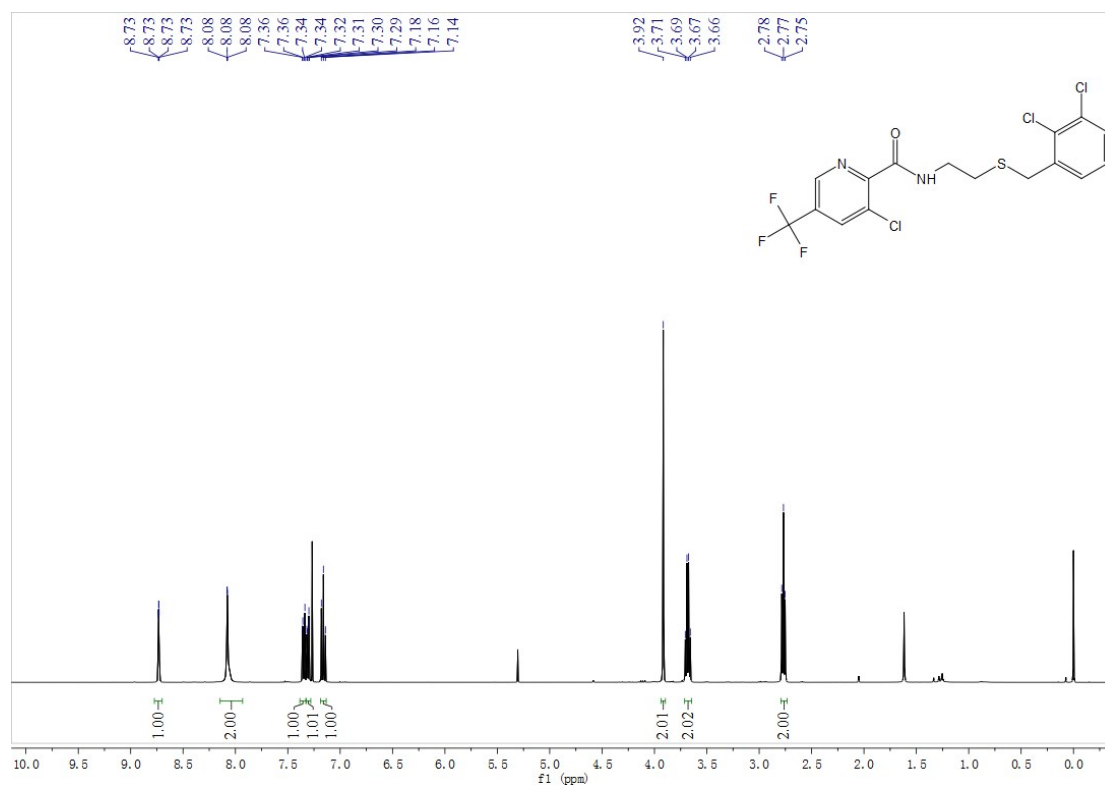


Fig. S16 ¹H NMR spectra of compound E6

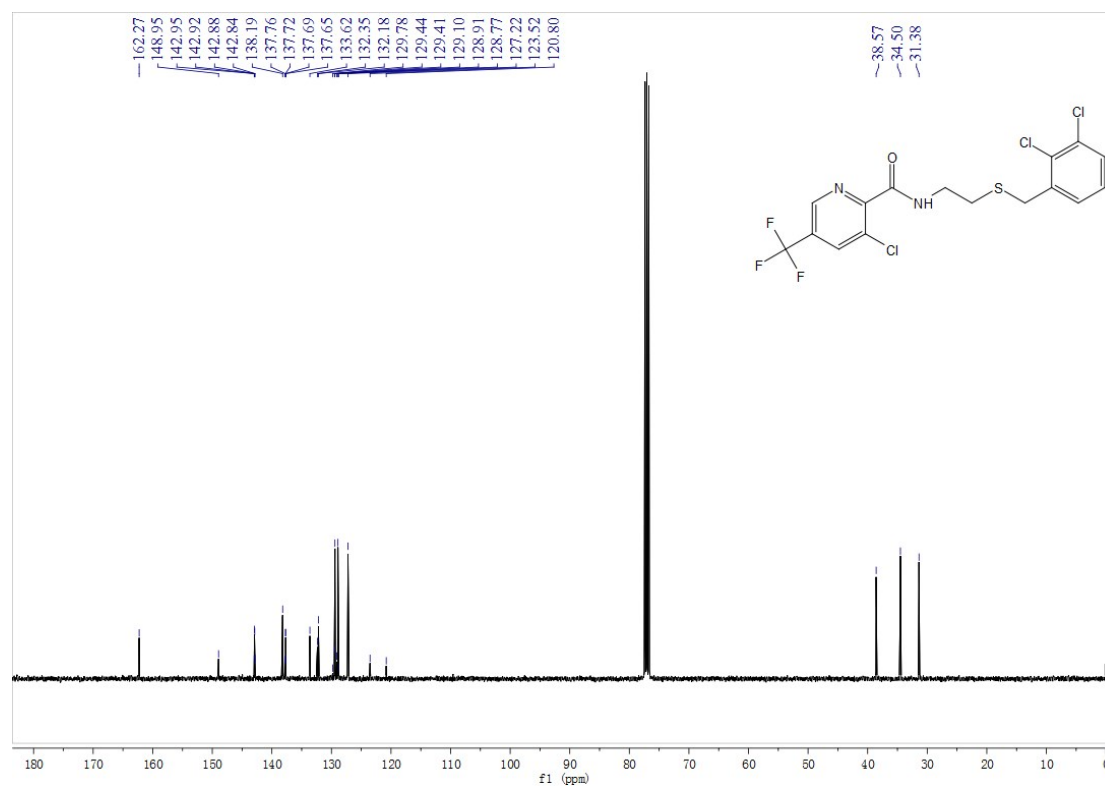


Fig. S17 ¹³C NMR spectra of compound E6

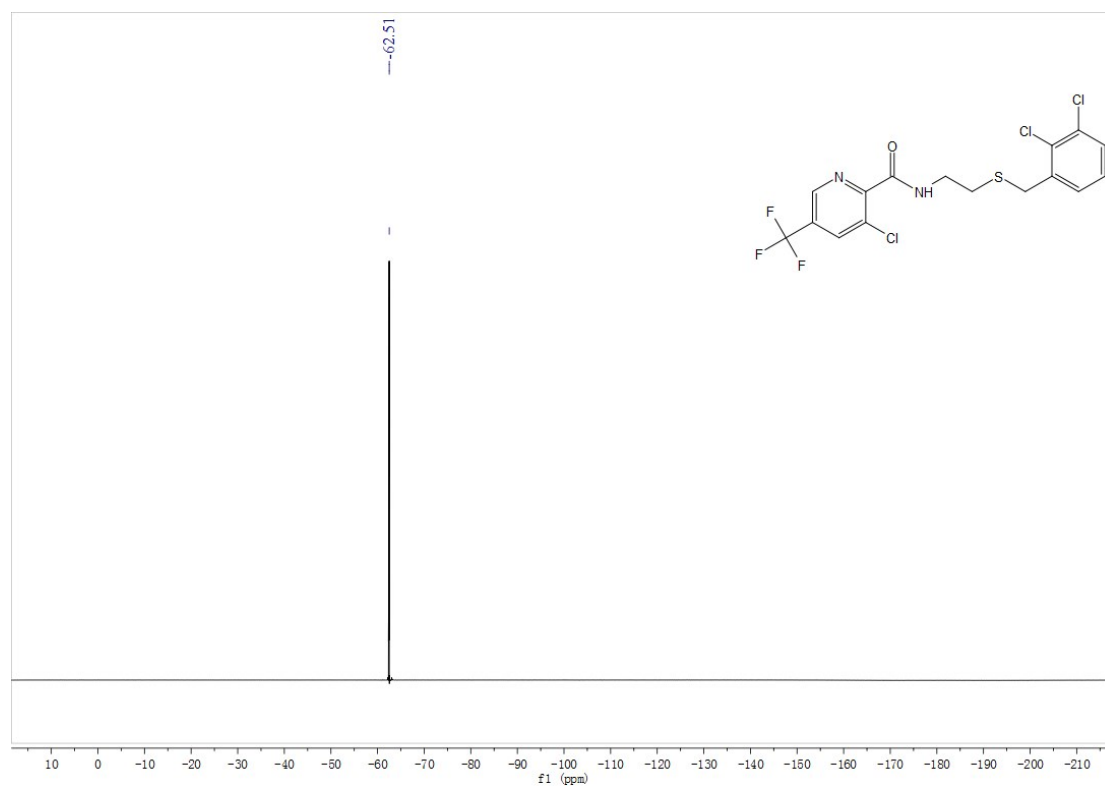


Fig. S18 ^{19}F NMR spectra of compound **E6**

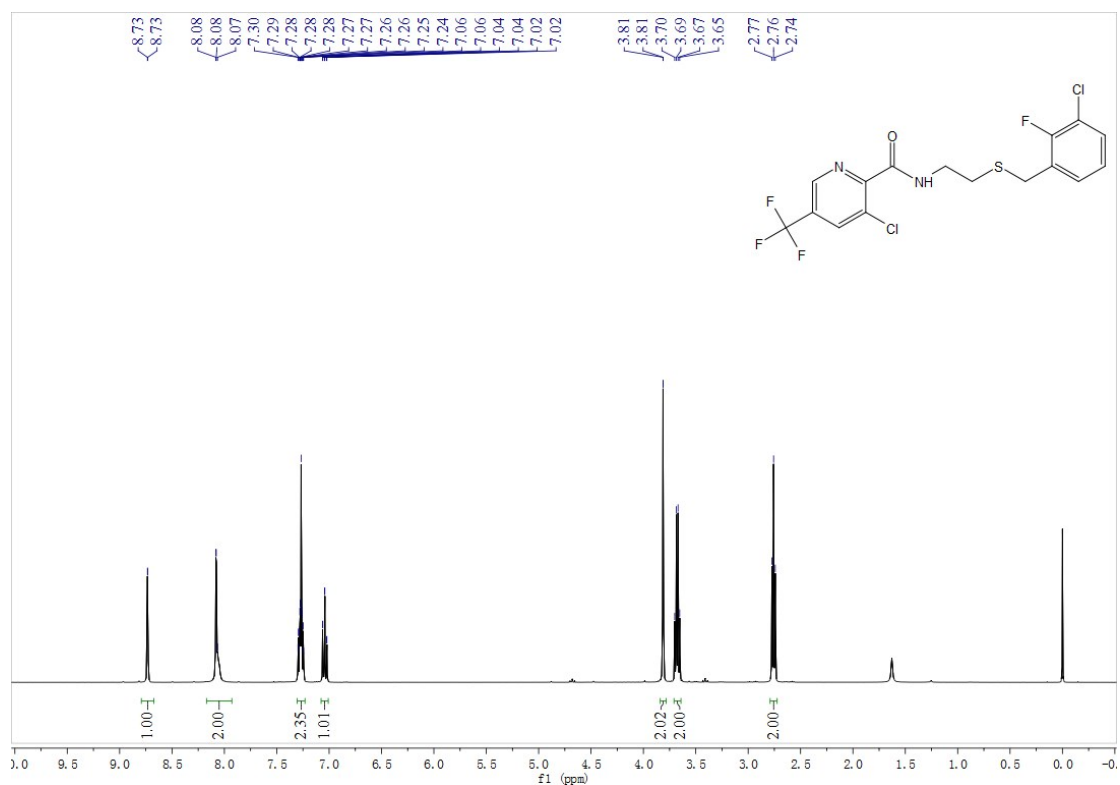


Fig. S19 ¹H NMR spectra of compound **E7**

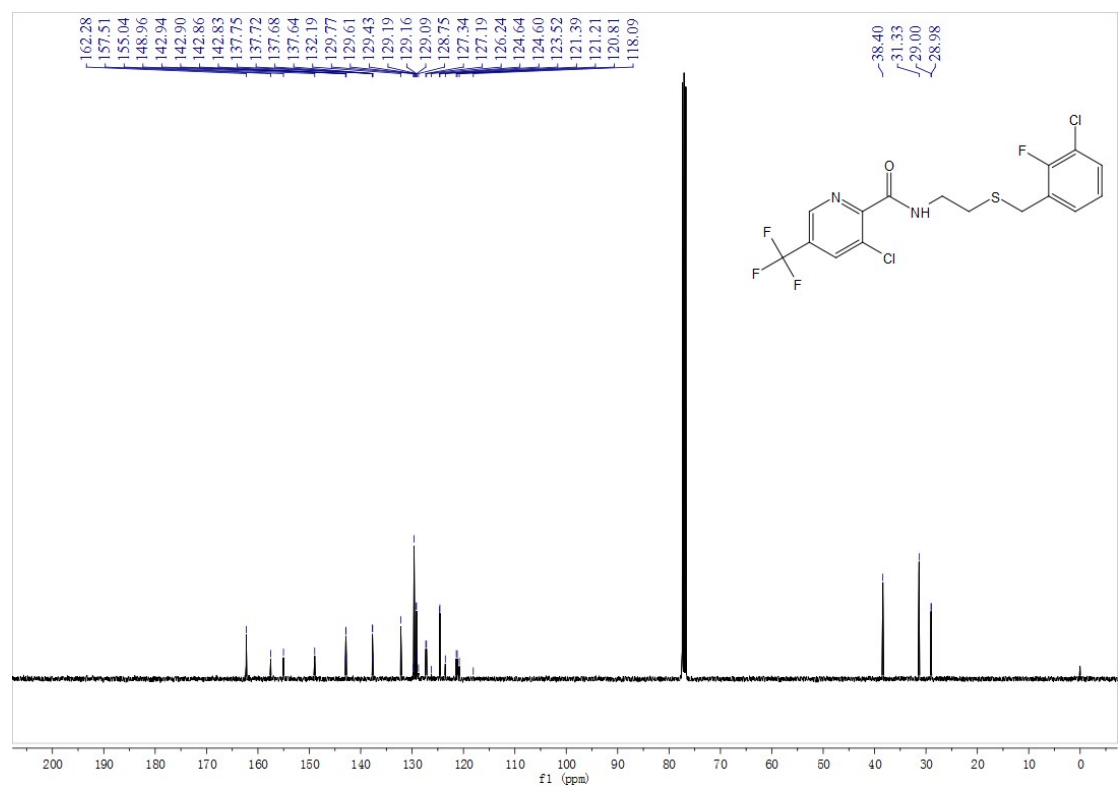


Fig. S20 ¹³C NMR spectra of compound **E7**

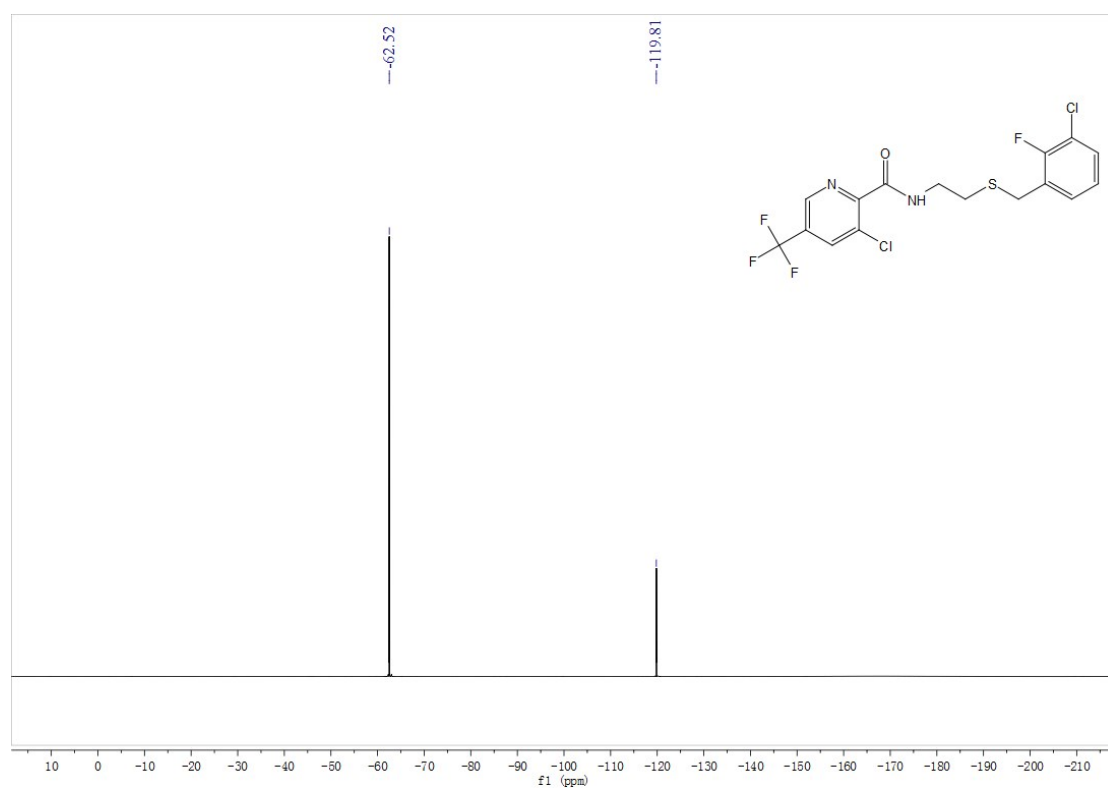


Fig. S21 ^{19}F NMR spectra of compound **E7**

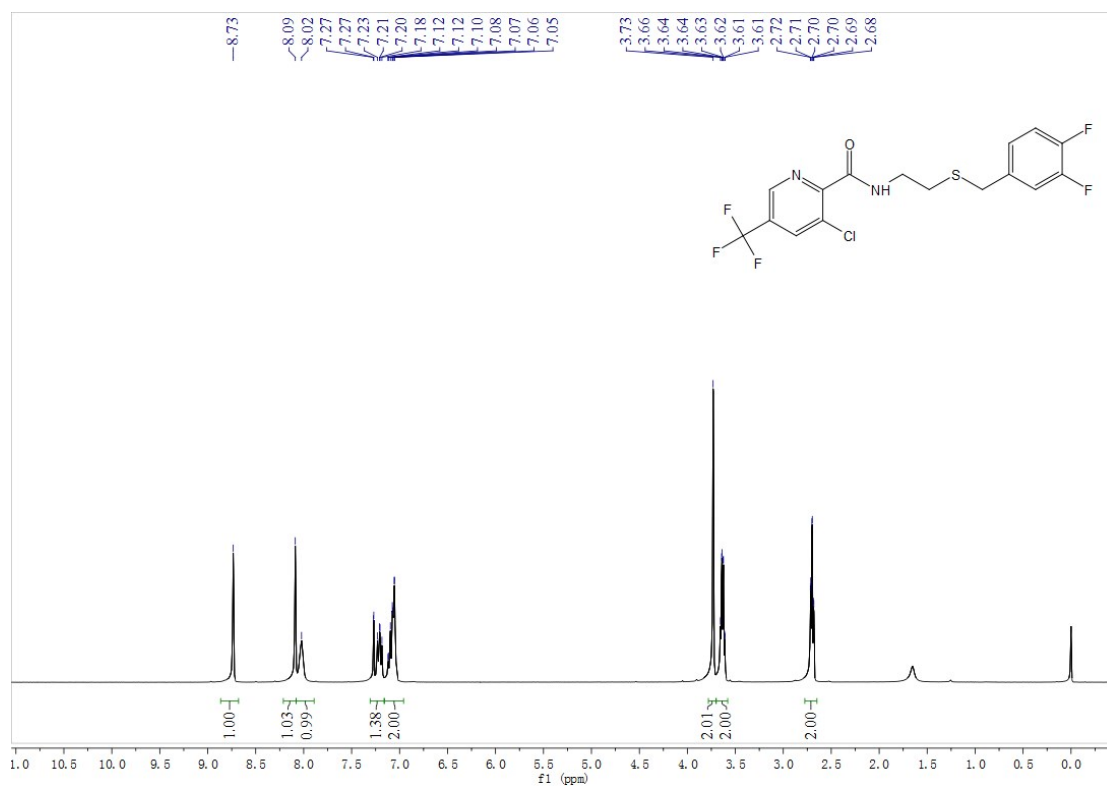


Fig. S22 ¹H NMR spectra of compound **E8**

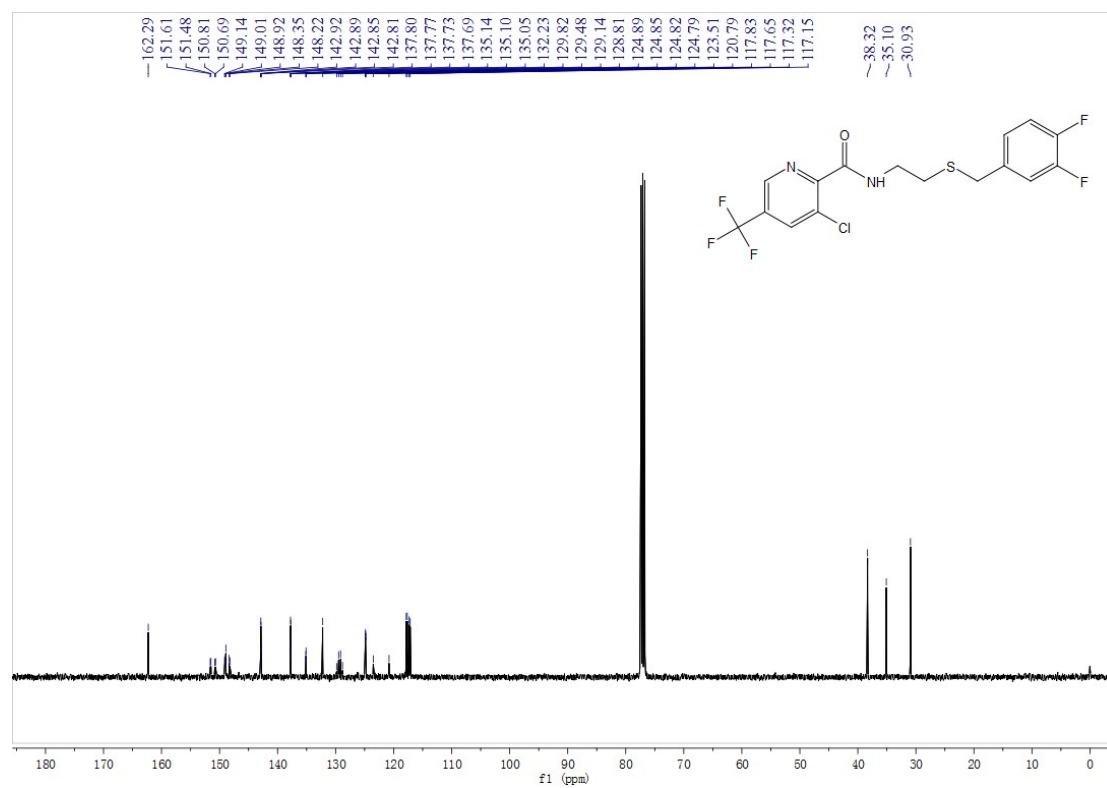


Fig. S23 ¹³C NMR spectra of compound **E8**

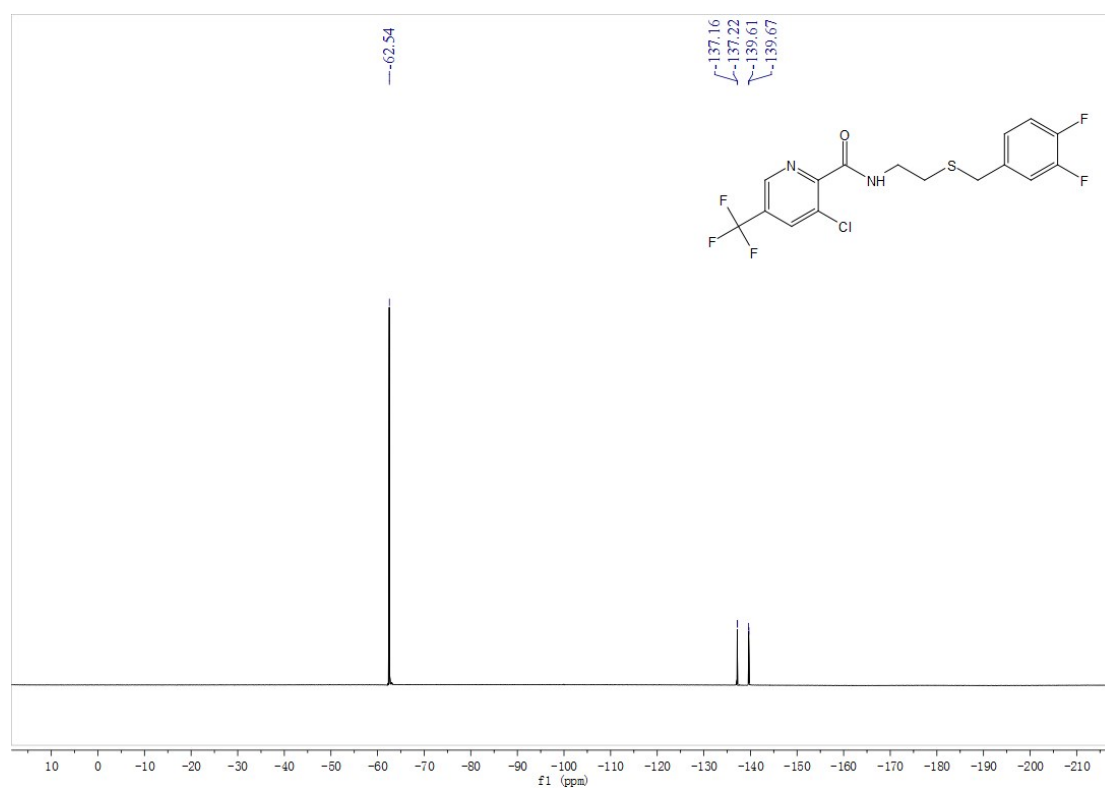


Fig. S24 ^{19}F NMR spectra of compound **E8**

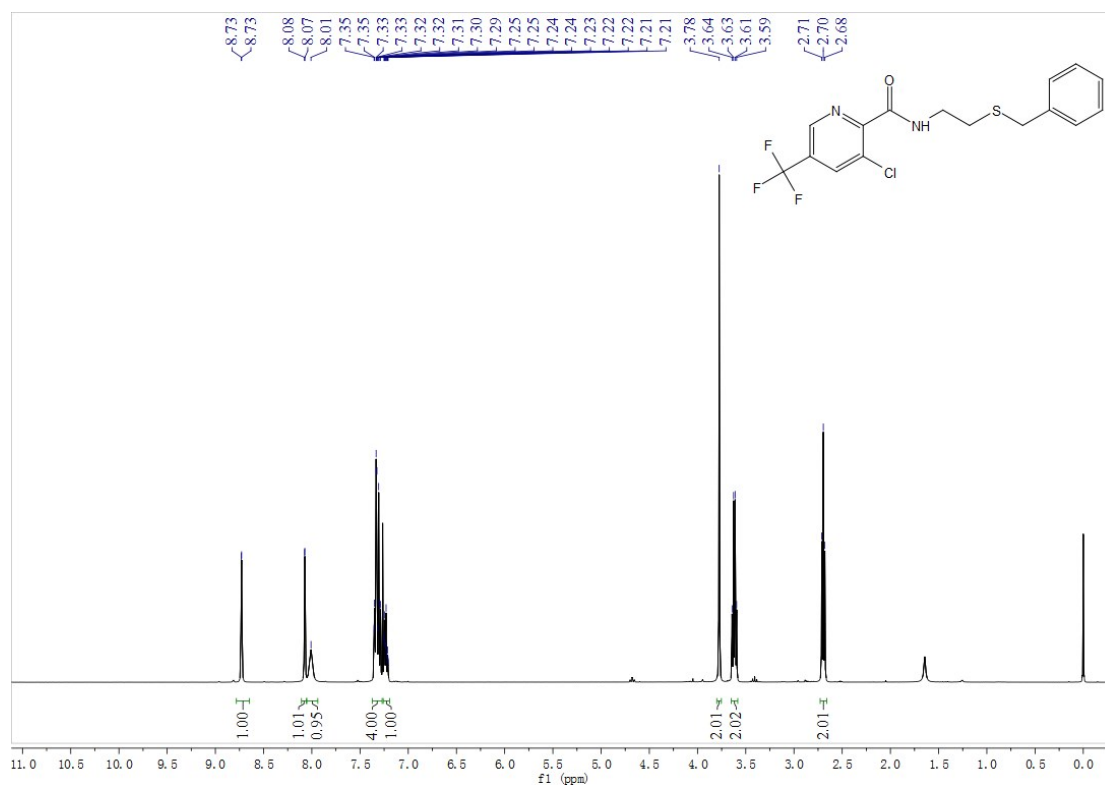


Fig. S25 ¹H NMR spectra of compound E9

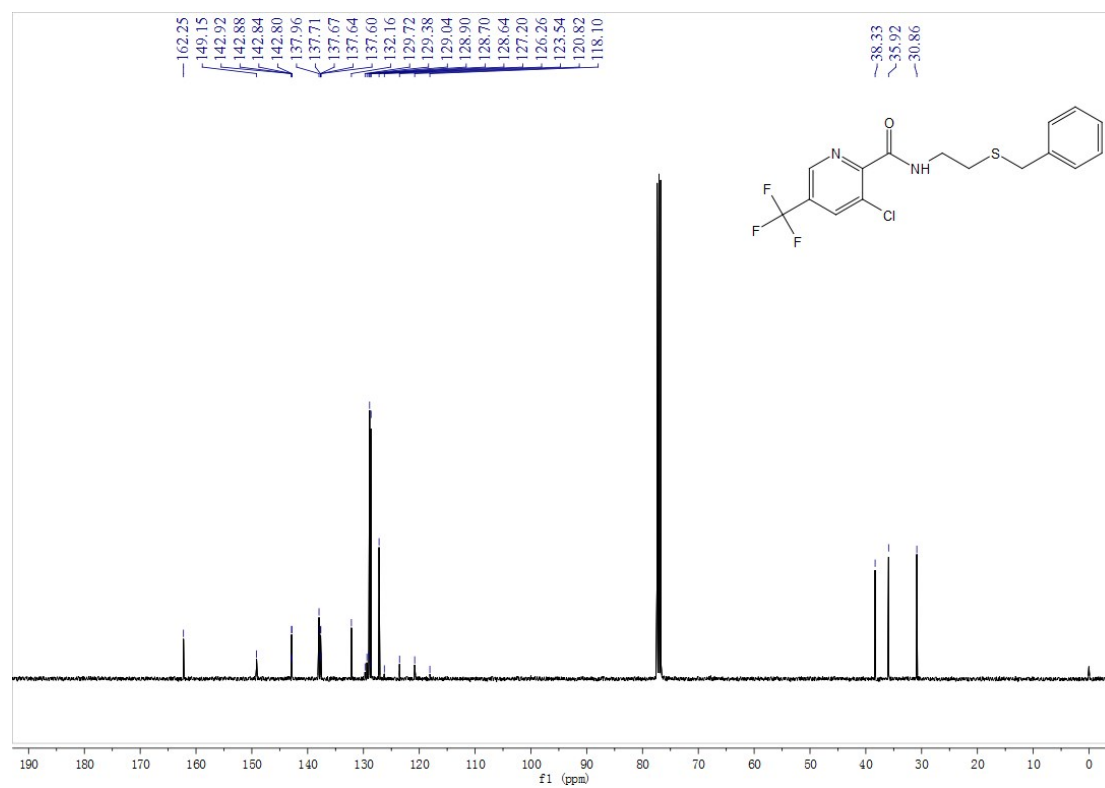


Fig. S26 ¹³C NMR spectra of compound E9

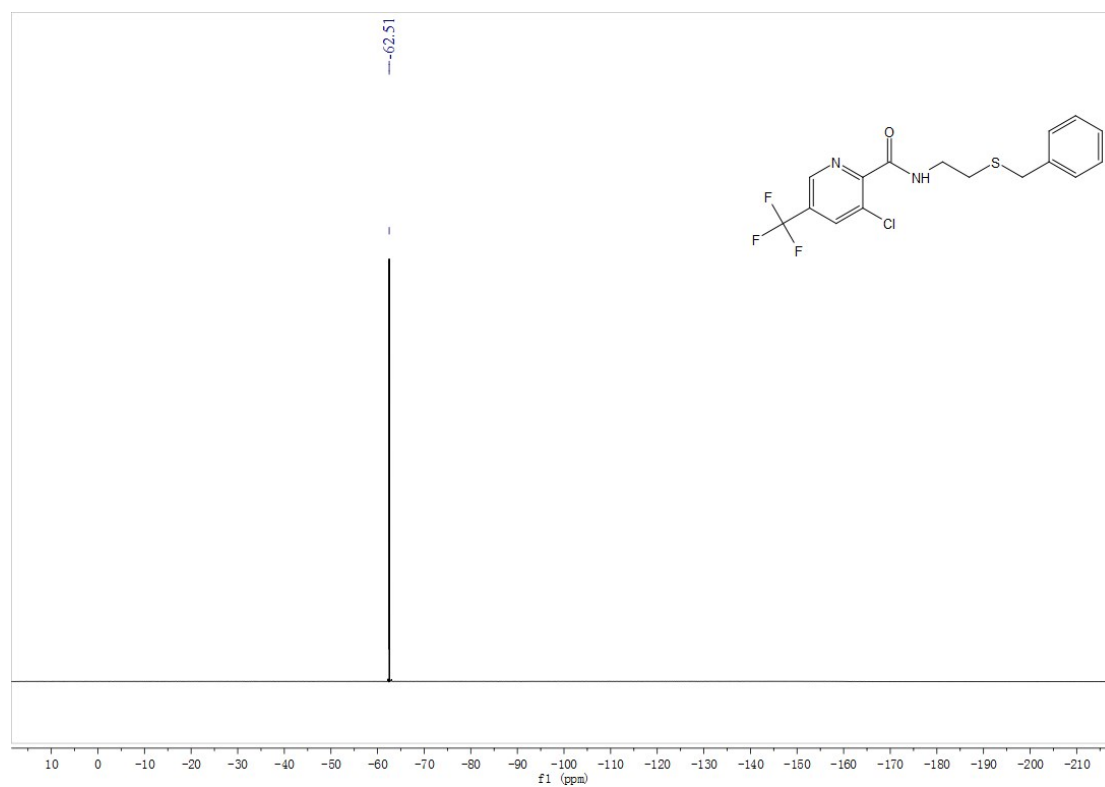


Fig. S27 ^{19}F NMR spectra of compound **E9**

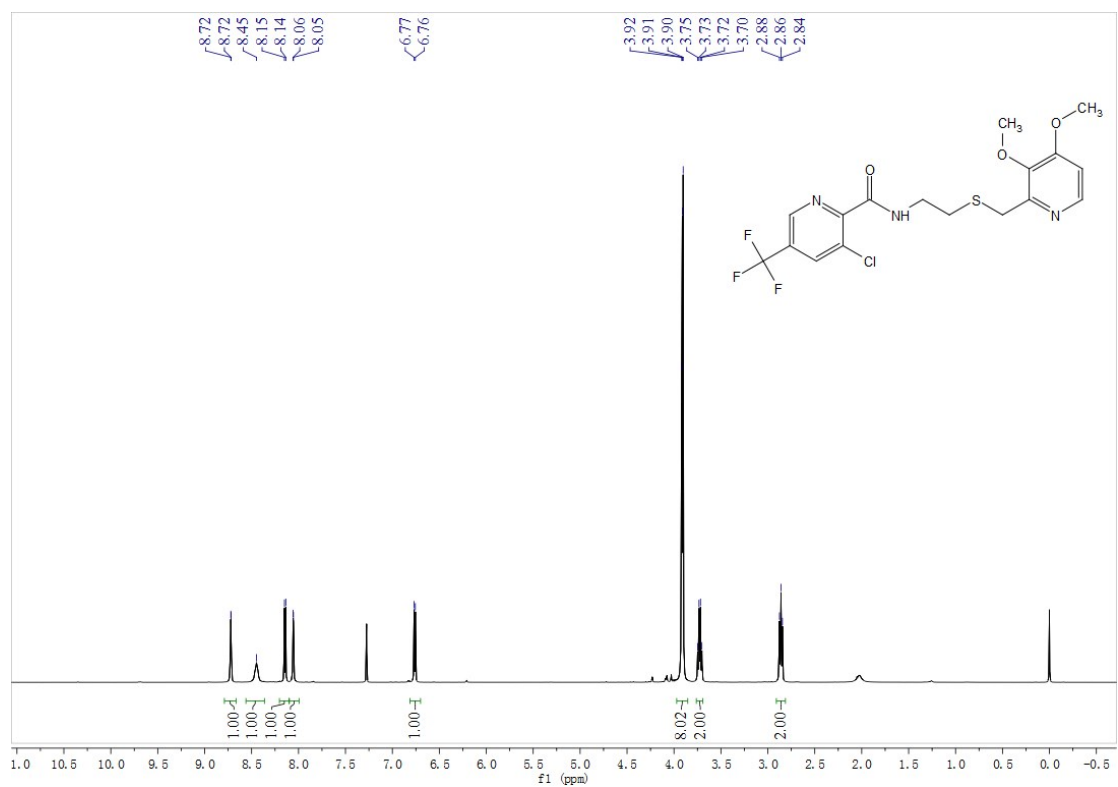


Fig. S28 ¹H NMR spectra of compound **E10**

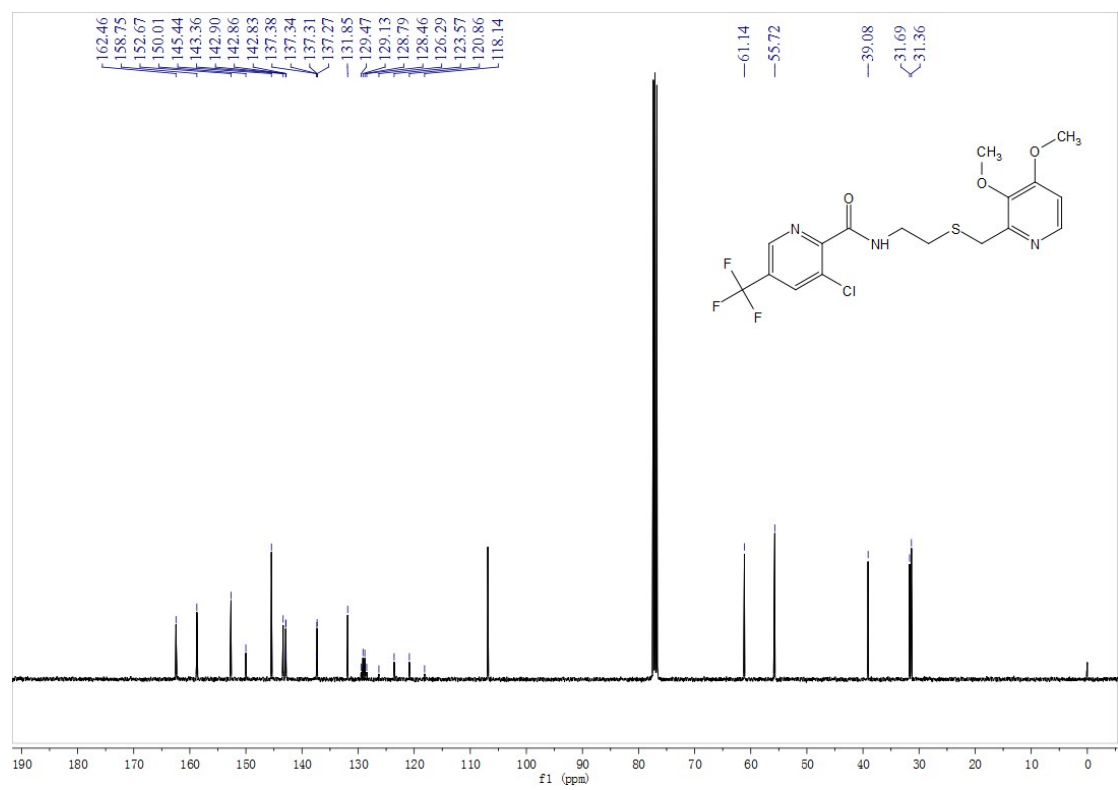


Fig. S29 ¹³C NMR spectra of compound **E10**

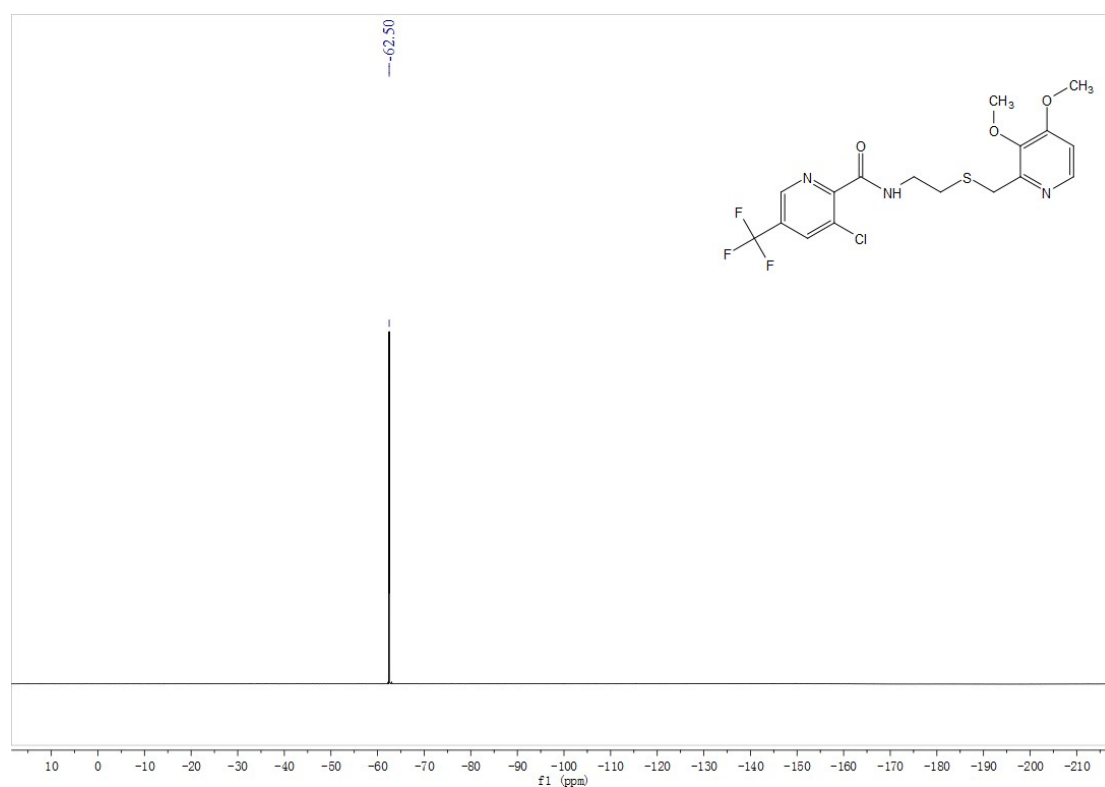


Fig. S30 ^{19}F NMR spectra of compound **E10**

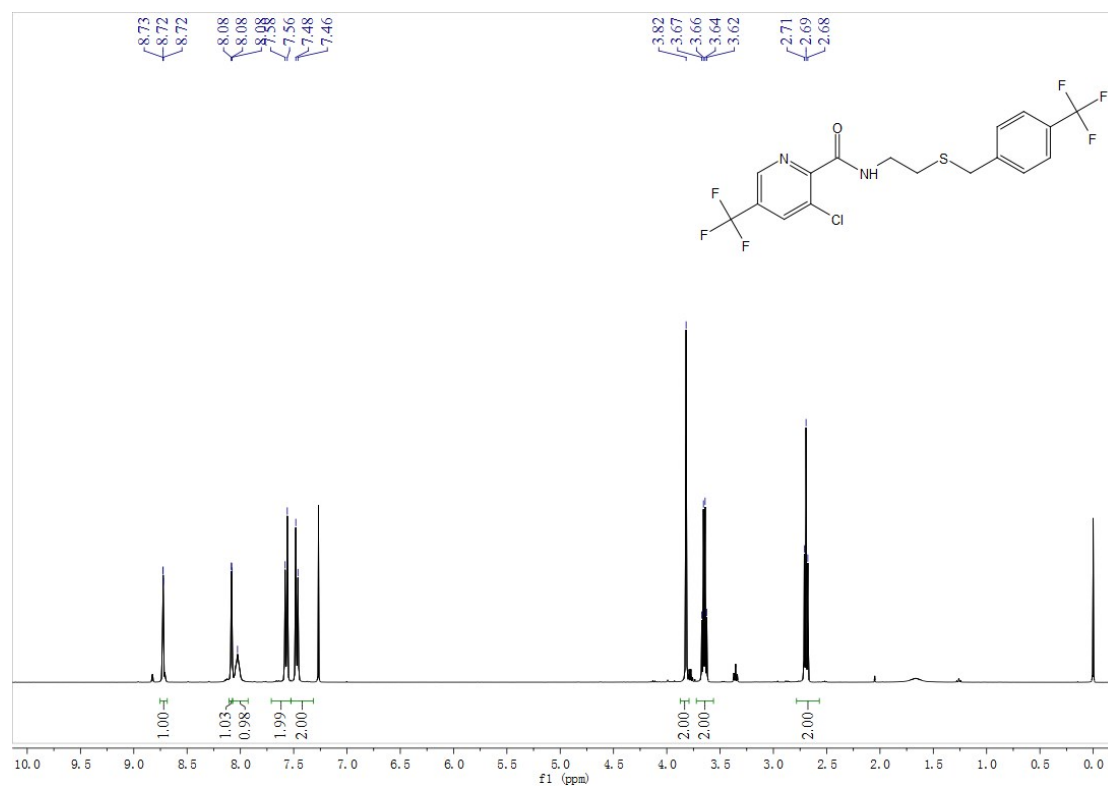


Fig. S31 ¹H NMR spectra of compound **E11**

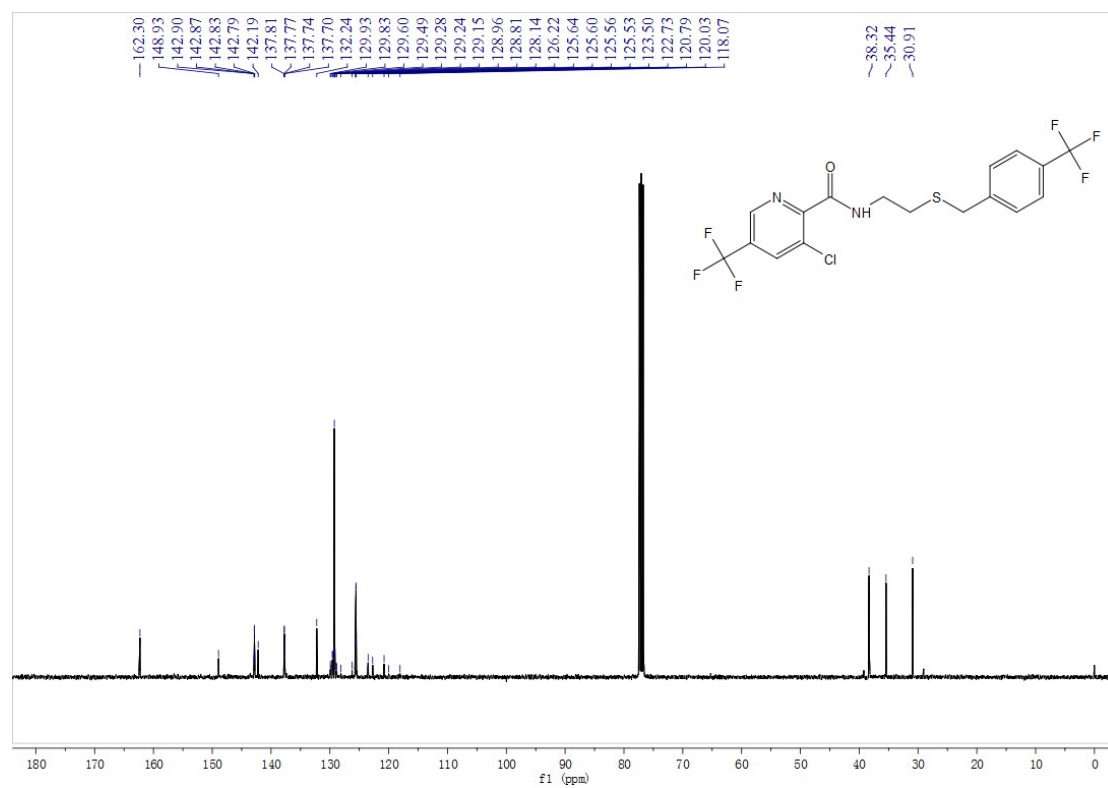


Fig. S32 ¹³C NMR spectra of compound **E11**

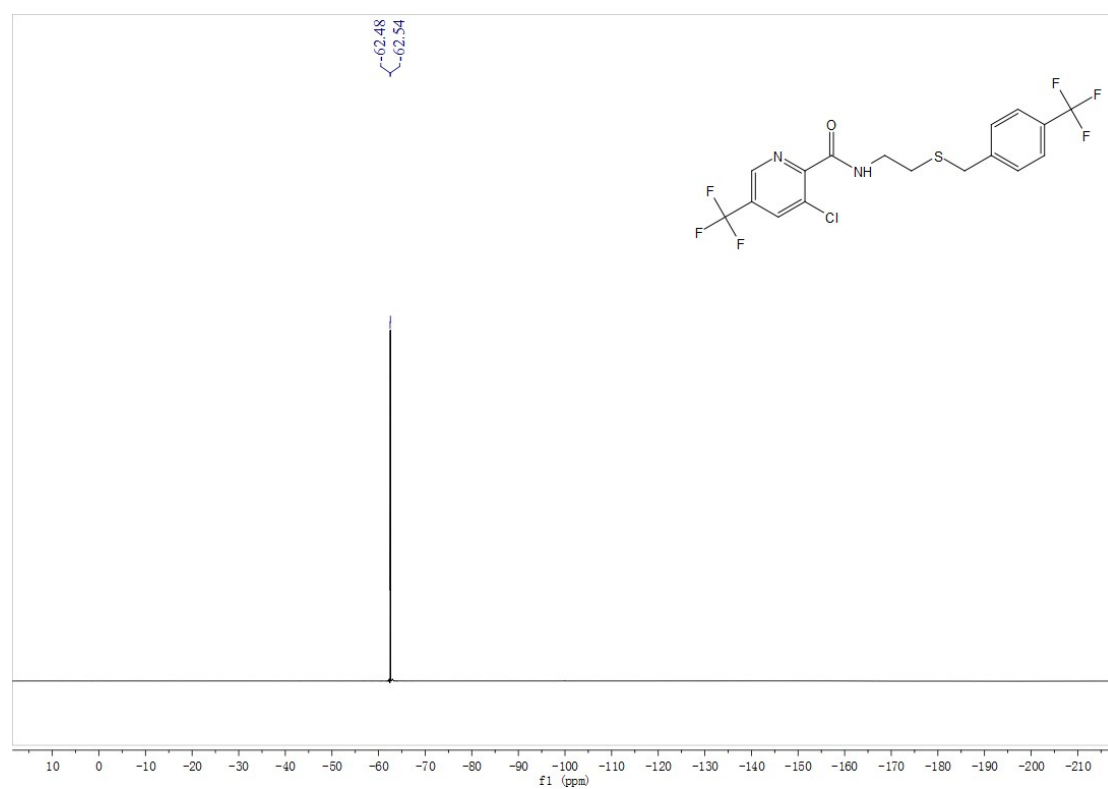


Fig. S33 ^{19}F NMR spectra of compound **E11**

