## A Profile of the *in vitro* Anti-tumor Activity Against Breast and Colon Cancer Cell Lines of novel specific ionic liquids based imidazole, benzothiazole conjugates

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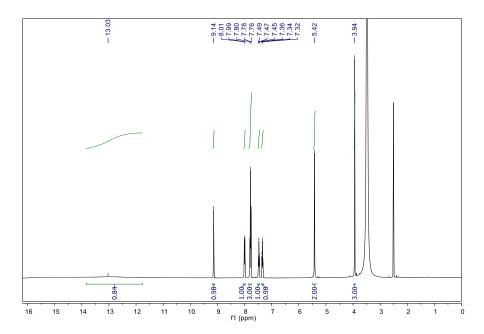


Figure S1. <sup>1</sup>H NMR of Compound 6.

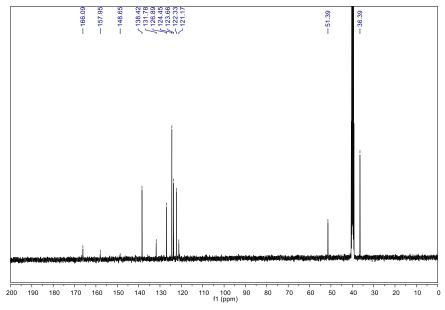


Figure S2. <sup>13</sup>C NMR of Compound 6.

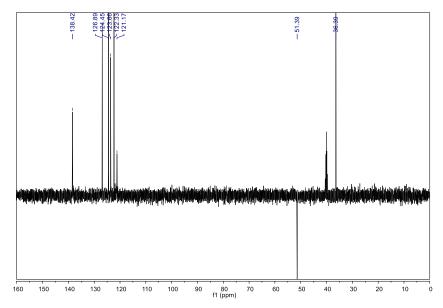
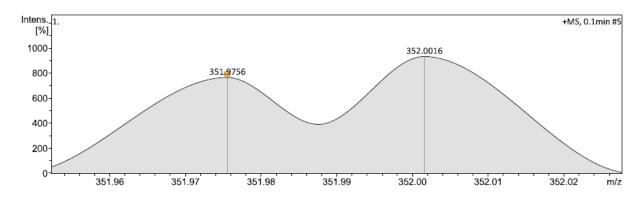


Figure S3. Dept-135 NMR of Compound 6.



**Figure S4**. HRMS (ESI) of Compound **6**.

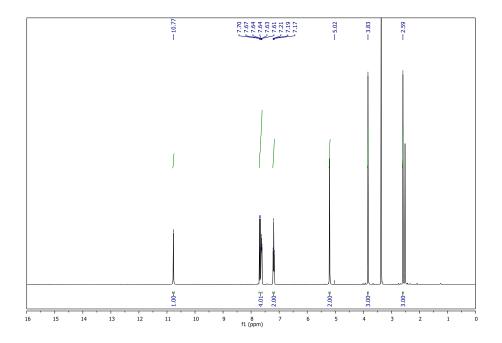
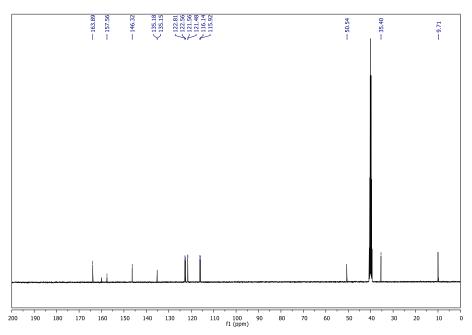
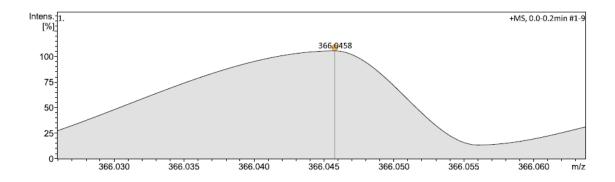


Figure S5. <sup>1</sup>H NMR of Compound 7.