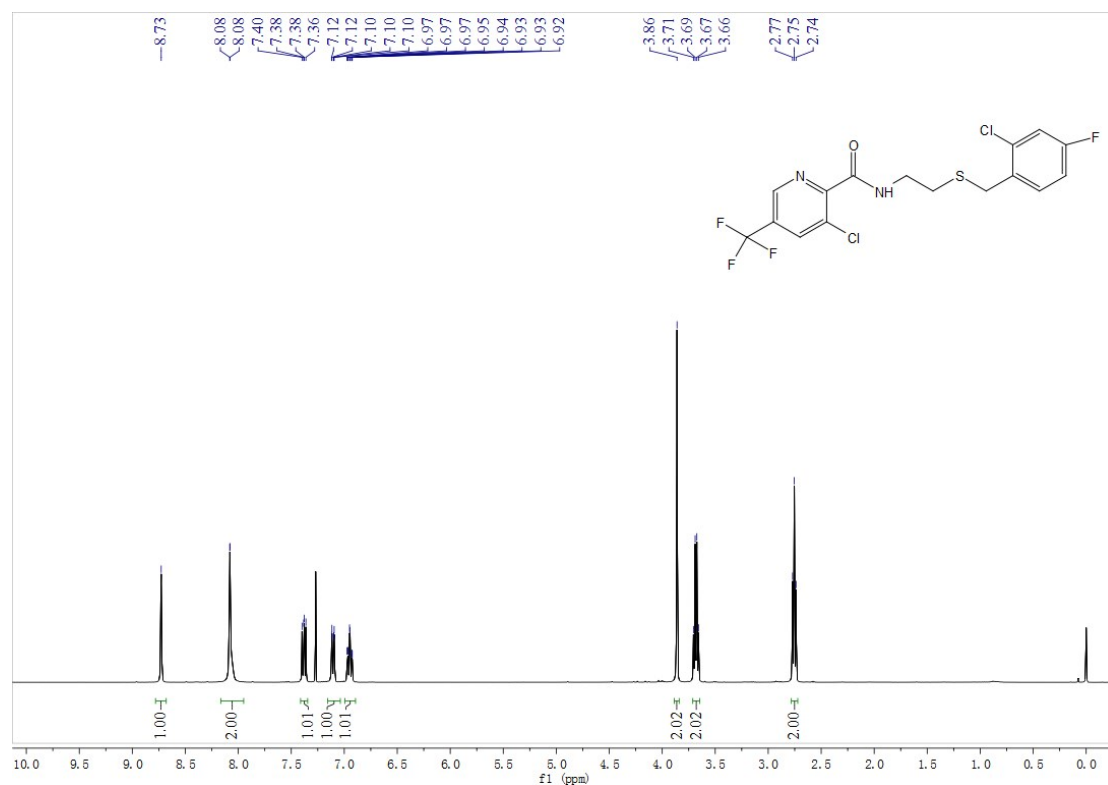


Fig. S34 ¹H NMR spectra of compound E12

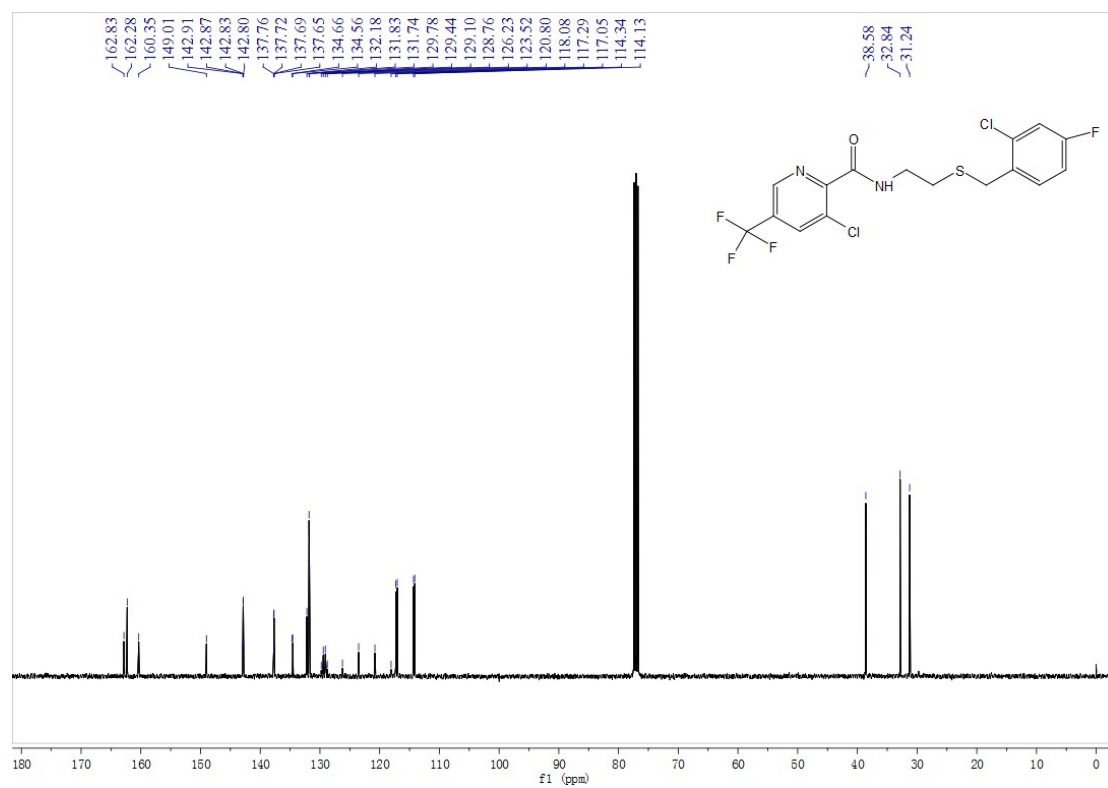


Fig. S35 ¹³C NMR spectra of compound E12

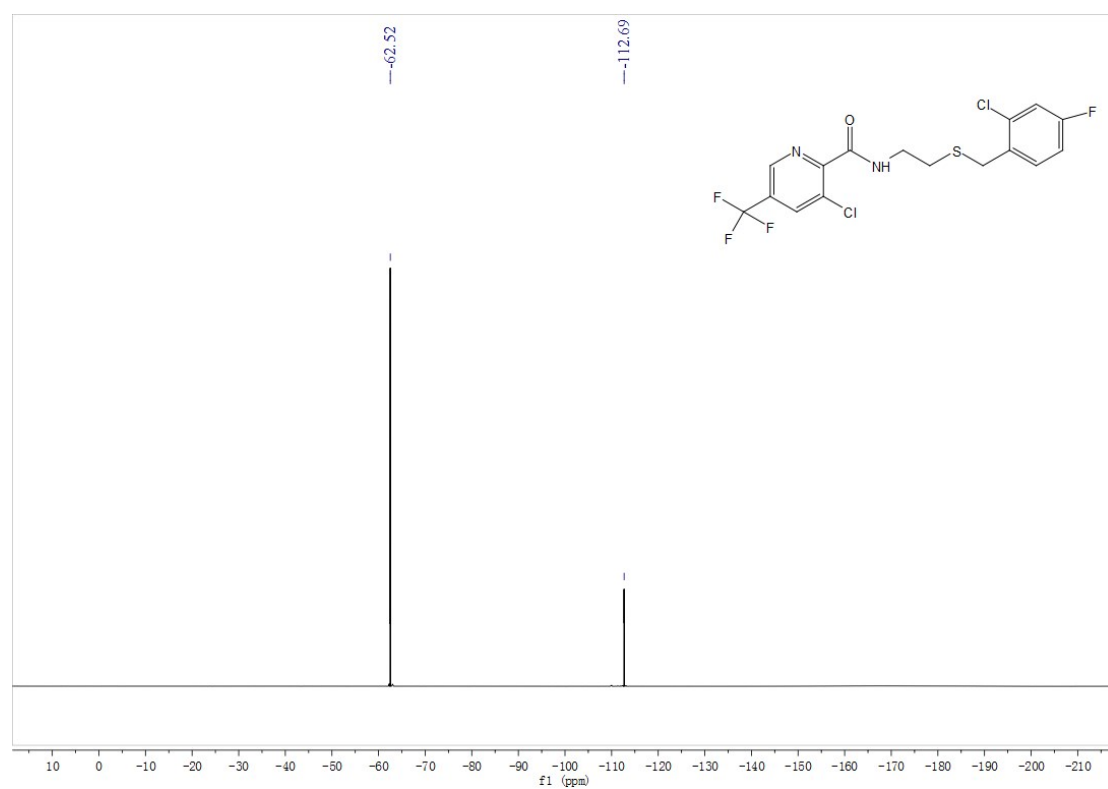


Fig. S36 ^{19}F NMR spectra of compound **E12**

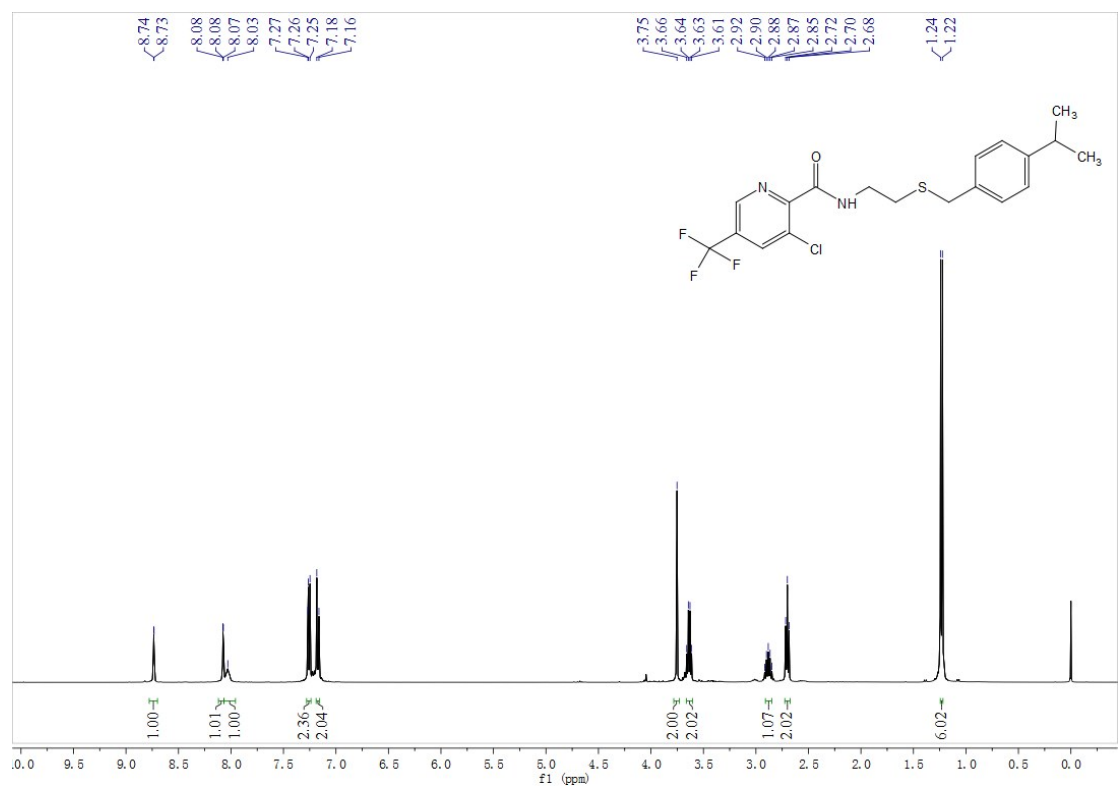


Fig. S37 ¹H NMR spectra of compound E13

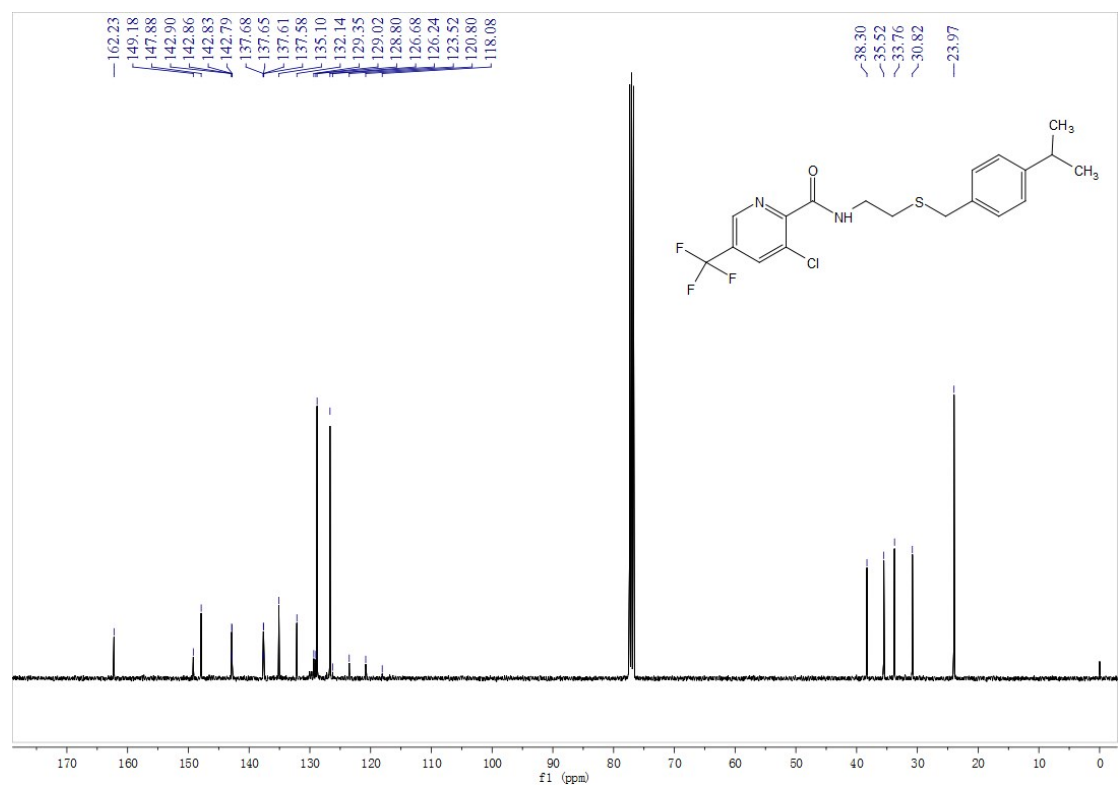


Fig. S38 ¹³C NMR spectra of compound E13

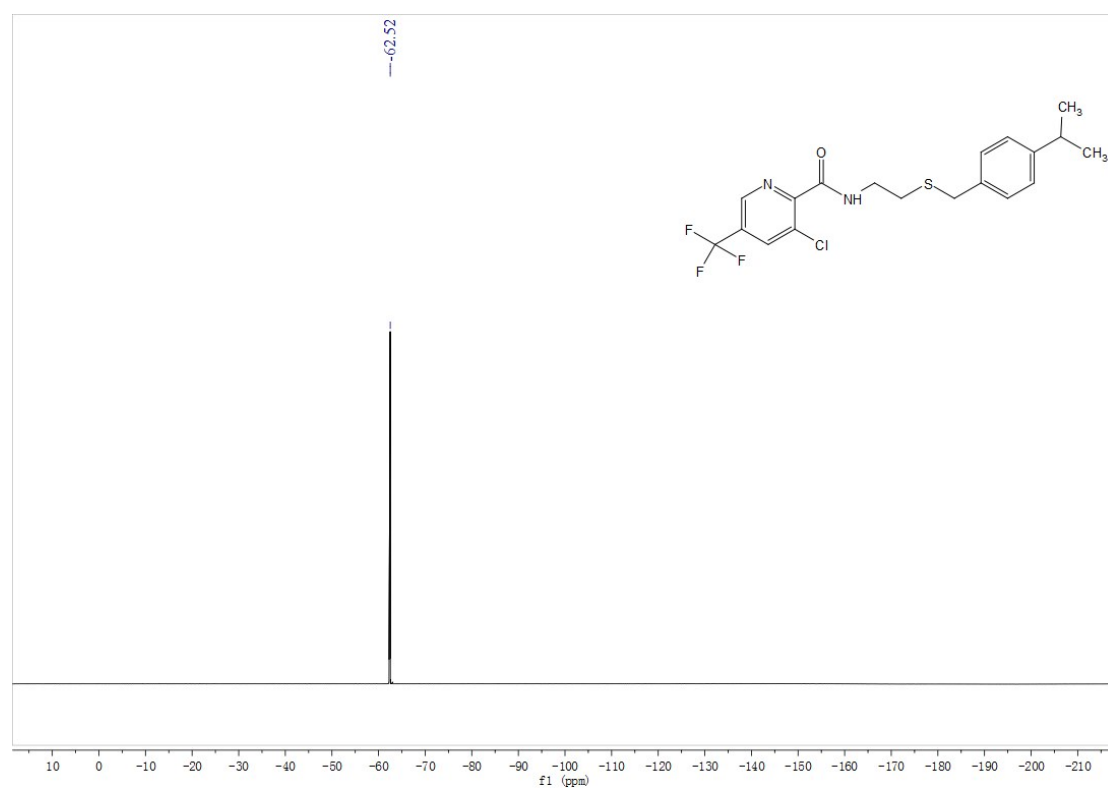


Fig. S39 ^{19}F NMR spectra of compound **E13**

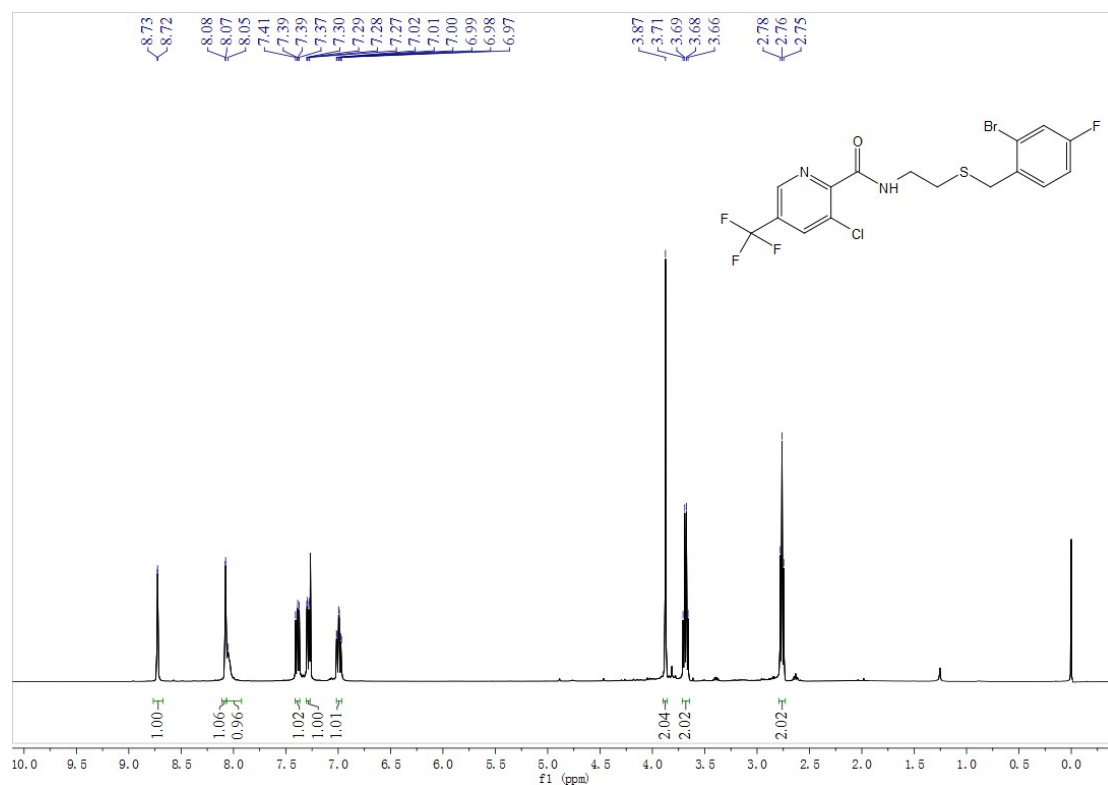


Fig. S40 ¹H NMR spectra of compound **E14**

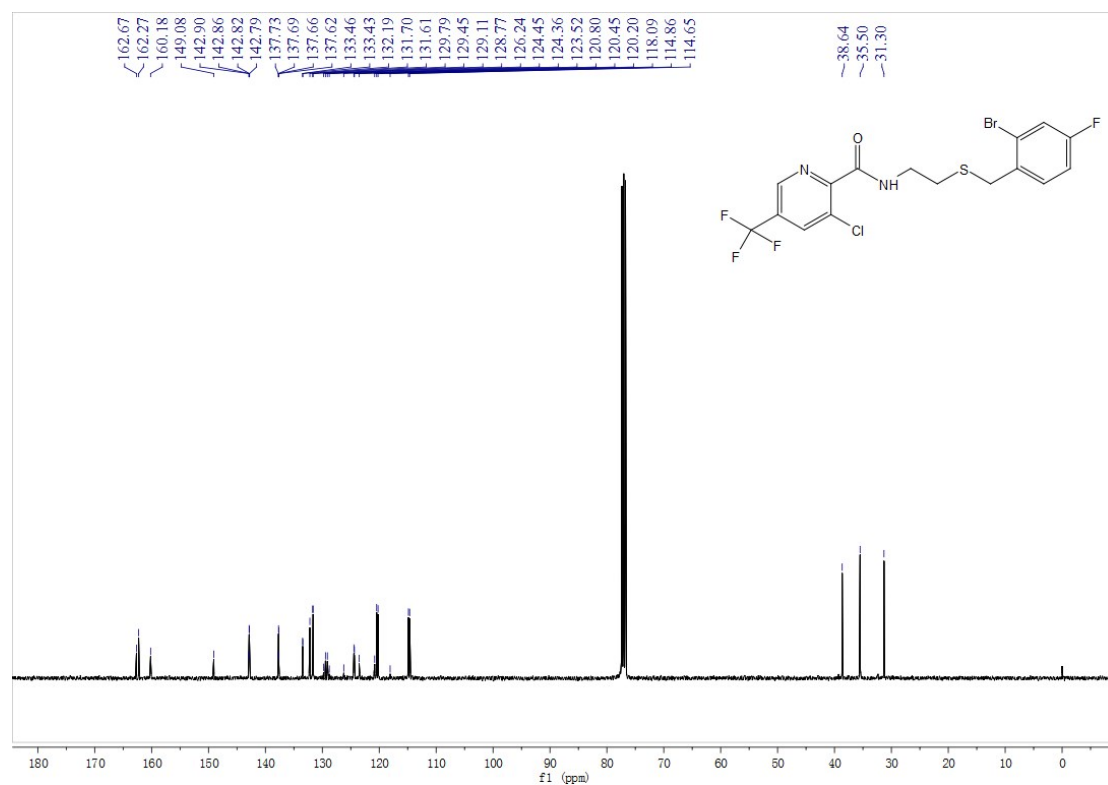


Fig. S41 ¹³C NMR spectra of compound **E14**

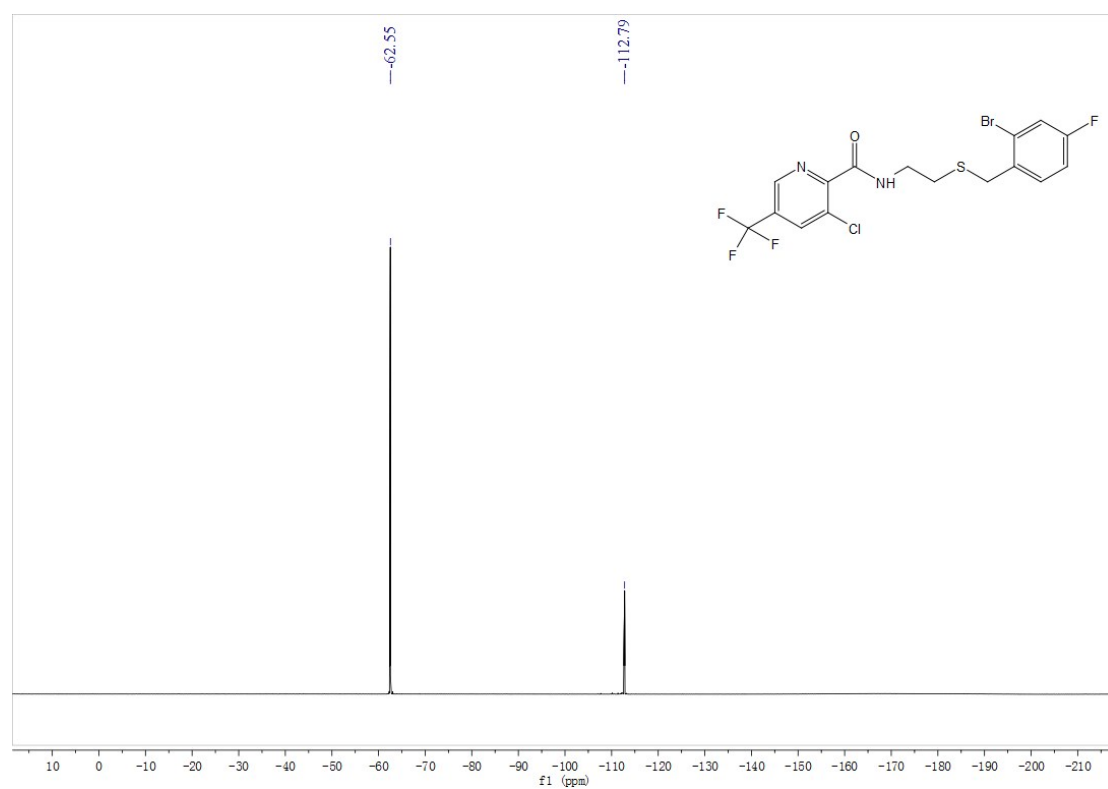


Fig. S42 ^{19}F NMR spectra of compound **E14**

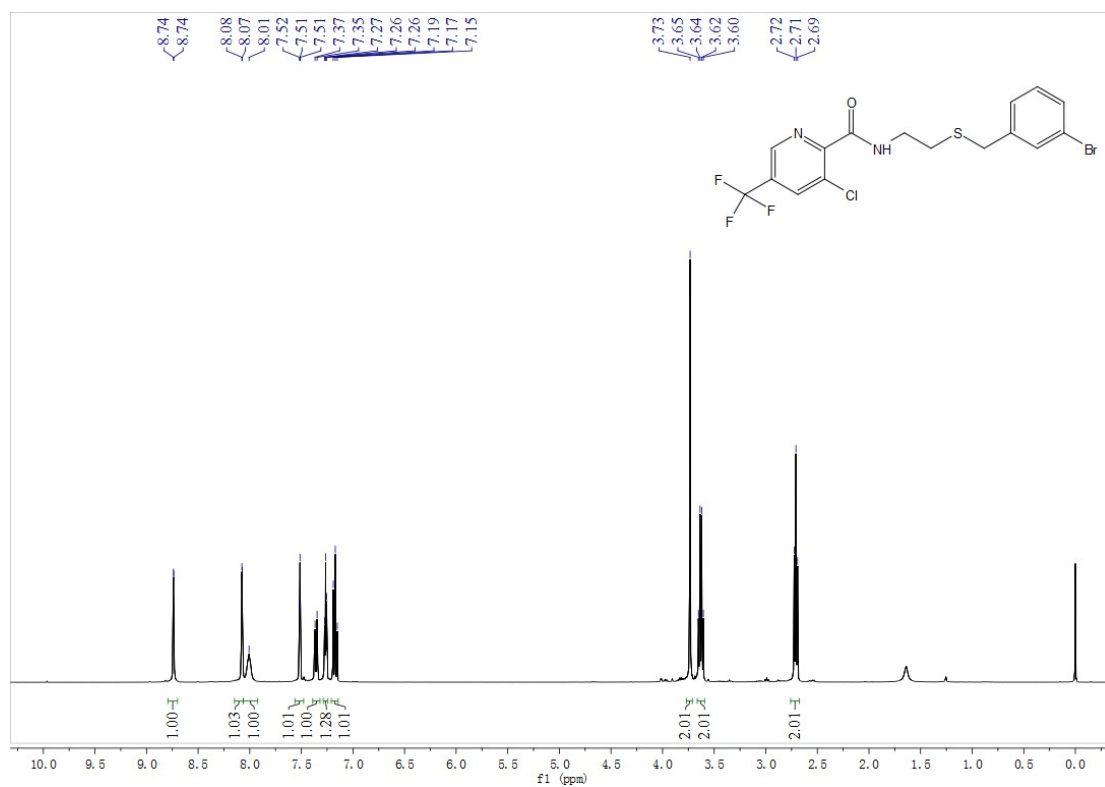


Fig. S43 ¹H NMR spectra of compound **E15**

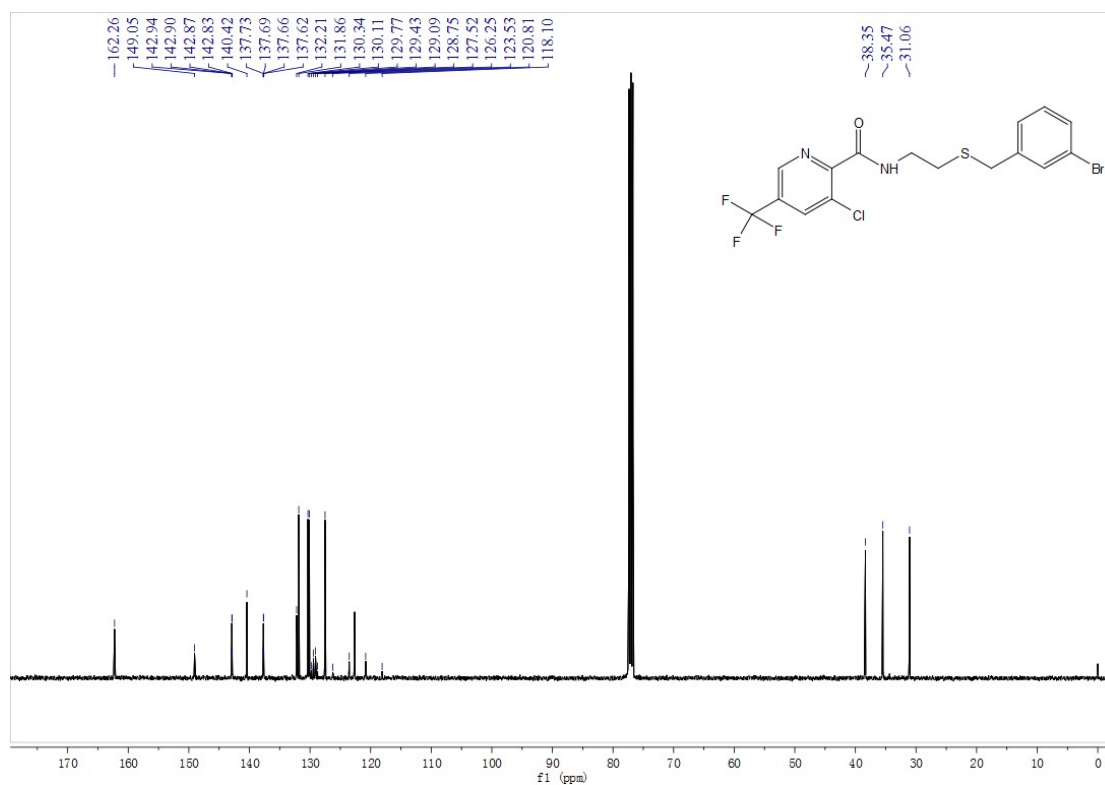


Fig. S44 ¹³C NMR spectra of compound **E15**

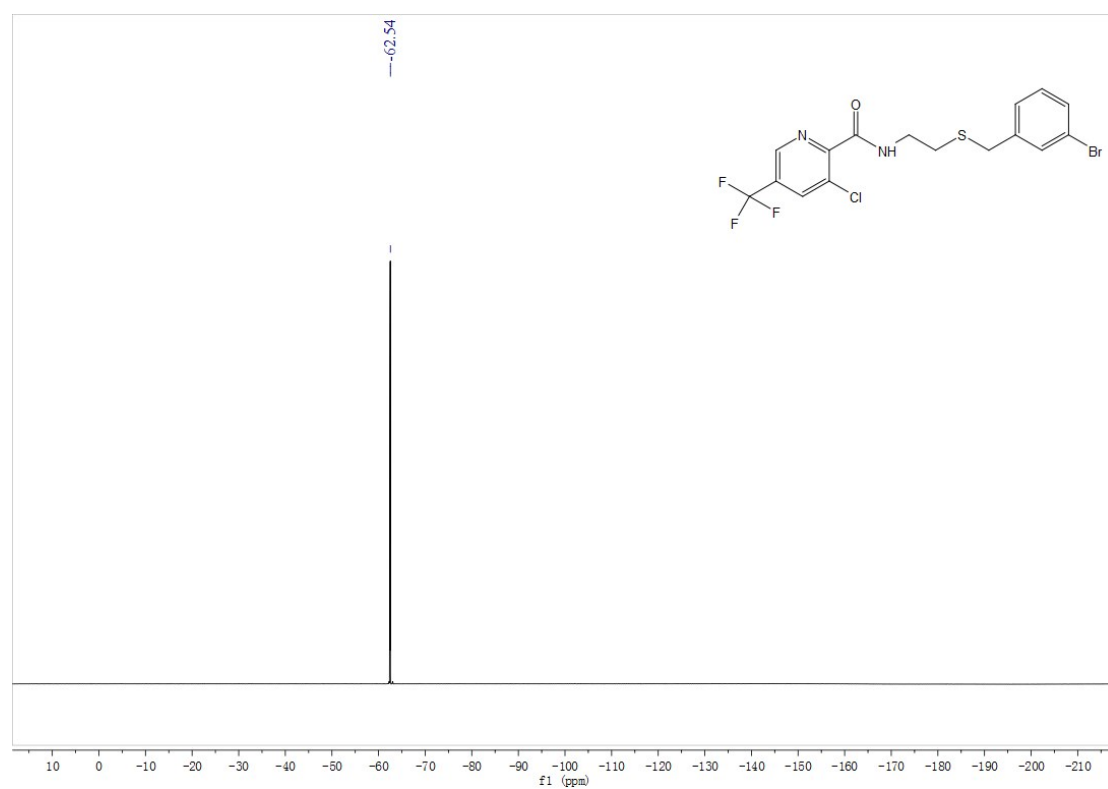


Fig. S45 ^{19}F NMR spectra of compound **E15**

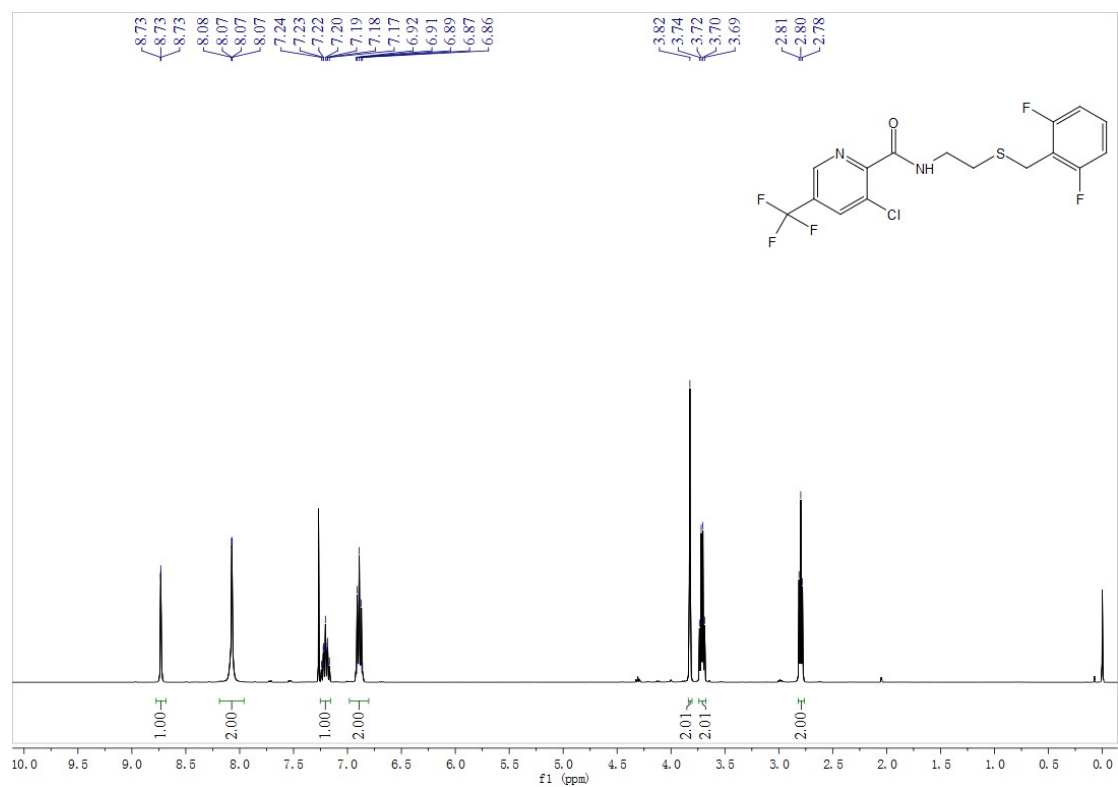


Fig. S46¹H NMR spectra of compound **E16**

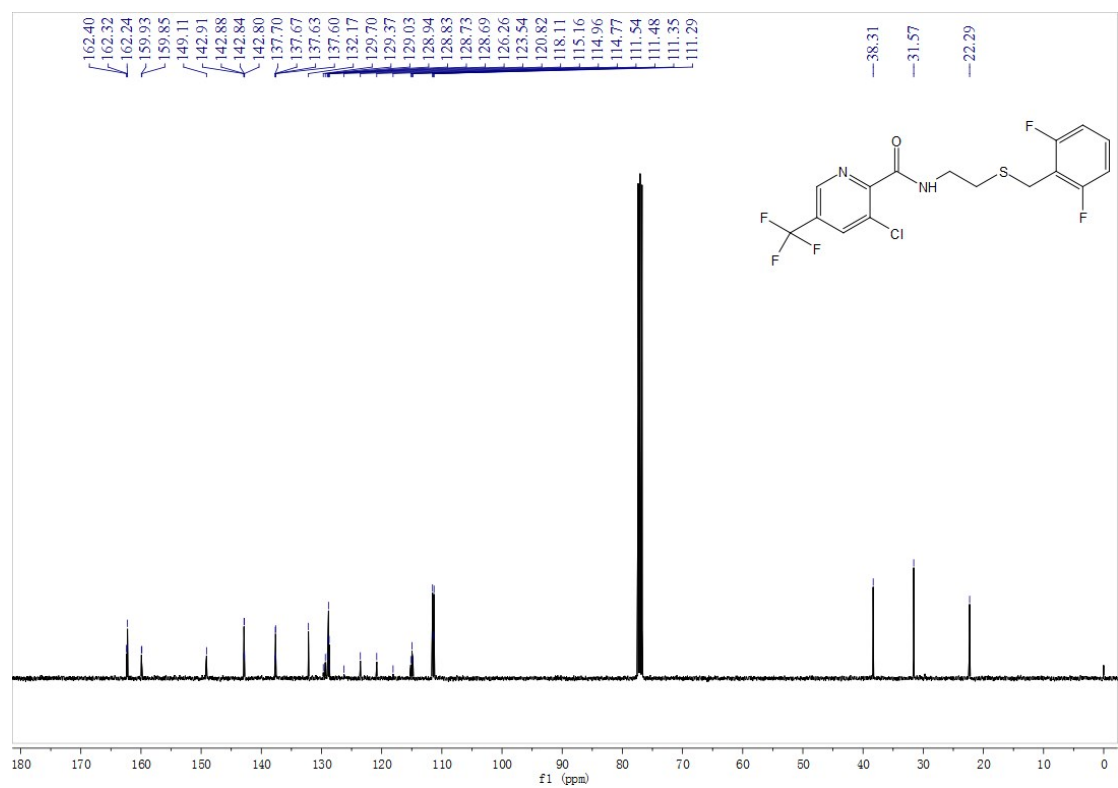


Fig. S47 ¹³C NMR spectra of compound **E16**

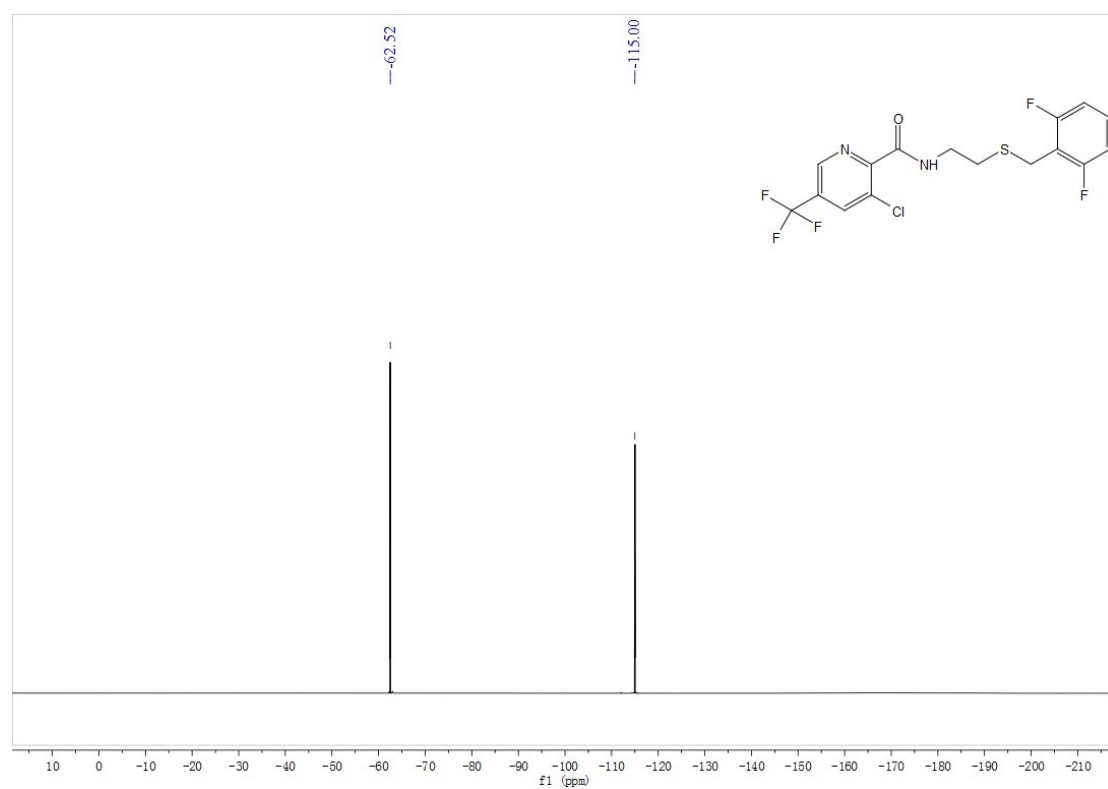


Fig. S48 ^{19}F NMR spectra of compound **E16**

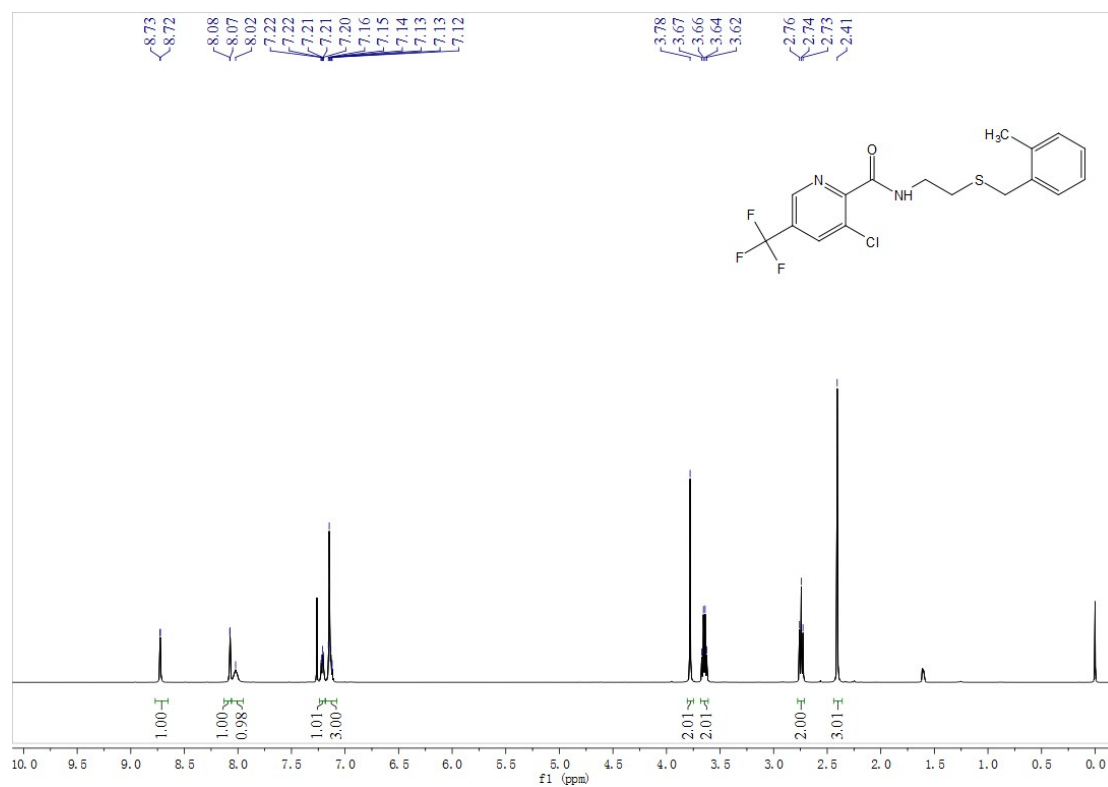


Fig. S49 ¹H NMR spectra of compound **E17**

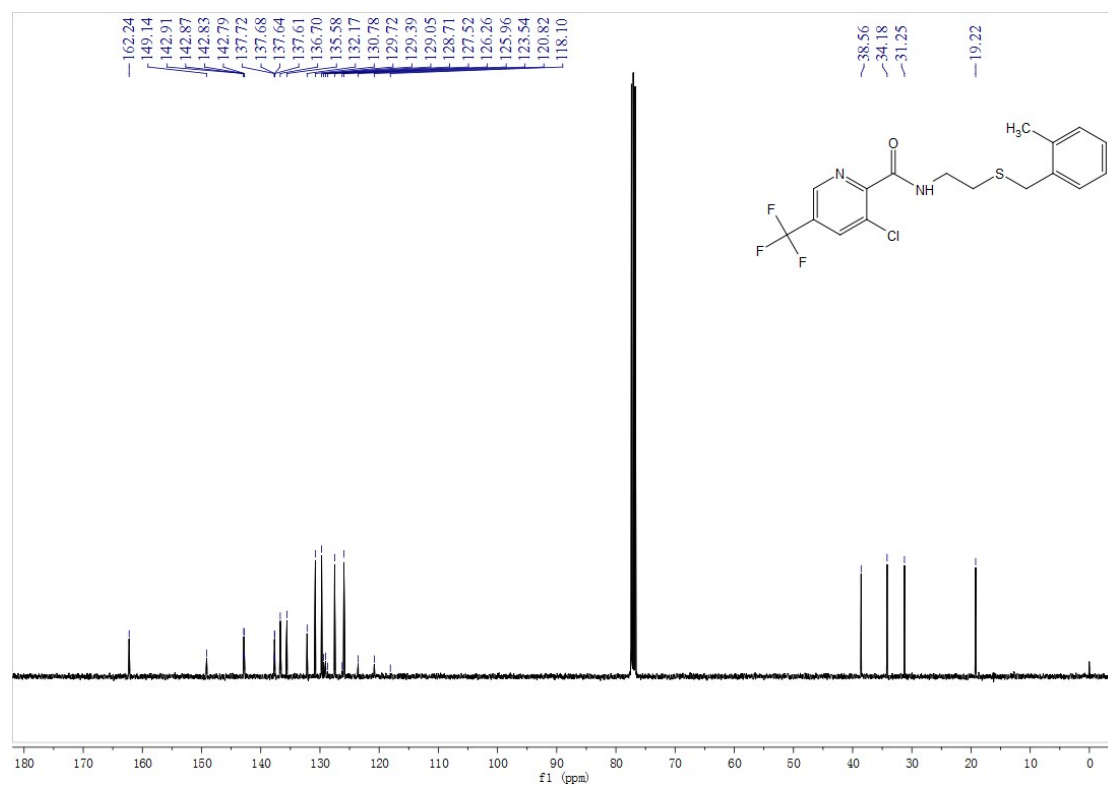


Fig. S50 ¹³C NMR spectra of compound **E17**

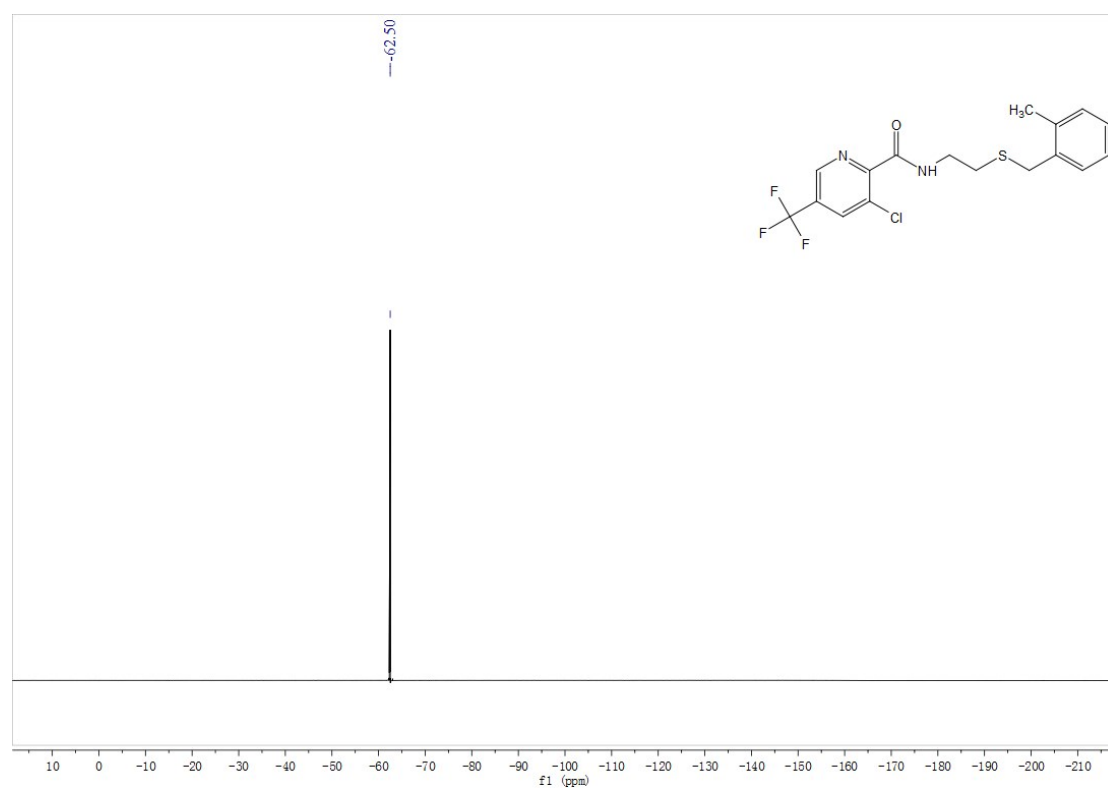


Fig. S51 ^{19}F NMR spectra of compound **E17**

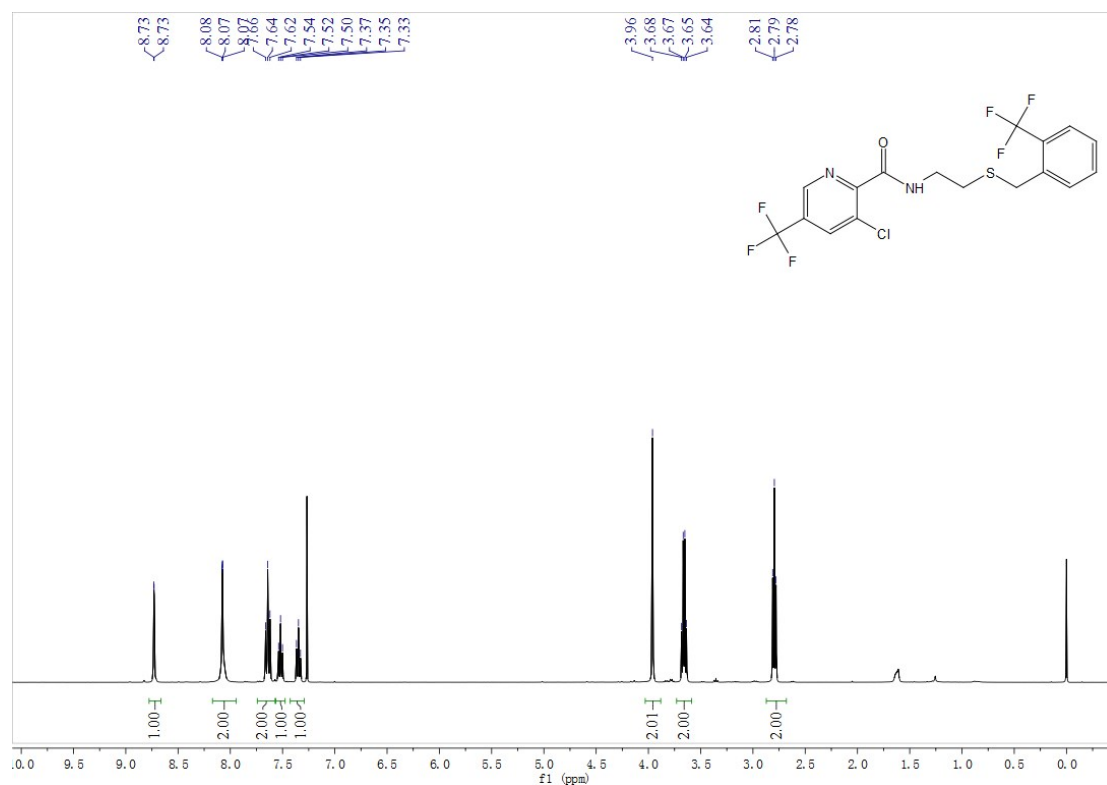


Fig. S52 ¹H NMR spectra of compound **E18**

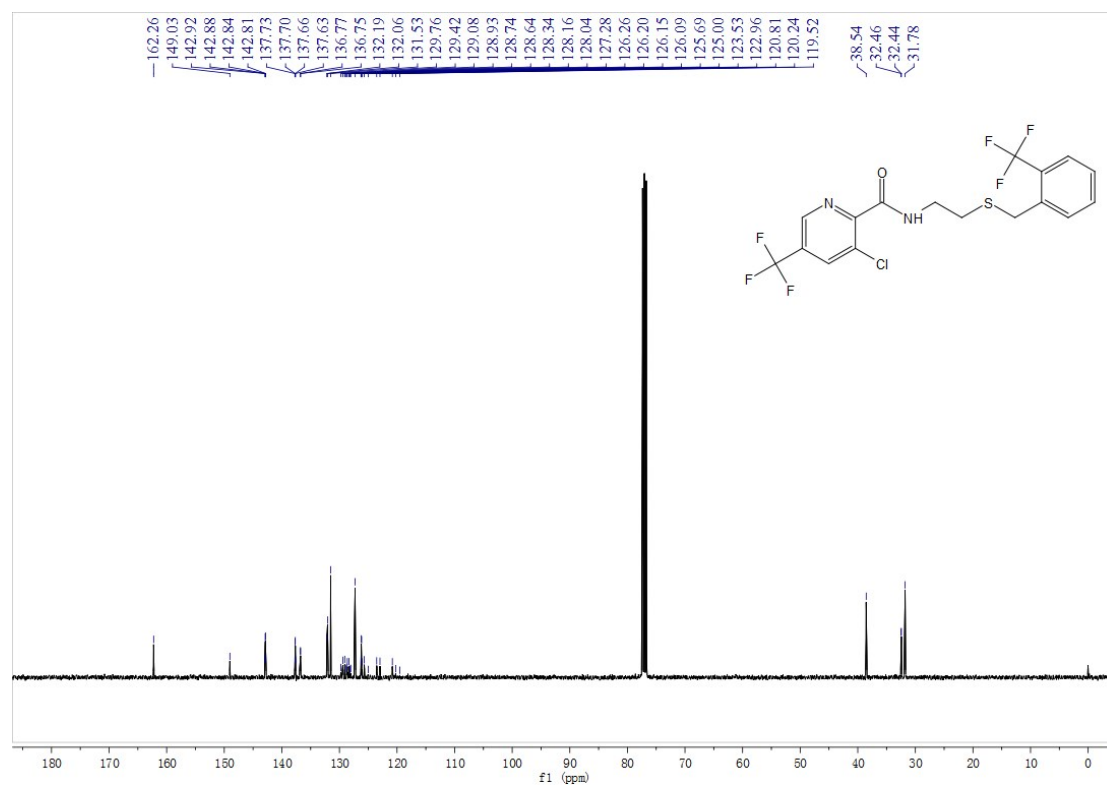


Fig. S53 ¹³C NMR spectra of compound **E18**

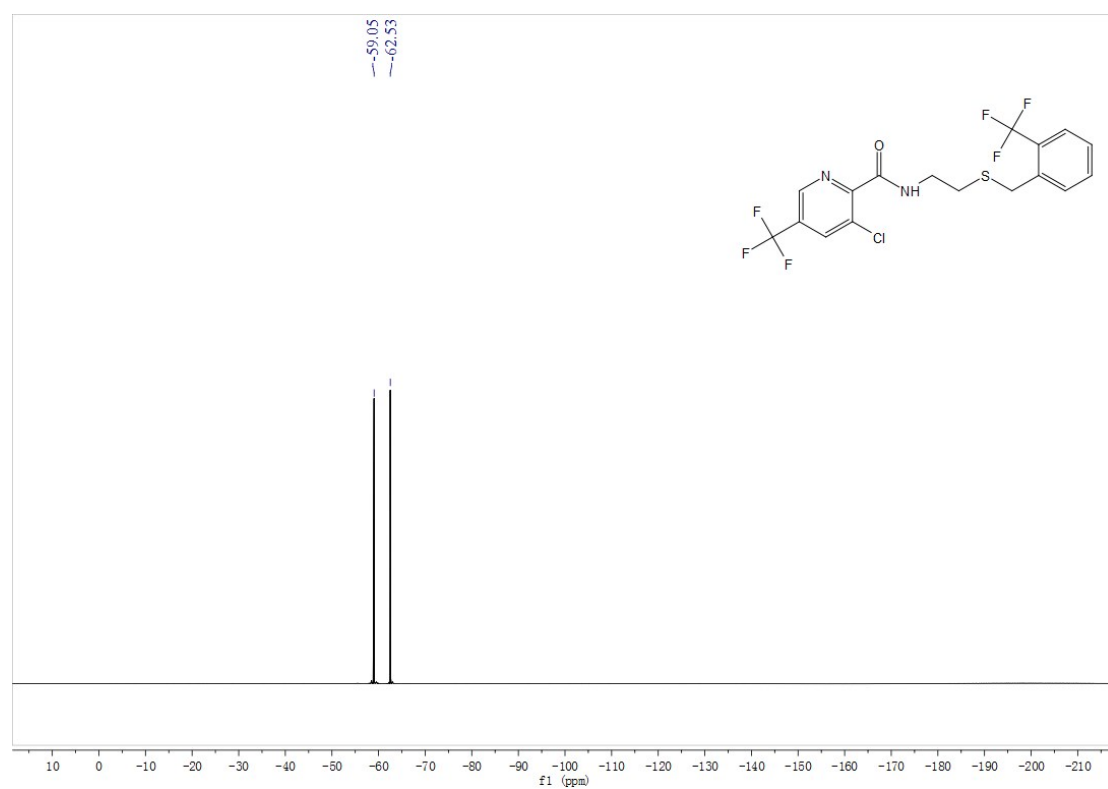


Fig. S54 ^{19}F NMR spectra of compound **E18**

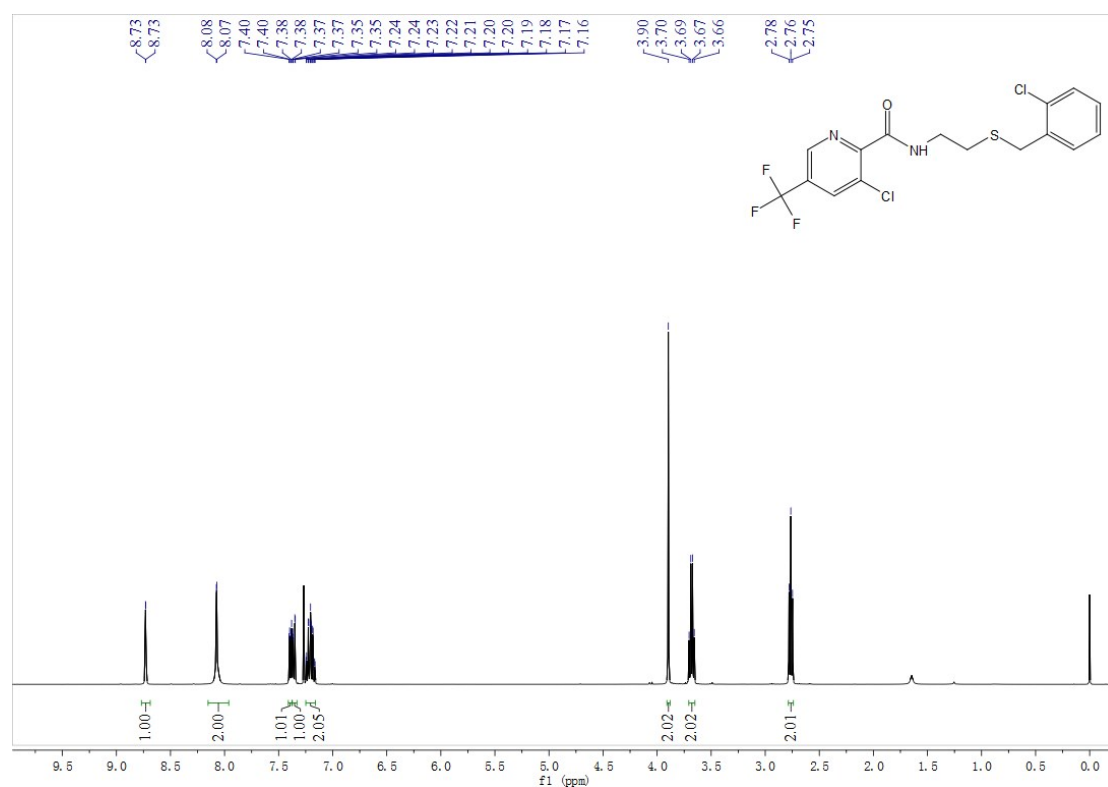


Fig. S55 ¹H NMR spectra of compound **E19**

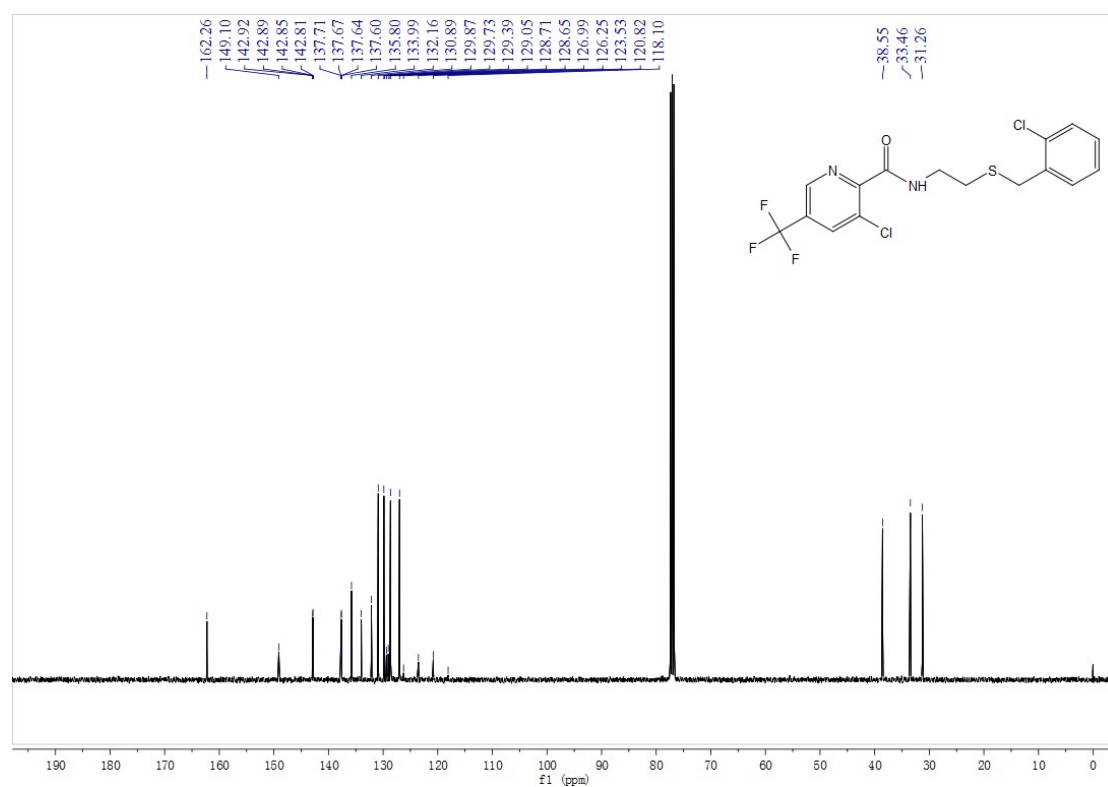


Fig. S56 ¹³C NMR spectra of compound **E19**

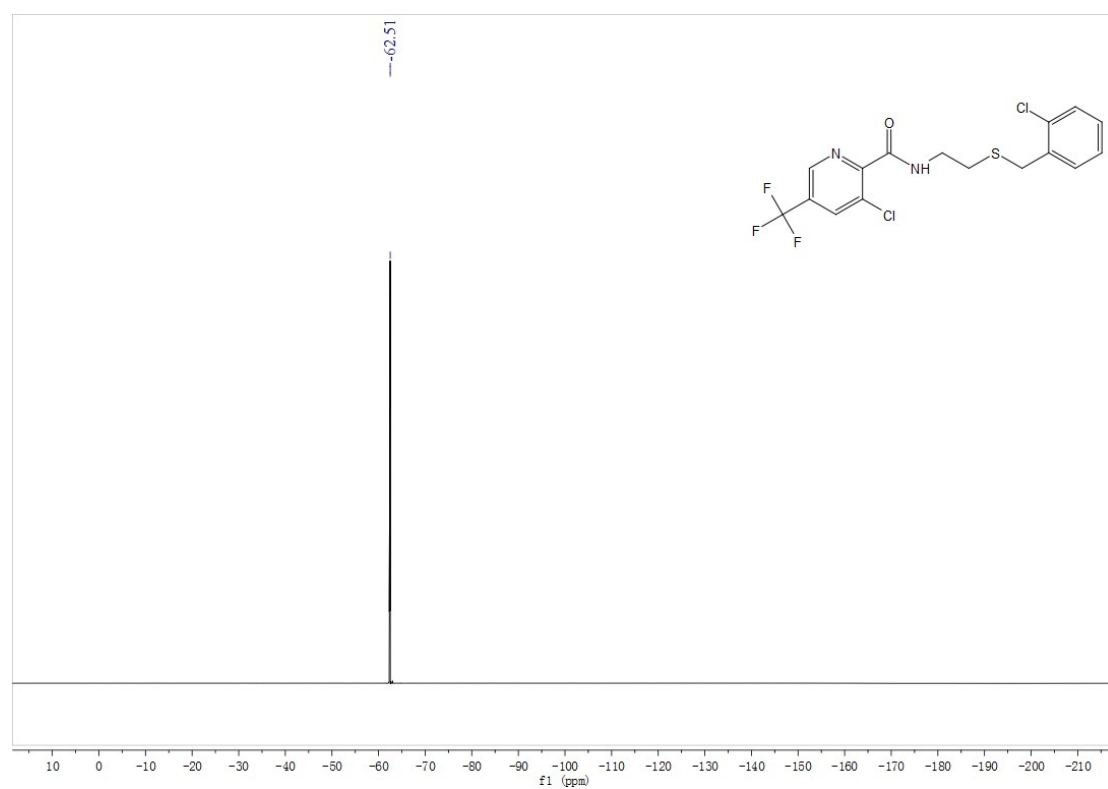


Fig. S57 ^{19}F NMR spectra of compound **E19**

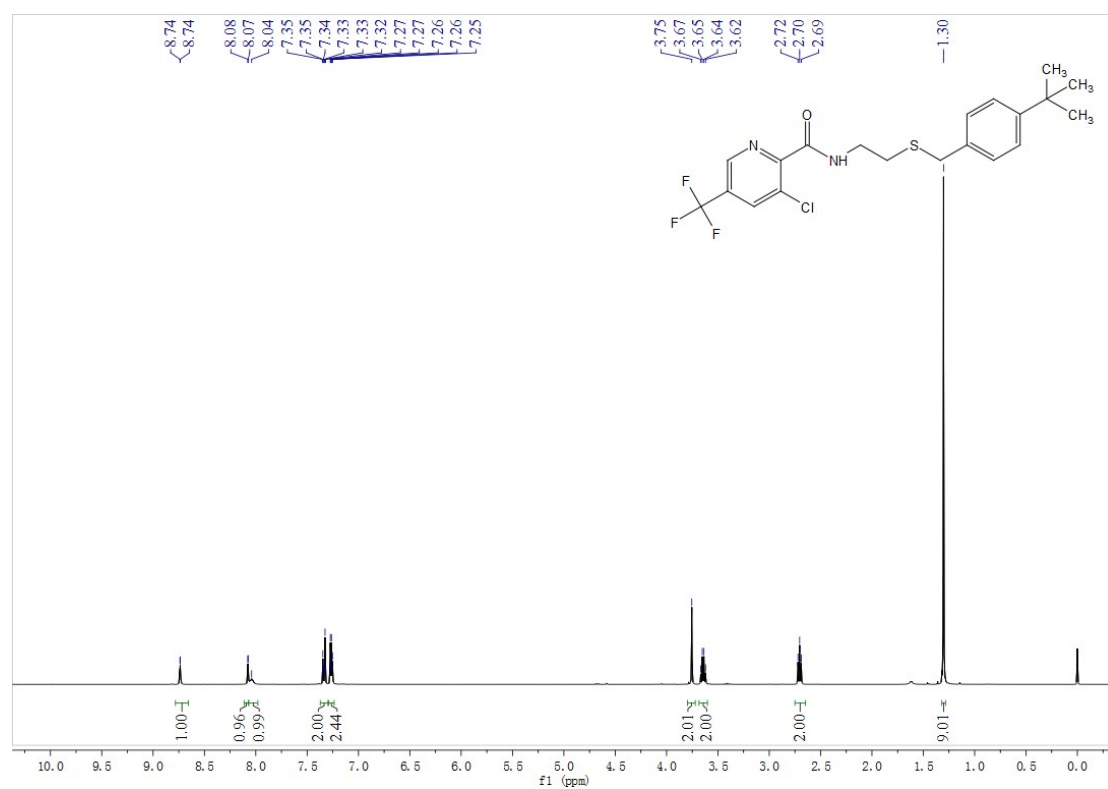


Fig. S58 ¹H NMR spectra of compound E20

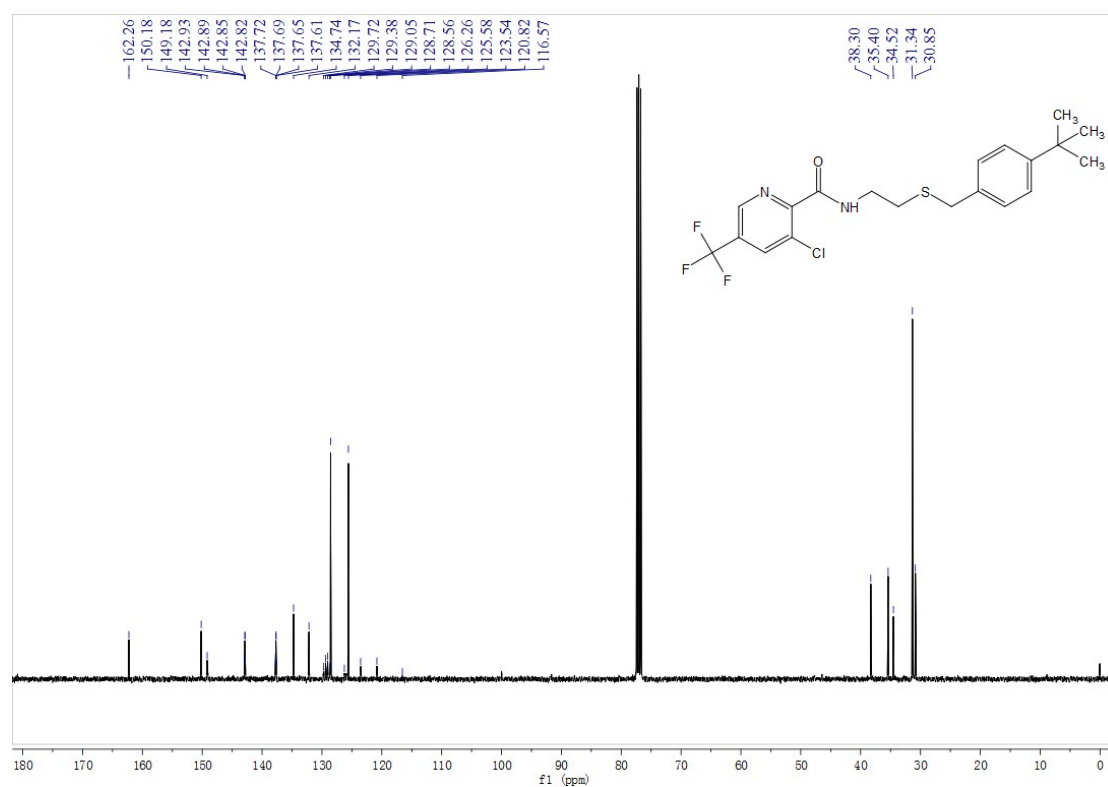


Fig. S59 ¹³C NMR spectra of compound E20

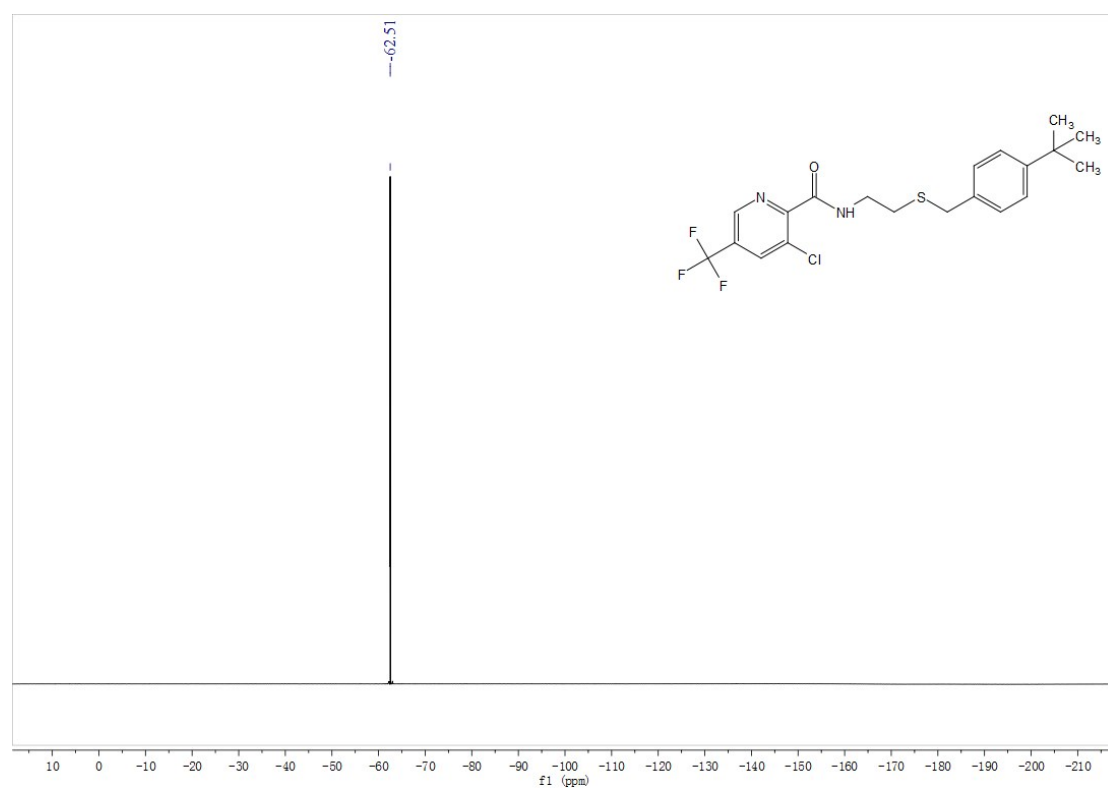


Fig. S60 ^{19}F NMR spectra of compound **E20**

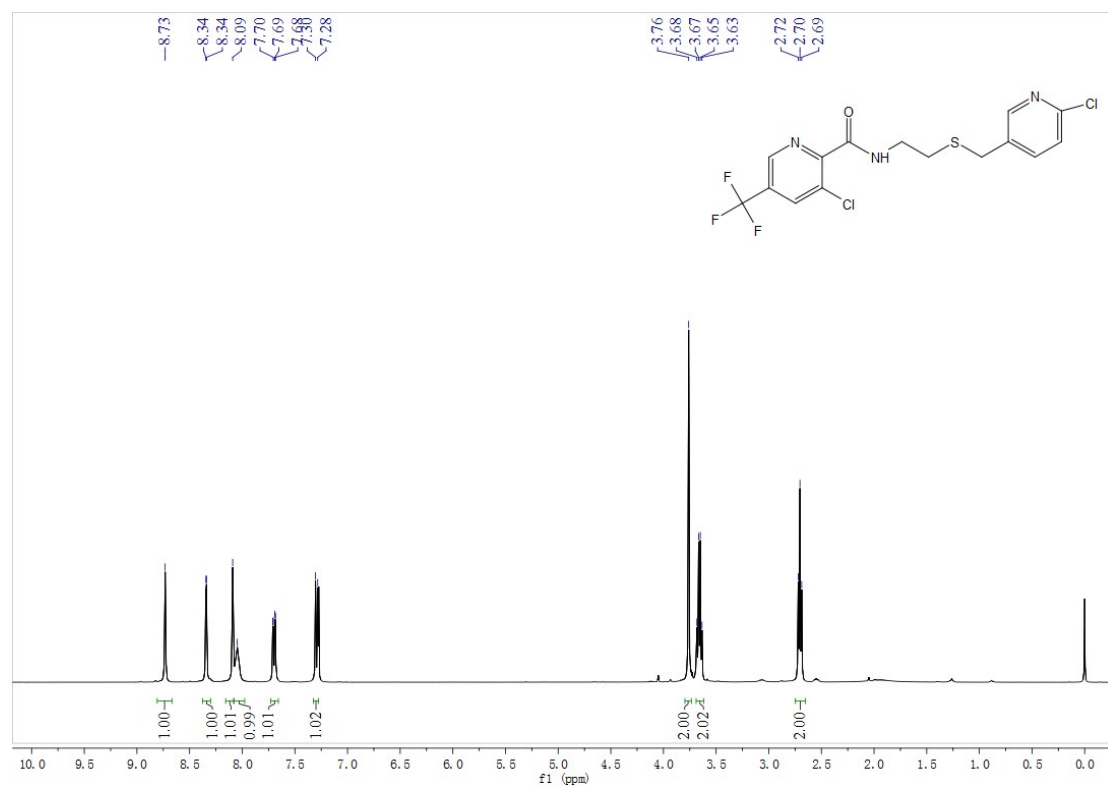


Fig. S61 ¹H NMR spectra of compound **E21**

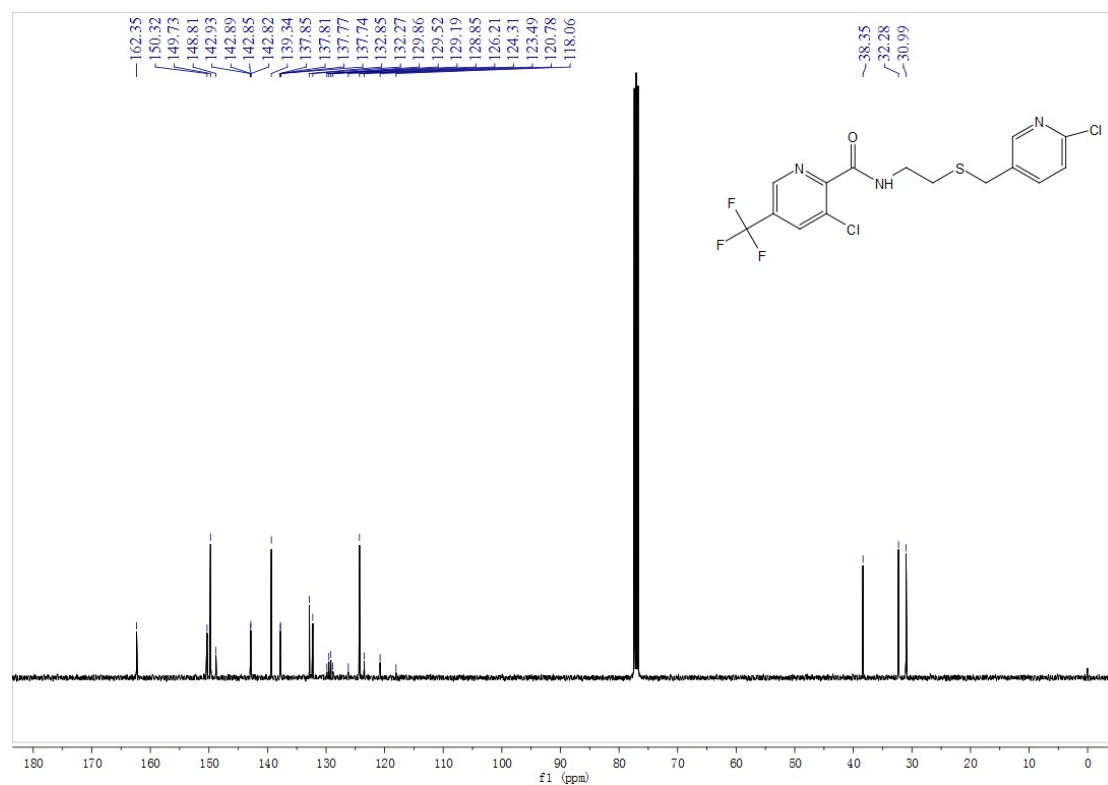


Fig. S62 ¹³C NMR spectra of compound **E21**

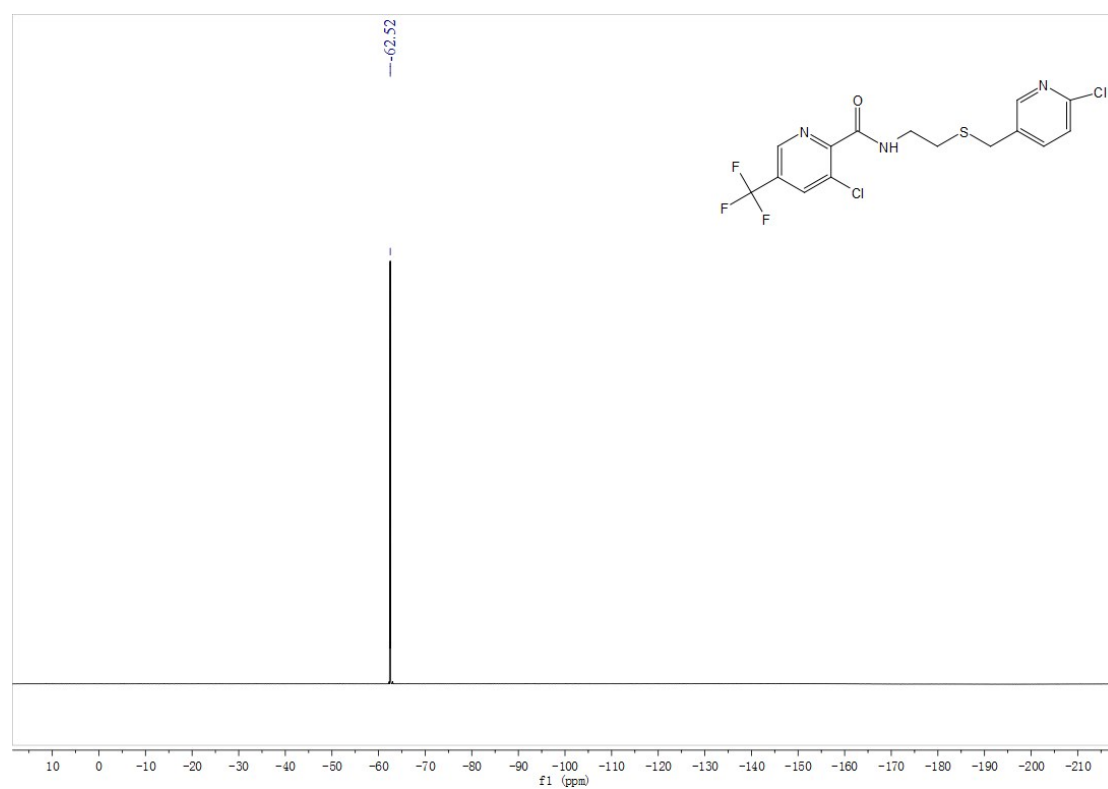


Fig. S63 ^{19}F NMR spectra of compound **E21**

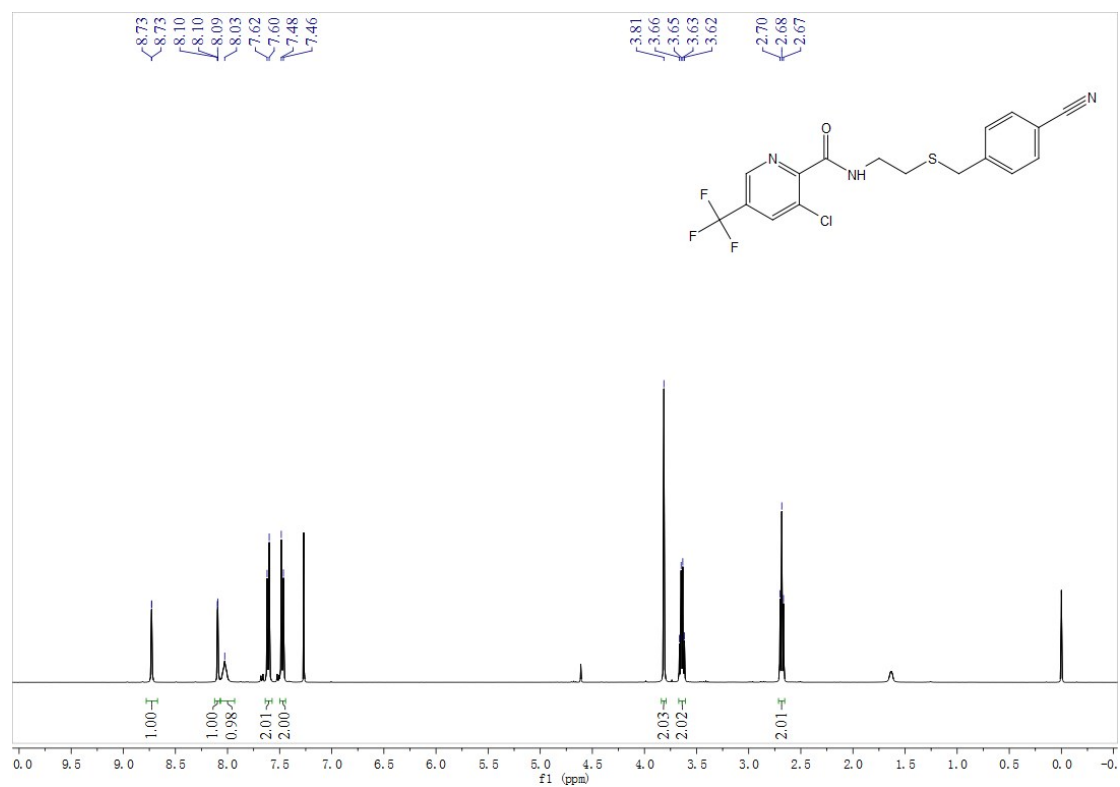


Fig. S64 ¹H NMR spectra of compound E22

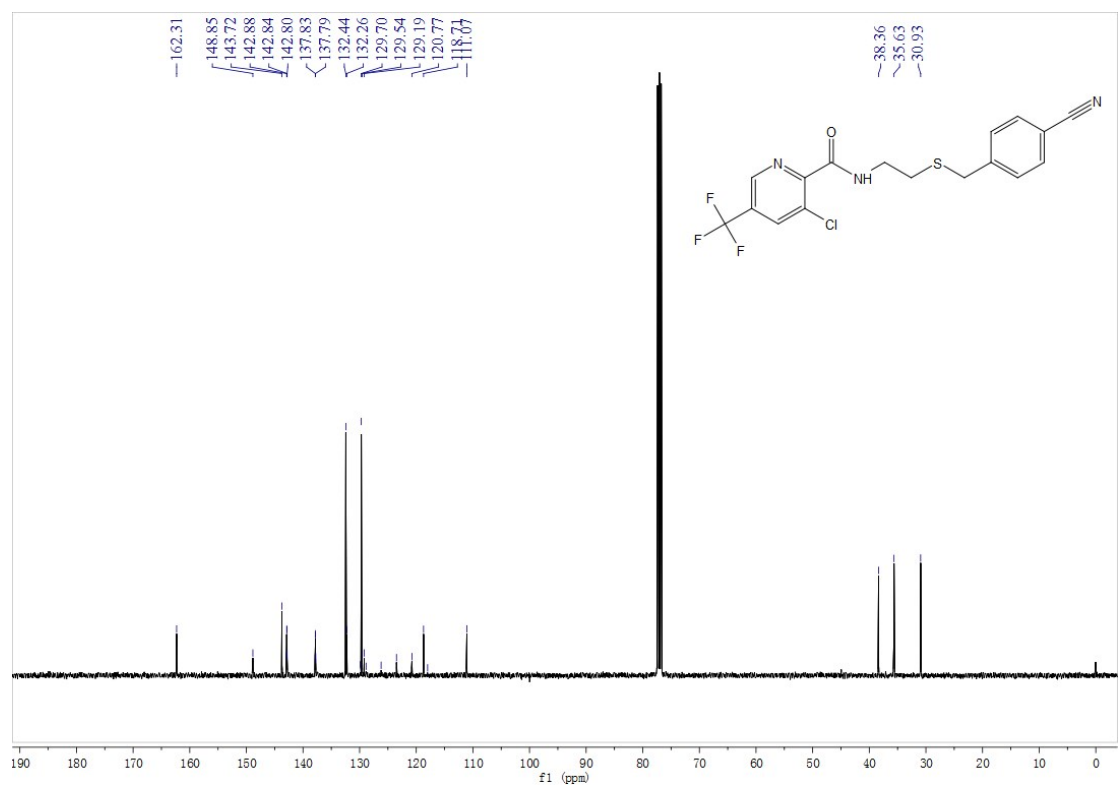


Fig. S65 ¹³C NMR spectra of compound E22

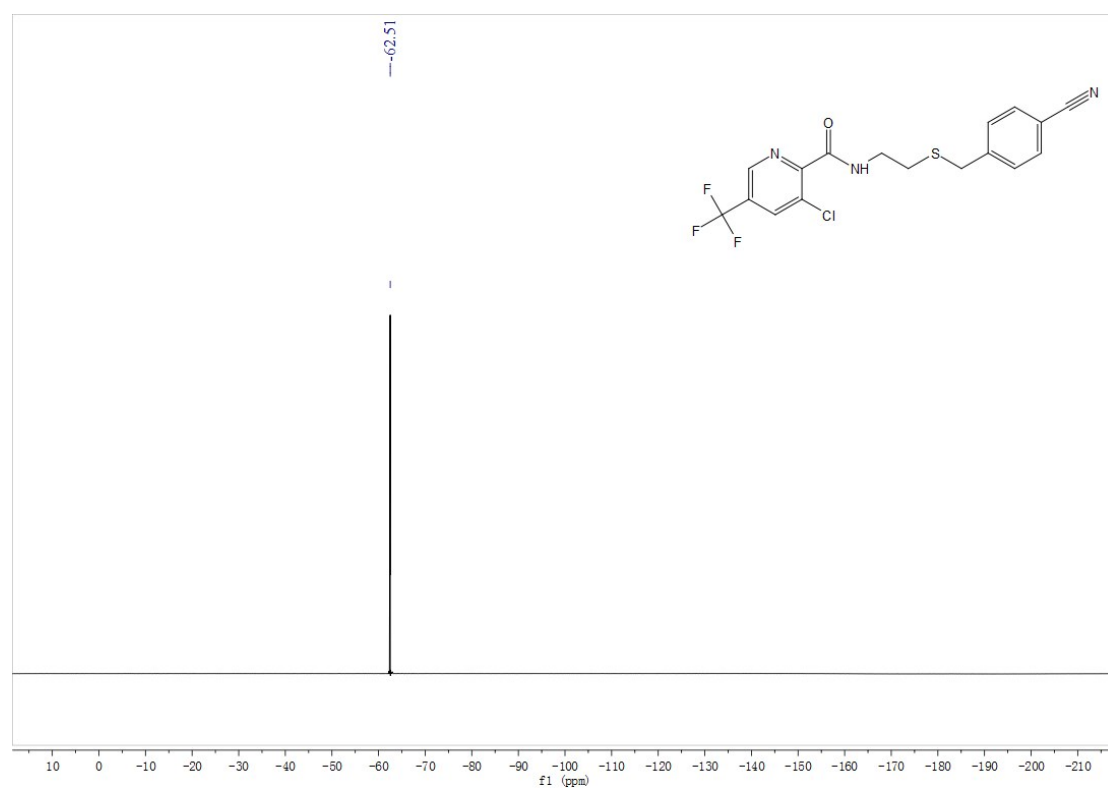


Fig. S66 ^{19}F NMR spectra of compound **E22**

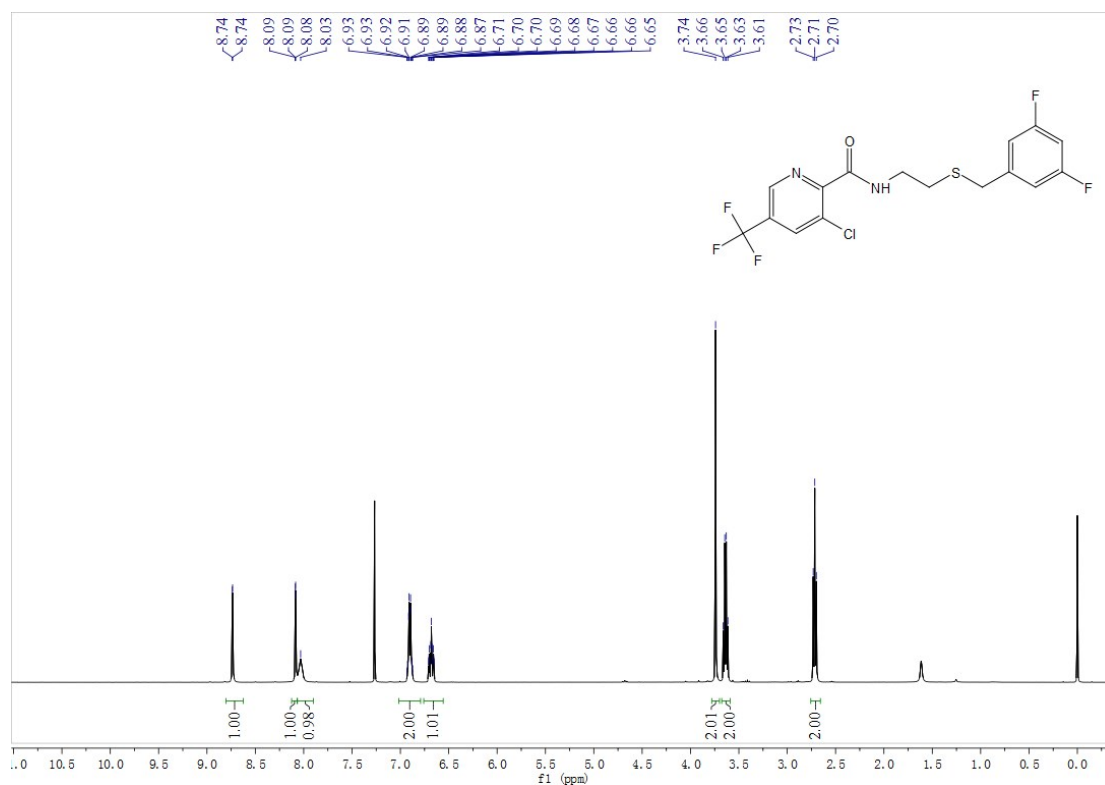


Fig. S67 ¹H NMR spectra of compound E23

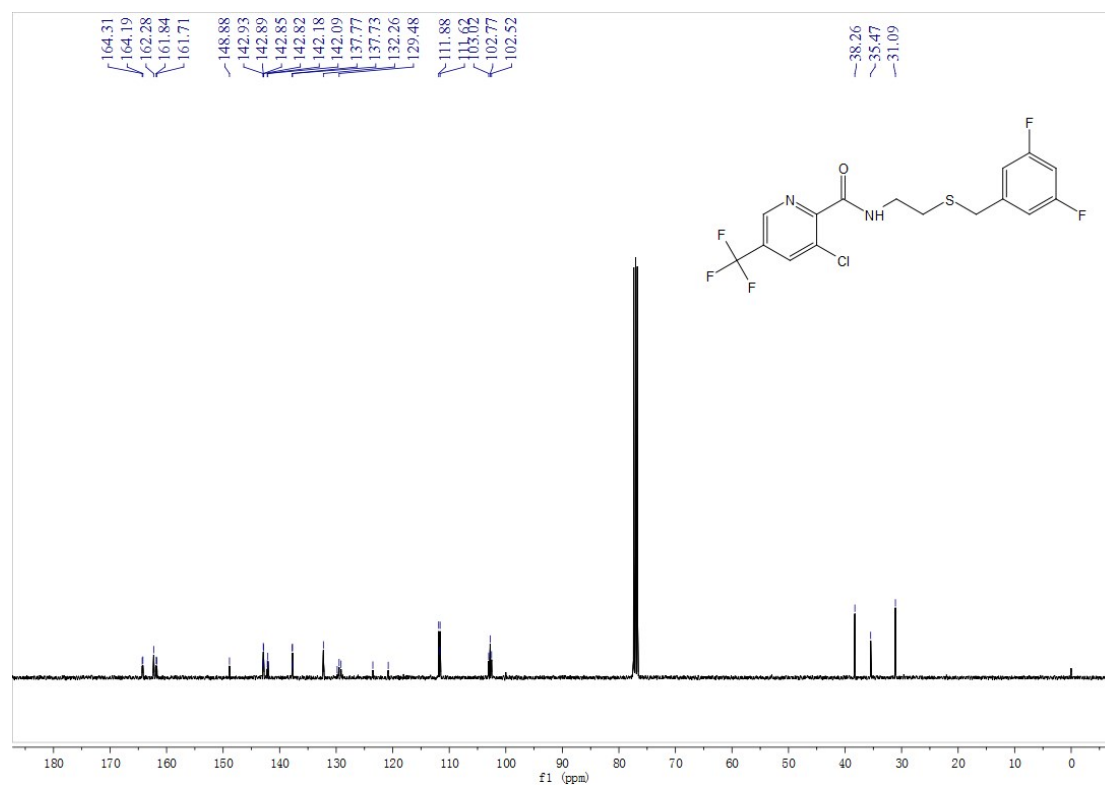


Fig. S68 ¹³C NMR spectra of compound E23