**Figure S6**. <sup>13</sup>C NMR of Compound **7**.



**Figure S7**. HRMS (ESI) of Compound 7.

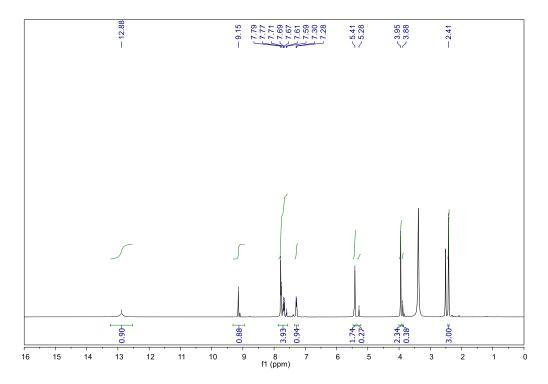


Figure S8.  $^1$ H NMR of Compound 8.

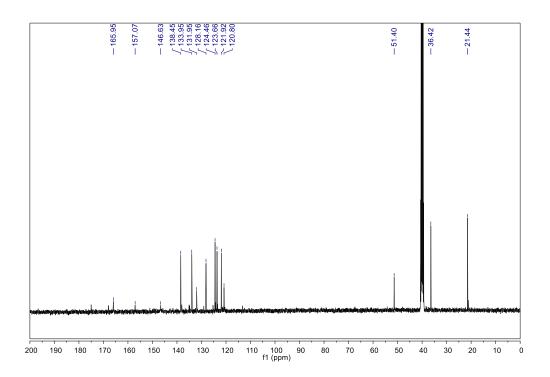


Figure S9. <sup>13</sup>C NMR of Compound 8.

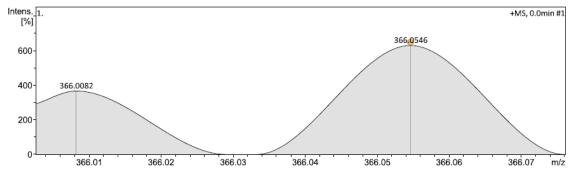


Figure S10. HRMS (ESI) of Compound 8.

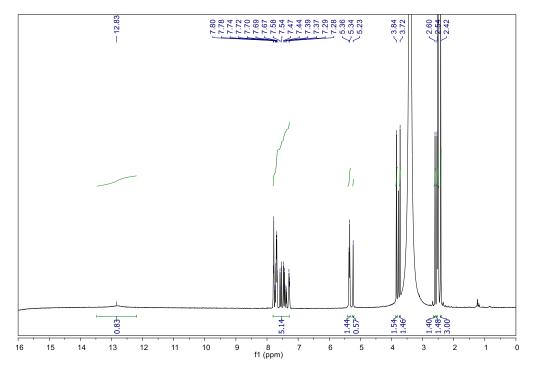


Figure S11. <sup>1</sup>H NMR of Compound 9.

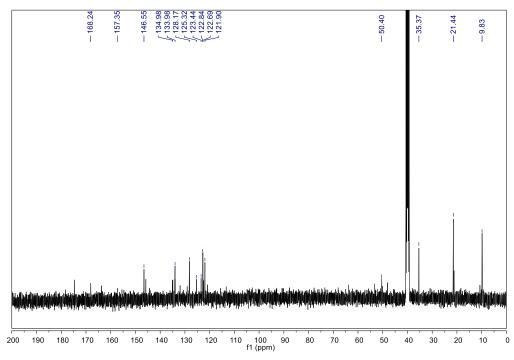


Figure S12. <sup>13</sup>C NMR of Compound 9.

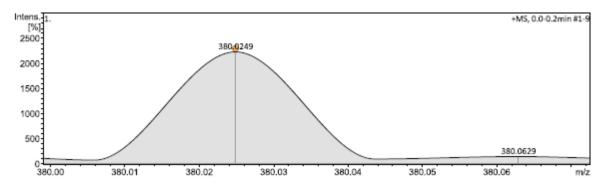


Figure S13. HRMS (ESI) of Compound 9.

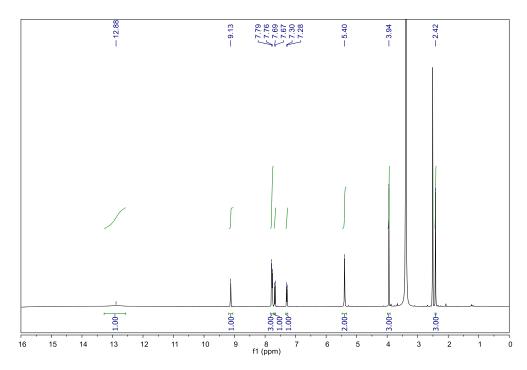


Figure S14. <sup>1</sup>H NMR of Compound 10.

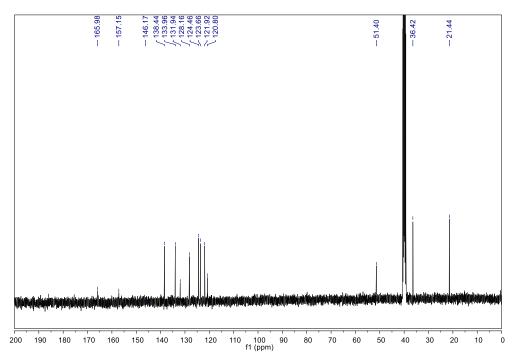


Figure S15. <sup>13</sup>C NMR of Compound 10.

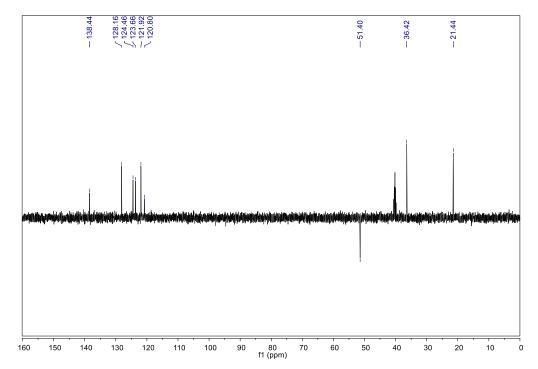


Figure S16. Dept-135 NMR of Compound 10.

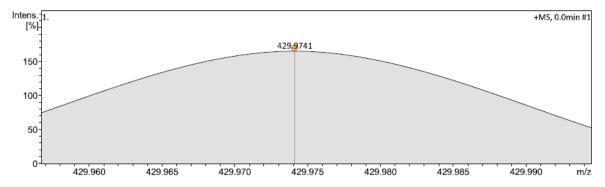


Figure S17. HRMS (ESI) of Compound 10.

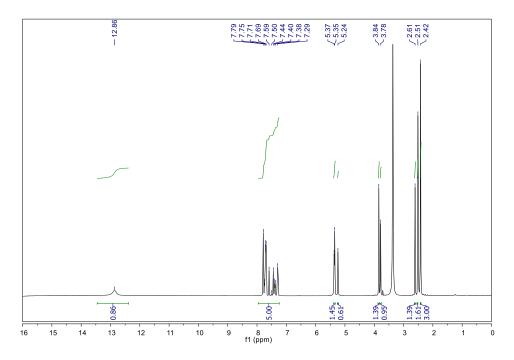


Figure S18. <sup>1</sup>H NMR of Compound 11.

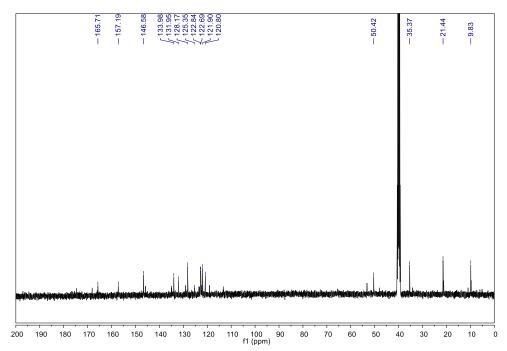


Figure S19. <sup>13</sup>C NMR of Compound 11.

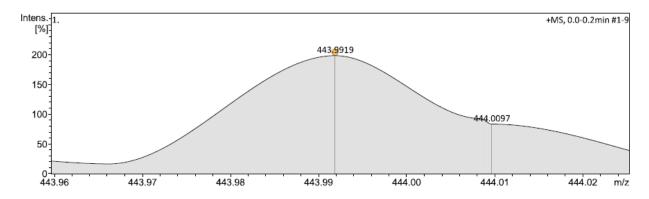


Figure S20. HRMS (ESI) of Compound 11.