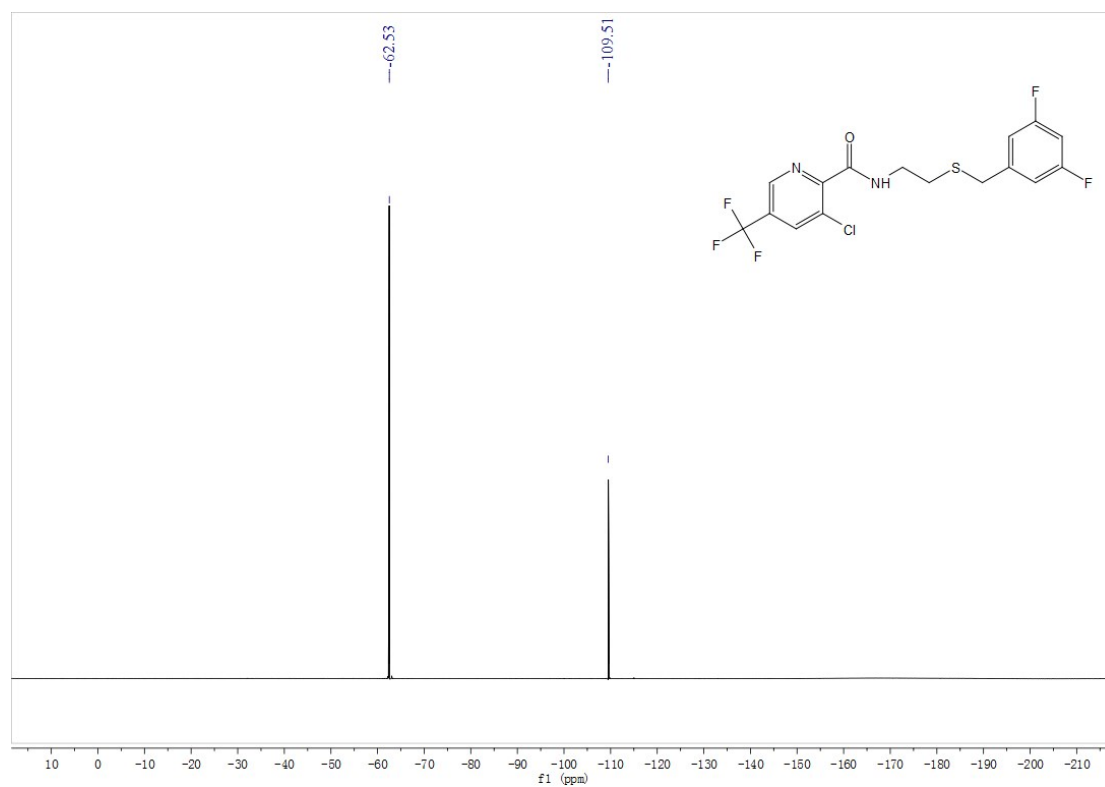


Fig. S69 ^{19}F NMR spectra of compound **E23**

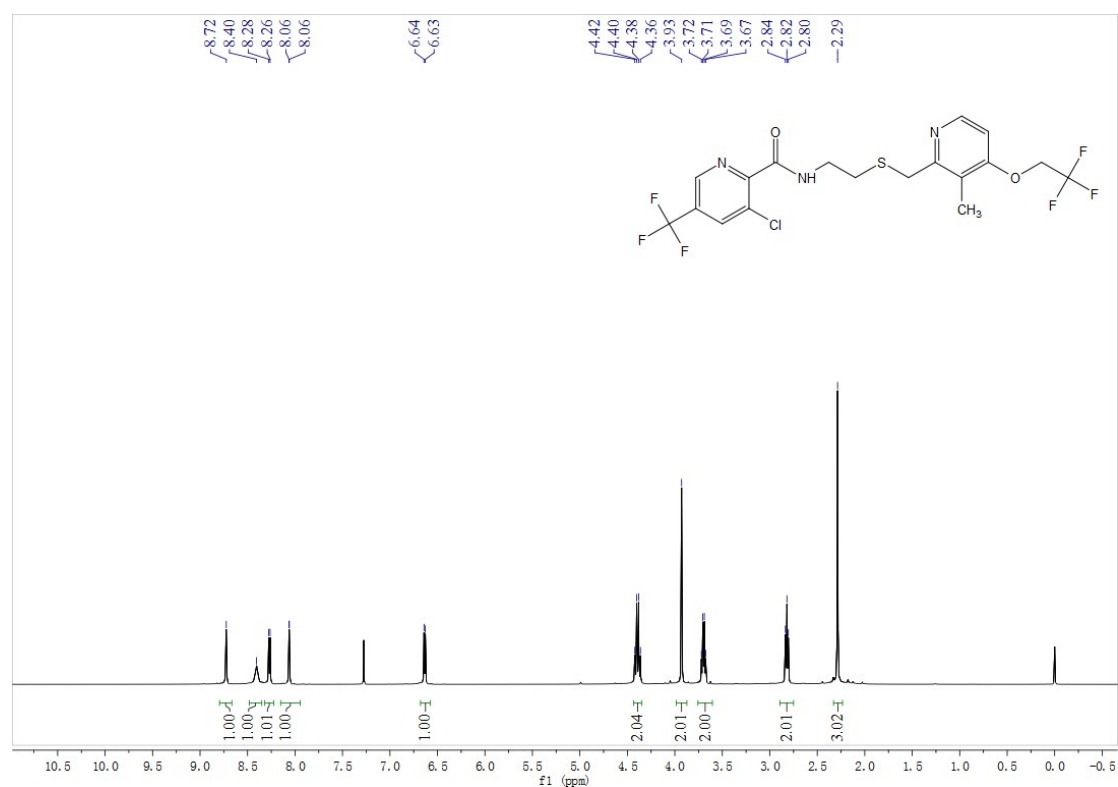


Fig. S70 ¹H NMR spectra of compound E24

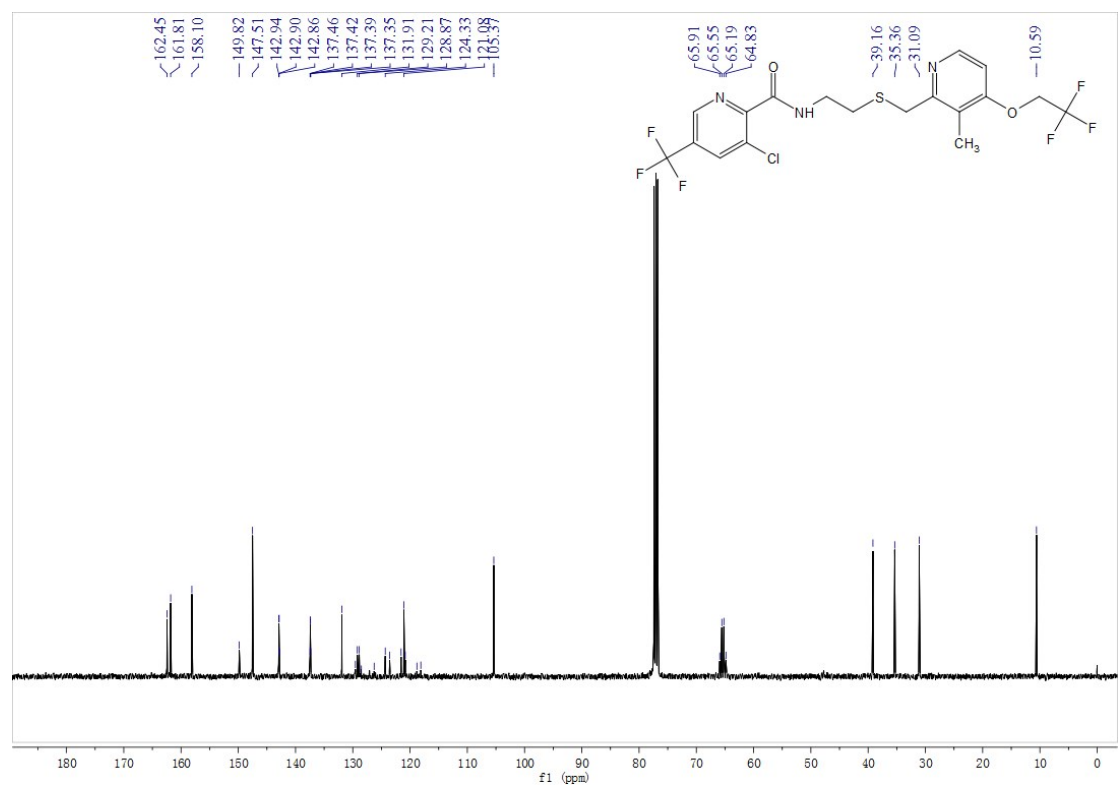


Fig. S71 ¹³C NMR spectra of compound E24

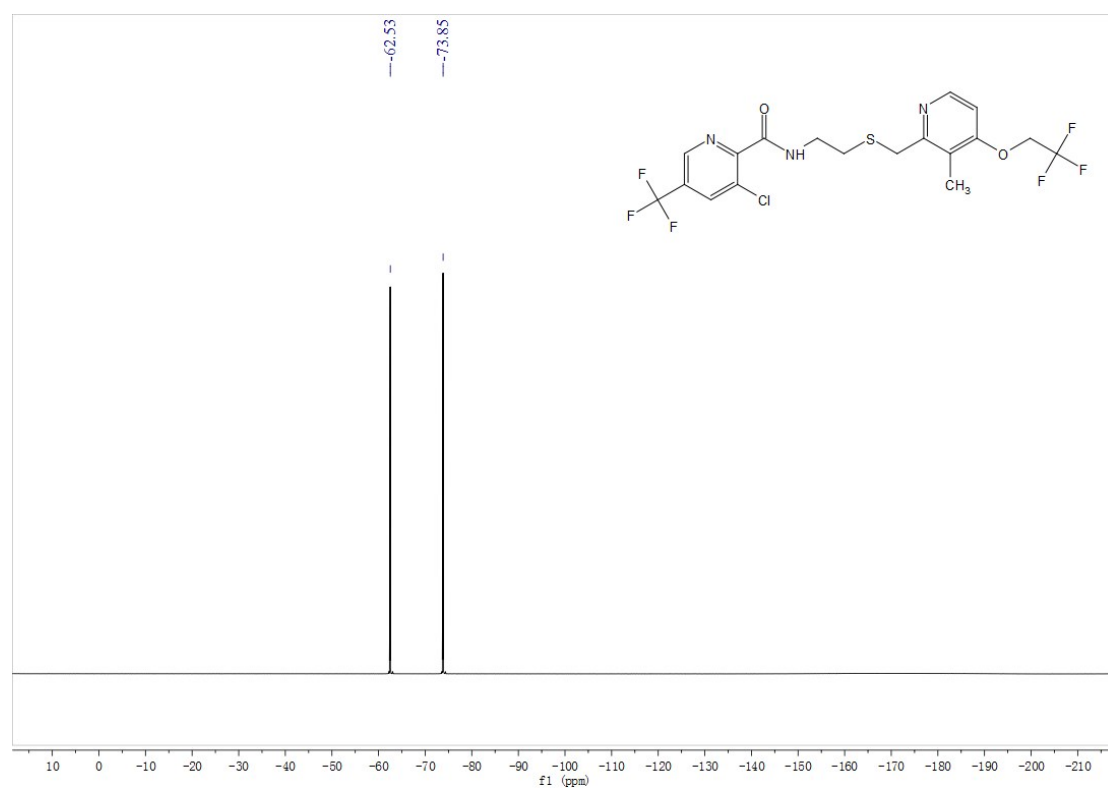


Fig. S72 ^{19}F NMR spectra of compound **E24**

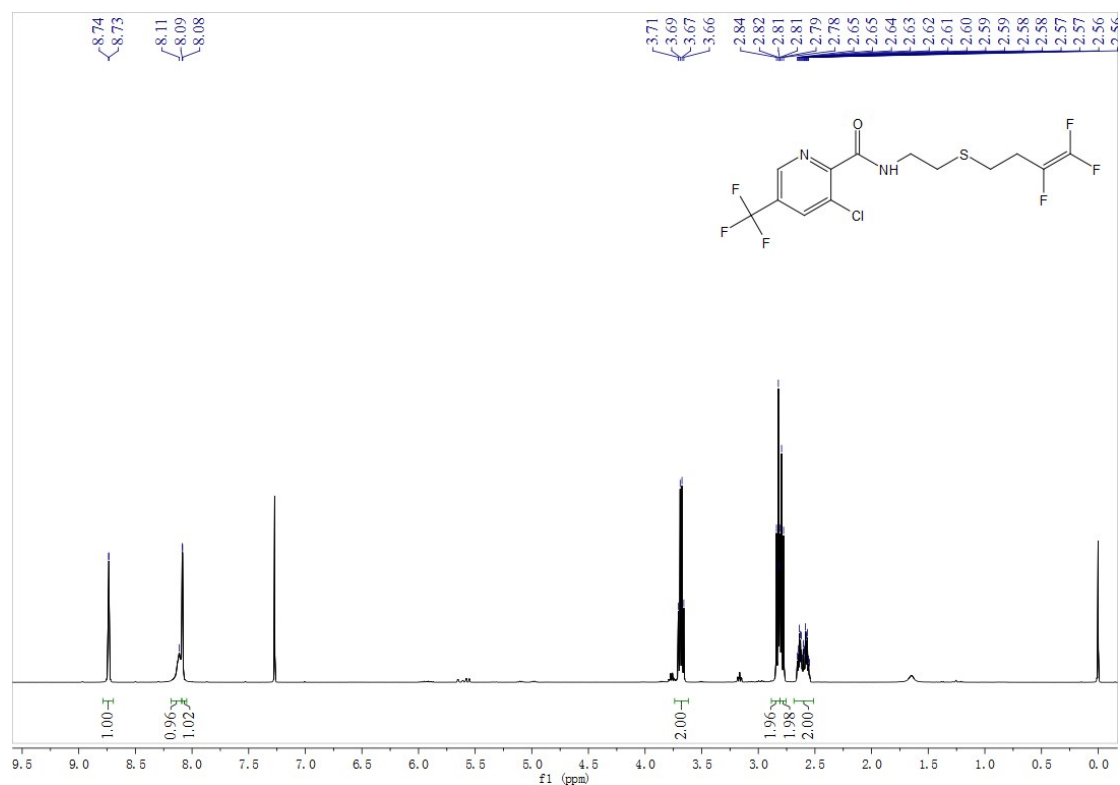


Fig. S73 ¹H NMR spectra of compound E25

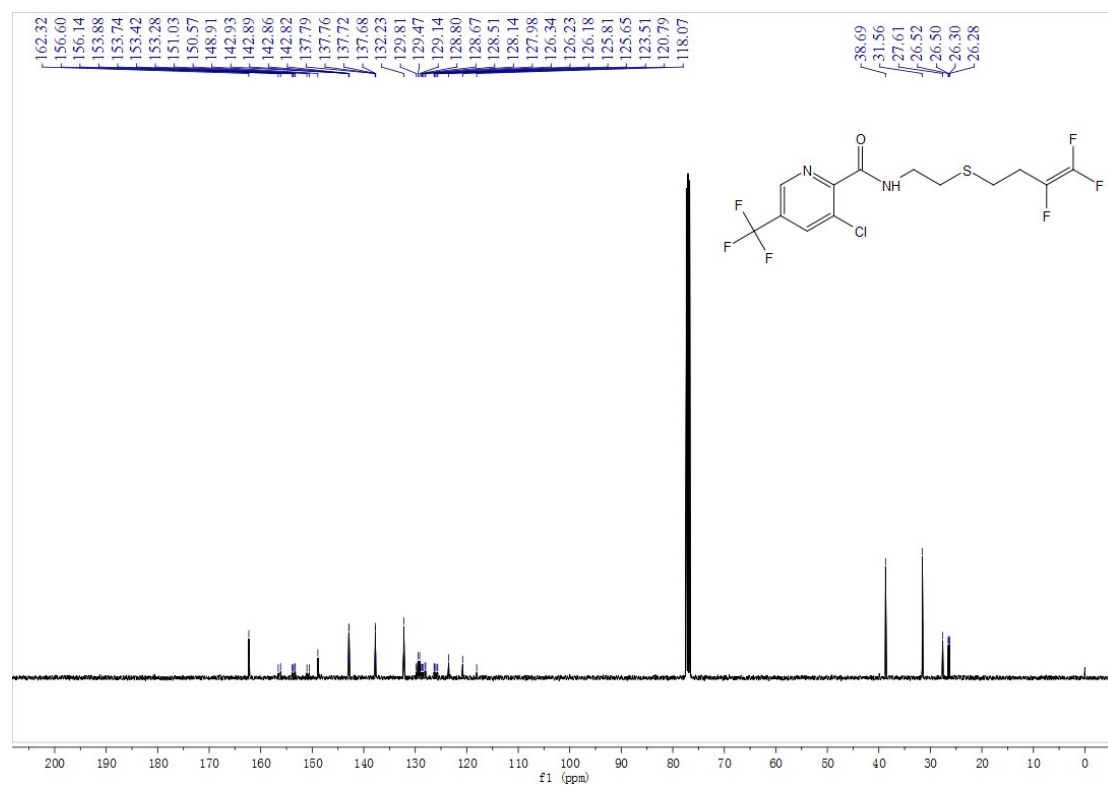


Fig. S74 ¹³C NMR spectra of compound E25

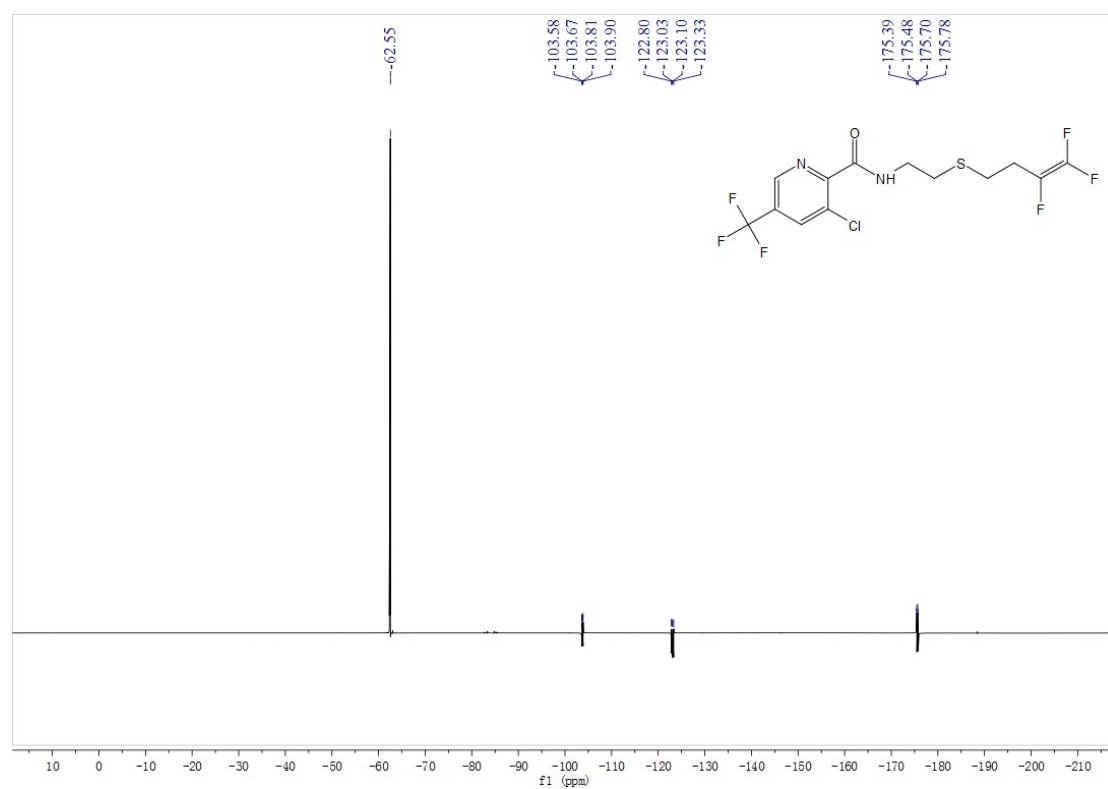


Fig. S75 ^{19}F NMR spectra of compound **E25**

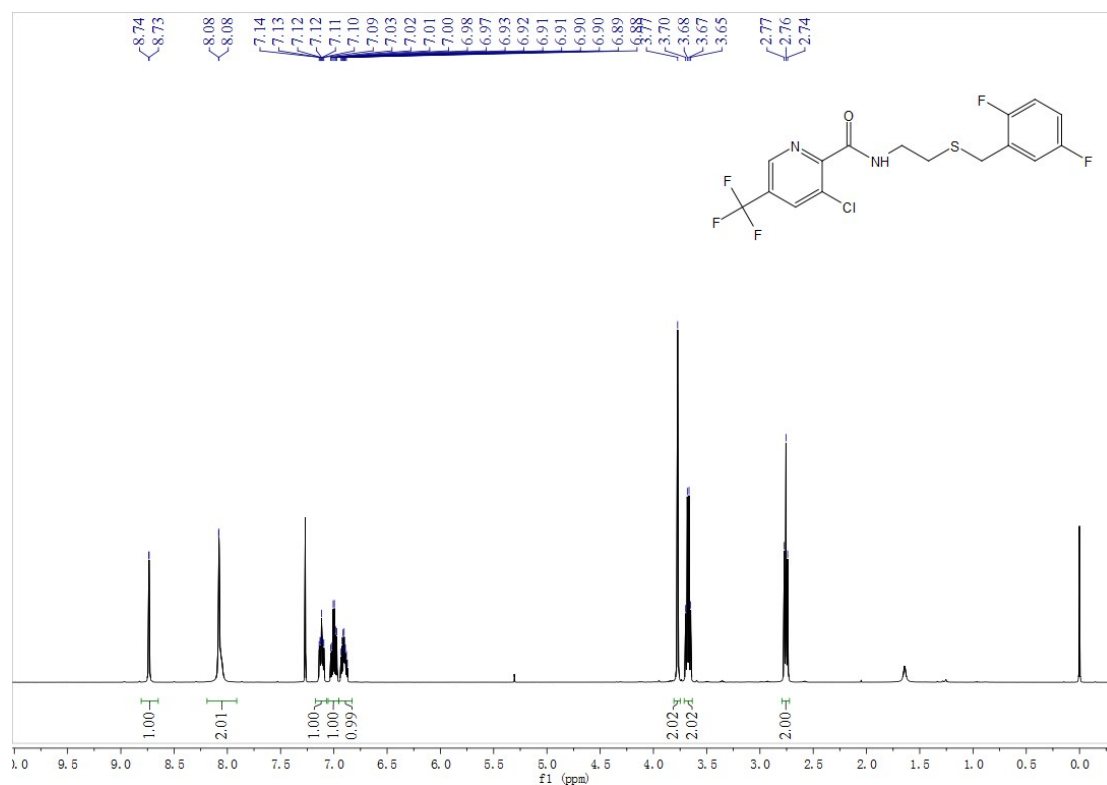


Fig. S76 ¹H NMR spectra of compound E26

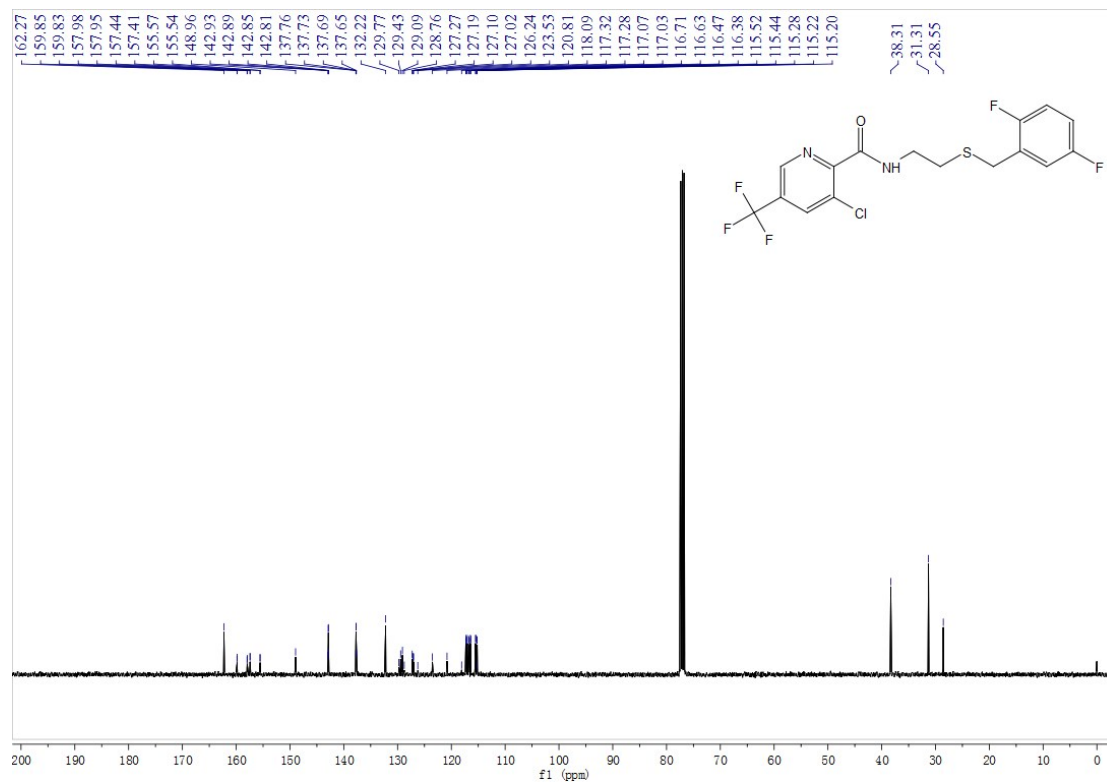


Fig. S77 ¹³C NMR spectra of compound E26

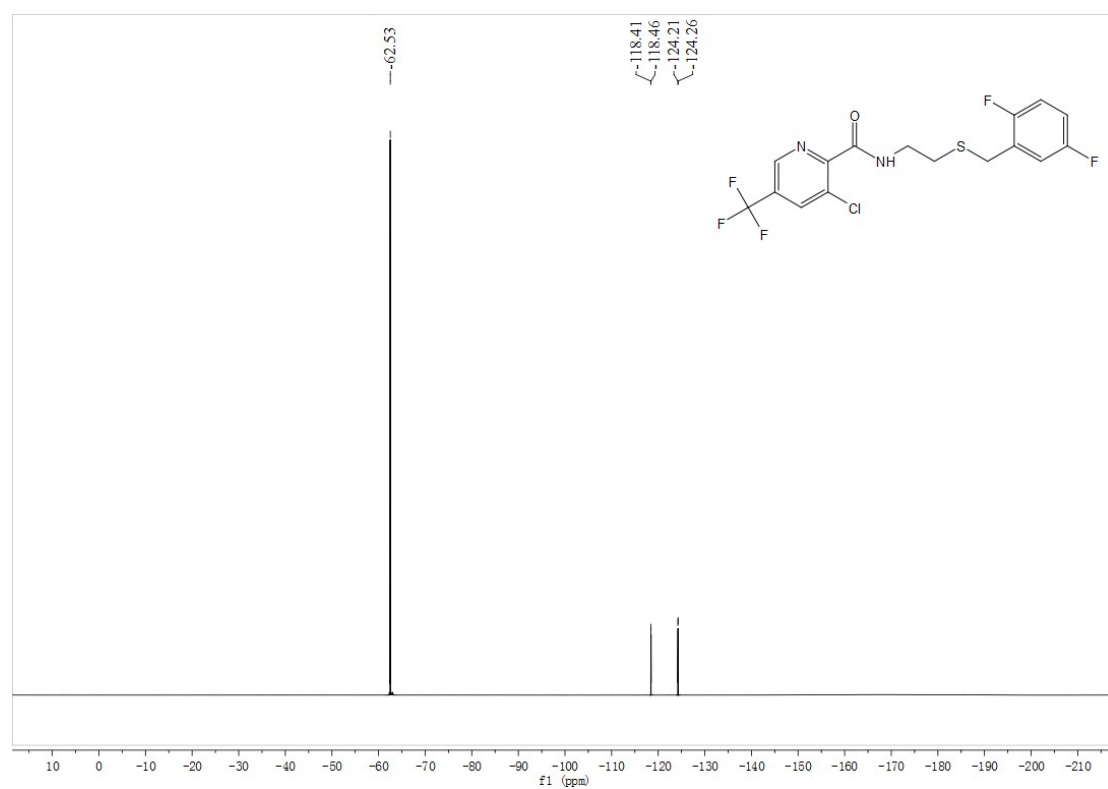


Fig. S78 ^{19}F NMR spectra of compound **E26**

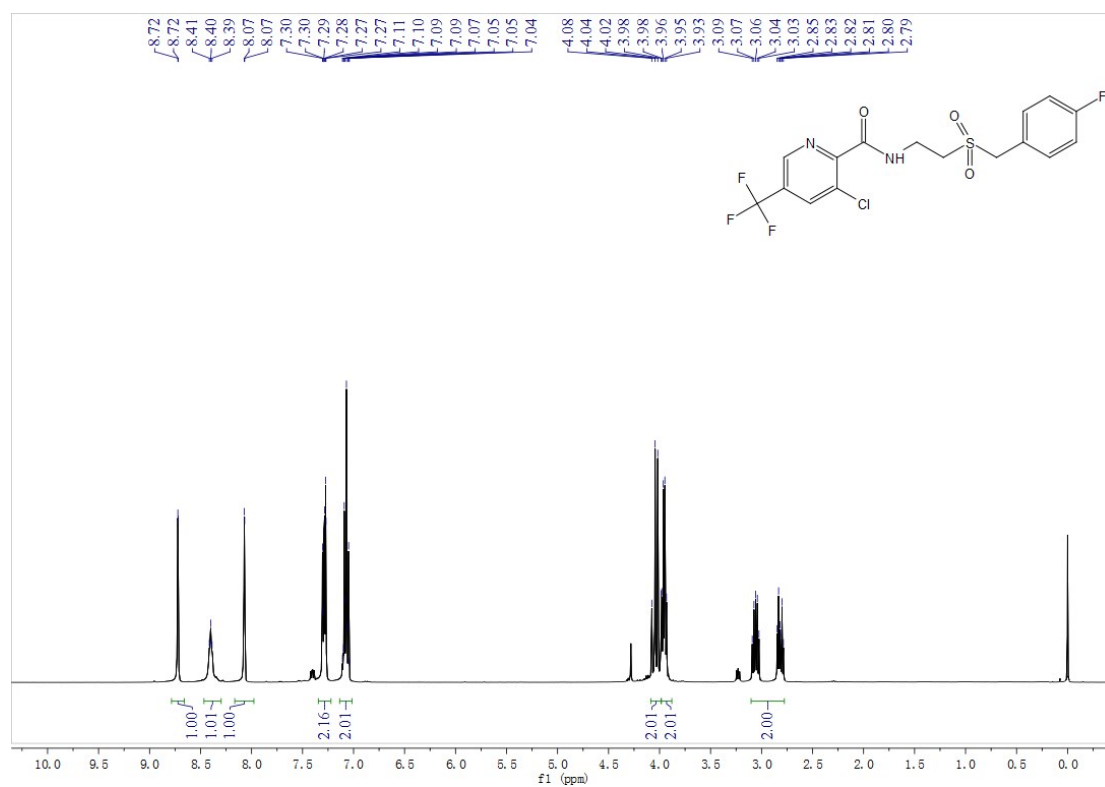


Fig. S79 ¹H NMR spectra of compound **F1**

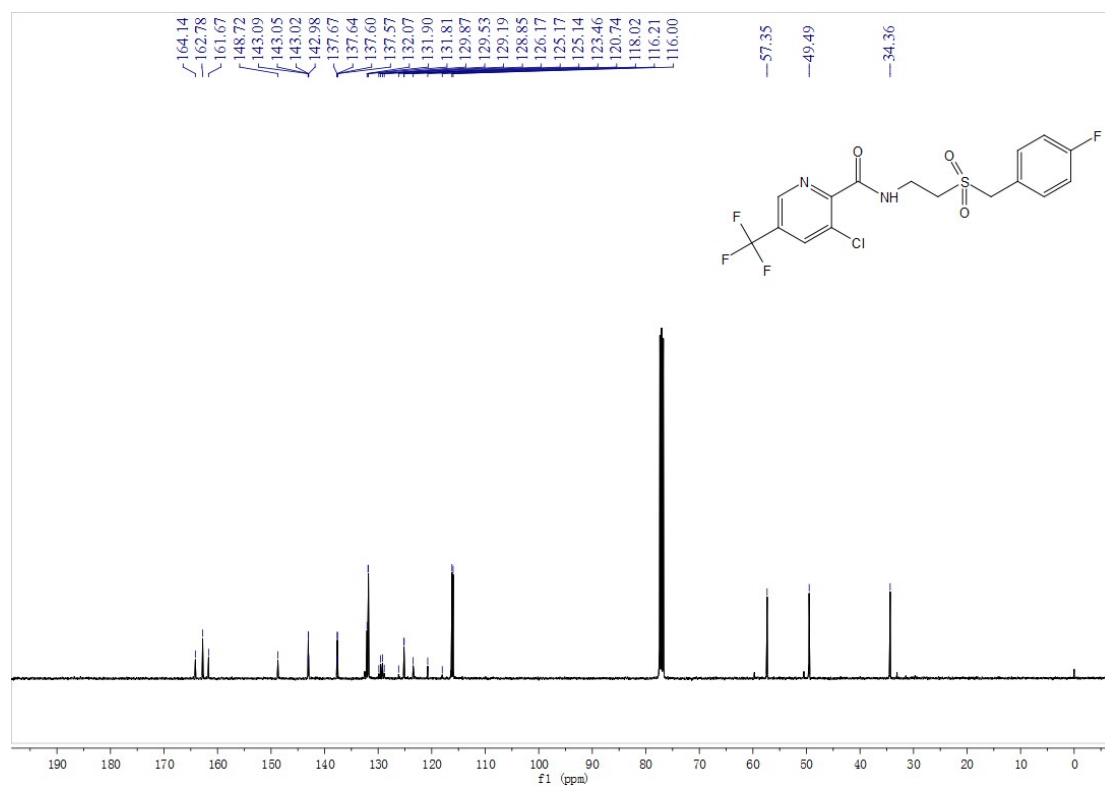


Fig. S80 ¹³C NMR spectra of compound **F1**

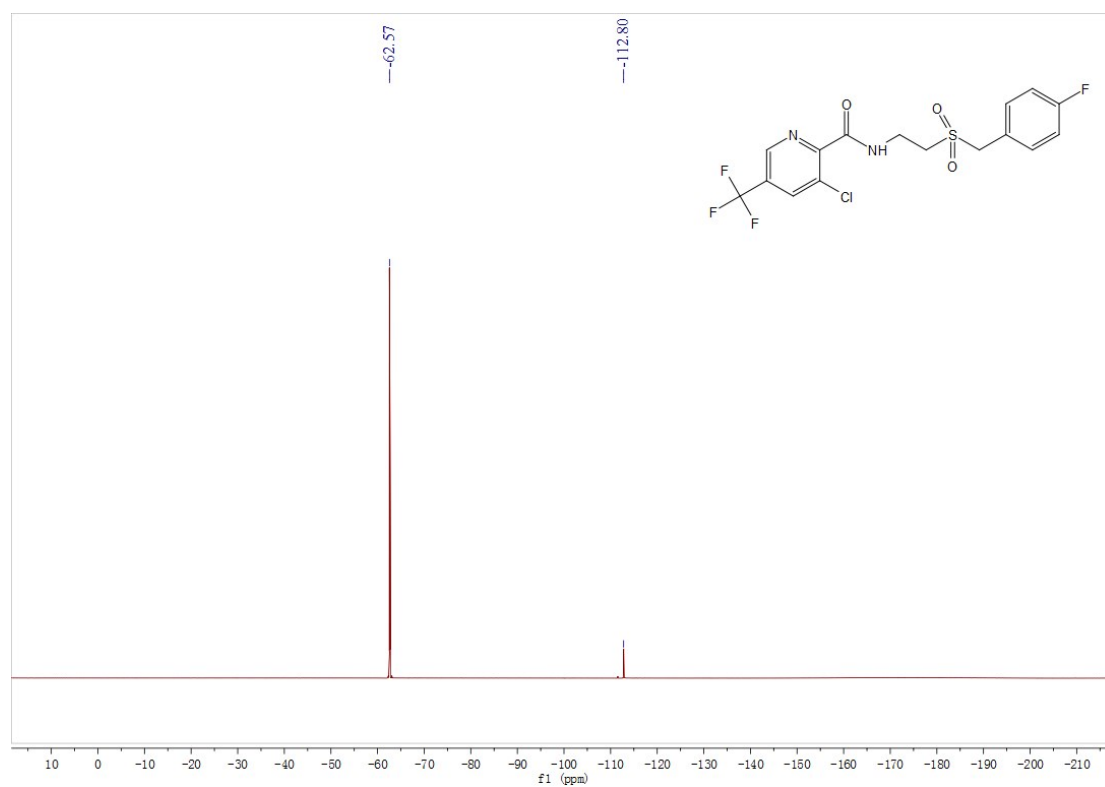


Fig. S81 ^{19}F NMR spectra of compound **F1**

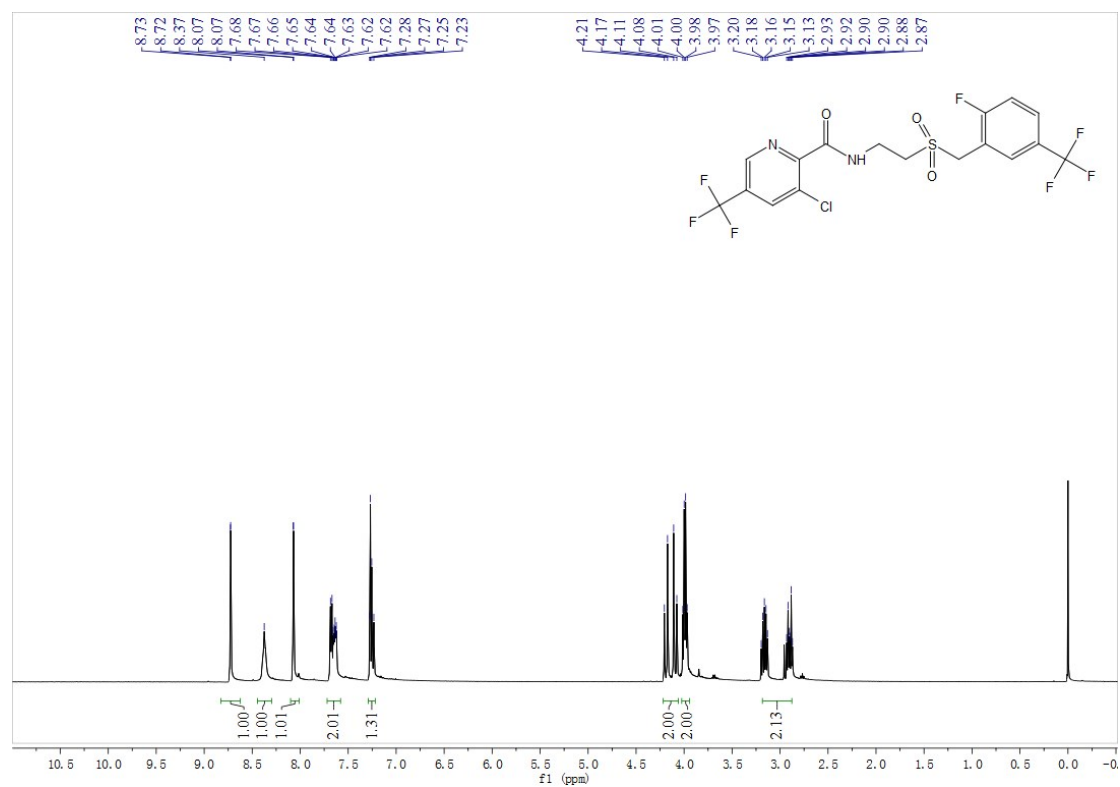


Fig. S82 ¹H NMR spectra of compound **F2**

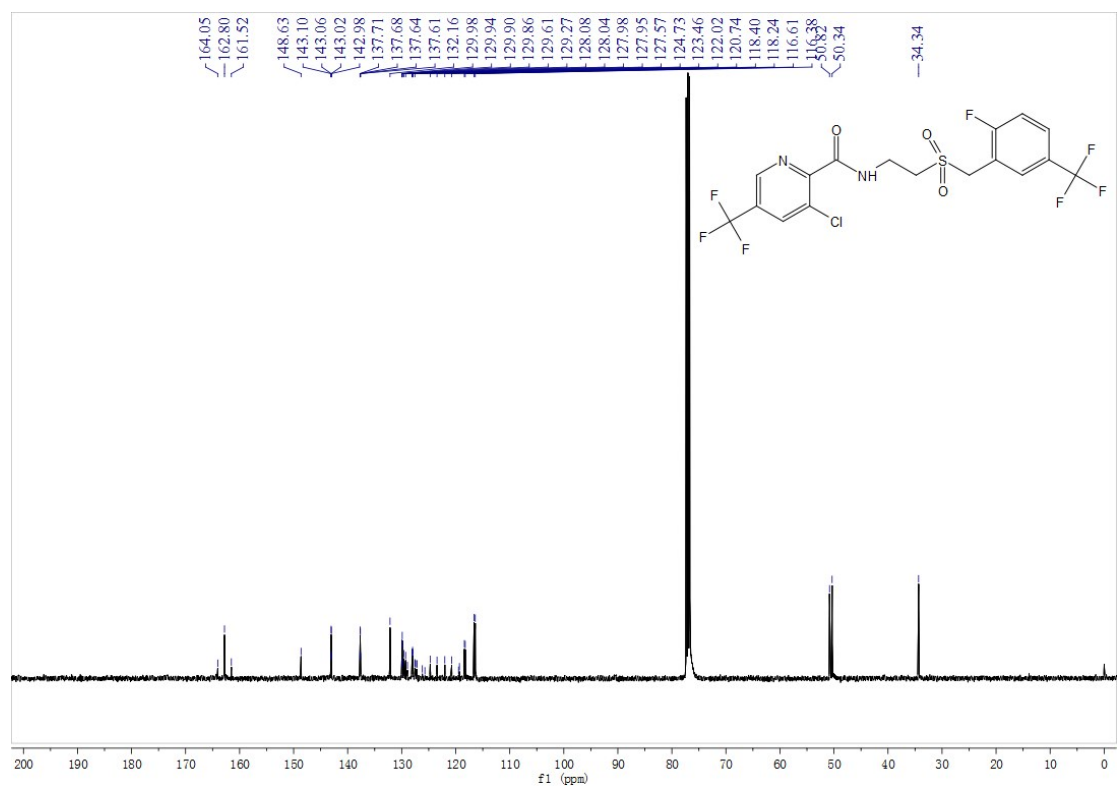


Fig. S83 ¹³C NMR spectra of compound **F2**

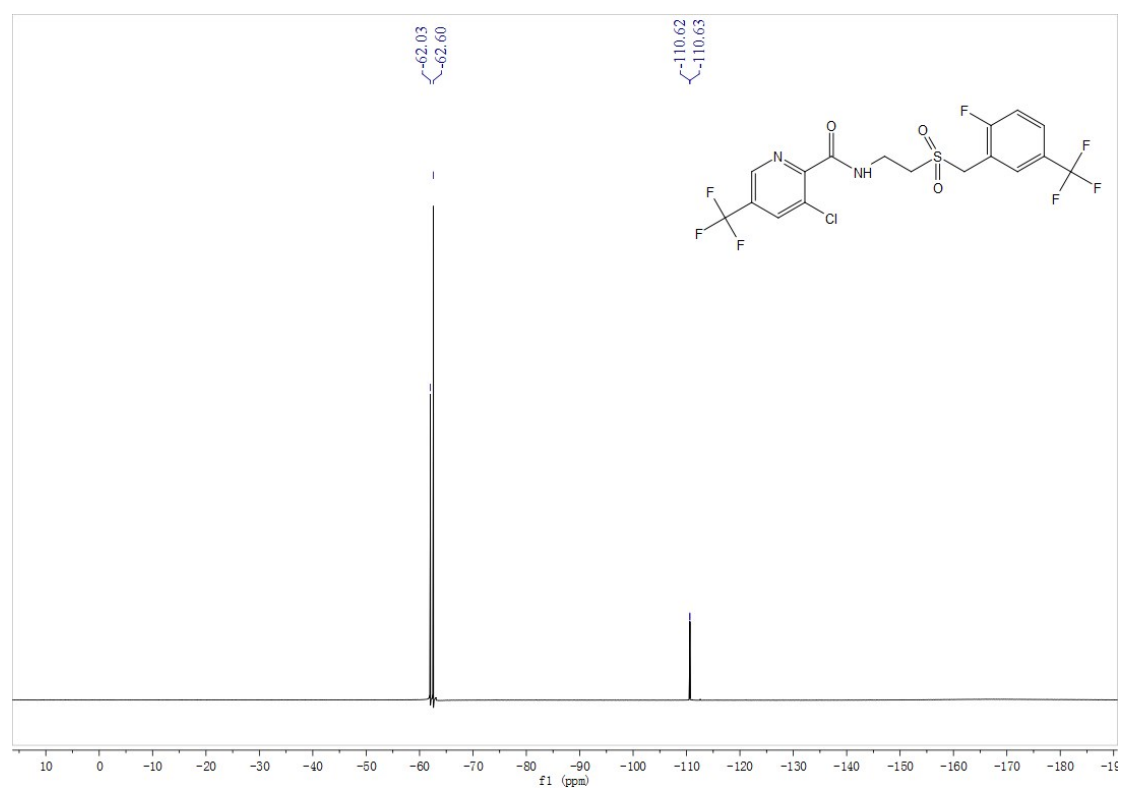


Fig. S84 ^{19}F NMR spectra of compound **F2**

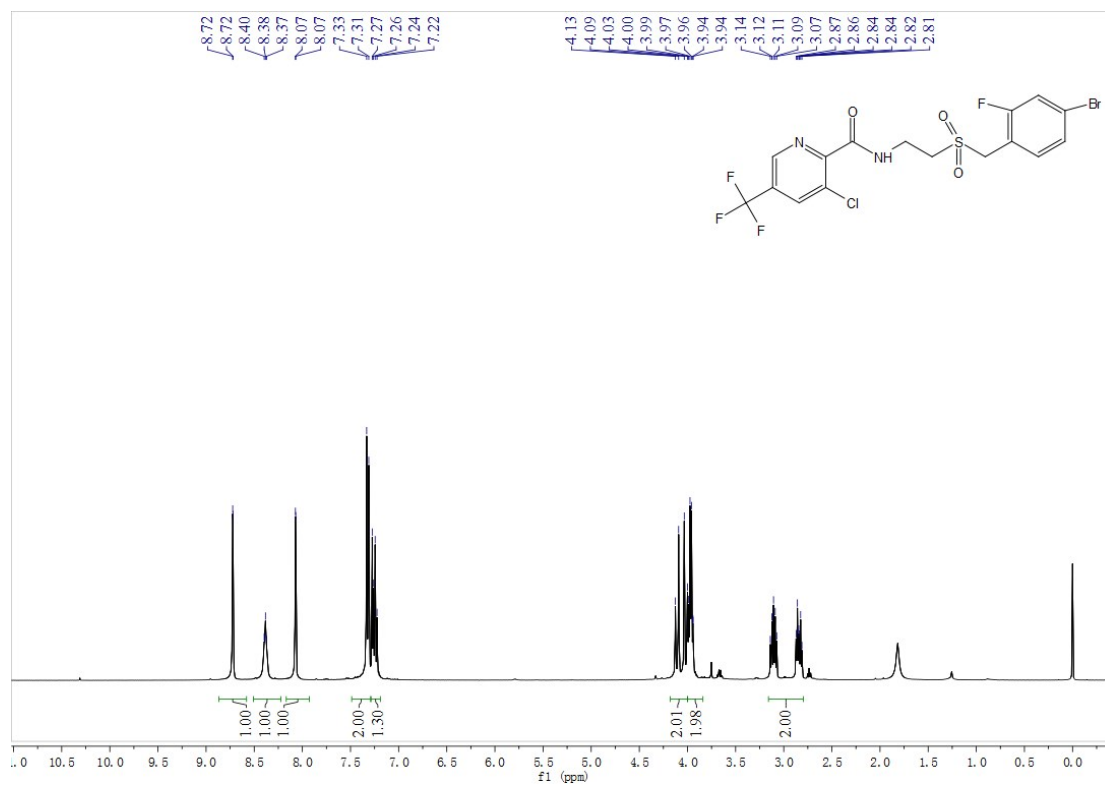


Fig. S85 ¹H NMR spectra of compound **F3**

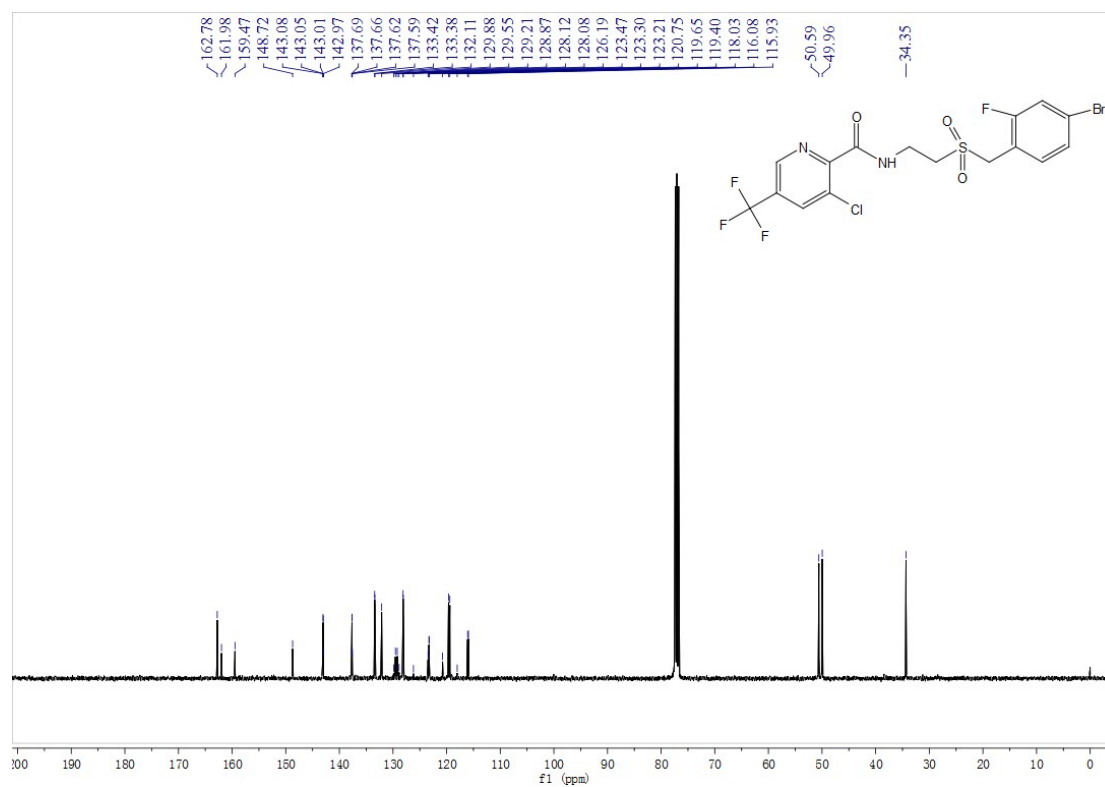


Fig. S86 ¹³C NMR spectra of compound **F3**