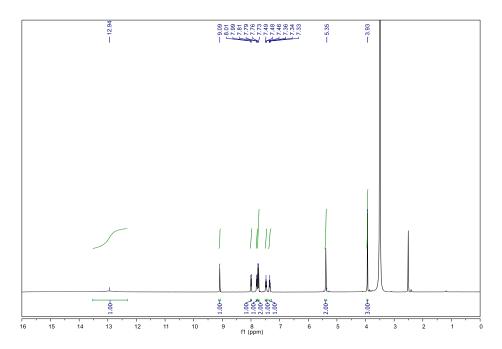


Figure S21. <sup>1</sup>H NMR of Compound 12.

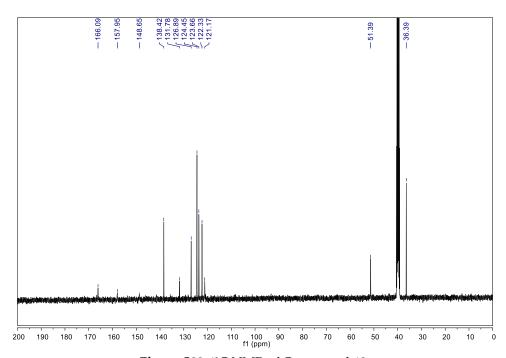


Figure S22. <sup>13</sup>C NMR of Compound 12.

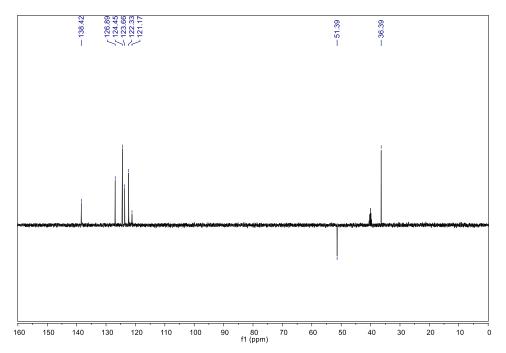


Figure S23. Dept-135 NMR of Compound 12.

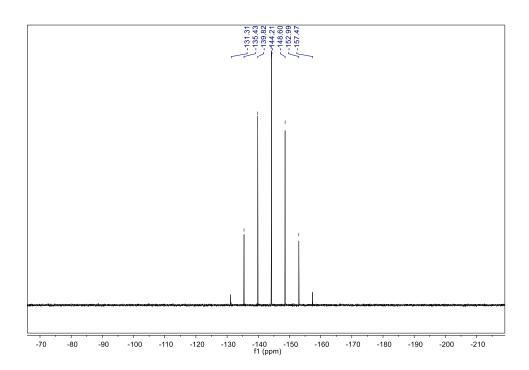
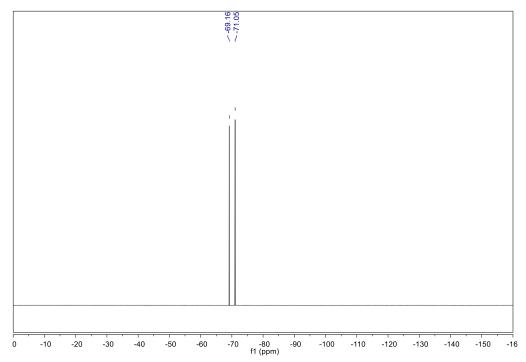


Figure S24. <sup>31</sup>PNMR of Compound 12.



**Figure S25**. <sup>19</sup>FNMR of Compound **12**.

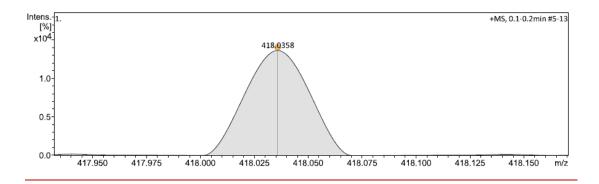


Figure S26. HRMS (ESI) of Compound 12.