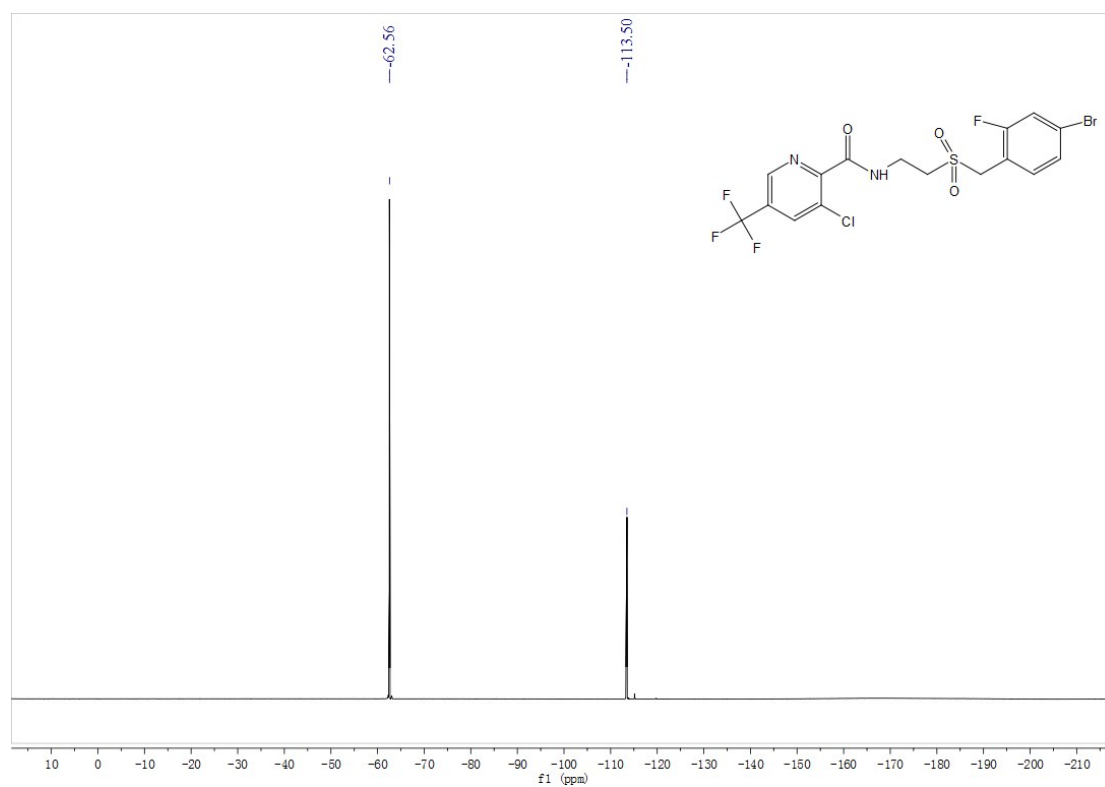


Fig. S87 ^{19}F NMR spectra of compound **F3**

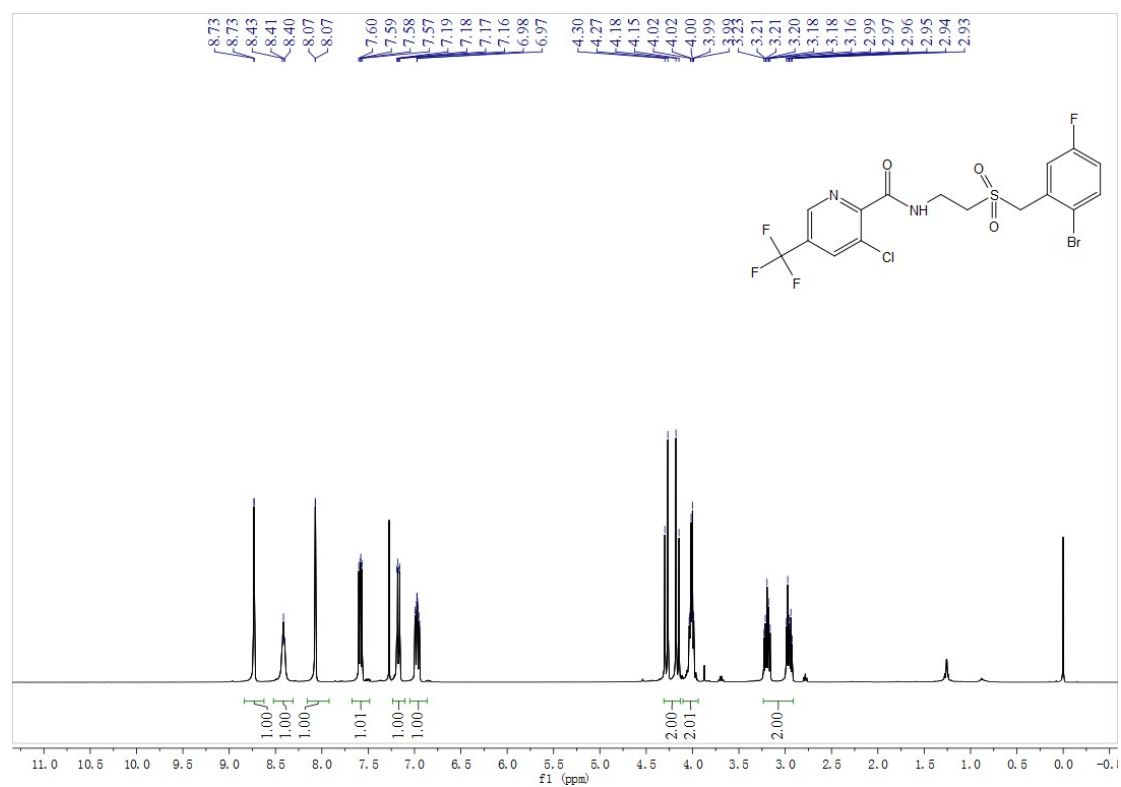


Fig. S88 ¹H NMR spectra of compound **F4**

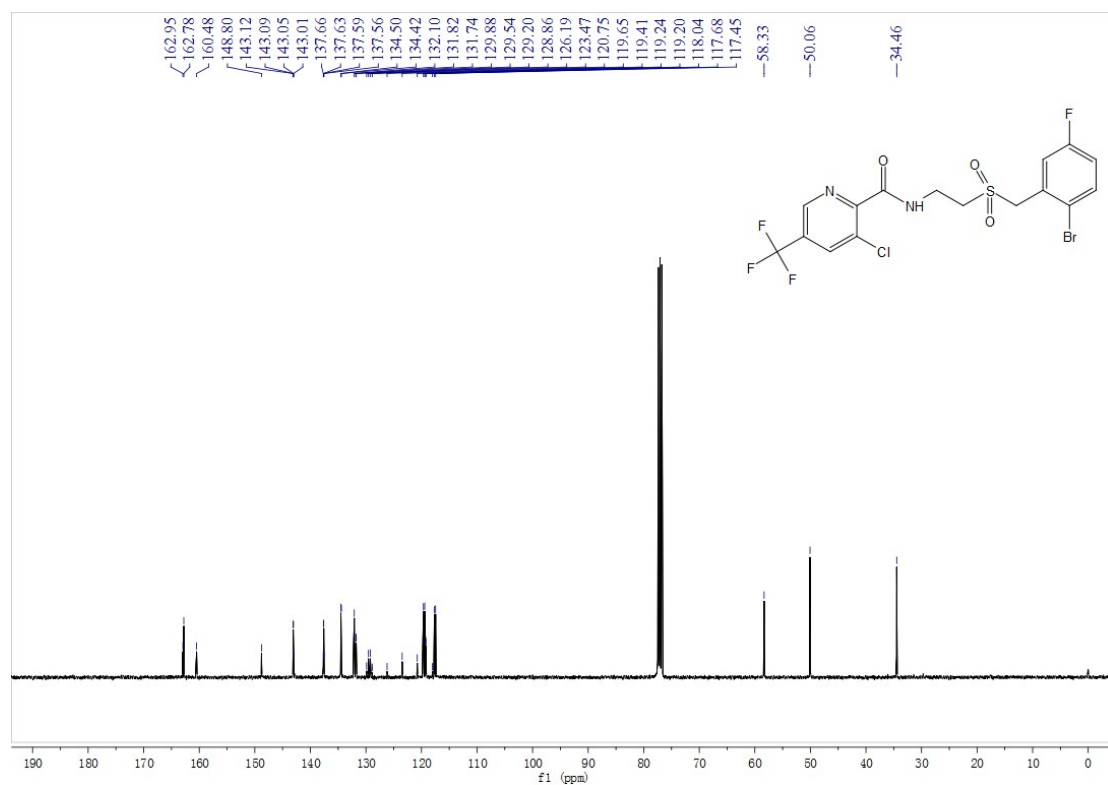


Fig. S89 ¹³C NMR spectra of compound **F4**

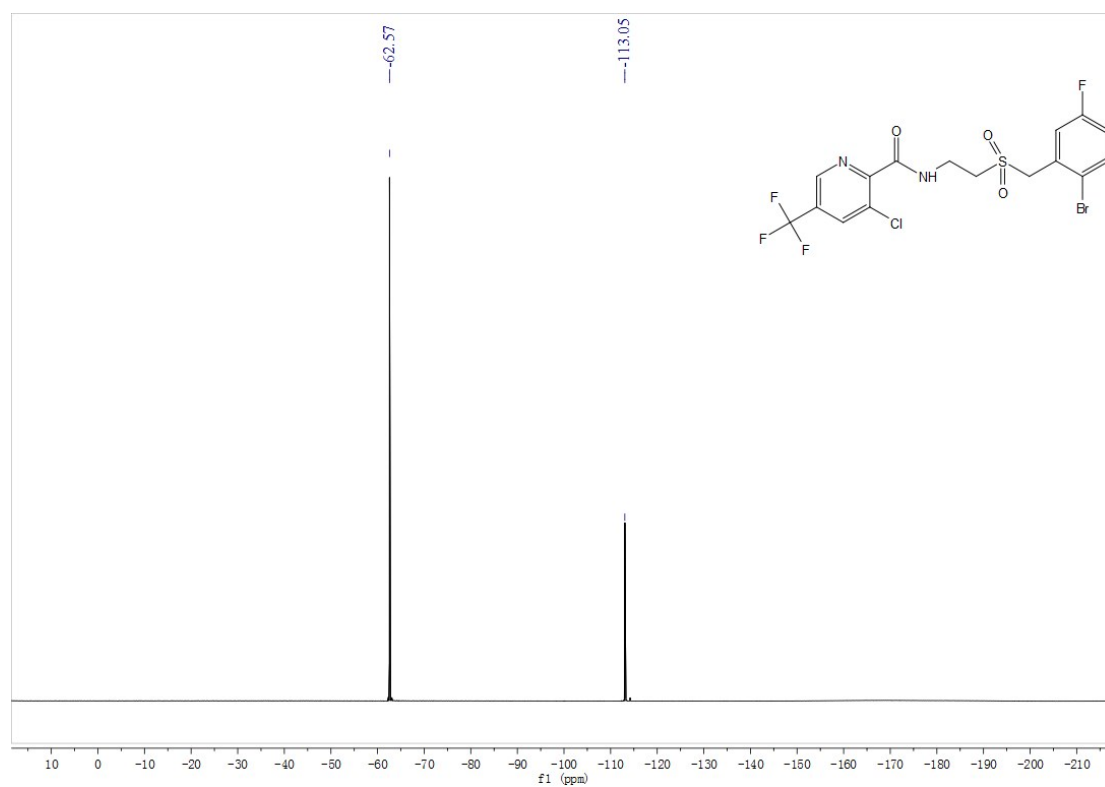


Fig. S90 ^{19}F NMR spectra of compound **F4**

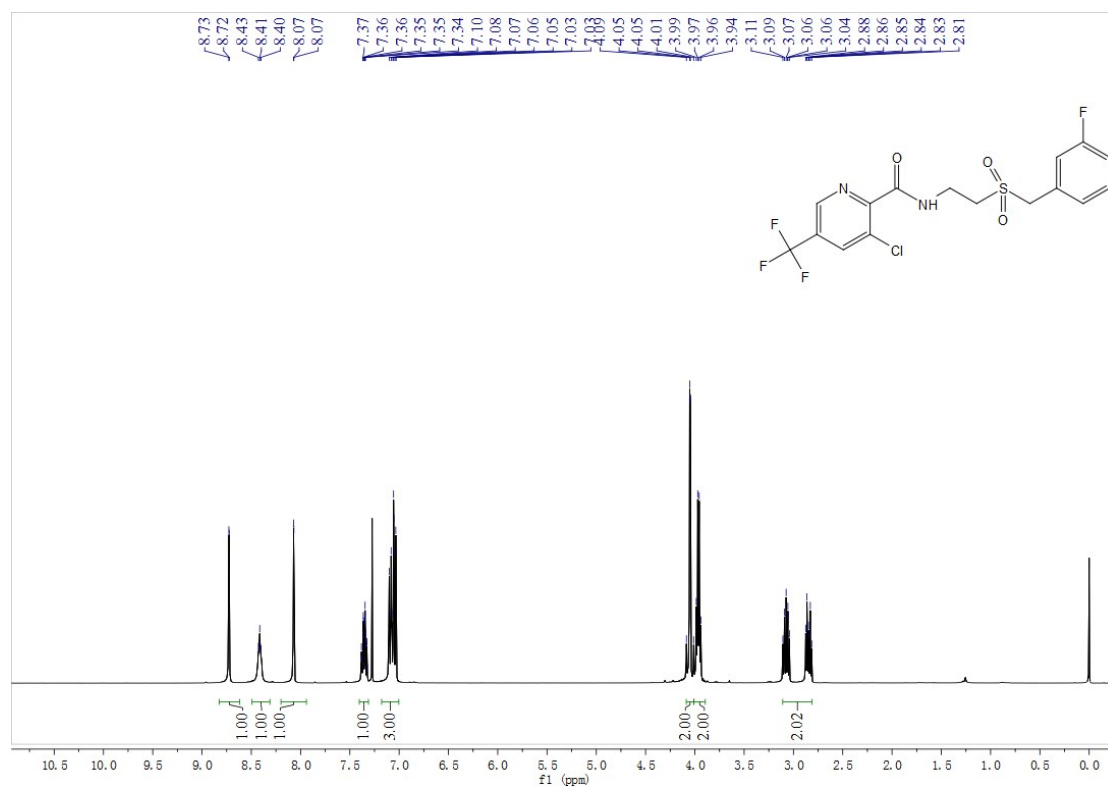


Fig. S91 ¹H NMR spectra of compound **F5**

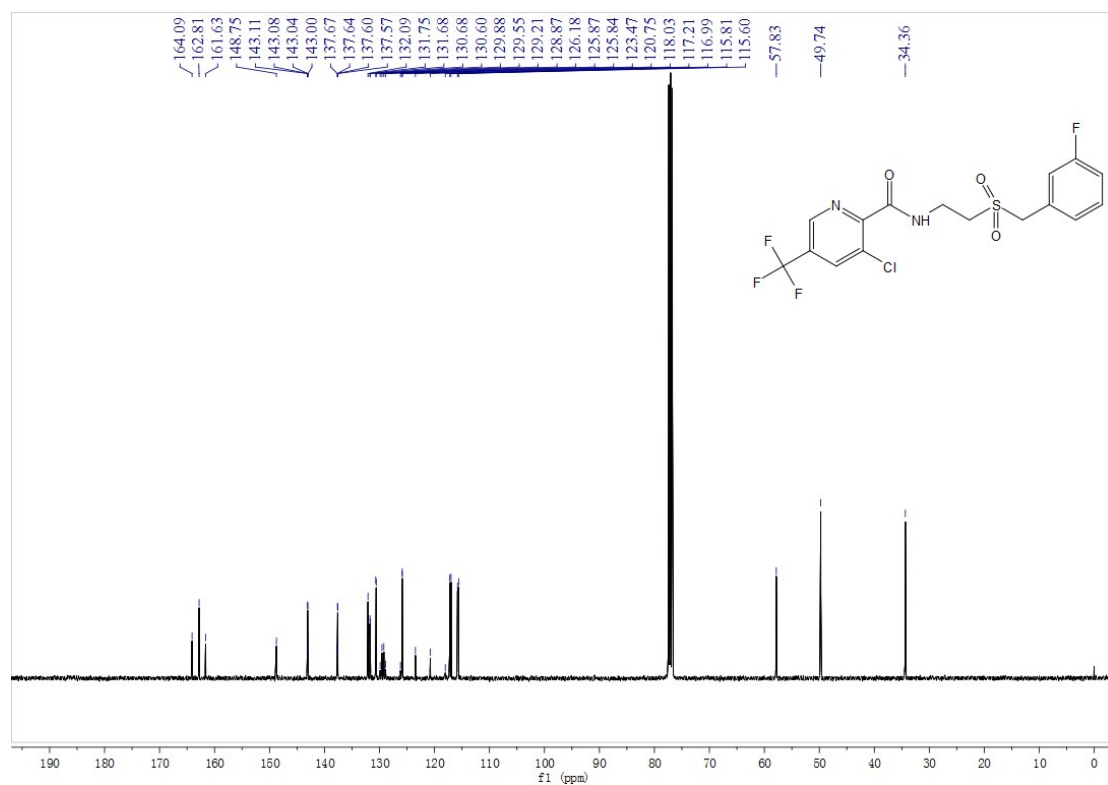


Fig. S92 ¹³C NMR spectra of compound **F5**

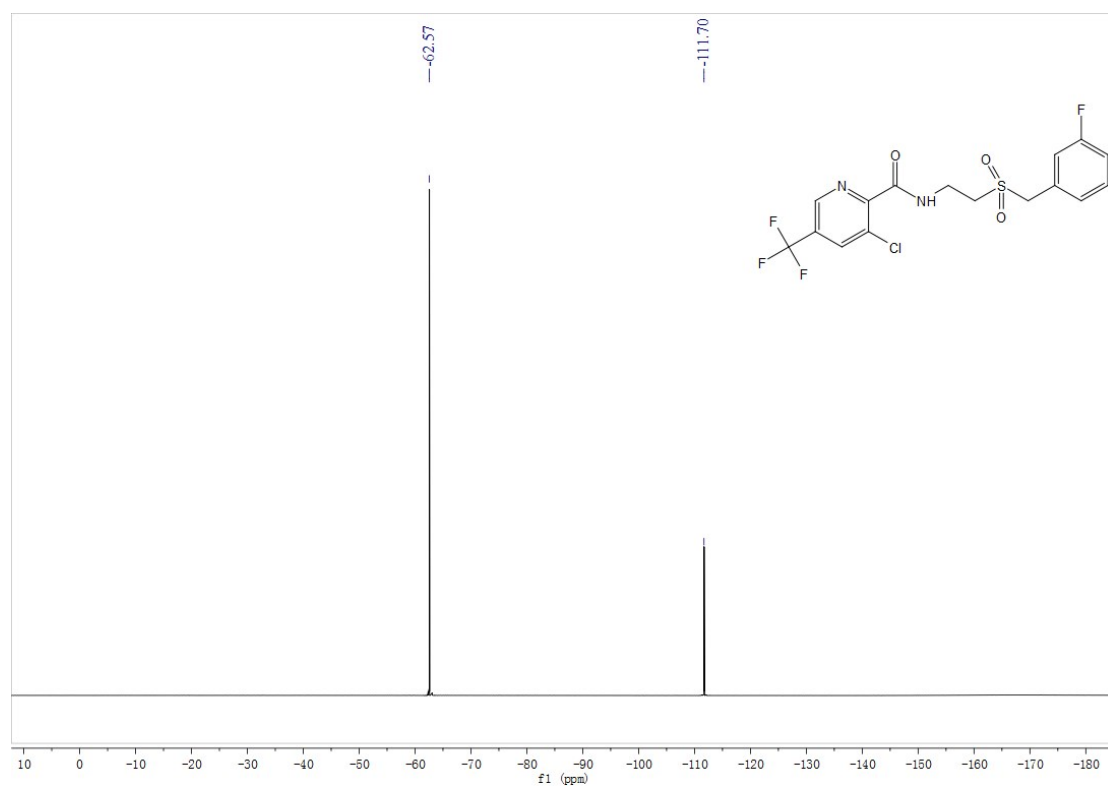


Fig. S93 ^{19}F NMR spectra of compound **F5**

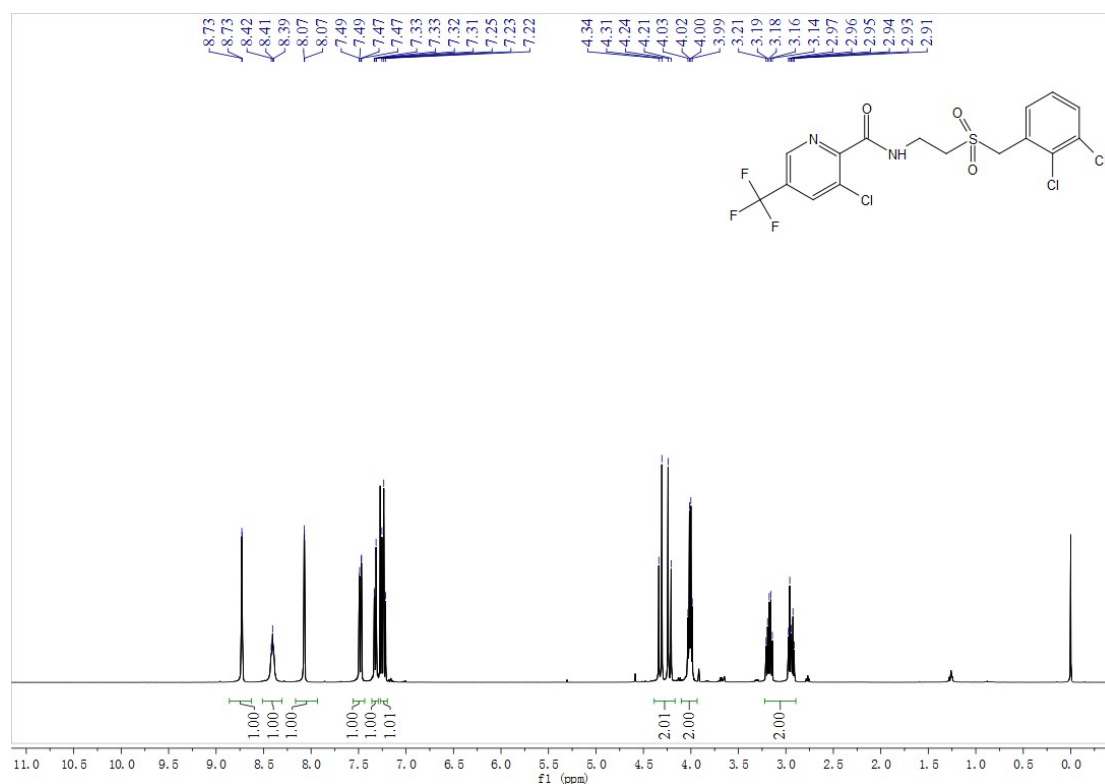


Fig. S94 ¹H NMR spectra of compound **F6**

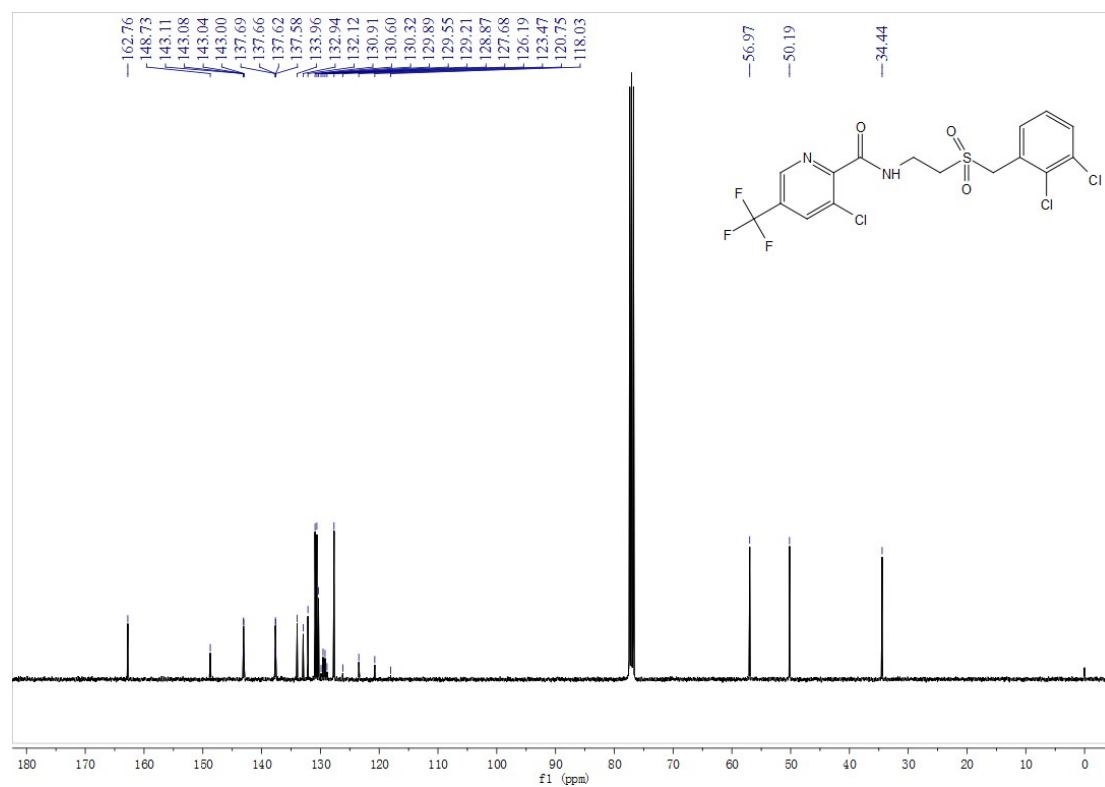


Fig. S95 ¹³C NMR spectra of compound **F6**

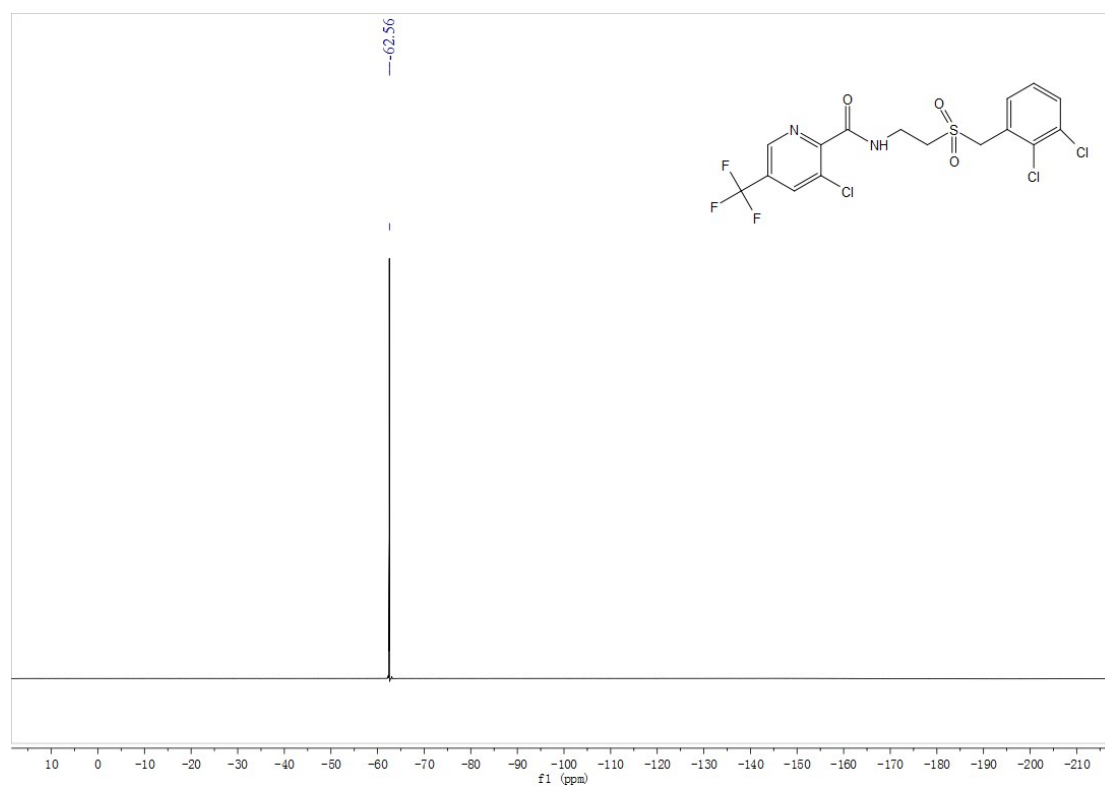


Fig. S96 ^{19}F NMR spectra of compound **F6**

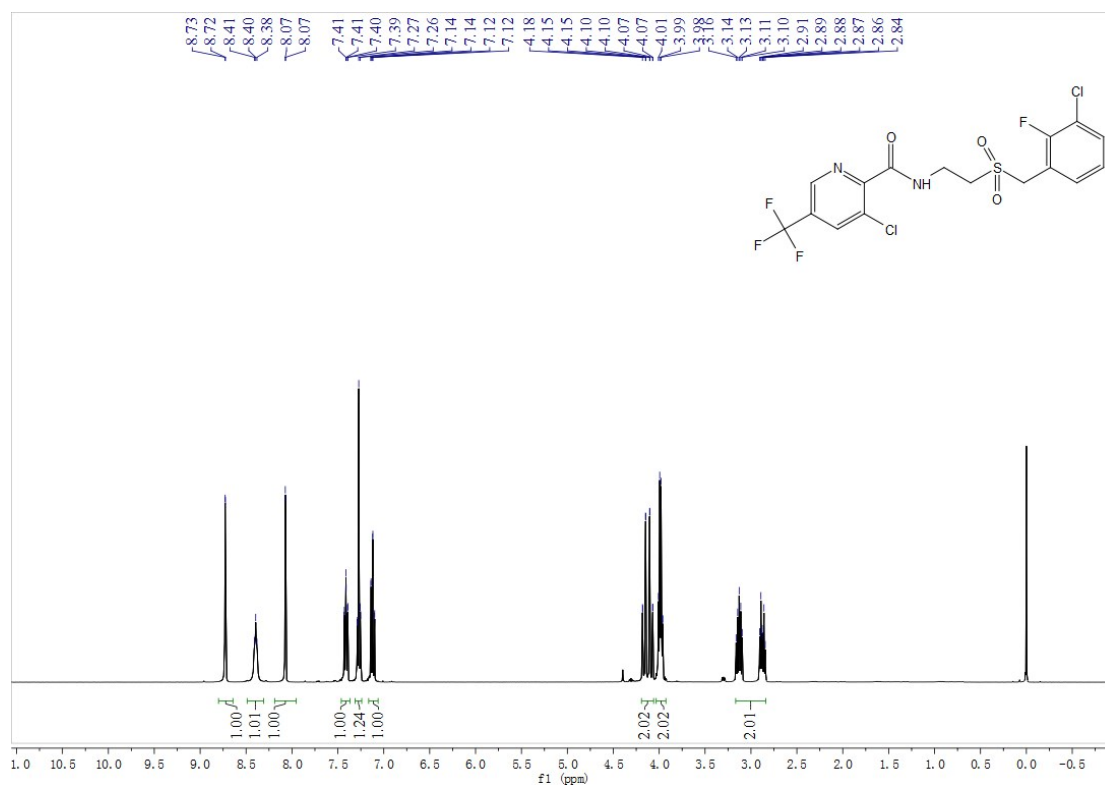


Fig. S97 ¹H NMR spectra of compound **F7**

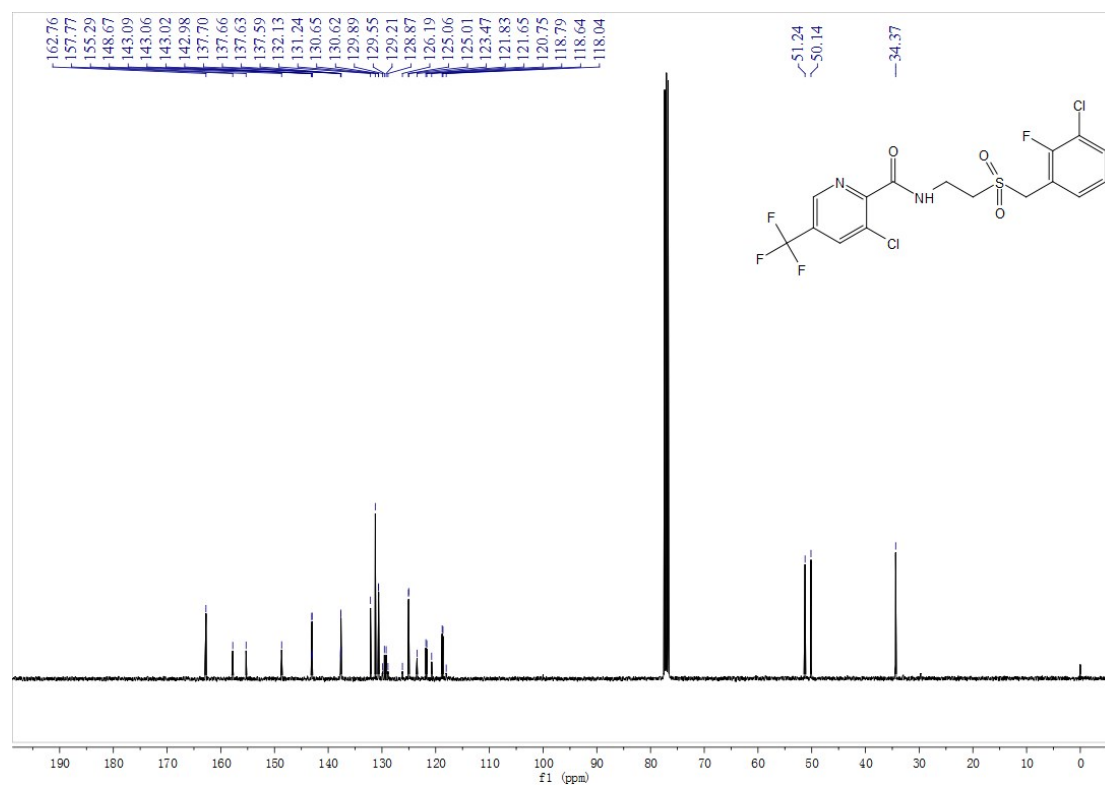


Fig. S98 ¹³C NMR spectra of compound **F7**

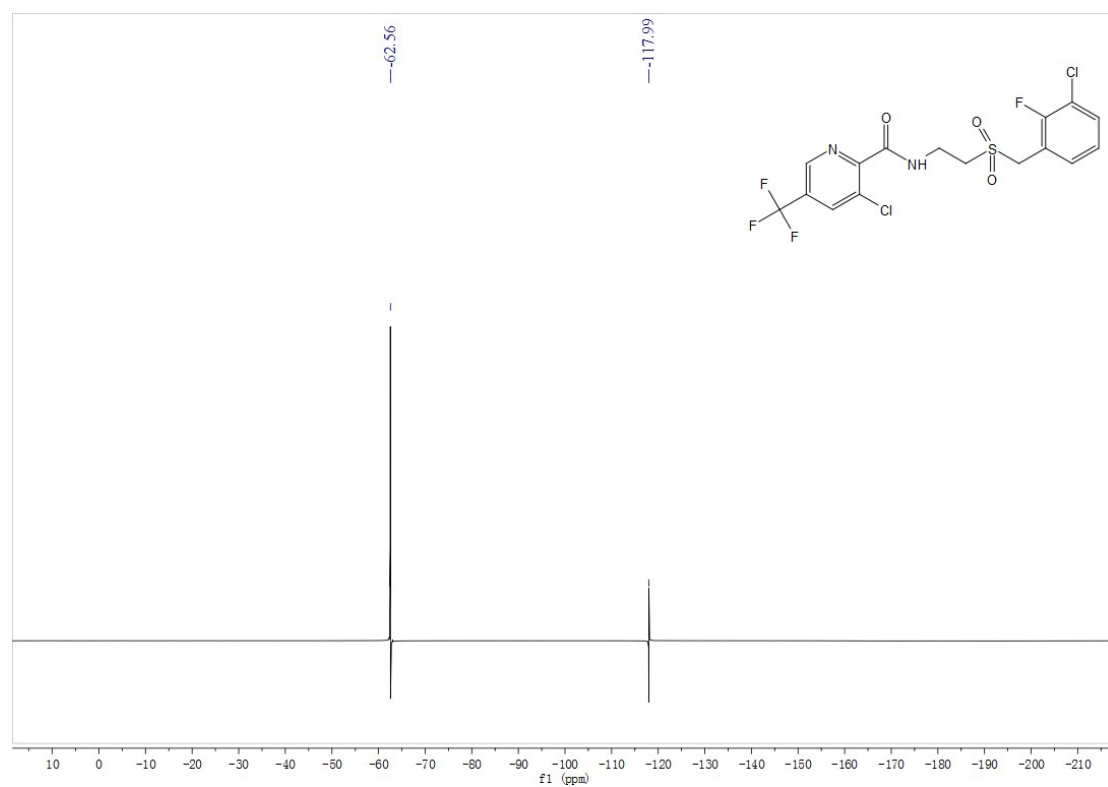


Fig. S99 ^{19}F NMR spectra of compound **F7**

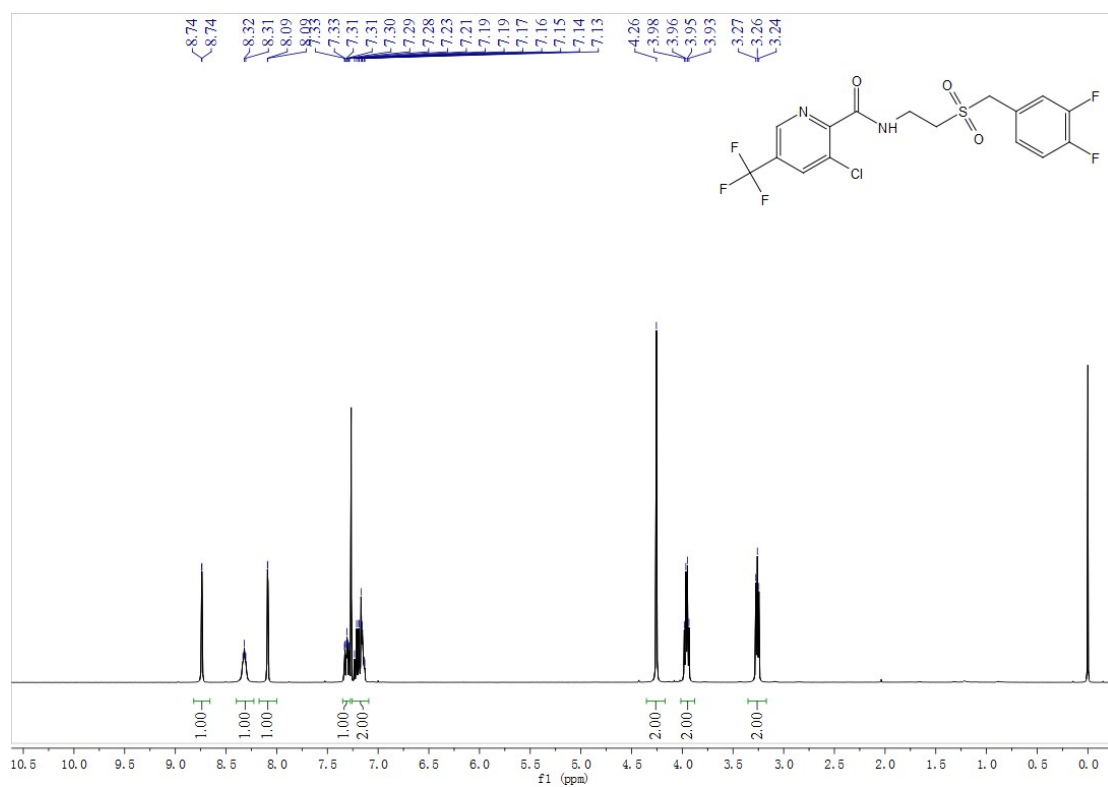


Fig. S100 ¹H NMR spectra of compound **F8**

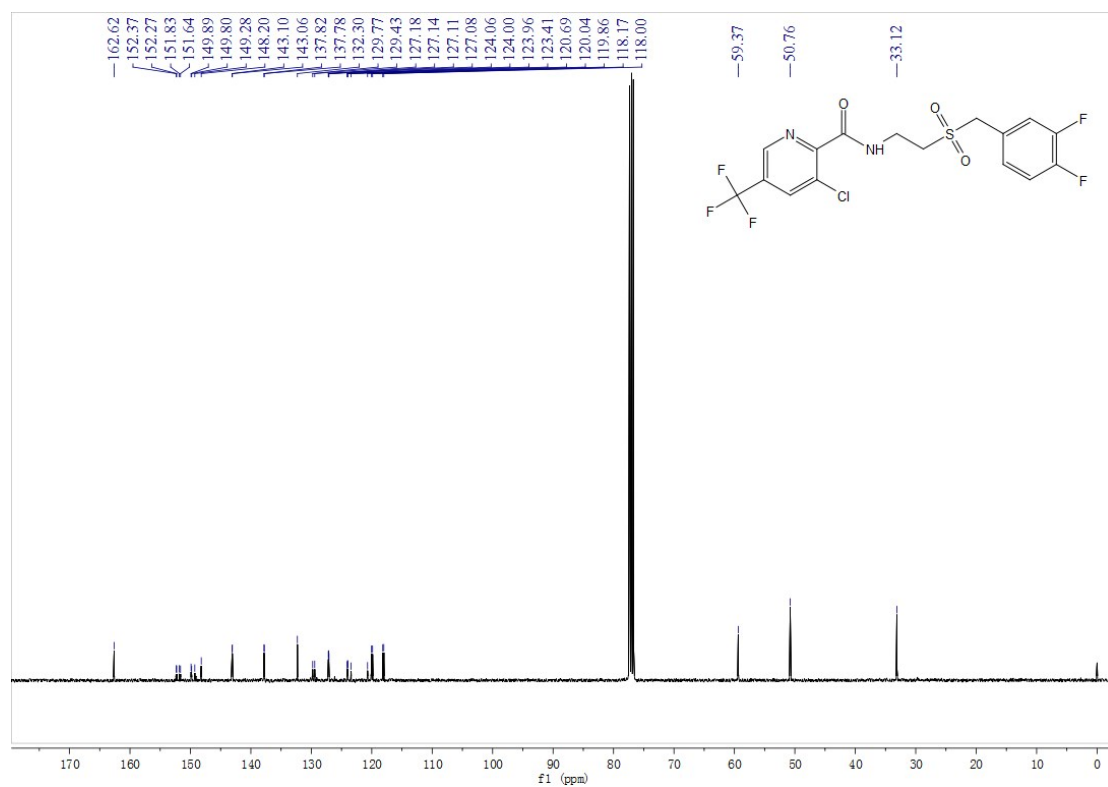


Fig. S101 ¹³C NMR spectra of compound **F8**

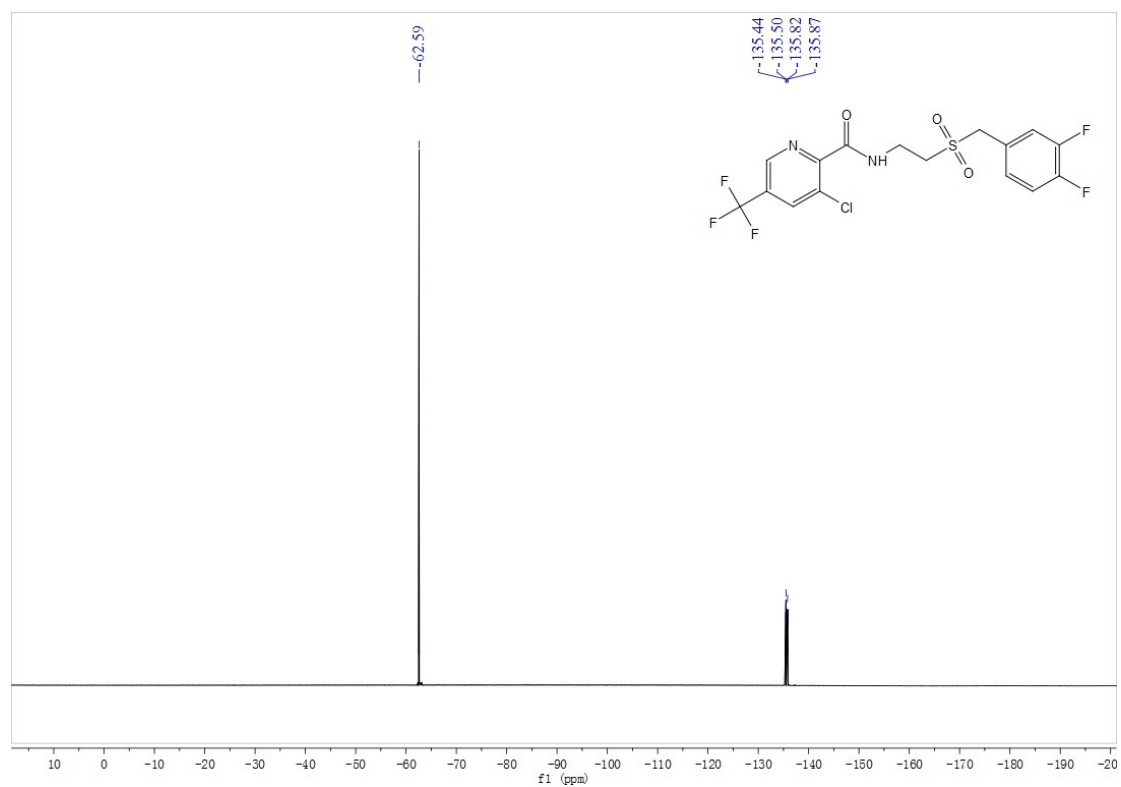


Fig. S102 ^{19}F NMR spectra of compound **F8**

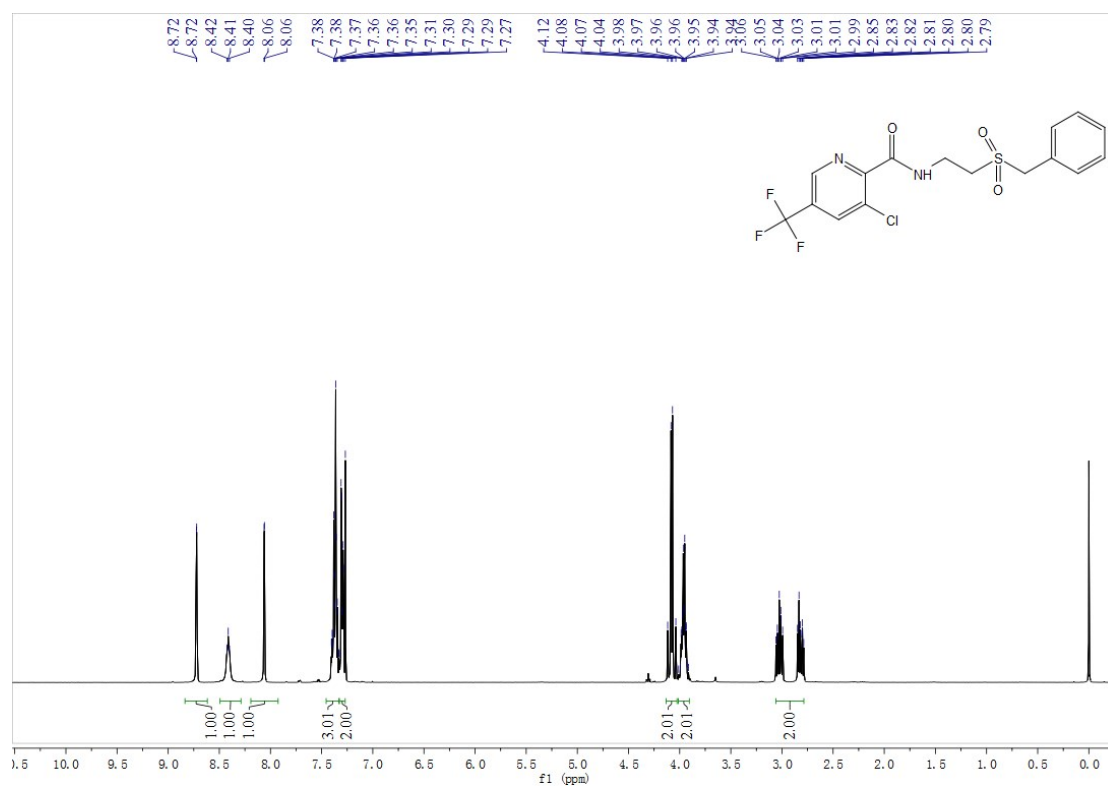


Fig. S103 ¹H NMR spectra of compound **F9**

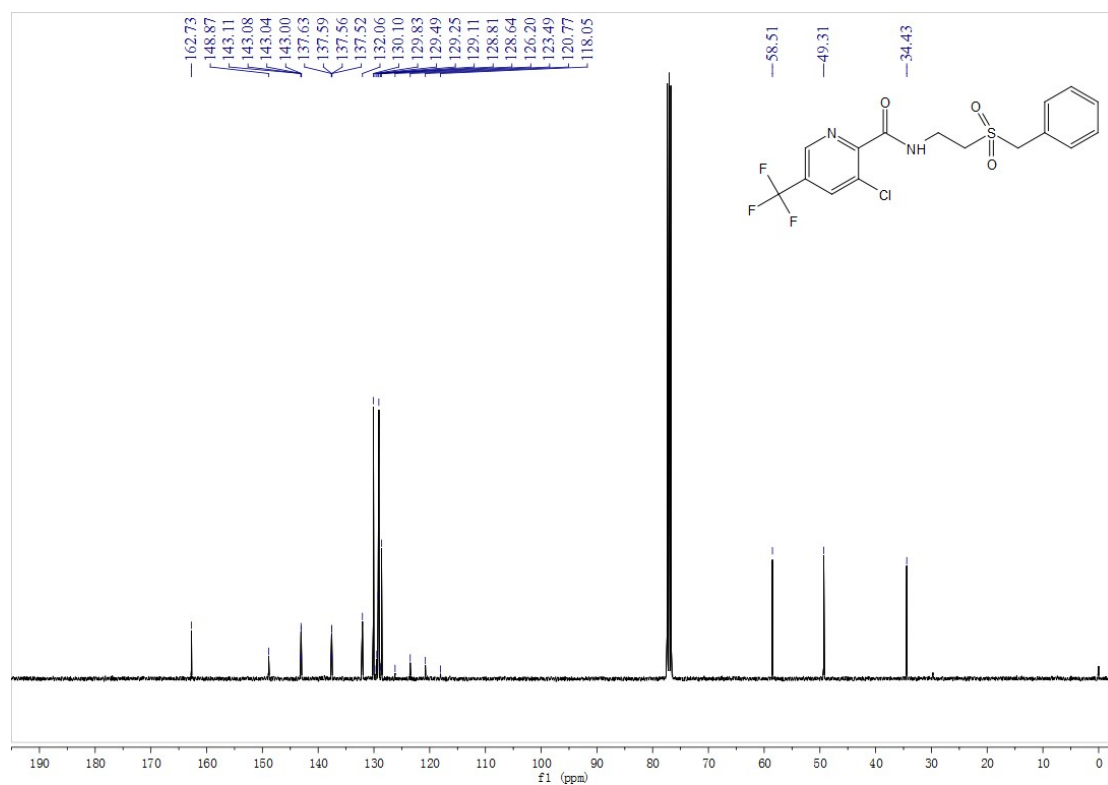