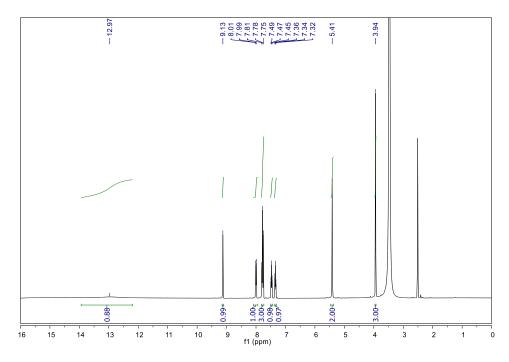


Figure S27. <sup>1</sup>H NMR of Compound 13.

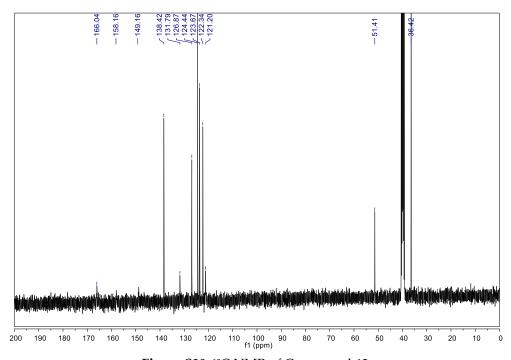


Figure S28. <sup>13</sup>C NMR of Compound 13.

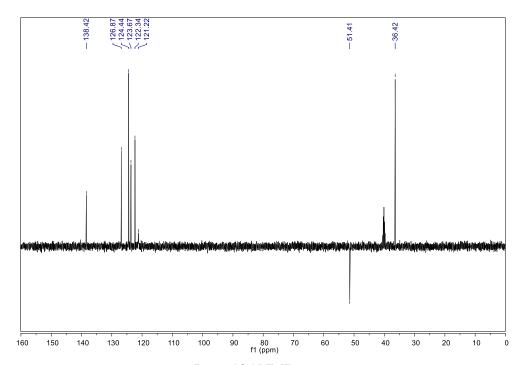


Figure S29. Dept-135 NMR of Compound 13.

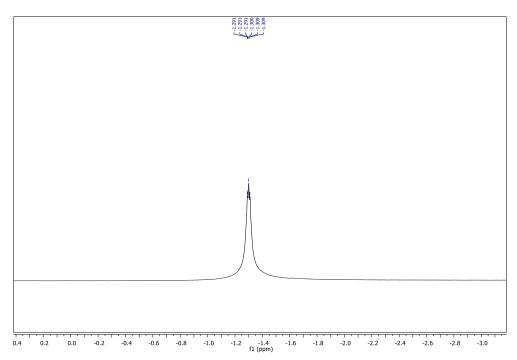


Figure S30. 11B NMR of Compound 13.

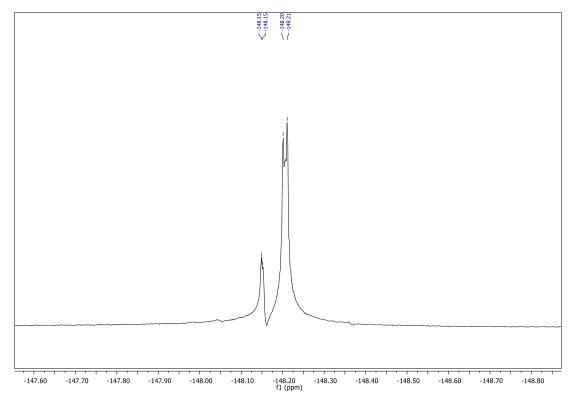


Figure S31. 19FNMR of Compound 13.

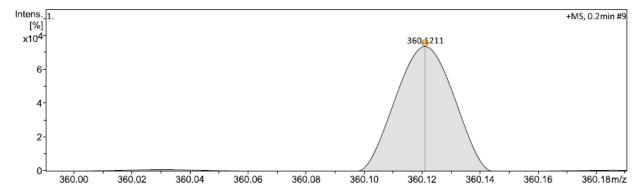


Figure S32. HRMS (ESI) of Compound 13.