Fig. S104 ¹³C NMR spectra of compound **F9**

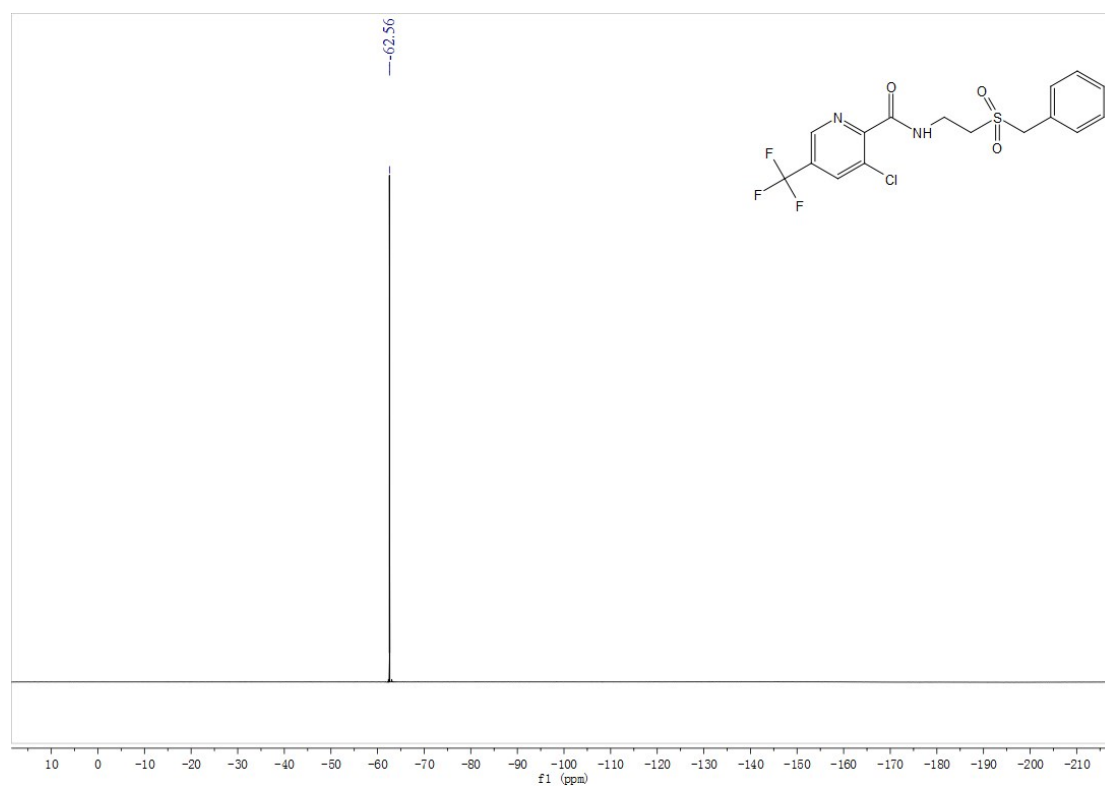


Fig. S105 ^{19}F NMR spectra of compound **F9**

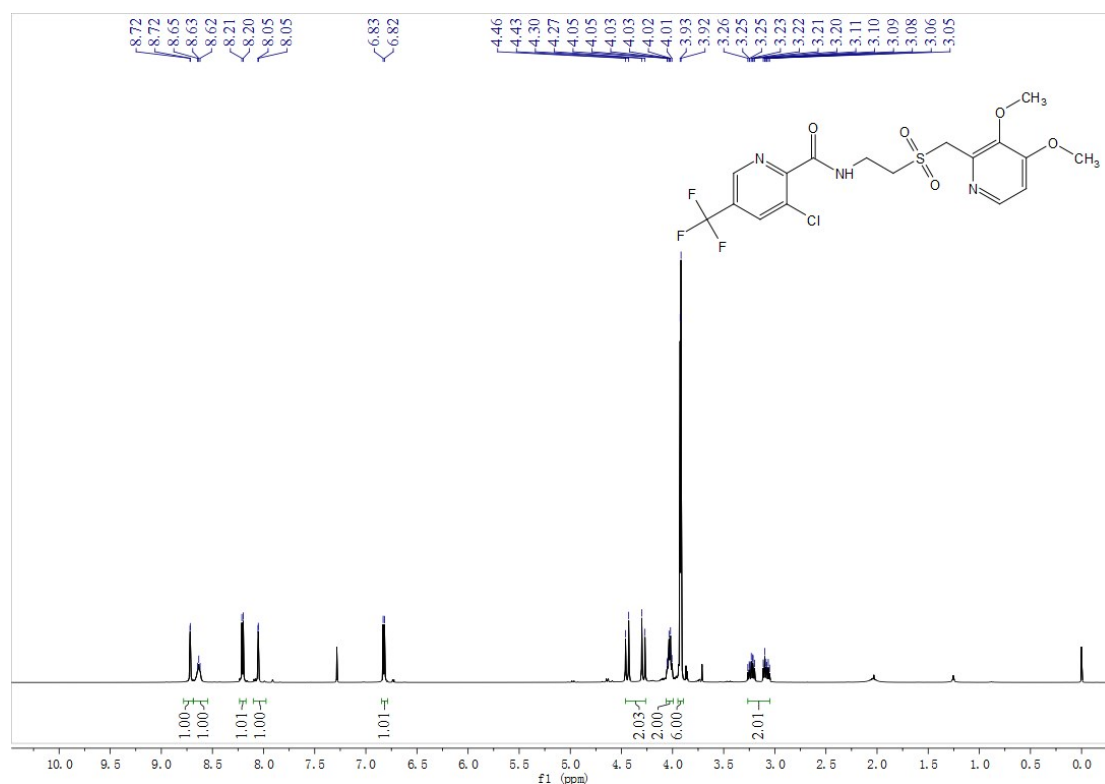


Fig. S106 ¹H NMR spectra of compound **F10**

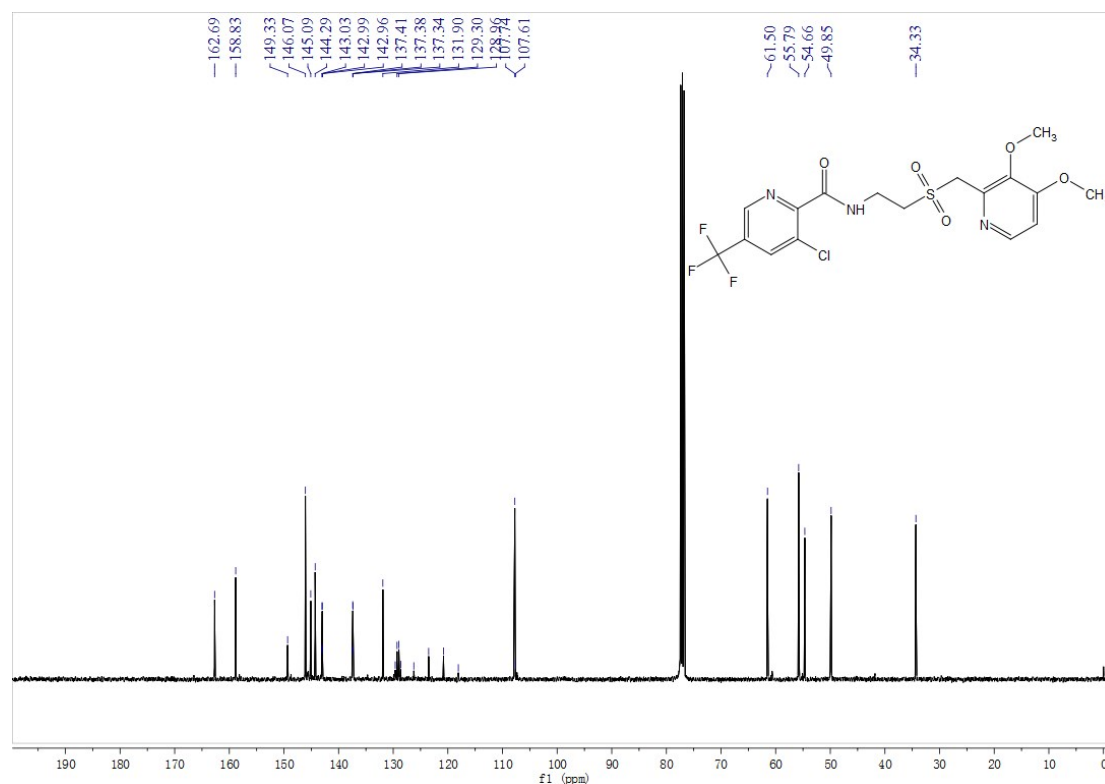


Fig. S107 ¹³C NMR spectra of compound **F10**

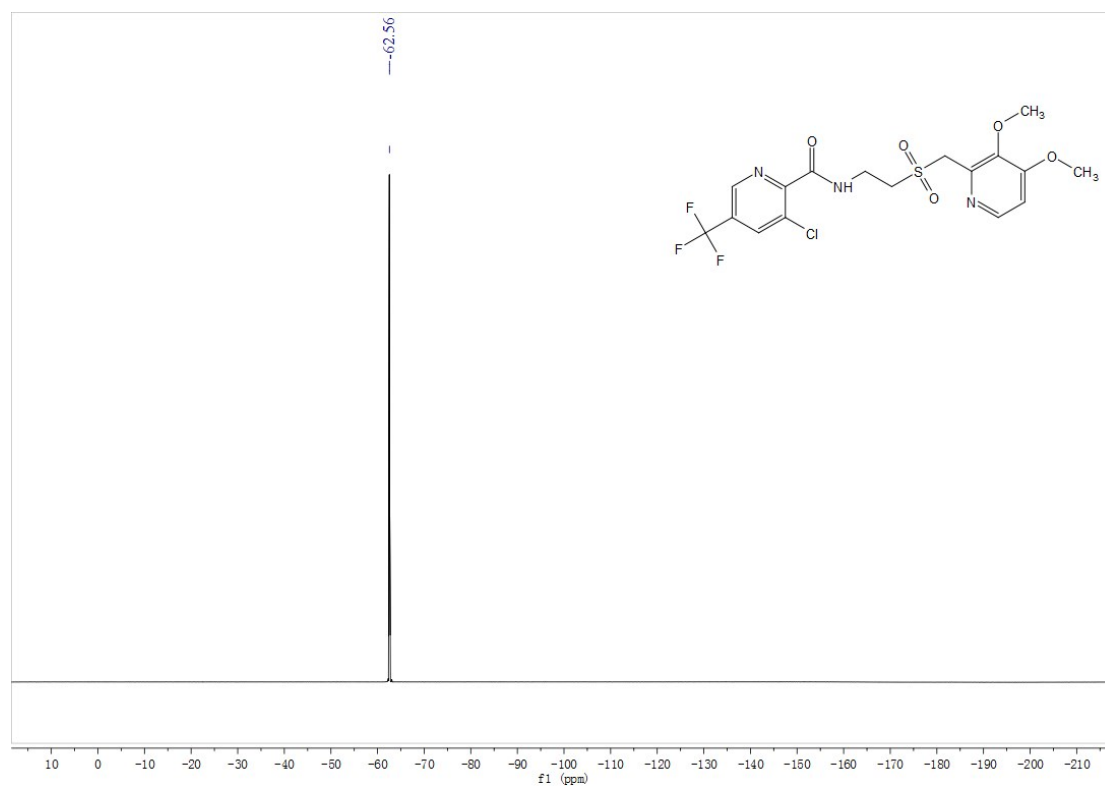


Fig. S108 ^{19}F NMR spectra of compound **F10**

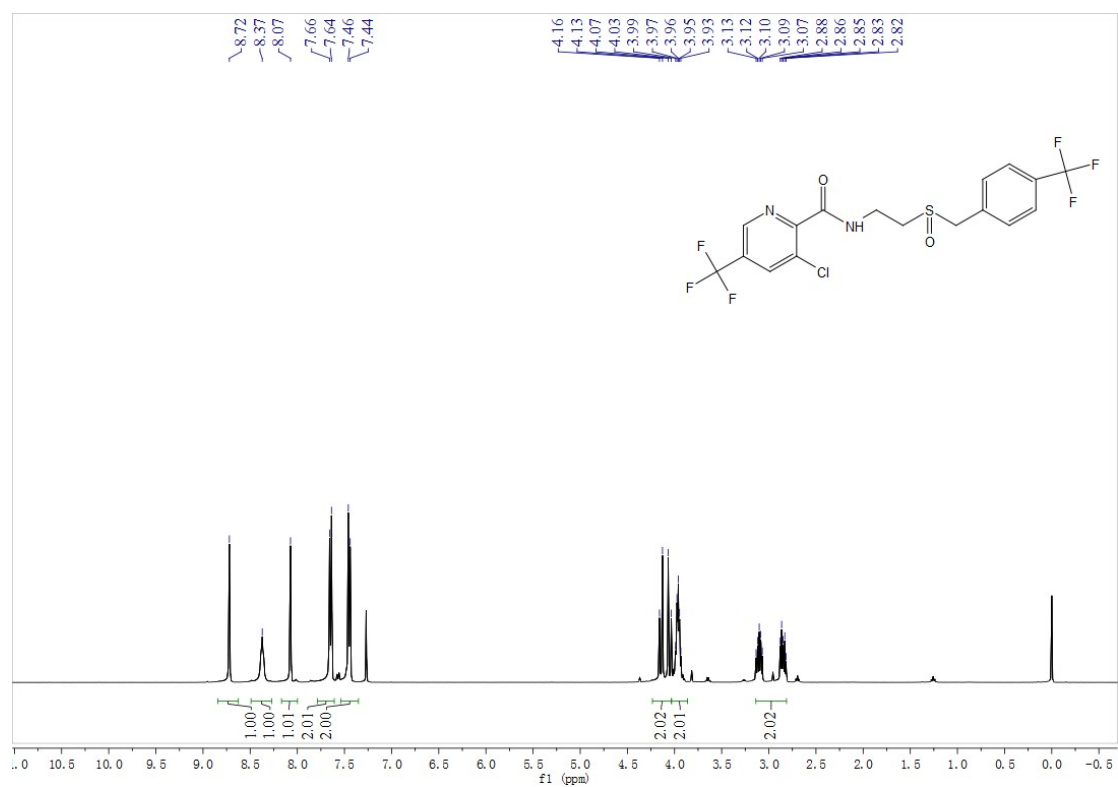


Fig. S109 ¹H NMR spectra of compound **G1**

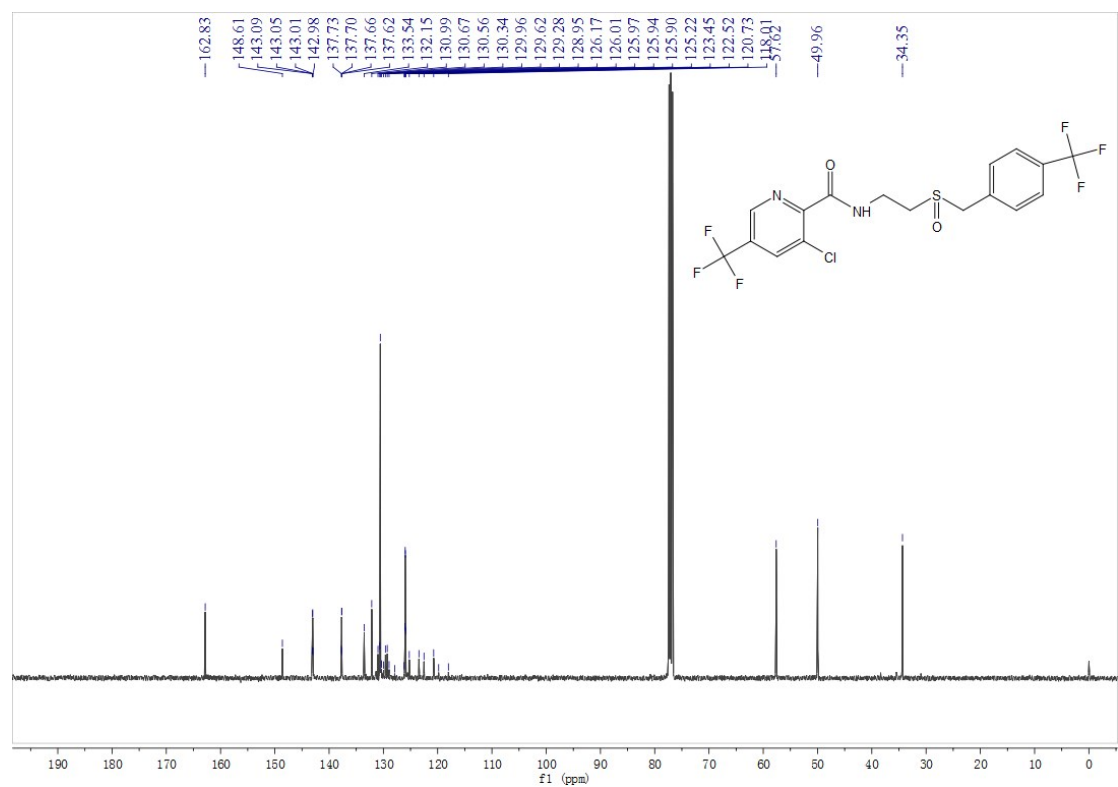


Fig. S110 ¹³C NMR spectra of compound **G1**

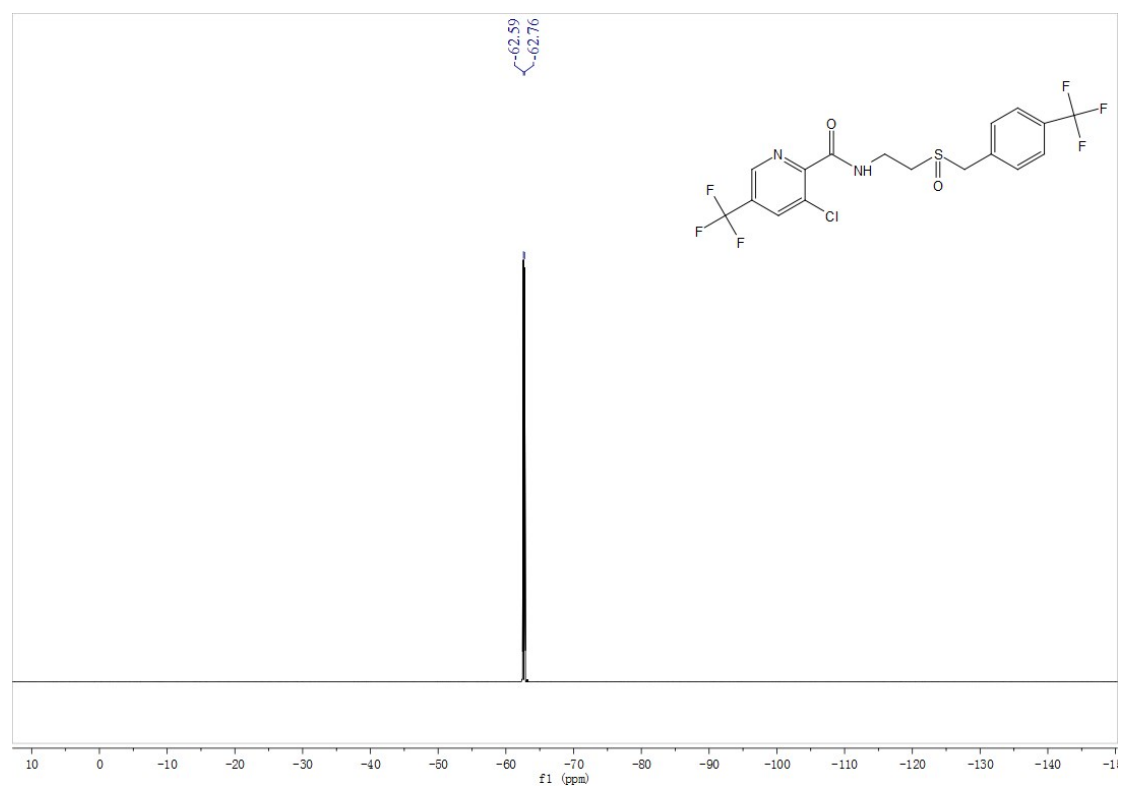


Fig. S111 ^{19}F NMR spectra of compound **G1**

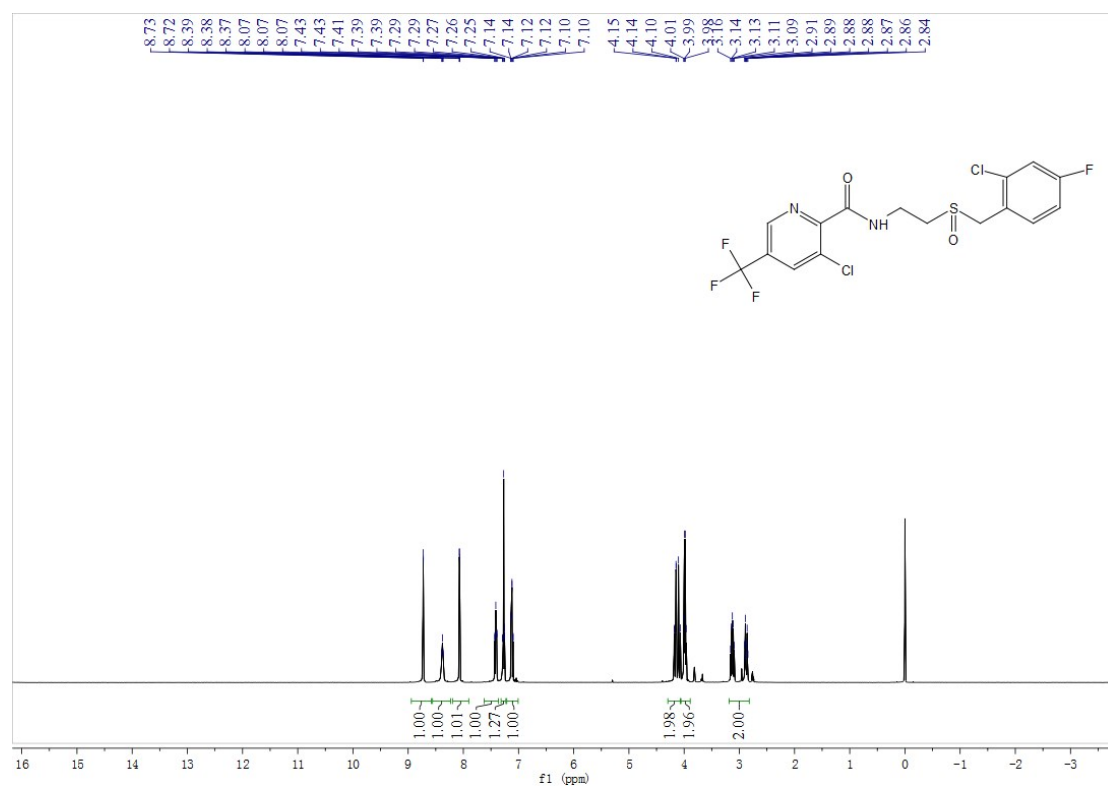


Fig. S112 ¹H NMR spectra of compound **G2**

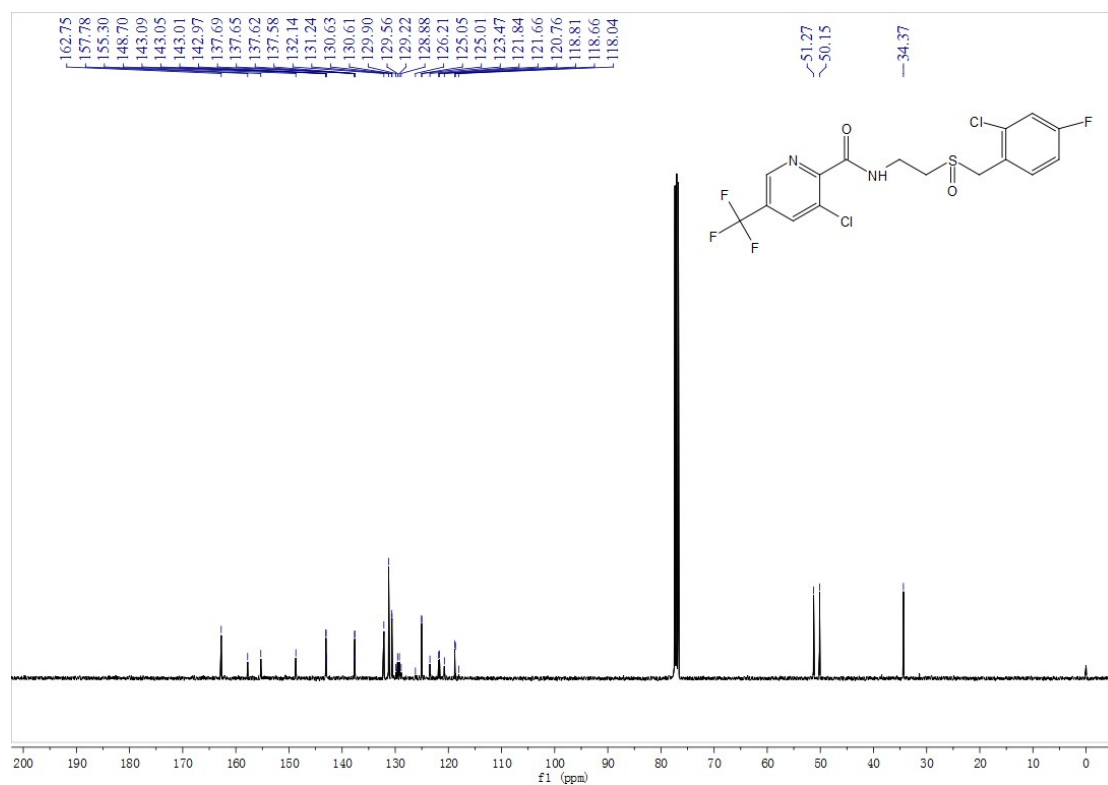


Fig. S113 ¹³C NMR spectra of compound **G2**

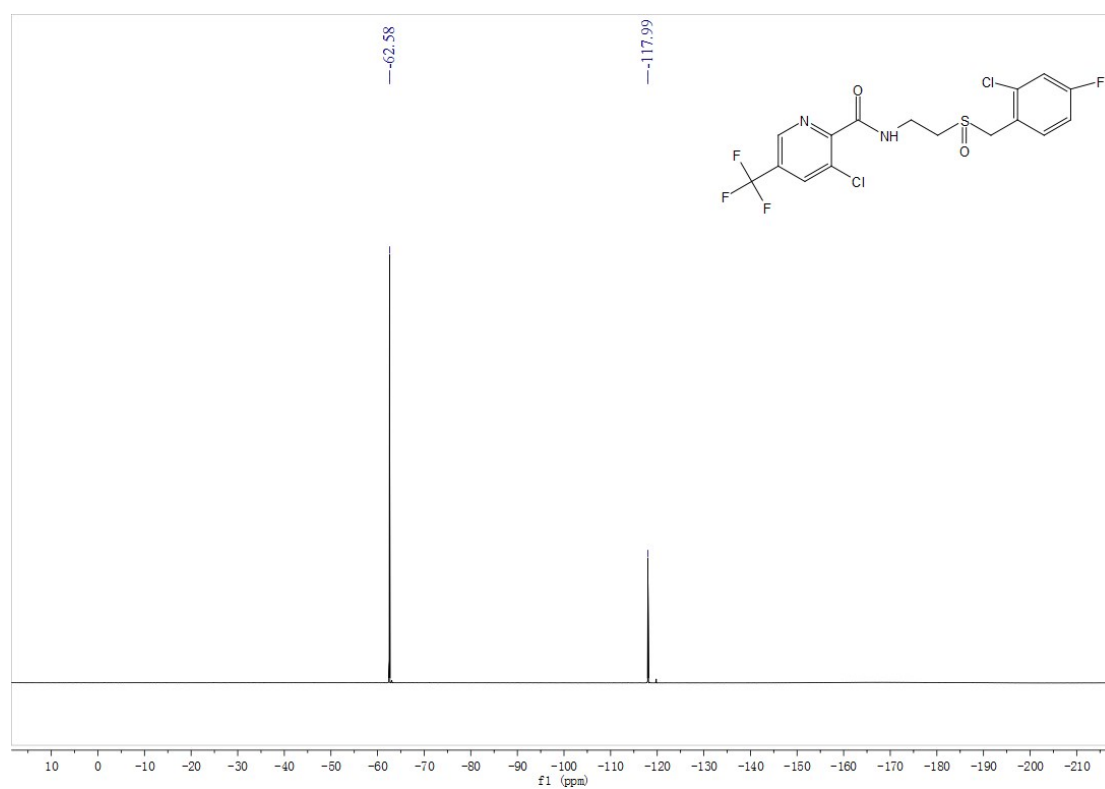


Fig. S114 ^{19}F NMR spectra of compound **G2**

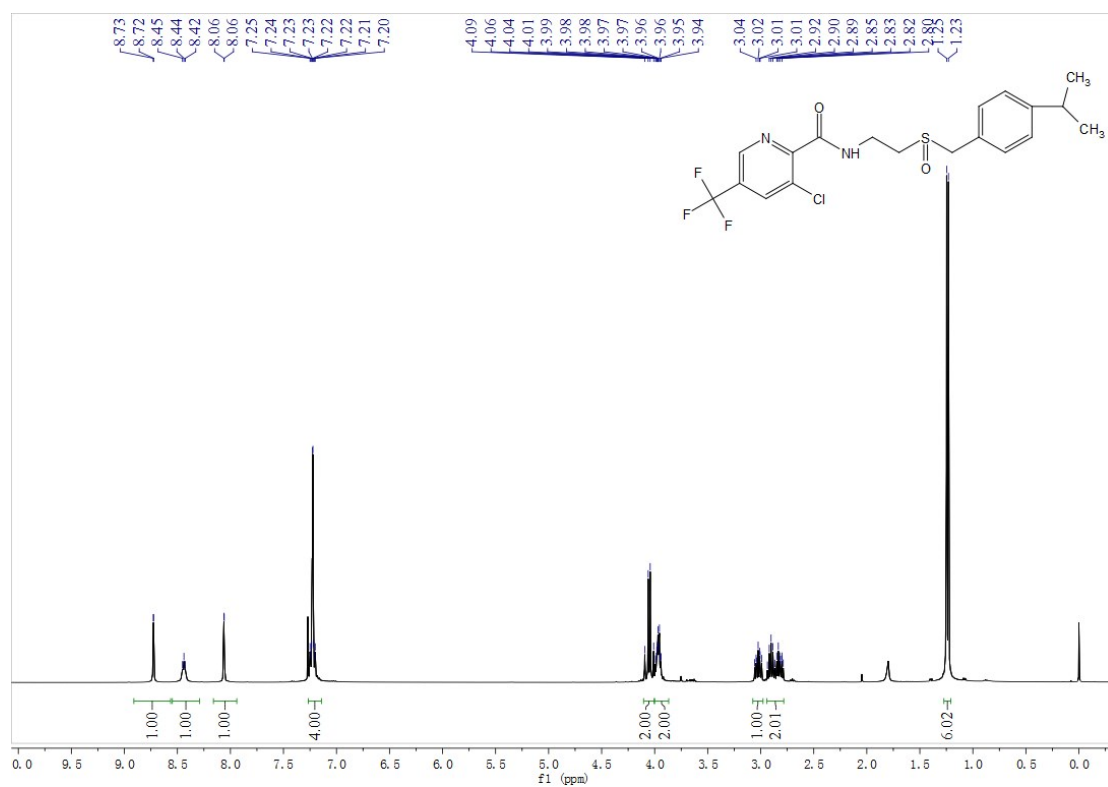


Fig. S115 ¹H NMR spectra of compound **G3**

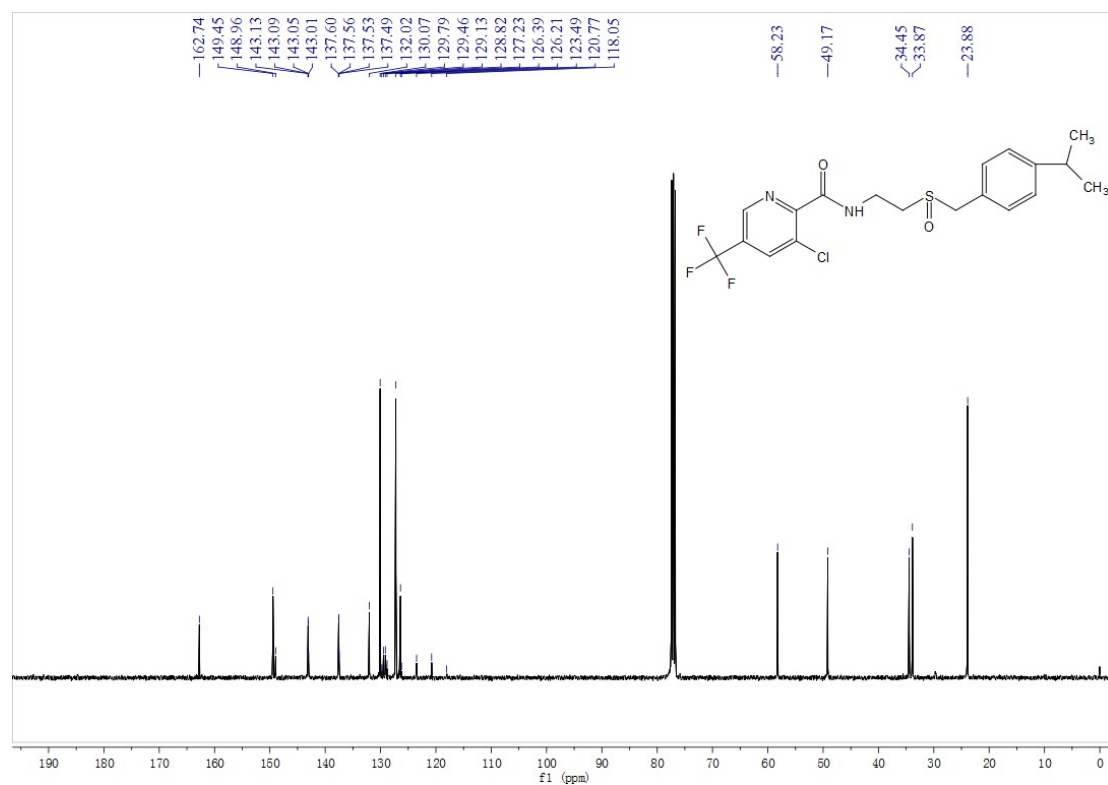


Fig. S116 ¹³C NMR spectra of compound **G3**

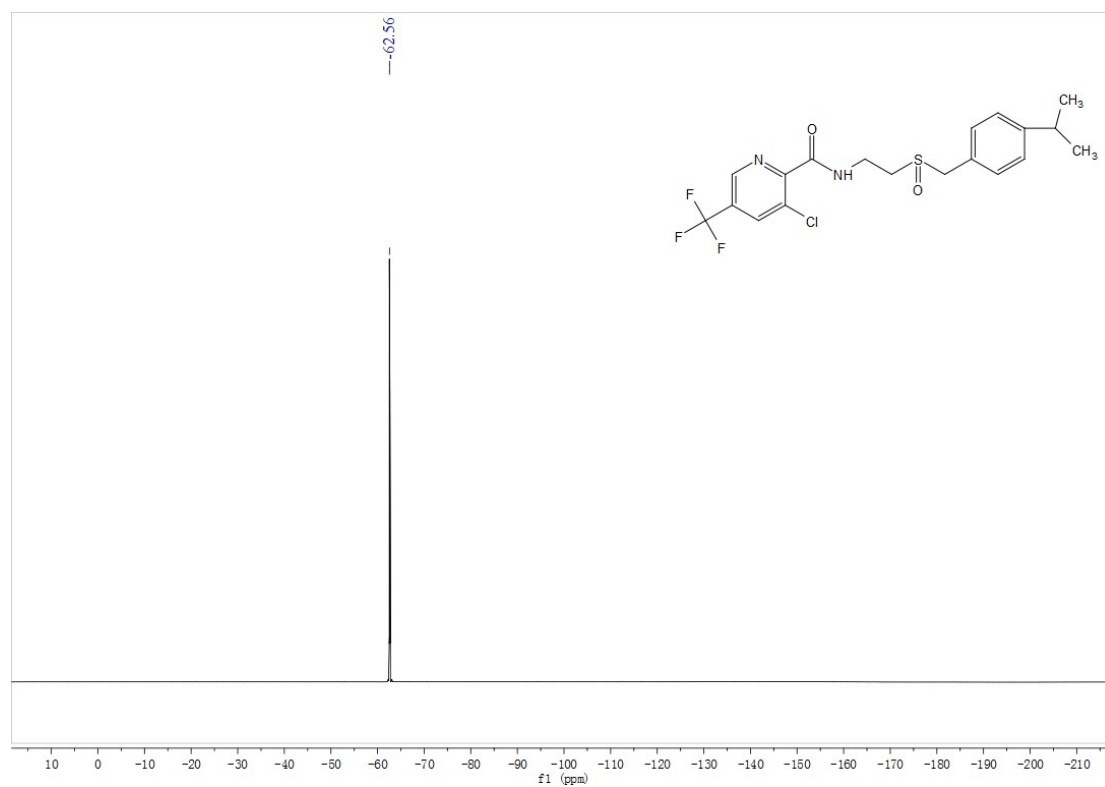


Fig. S117 ^{19}F NMR spectra of compound **G3**

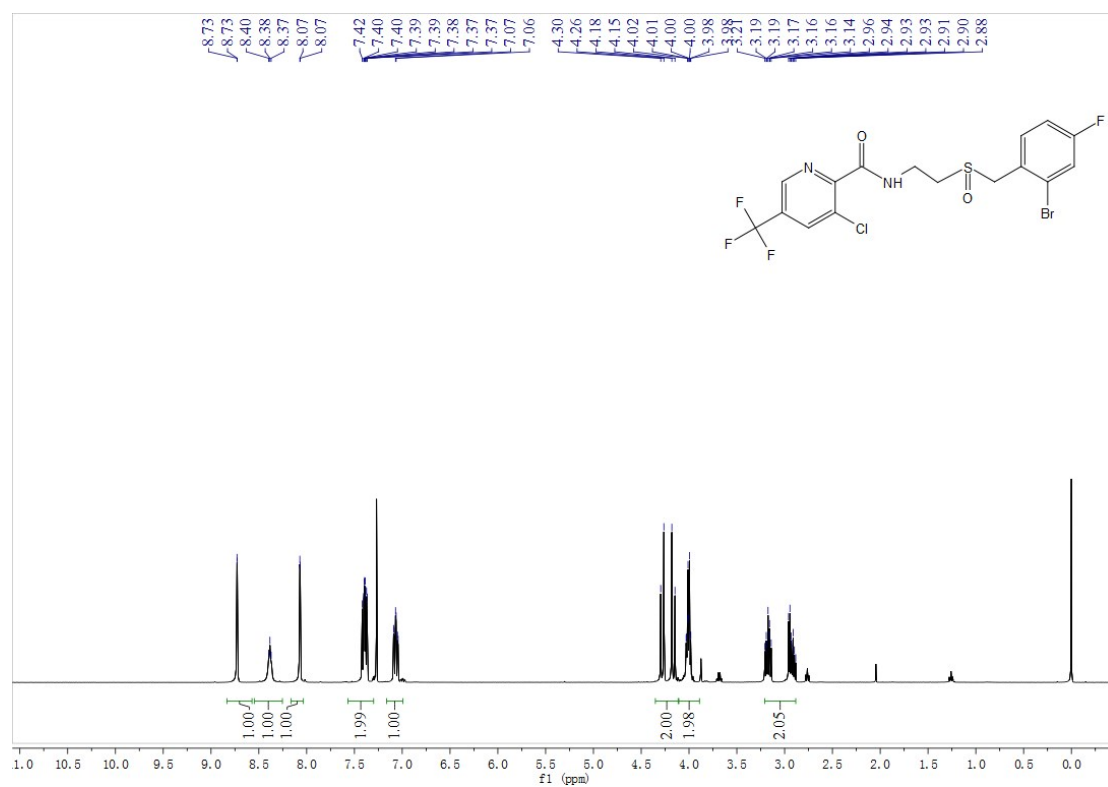


Fig. S118 ¹H NMR spectra of compound **G4**

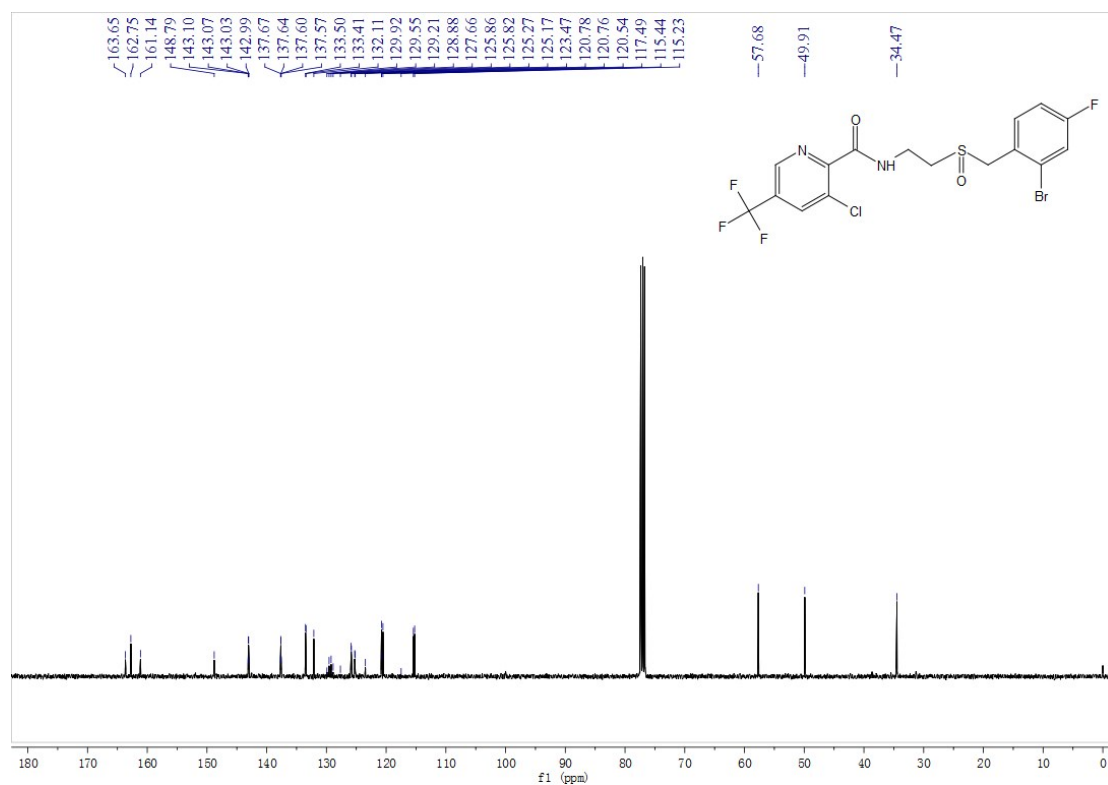


Fig. S119 ¹³C NMR spectra of compound **G4**

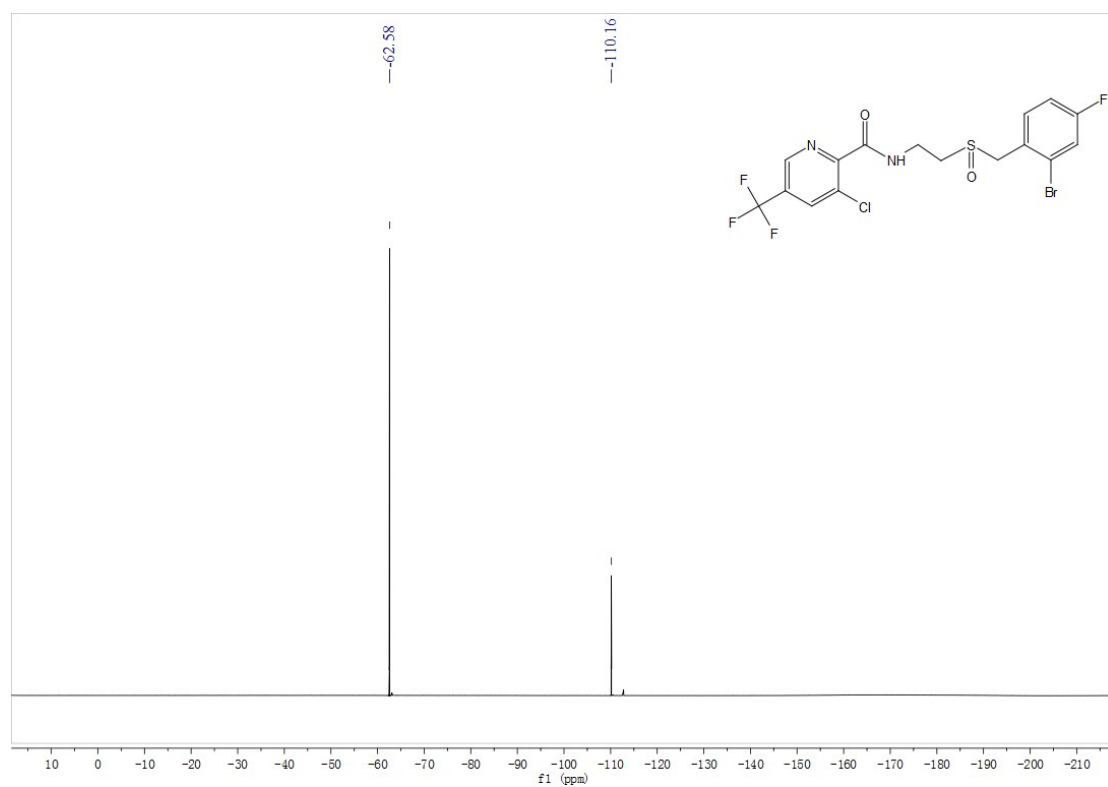


Fig. S120 ^{19}F NMR spectra of compound **G4**

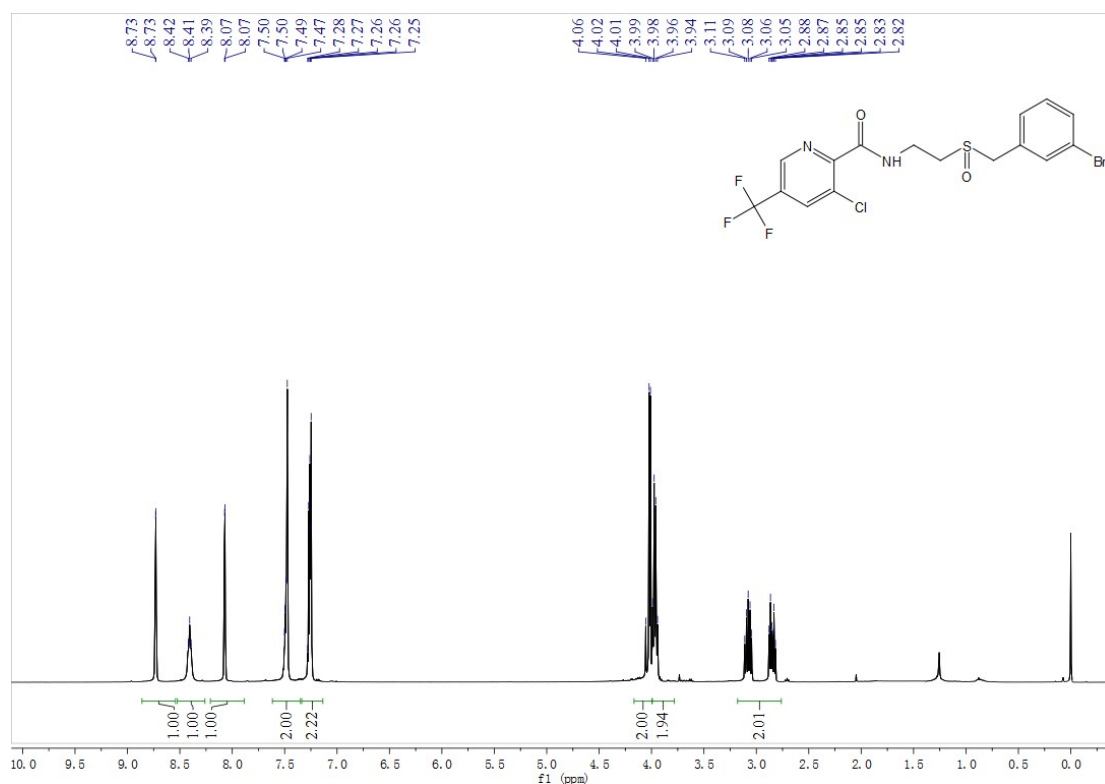


Fig. S121 ¹H NMR spectra of compound **G5**