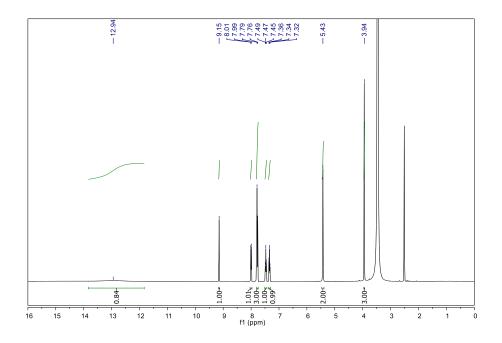


Figure S33. <sup>1</sup>H NMR of Compound 14.

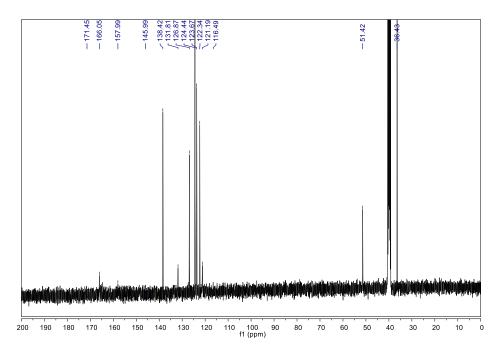


Figure S34. <sup>13</sup>C NMR of Compound 14.

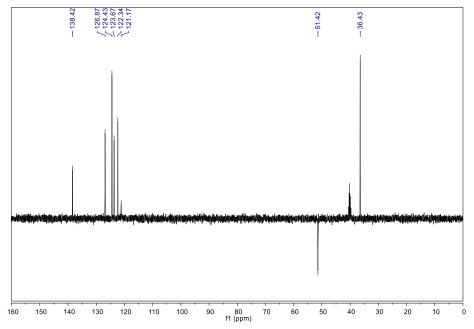
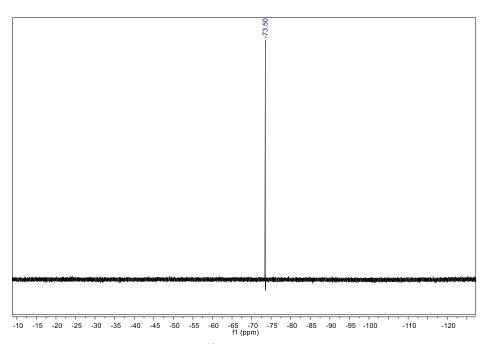


Figure S35. Dept-135 NMR of Compound 14.



**Figure S36**. <sup>19</sup>FNMR of Compound **14**.

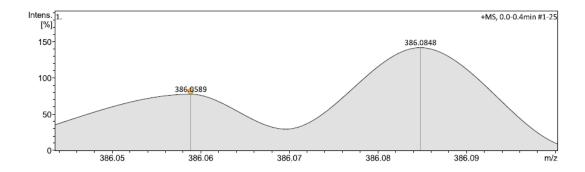


Figure S37. HRMS (ESI) of Compound 14.

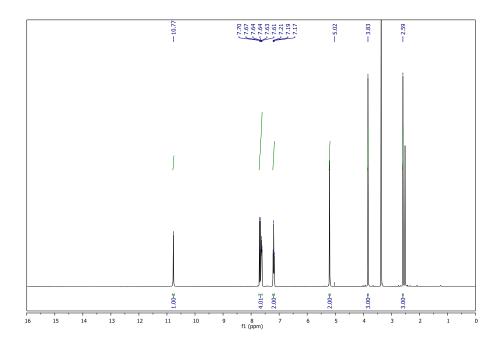
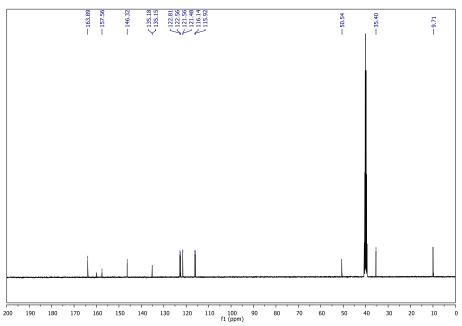


Figure S38. <sup>1</sup>H NMR of Compound 15.



**Figure S39**. <sup>13</sup>C NMR of Compound **15**.

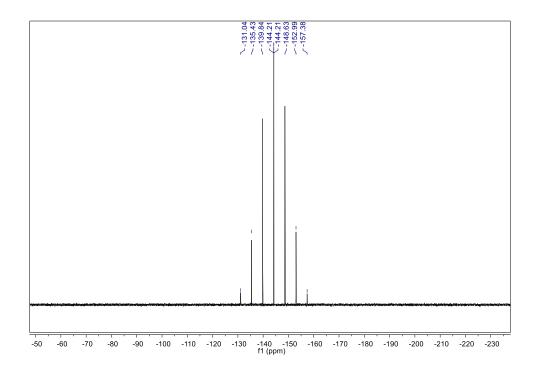
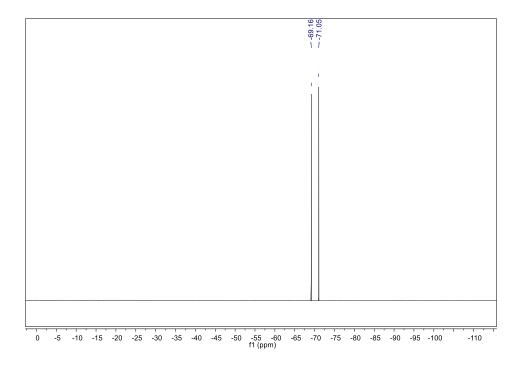


Figure S40. <sup>31</sup>PNMR of Compound 15.



**Figure S41**. <sup>19</sup>FNMR of Compound **15**.

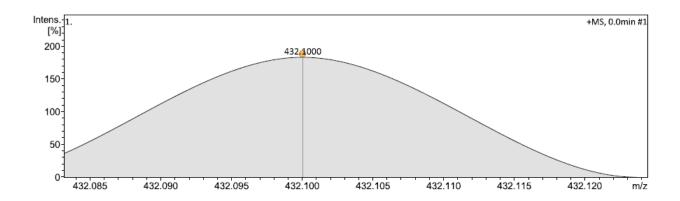


Figure S42. HRMS (ESI) of Compound 15.

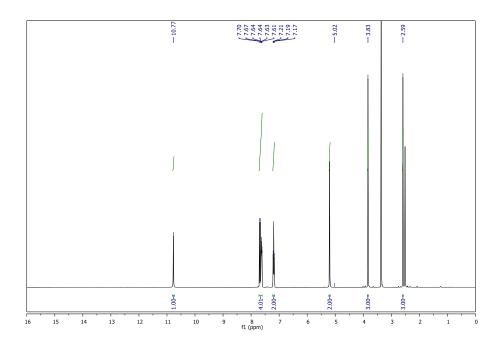
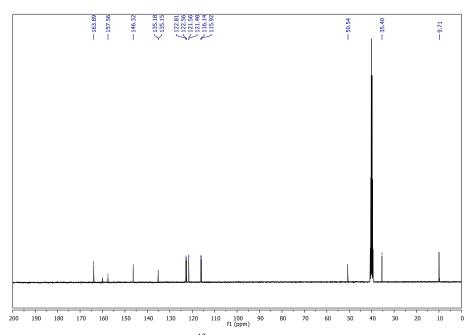


Figure S43. <sup>1</sup>H NMR of Compound 16.