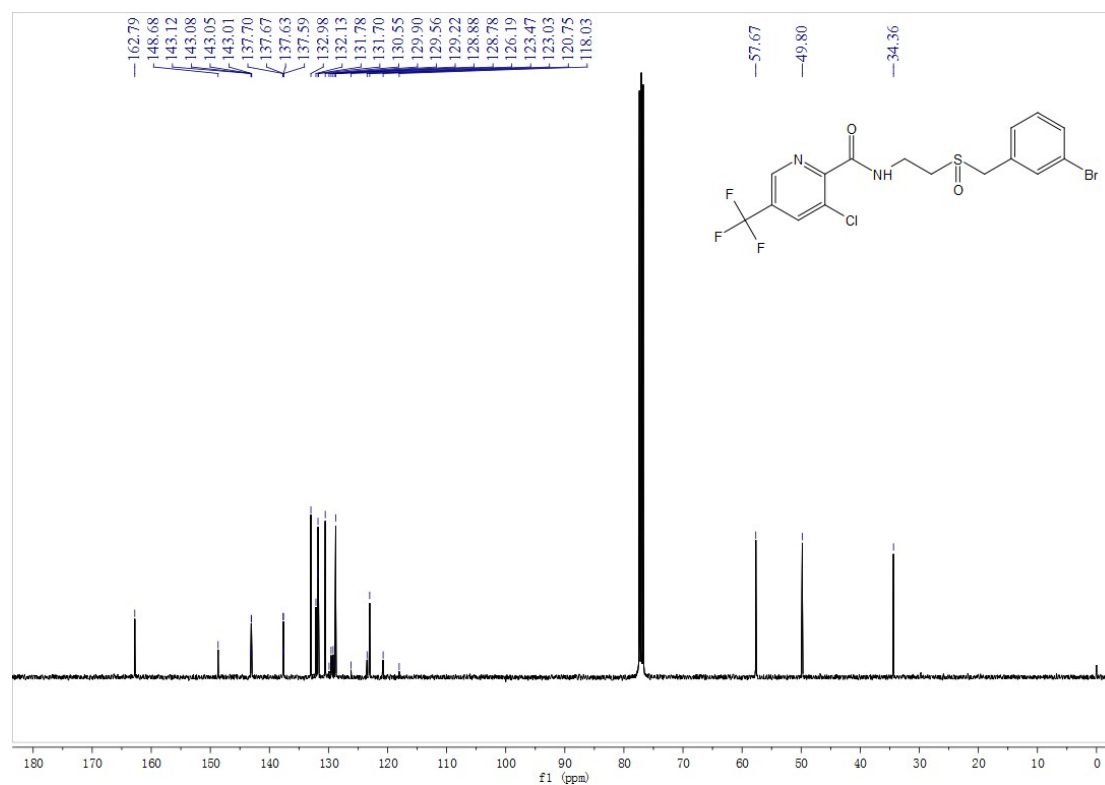


Fig. S122 ¹³C NMR spectra of compound **G5**

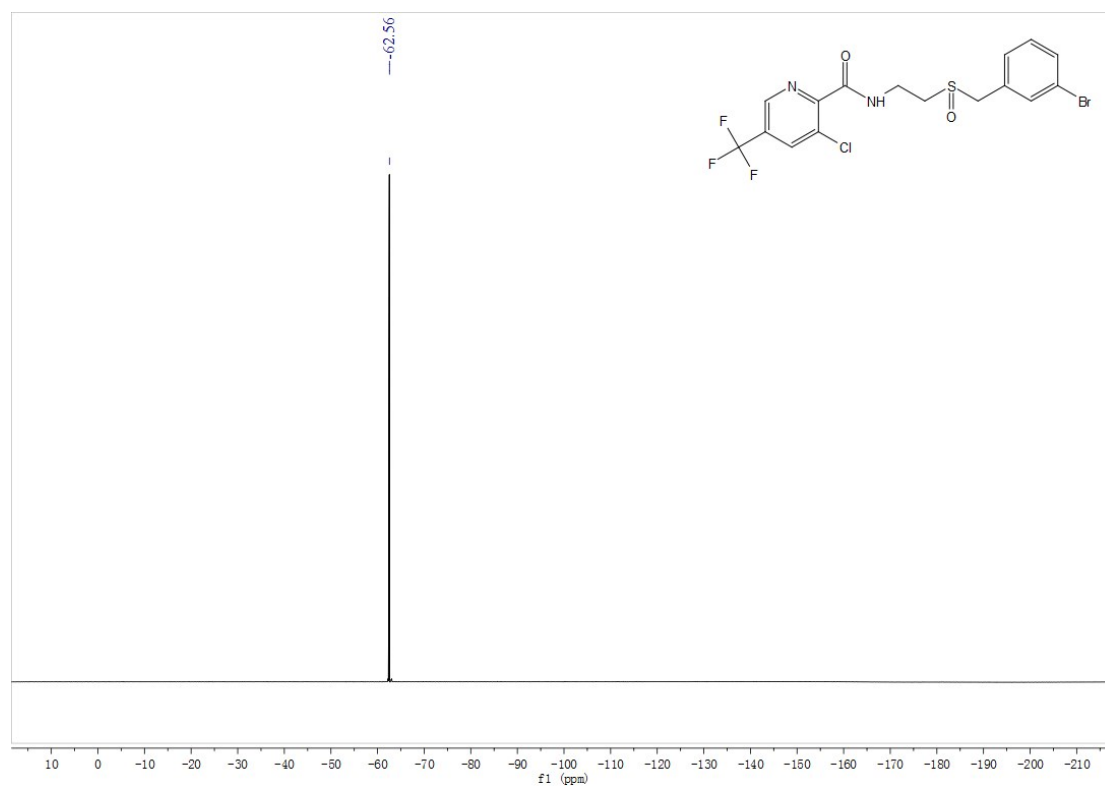


Fig. S123 ^{19}F NMR spectra of compound **G5**

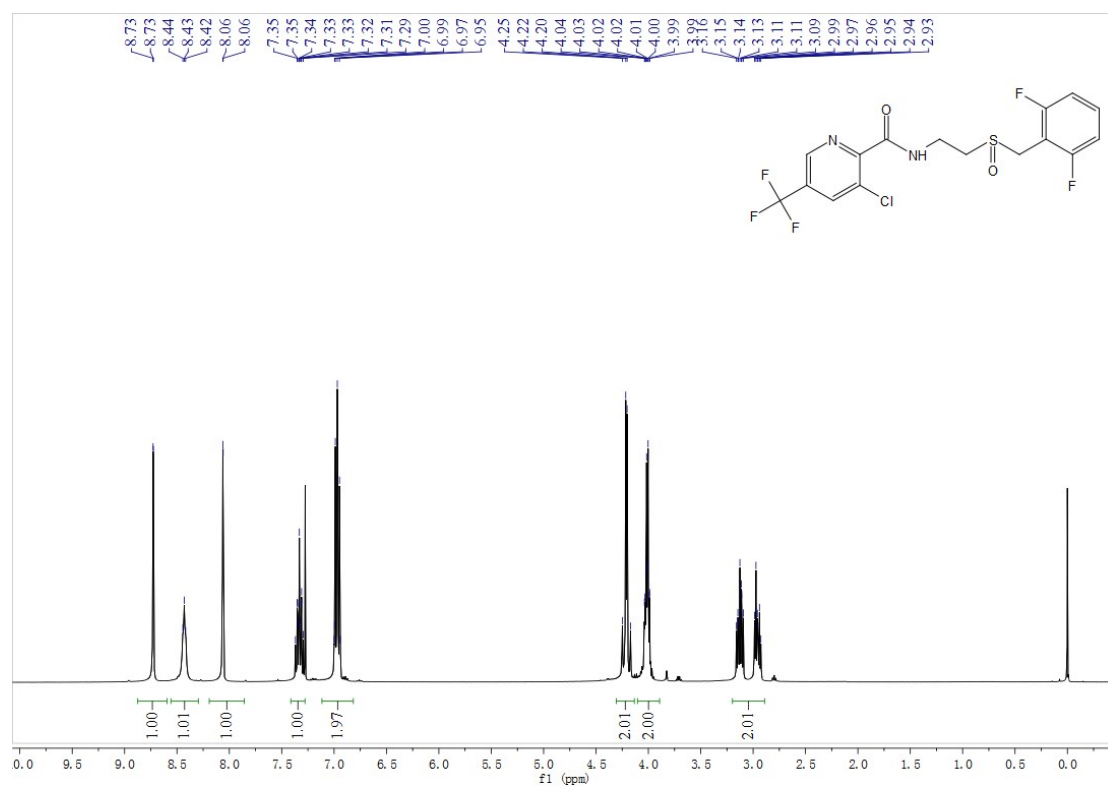


Fig. S124 ¹H NMR spectra of compound **G6**

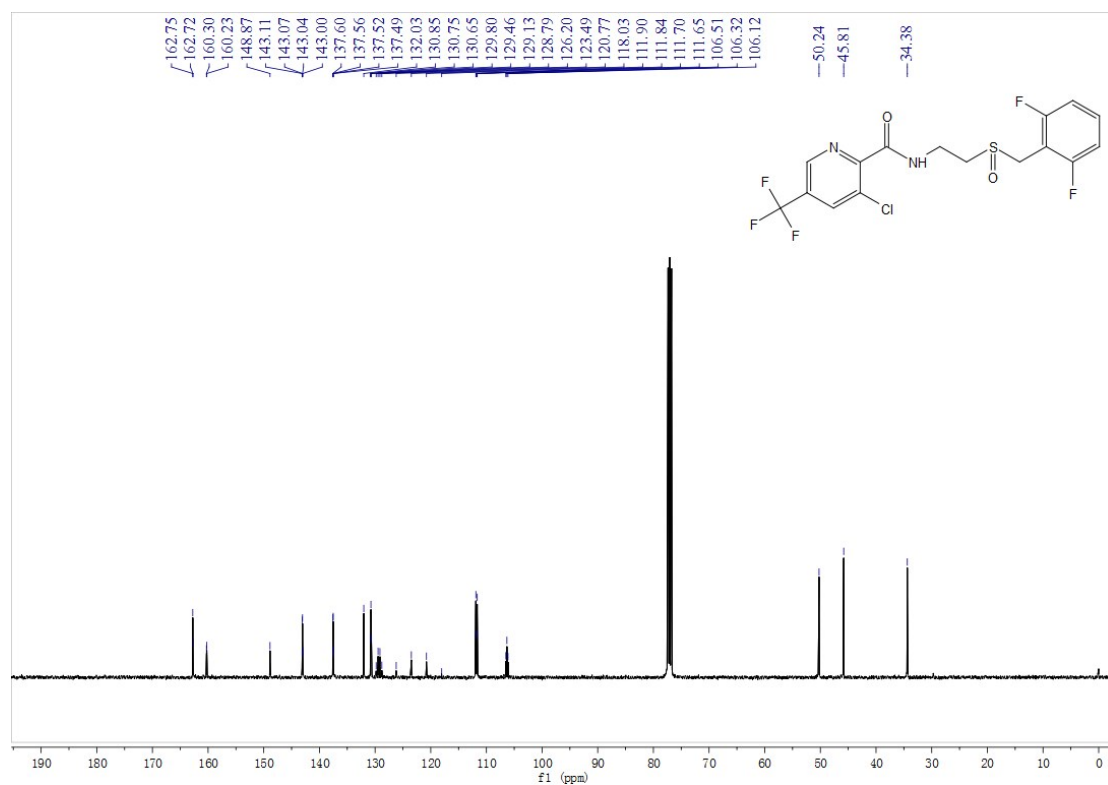


Fig. S125 ¹³C NMR spectra of compound **G6**

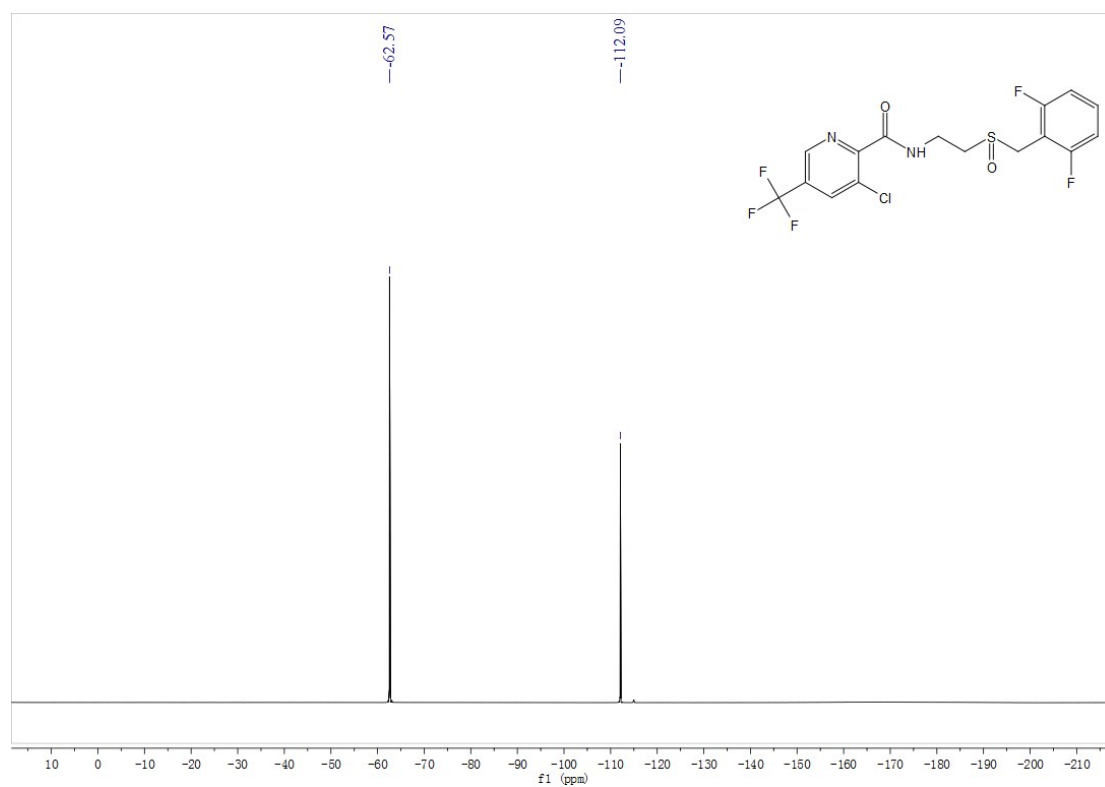


Fig. S126 ^{19}F NMR spectra of compound **G6**

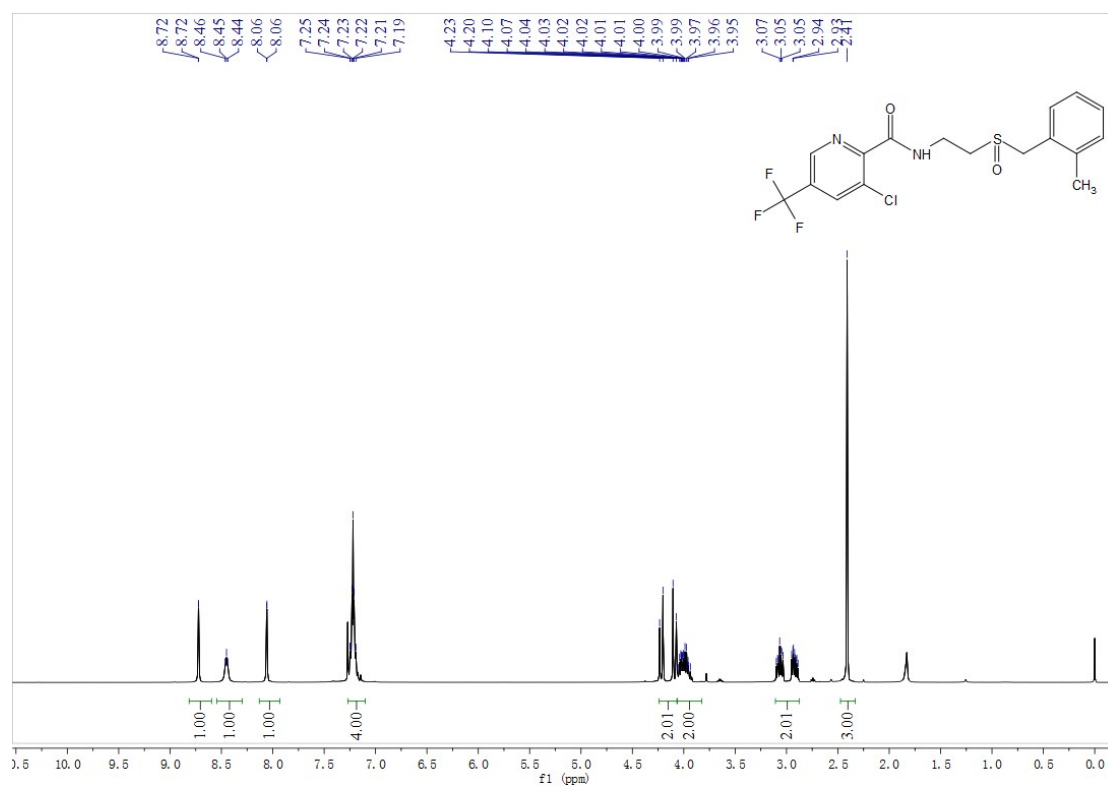


Fig. S127 ¹H NMR spectra of compound **G7**

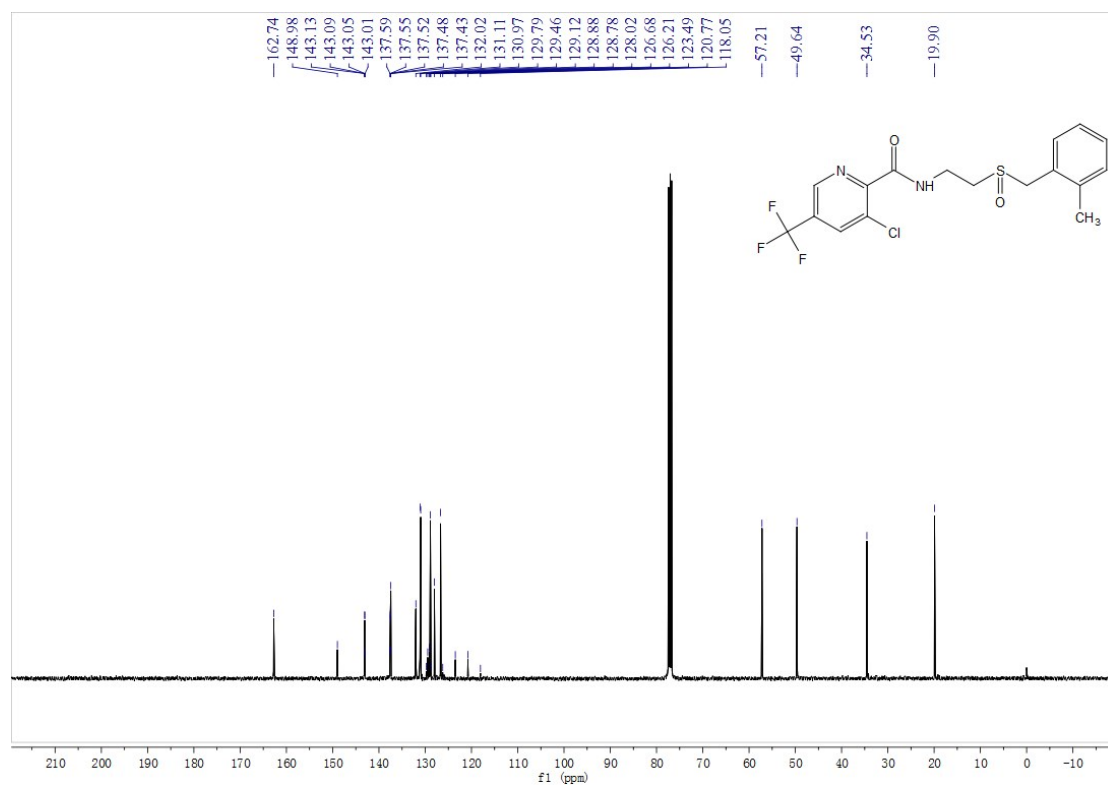


Fig. S128 ¹³C NMR spectra of compound **G7**

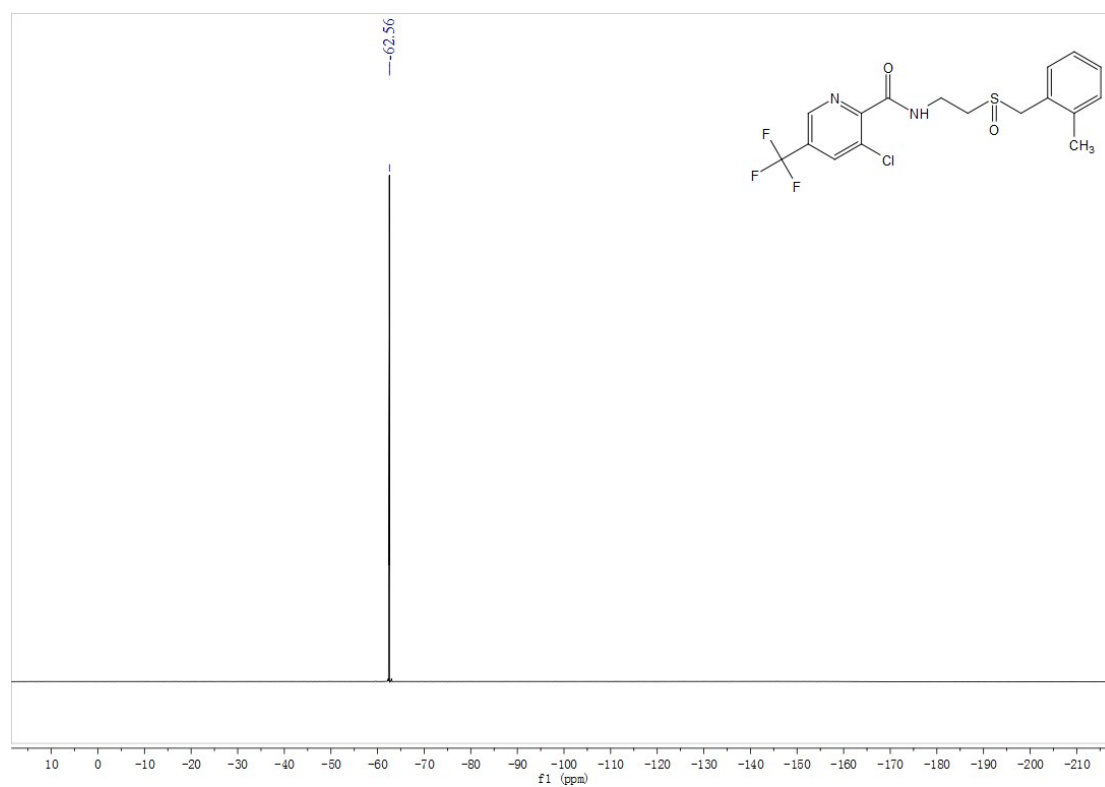


Fig. S129 ^{19}F NMR spectra of compound **G7**

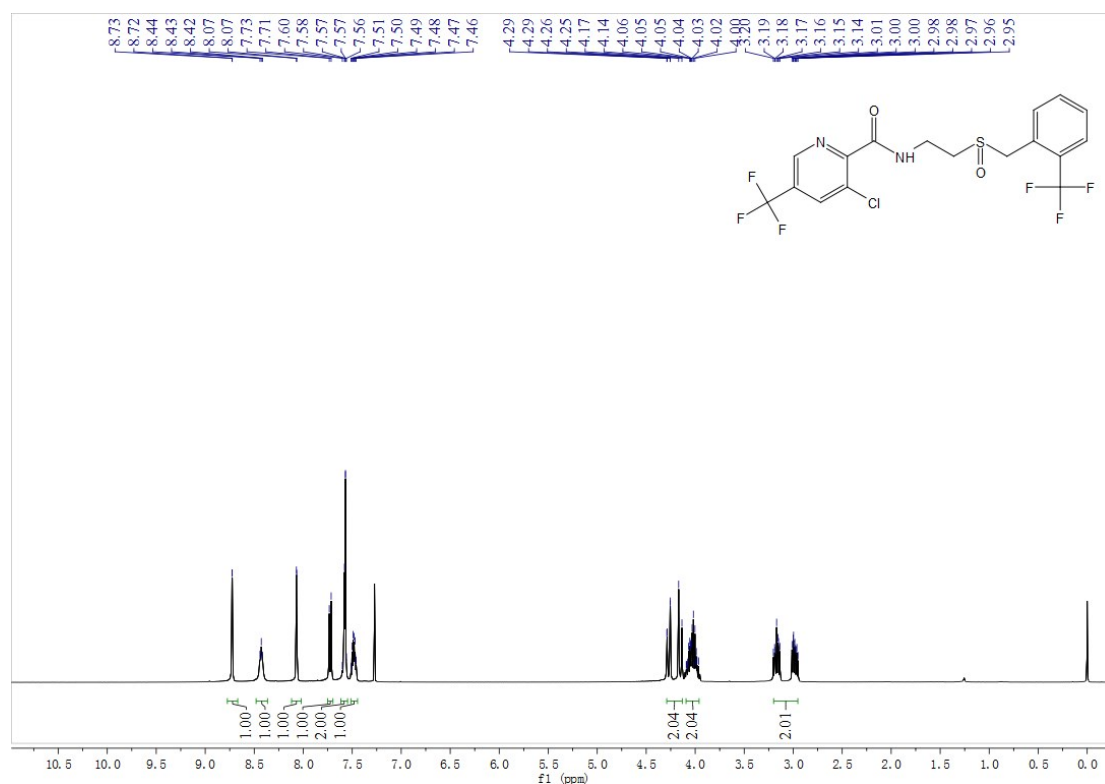


Fig. S130 ¹H NMR spectra of compound **G8**

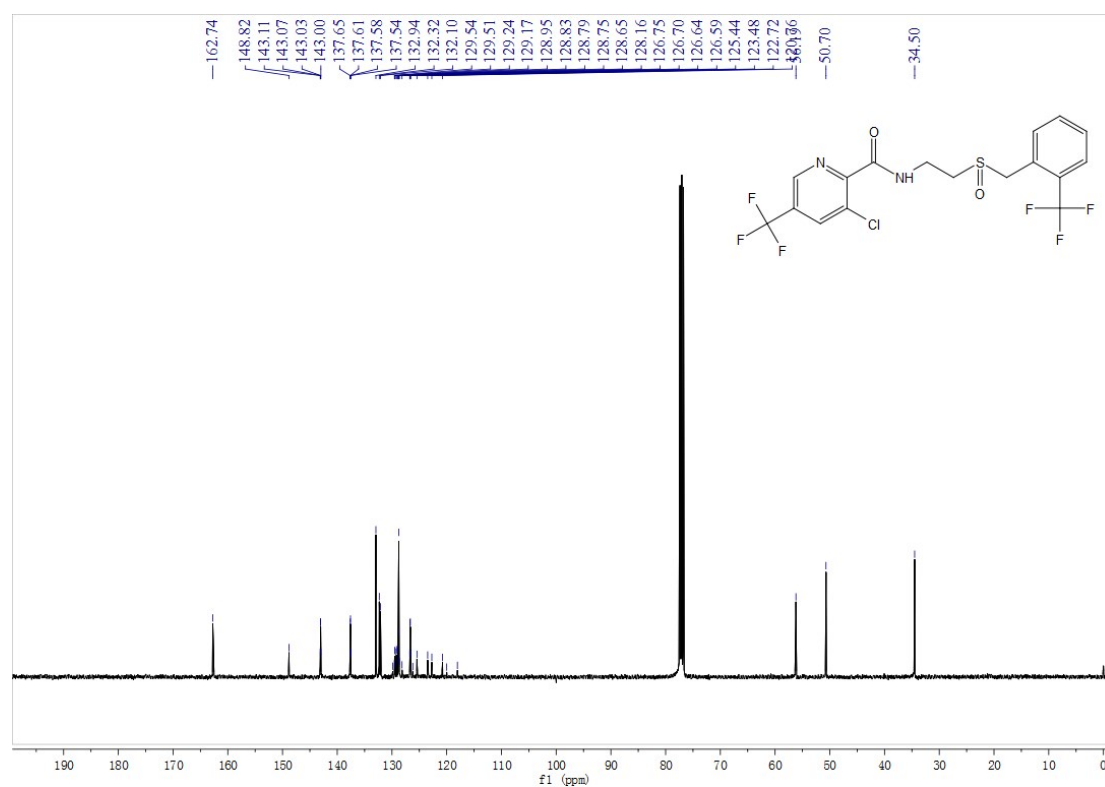


Fig. S131 ¹³C NMR spectra of compound **G8**

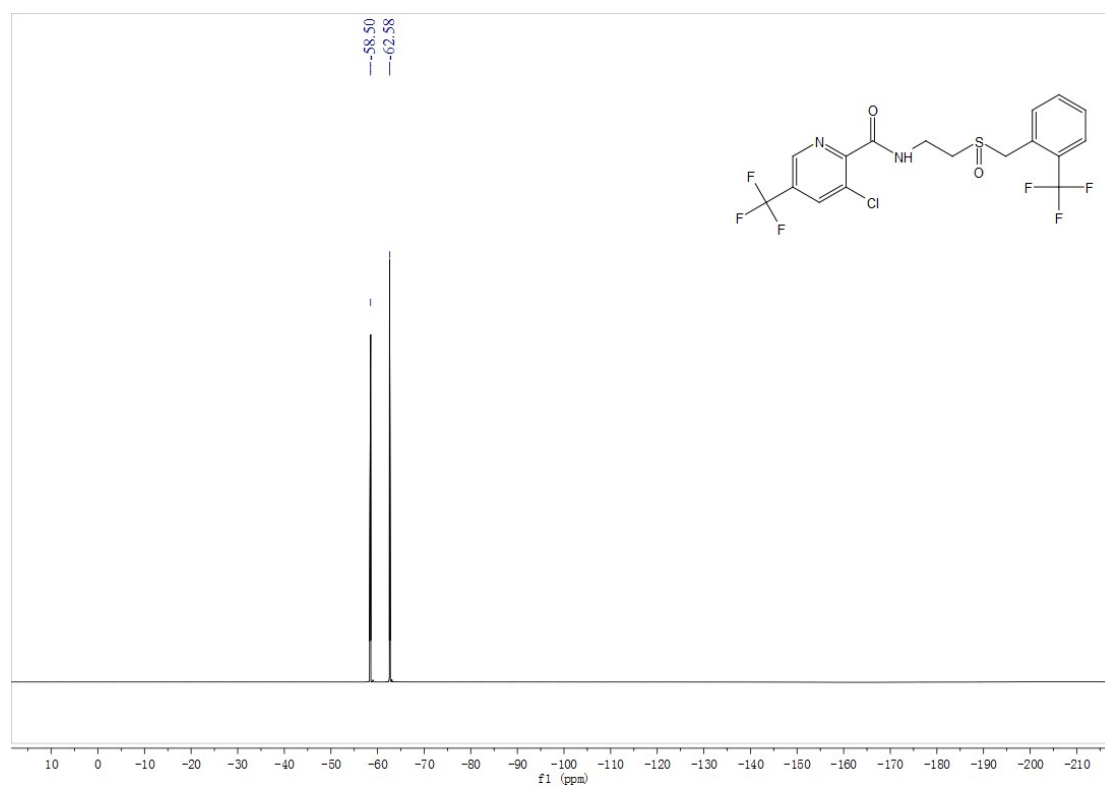


Fig. S132 ^{19}F NMR spectra of compound **G8**

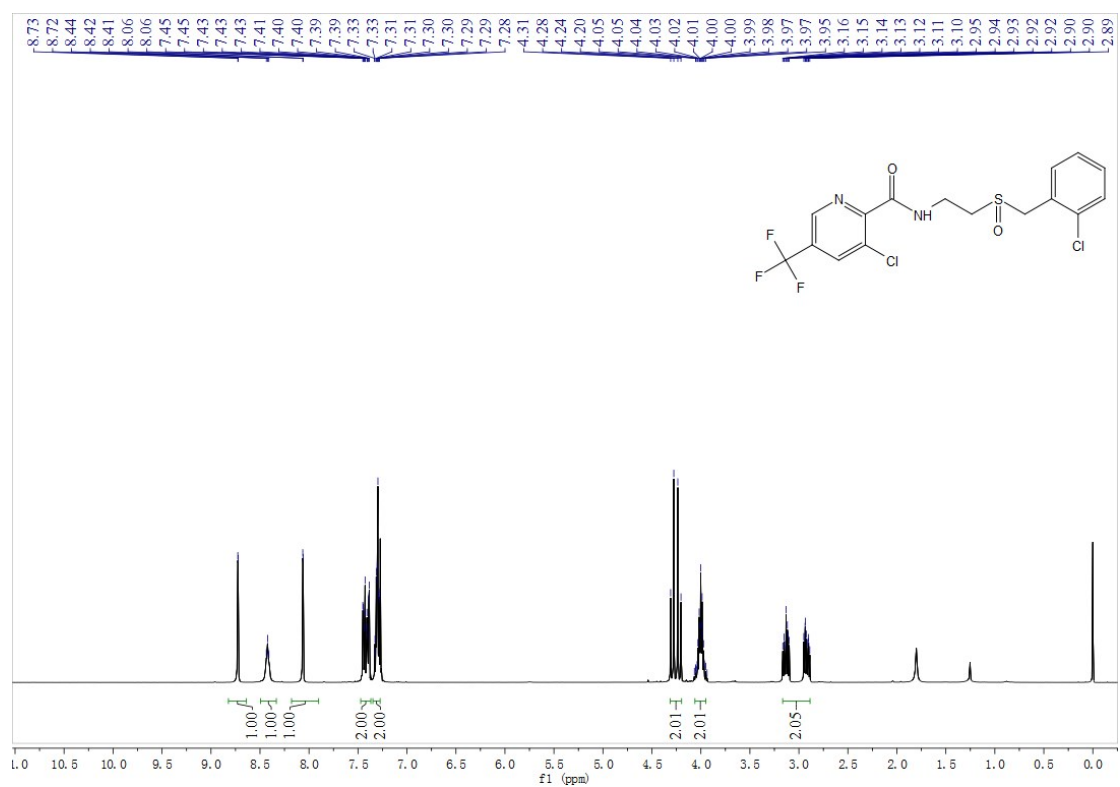


Fig. S133 ¹H NMR spectra of compound **G9**

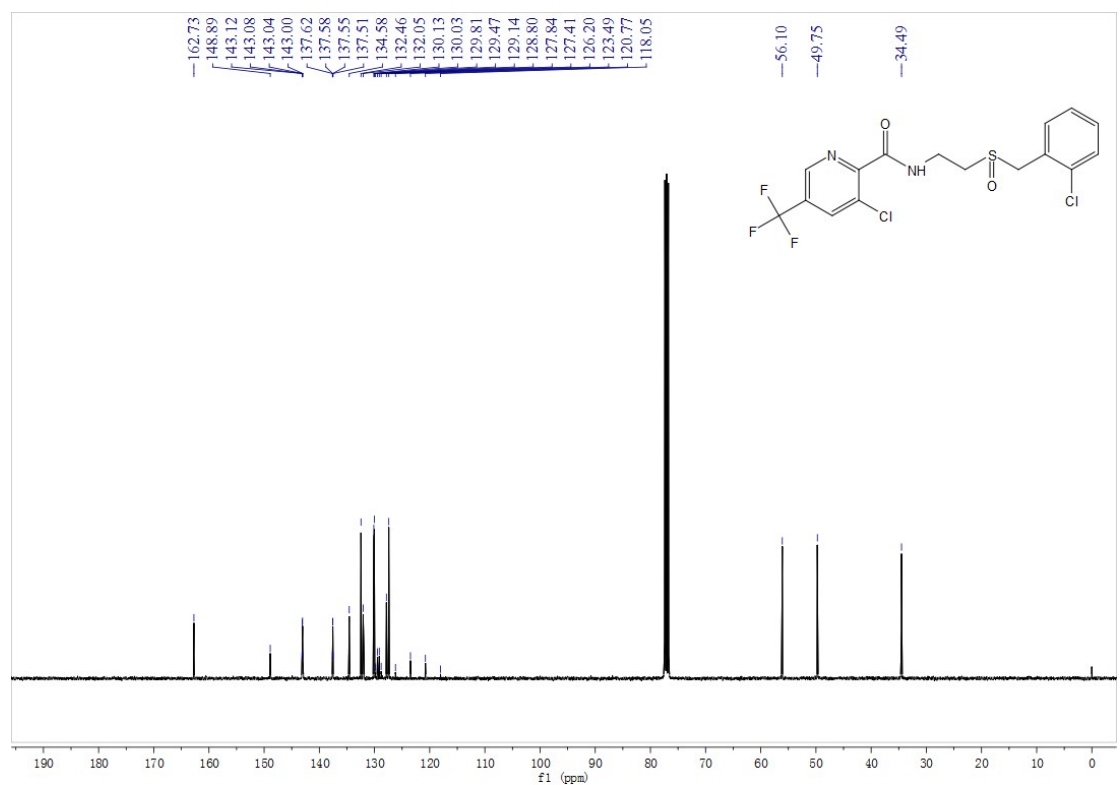


Fig. S134 ¹³C NMR spectra of compound **G9**

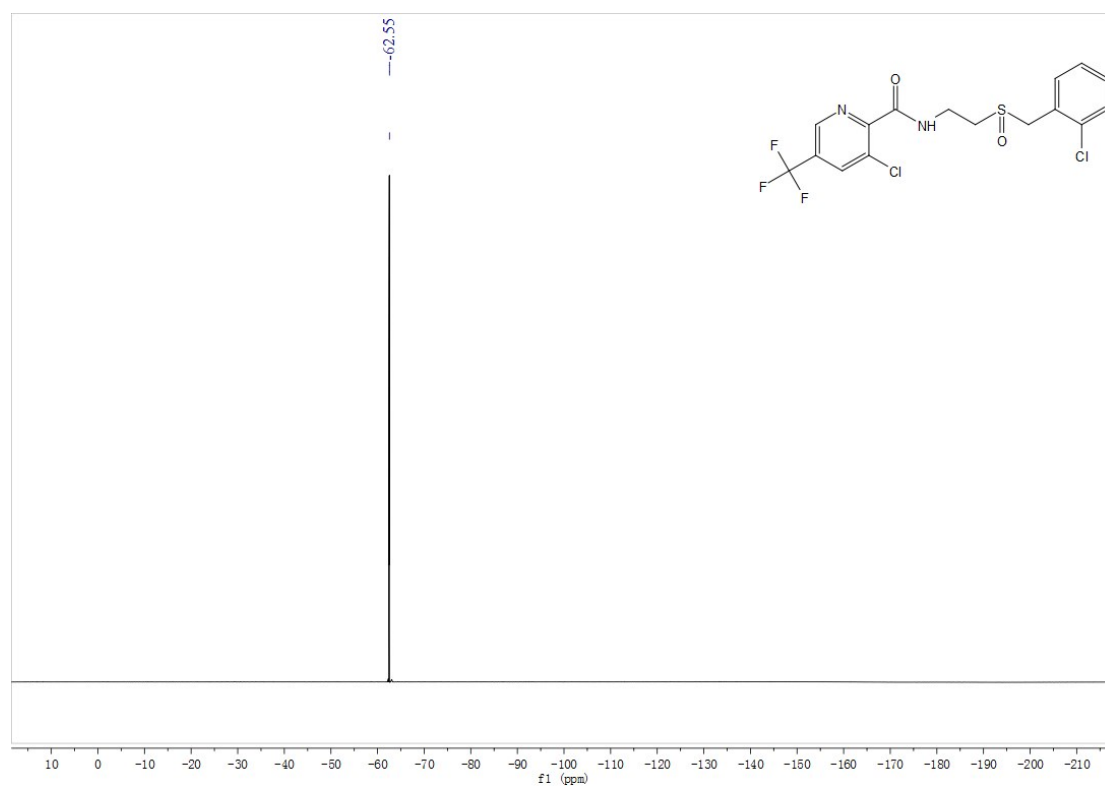


Fig. S135 ^{19}F NMR spectra of compound **G9**

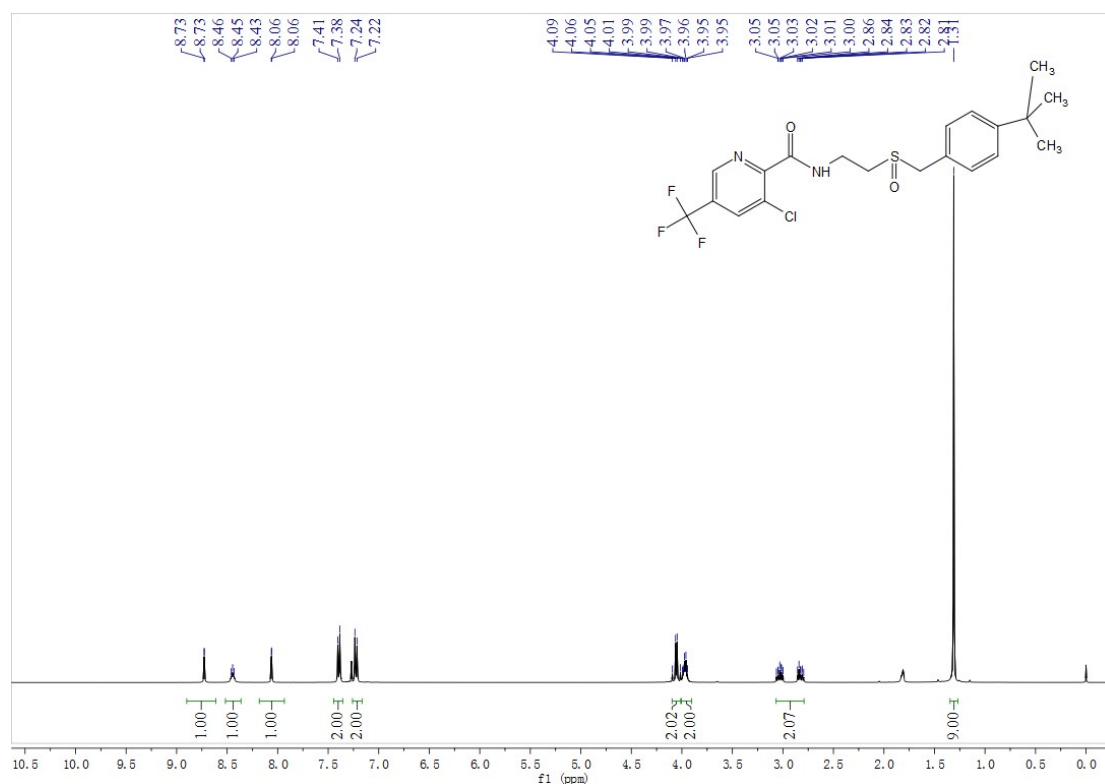


Fig. S136 ¹H NMR spectra of compound **G10**

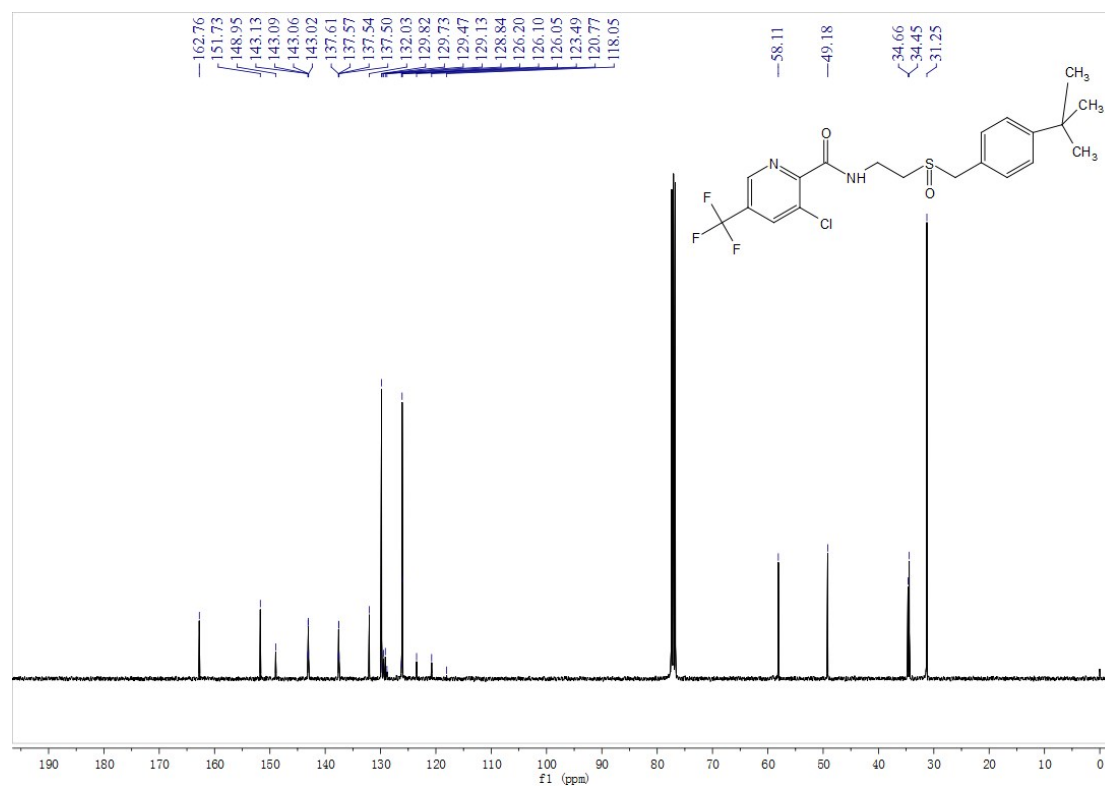


Fig. S137 ¹³C NMR spectra of compound **G10**

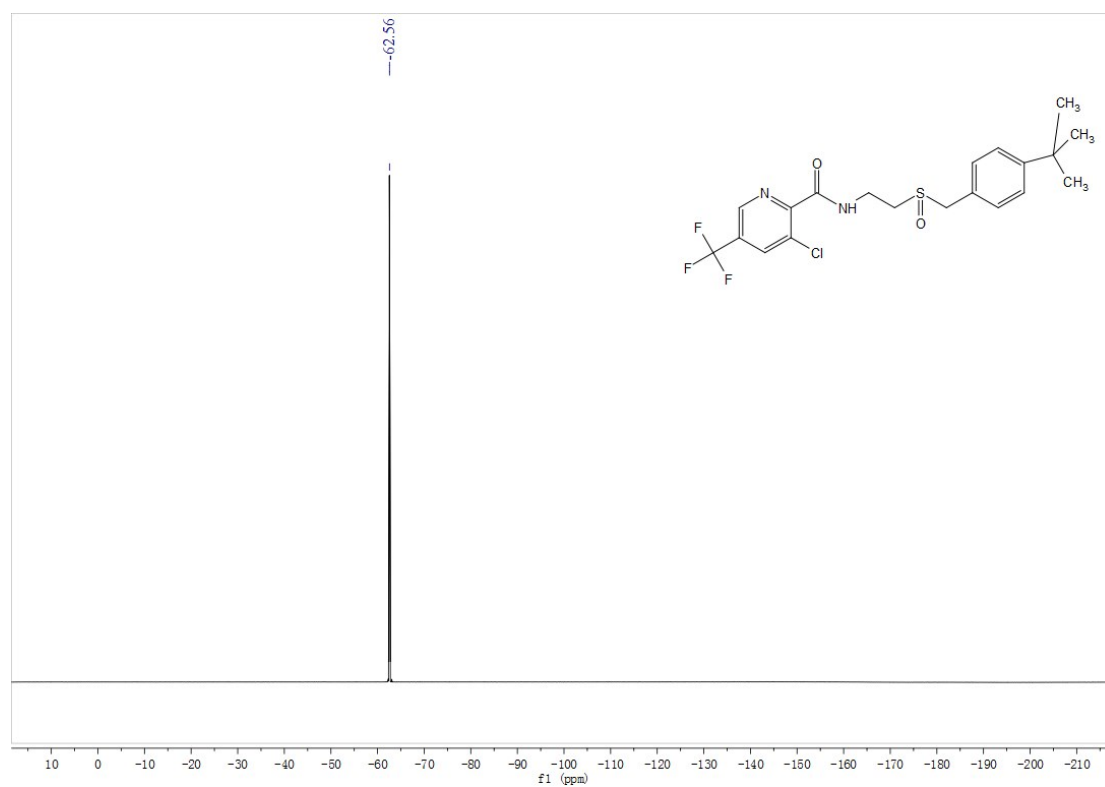


Fig. S138 ^{19}F NMR spectra of compound **G10**

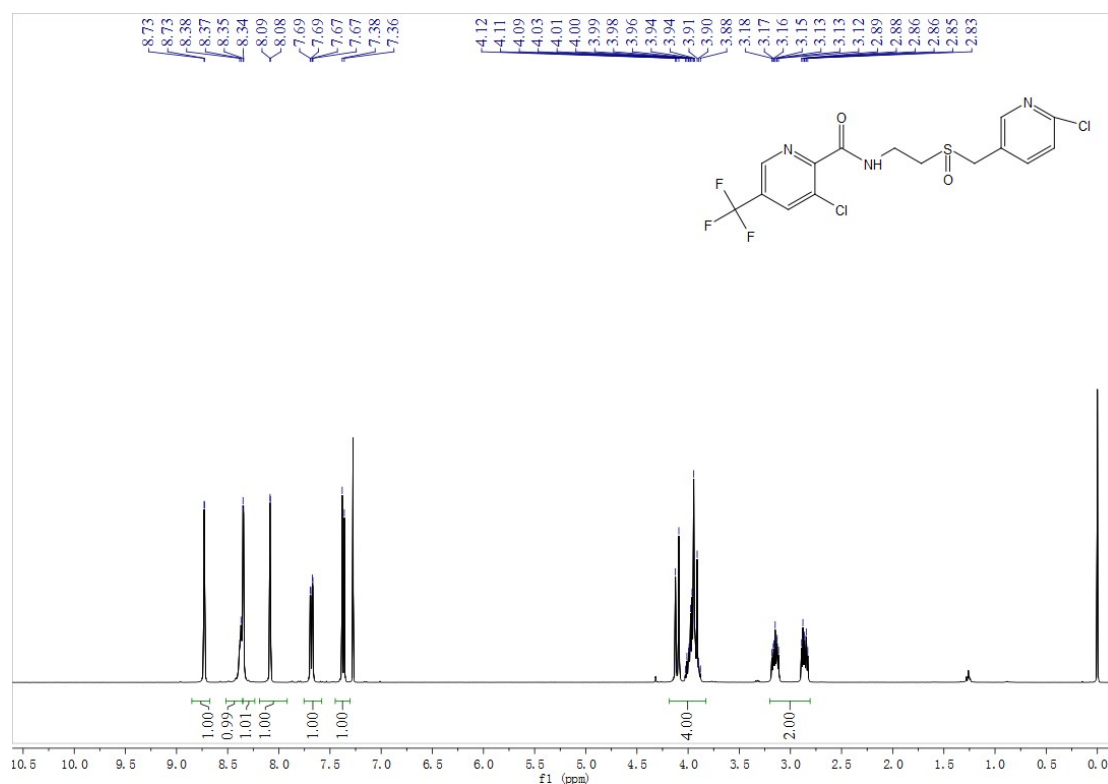


Fig. S139 ¹H NMR spectra of compound **G11**

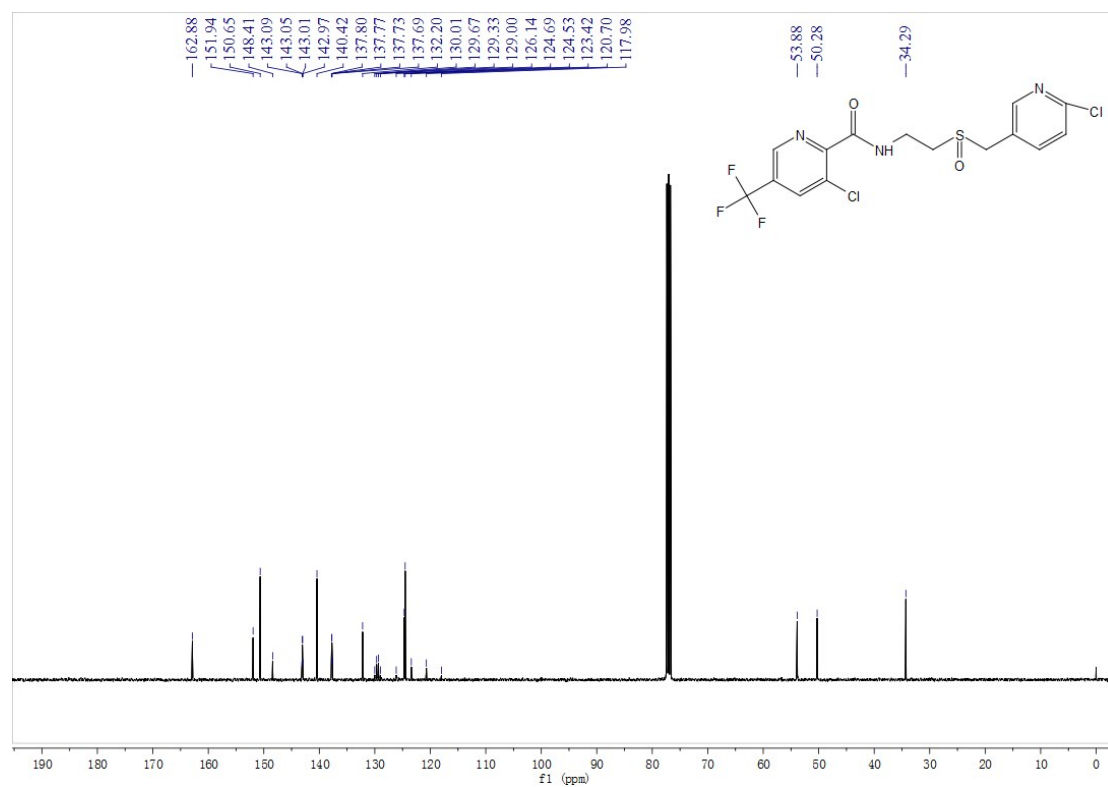


Fig. S140 ¹³C NMR spectra of compound **G11**

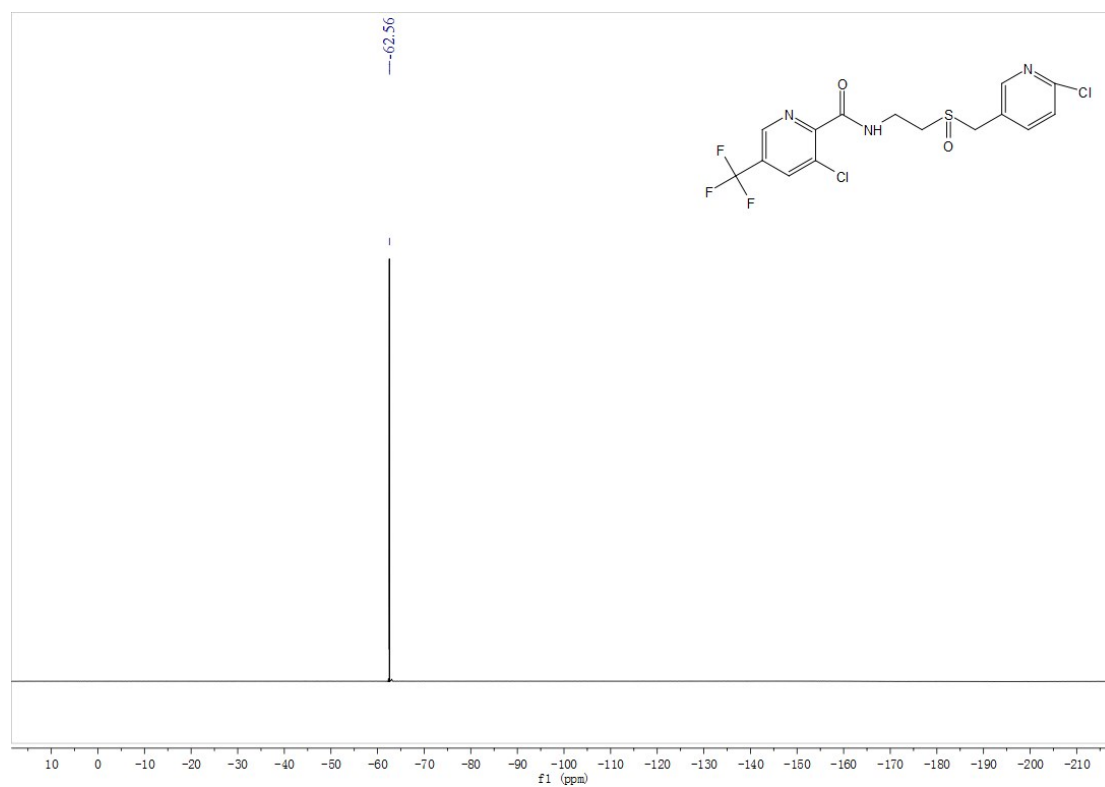


Fig. S141 ^{19}F NMR spectra of compound **G11**

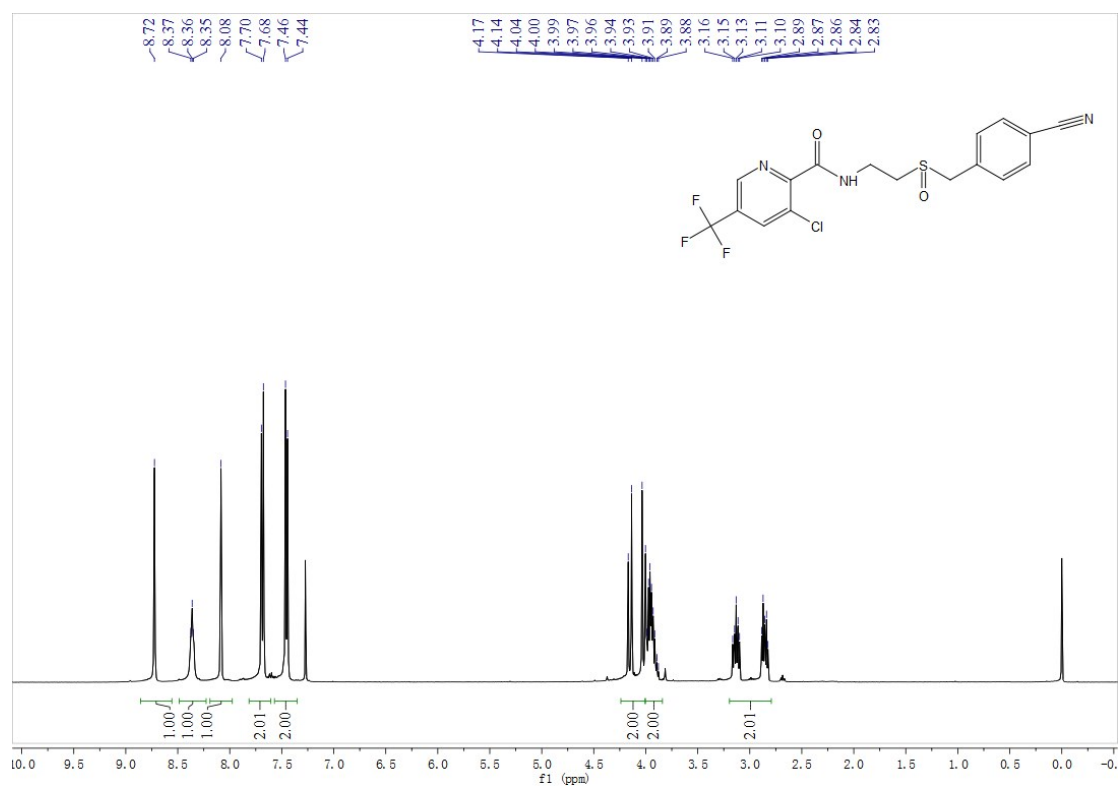


Fig. S142 ¹H NMR spectra of compound **G12**

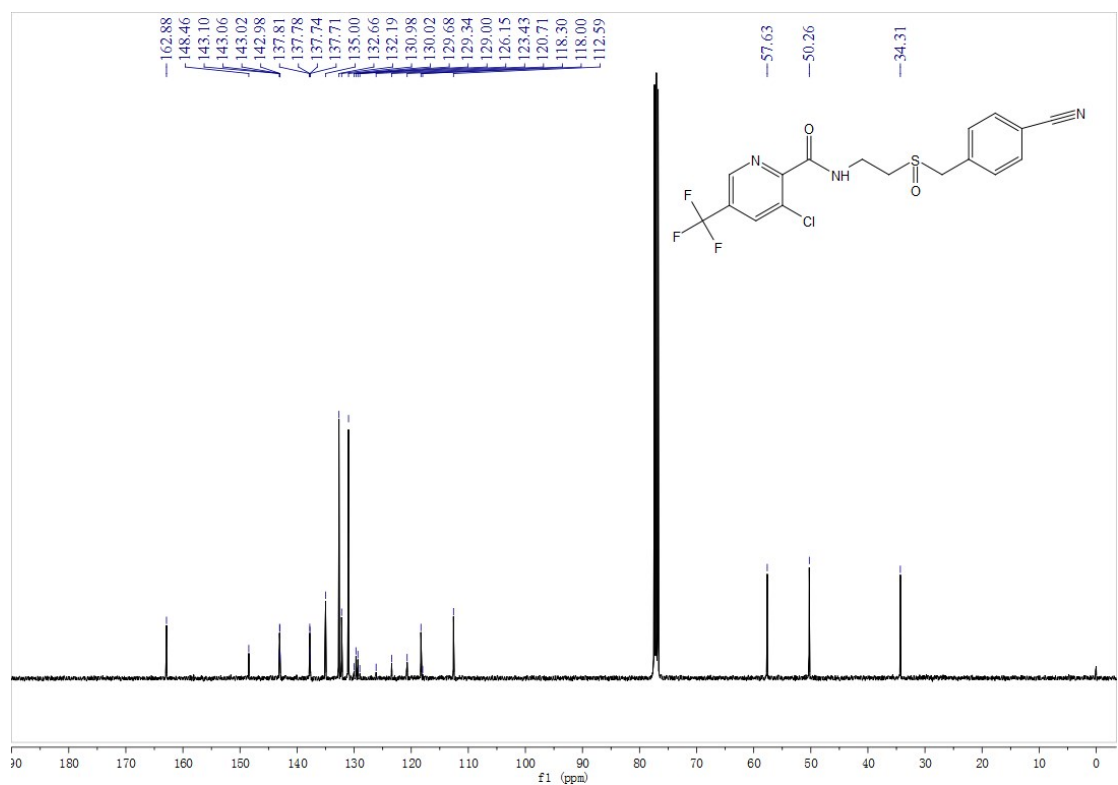


Fig. S143 ¹³C NMR spectra of compound **G12**

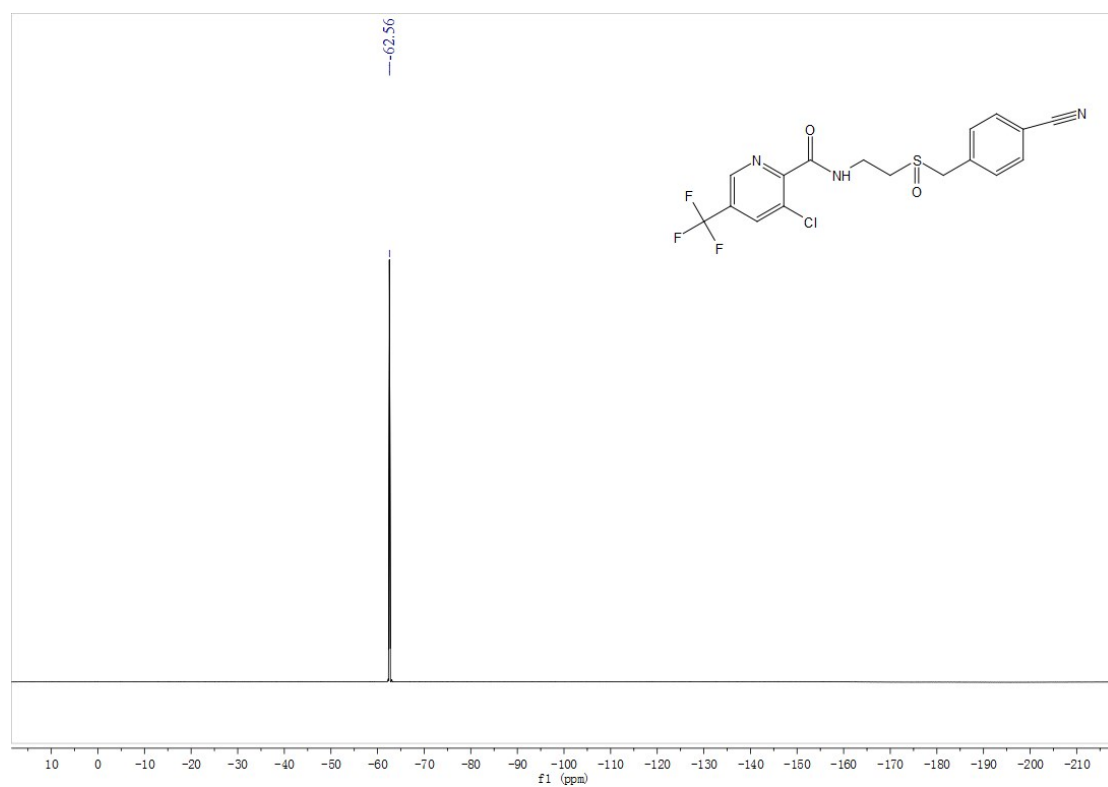


Fig. S144 ^{19}F NMR spectra of compound **G12**

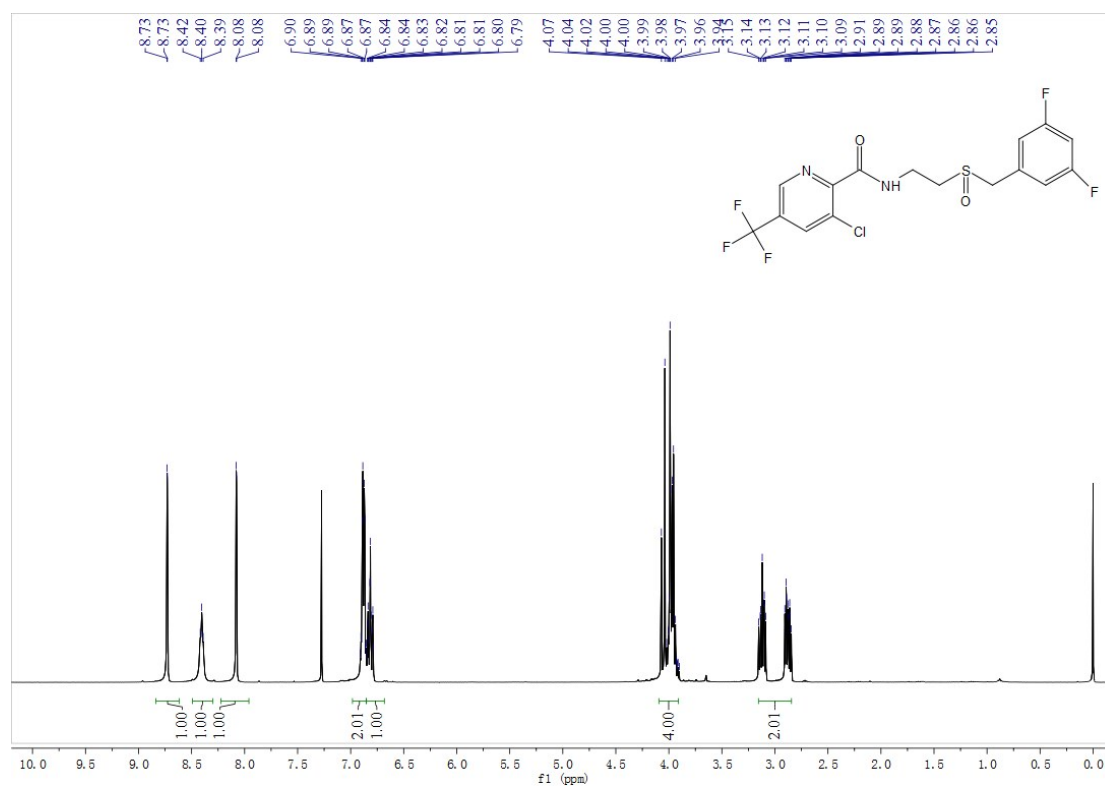


Fig. S145 ¹H NMR spectra of compound **G13**

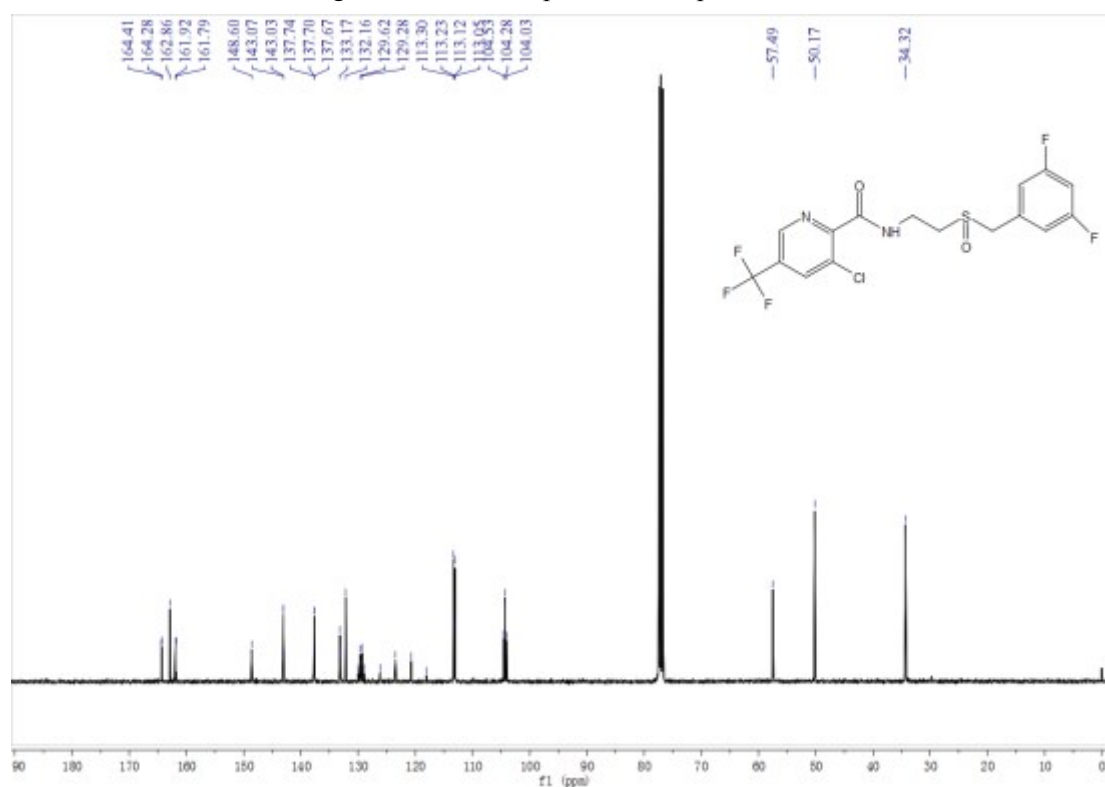


Fig. S146 ¹³C NMR spectra of compound **G13**



Fig. S147 ^{19}F NMR spectra of compound **G13**

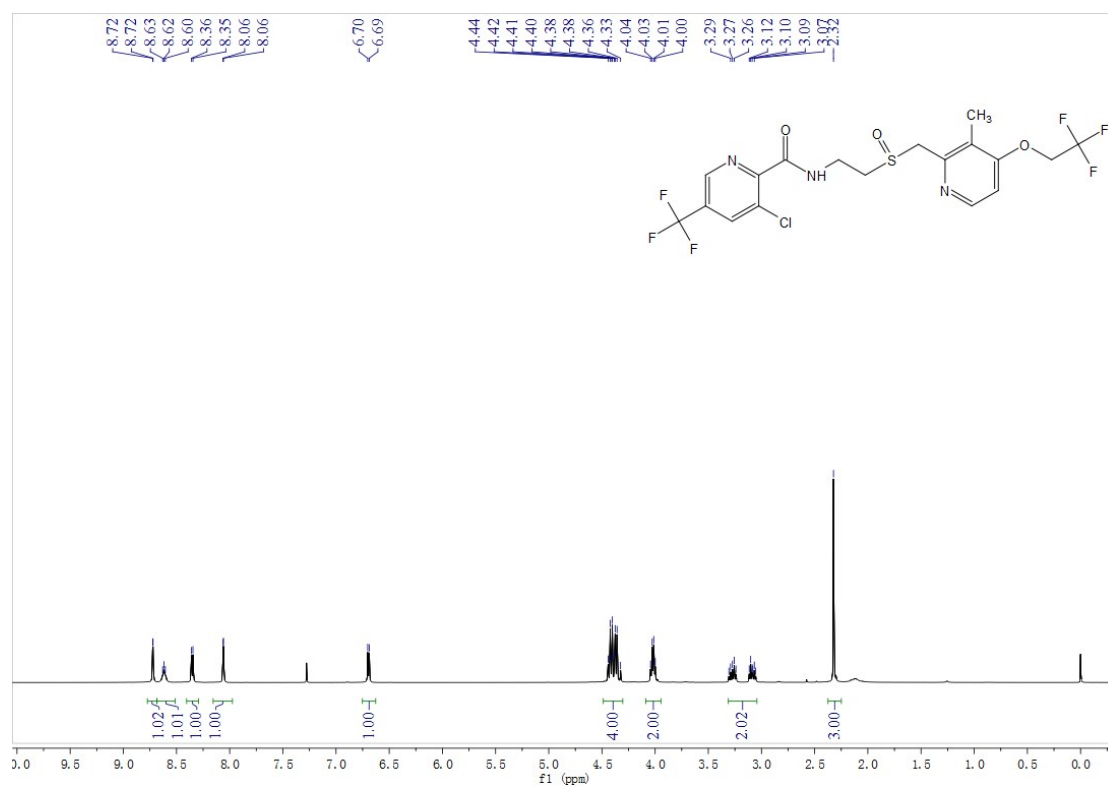


Fig. S148 ¹H NMR spectra of compound **G14**

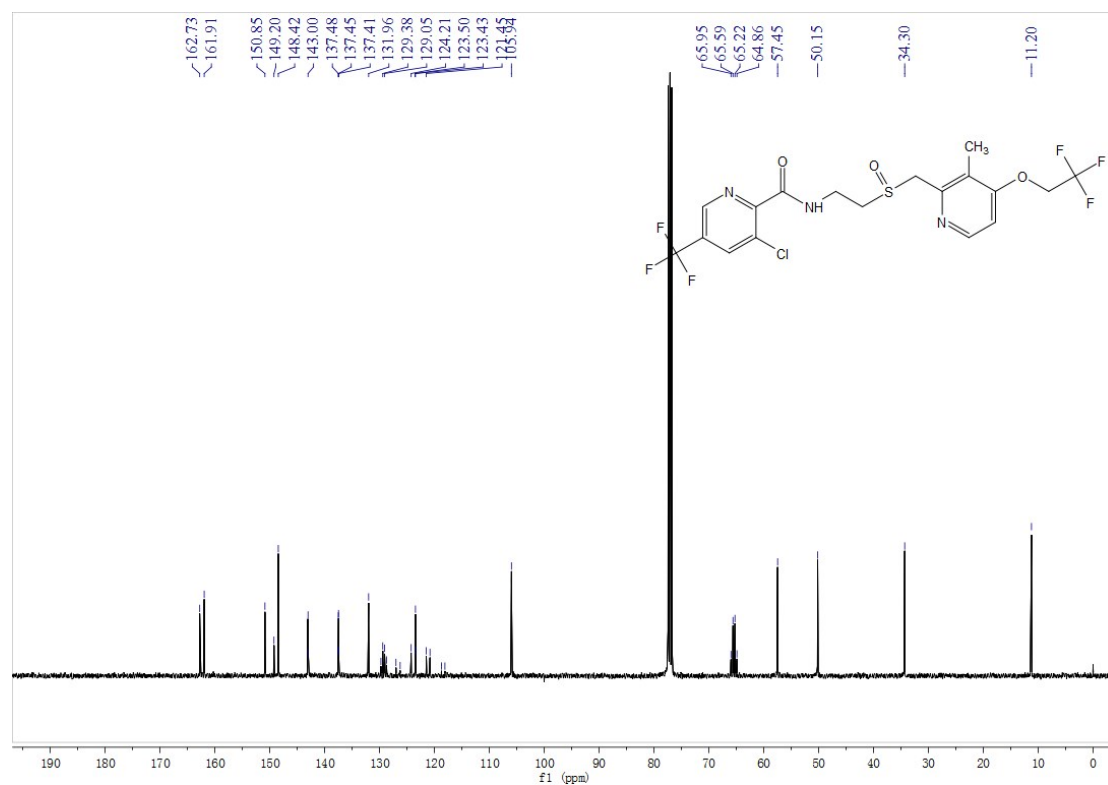


Fig. S149 ¹³C NMR spectra of compound **G14**

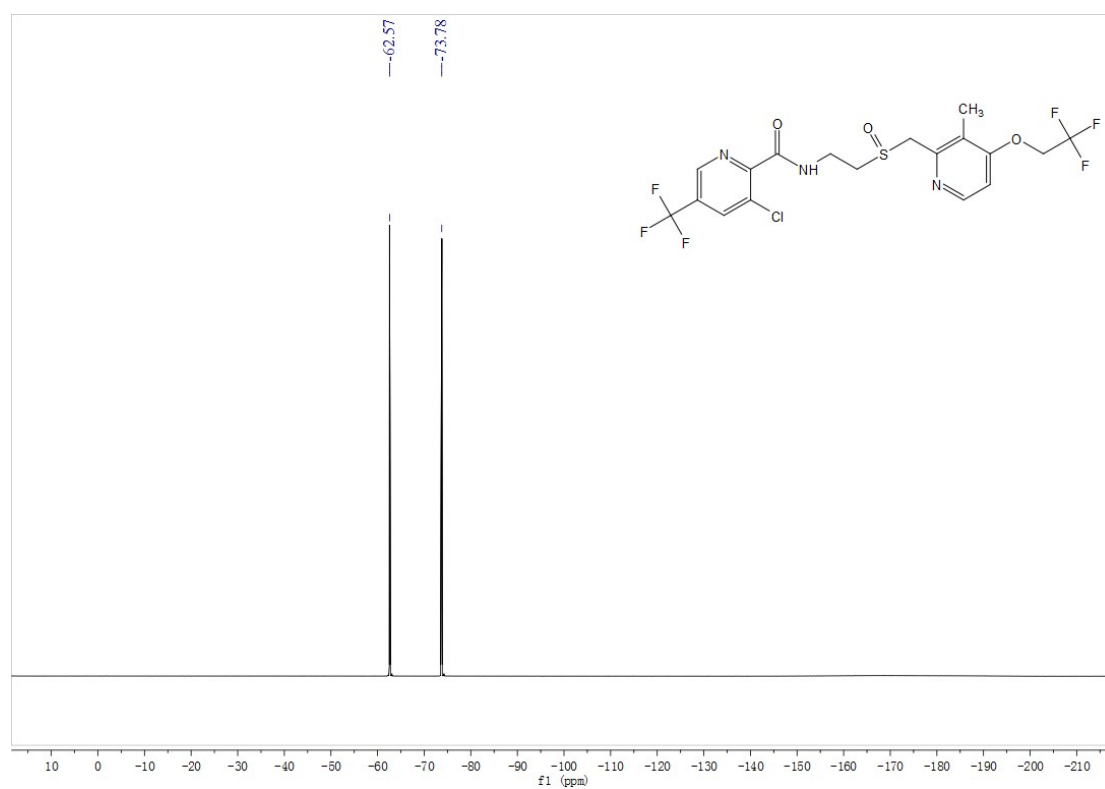


Fig. S150 ^{19}F NMR spectra of compound **G14**

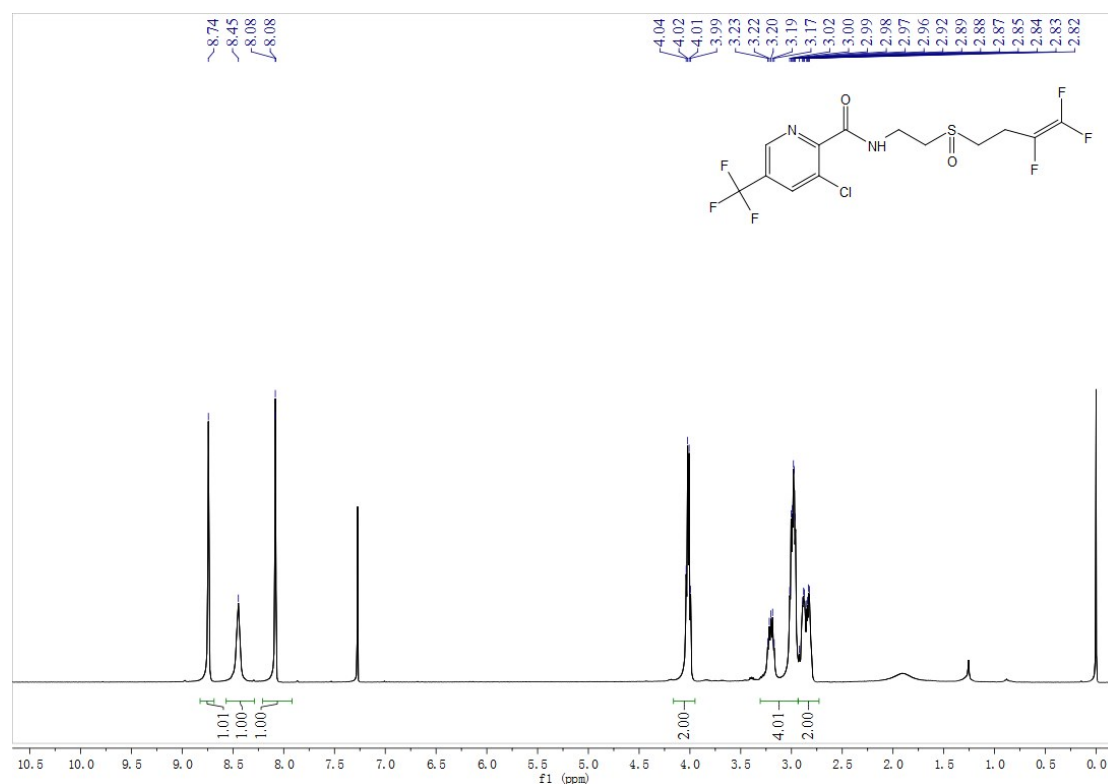


Fig. S151 ¹H NMR spectra of compound **G15**

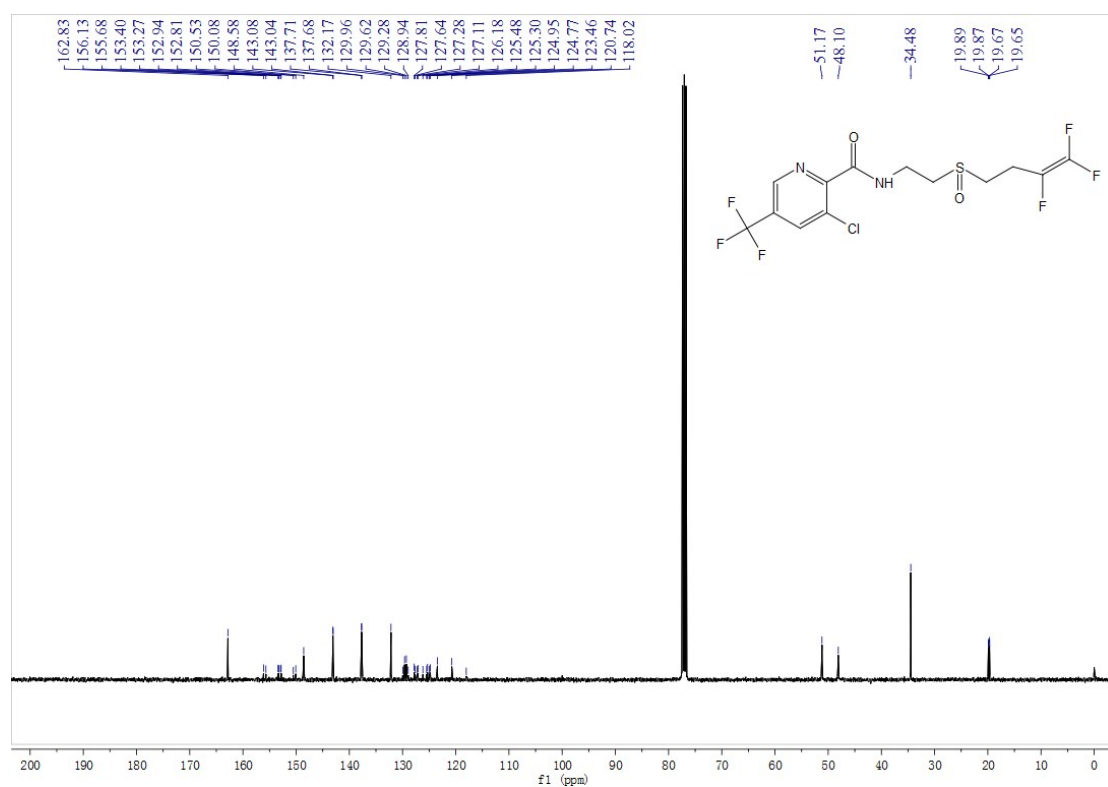


Fig. S152 ¹³C NMR spectra of compound **G15**

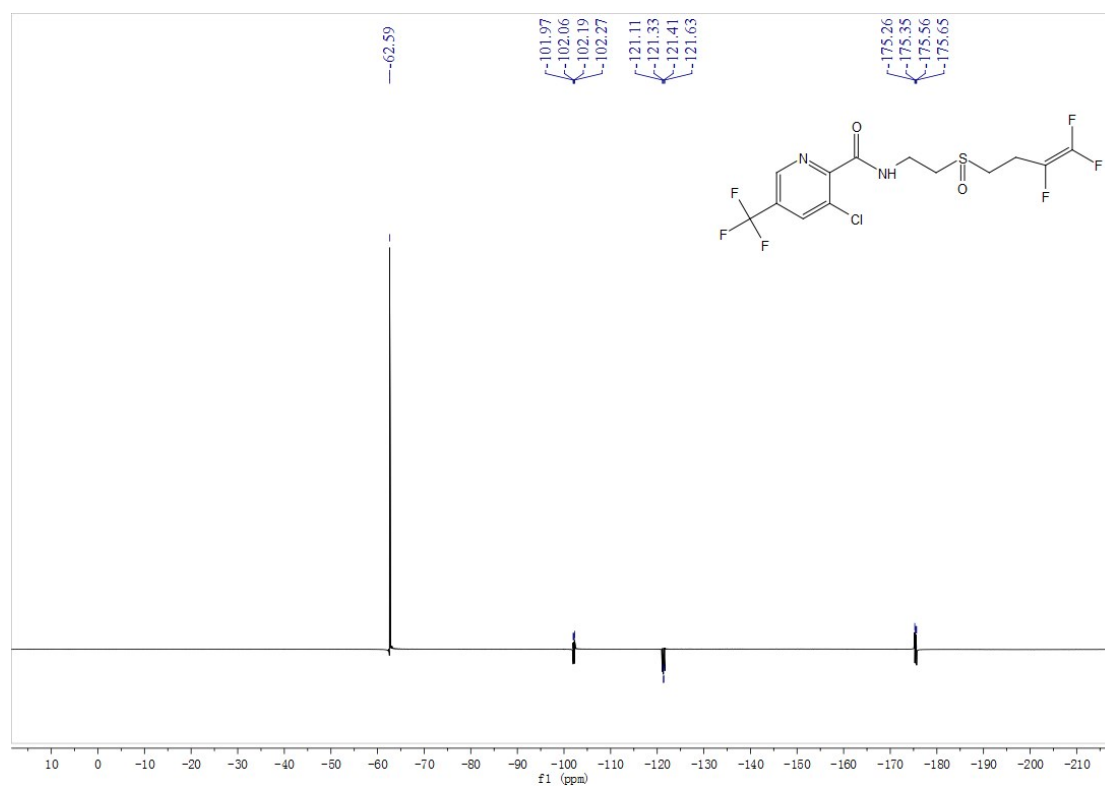


Fig. S153 ^{19}F NMR spectra of compound **G15**

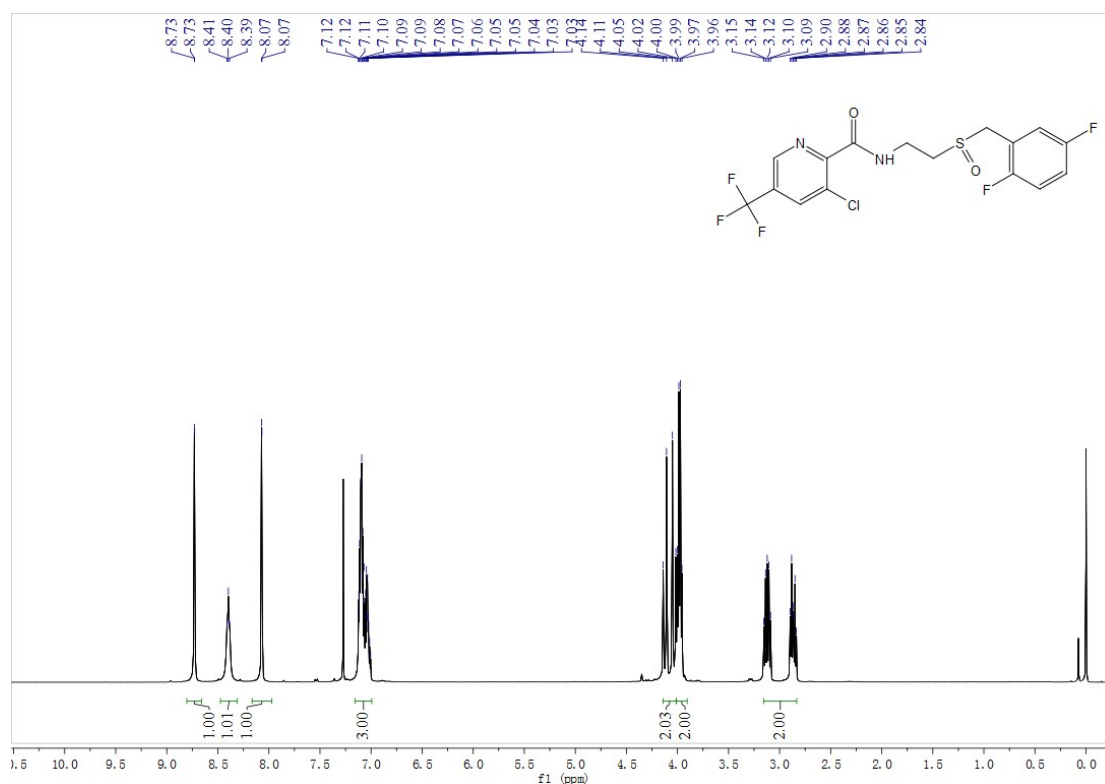


Fig. S154 ¹H NMR spectra of compound **G16**

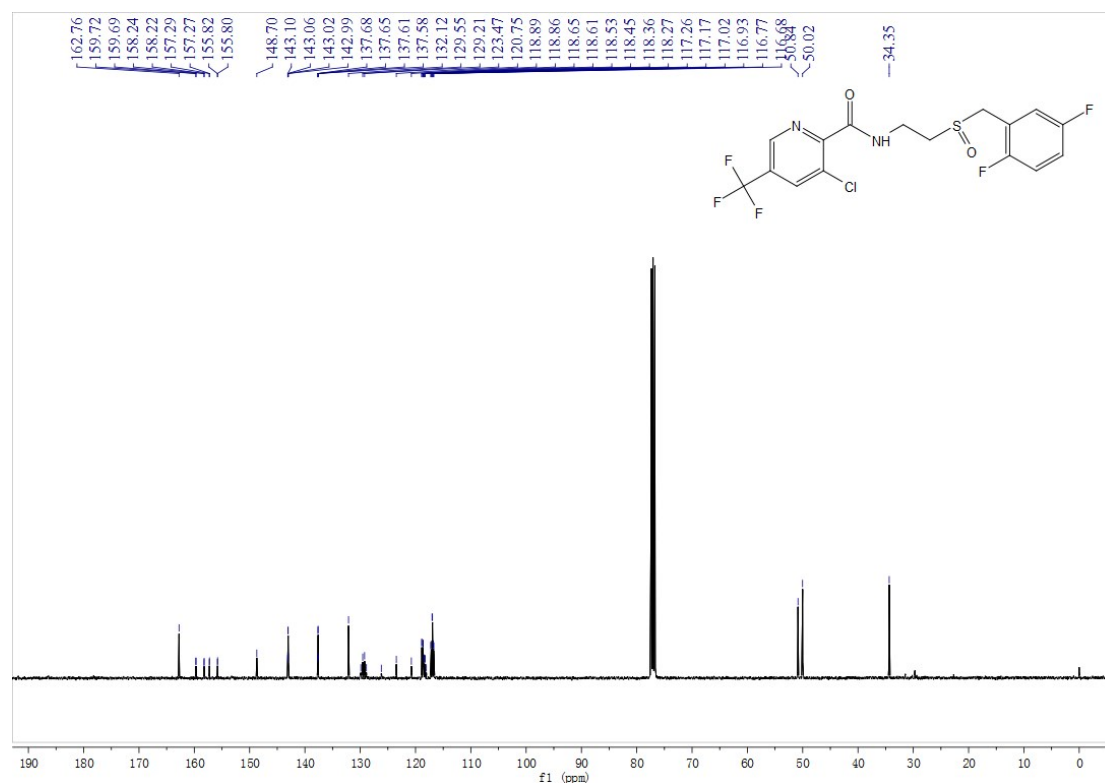


Fig. S155 ¹³C NMR spectra of compound **G16**

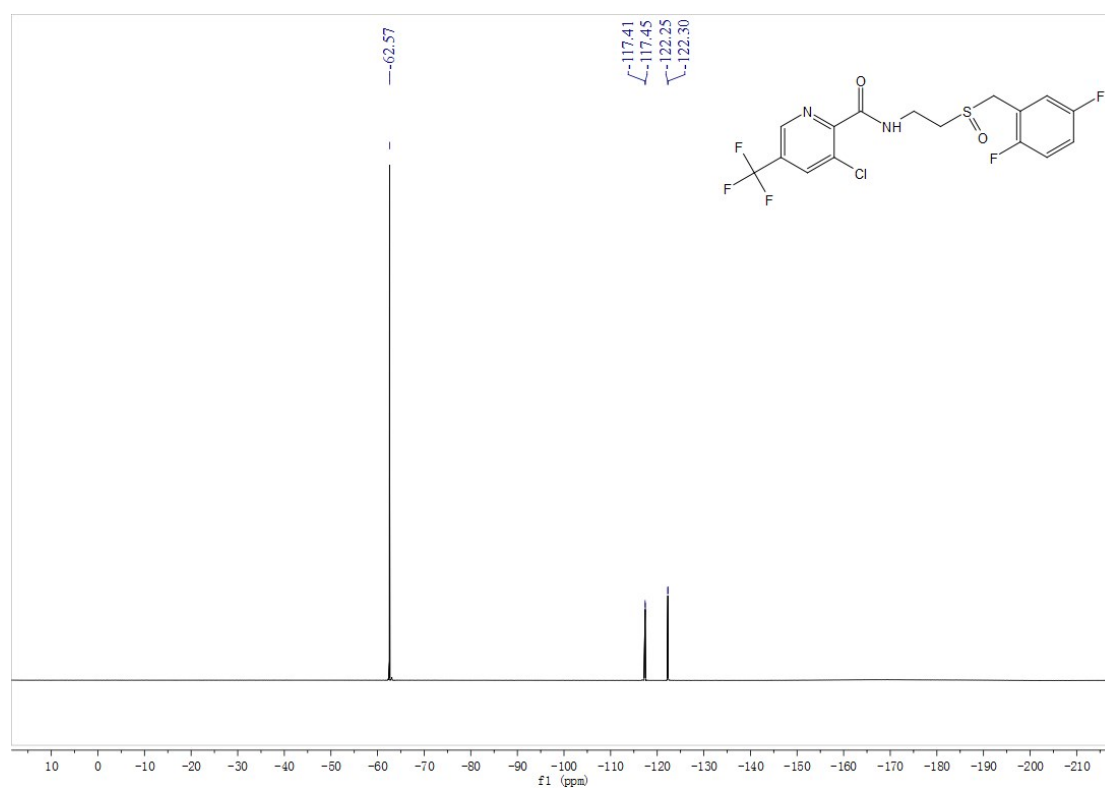


Fig. S156 ^{19}F NMR spectra of compound **G16**