**Figure S44**. <sup>13</sup>C NMR of Compound **16**.

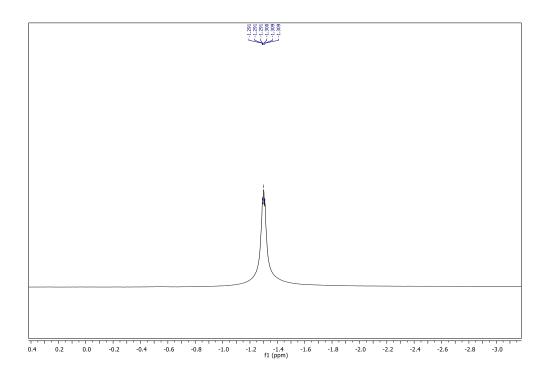
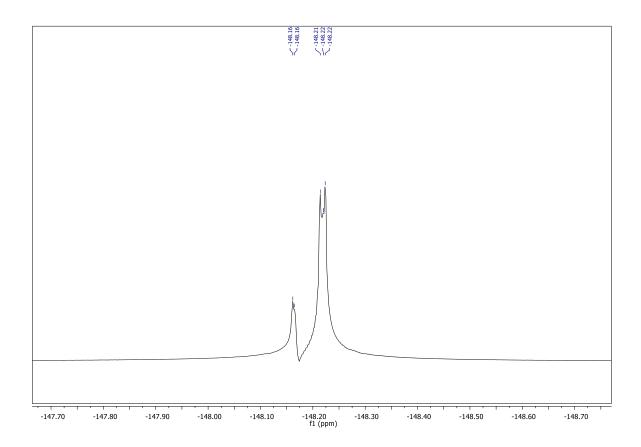


Figure S45. <sup>11</sup>B NMR of Compound 16.



**Figure S46**. <sup>19</sup>FNMR of Compound **16**.

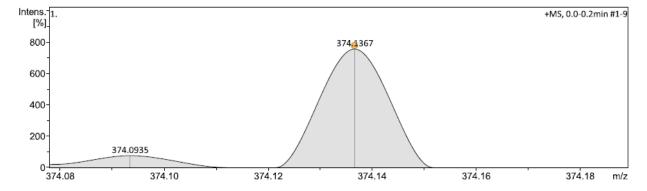


Figure S47. HRMS (ESI) of Compound 16.

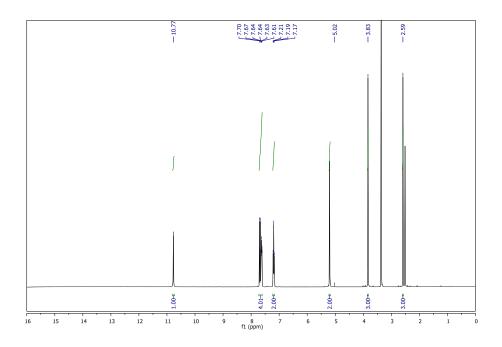


Figure S48. <sup>1</sup>H NMR of Compound 17.

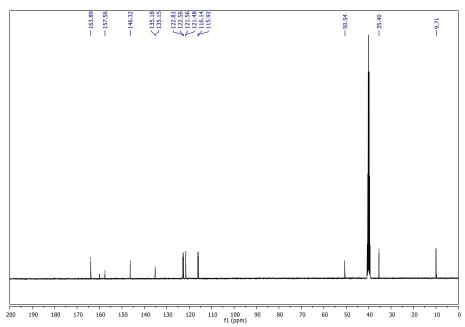
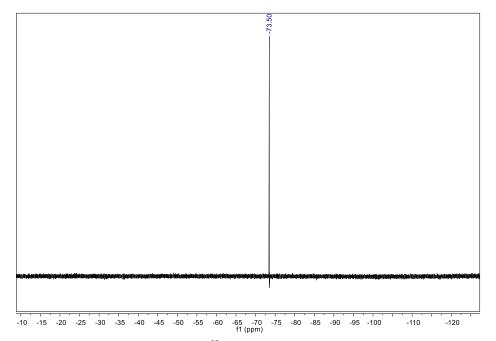


Figure S49. <sup>13</sup>C NMR of Compound 17.



**Figure S50**. <sup>19</sup>FNMR of Compound **17**.

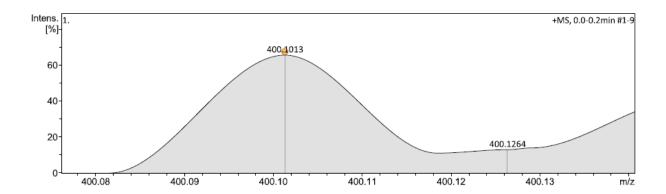


Figure S51. HRMS (ESI) of Compound 17.

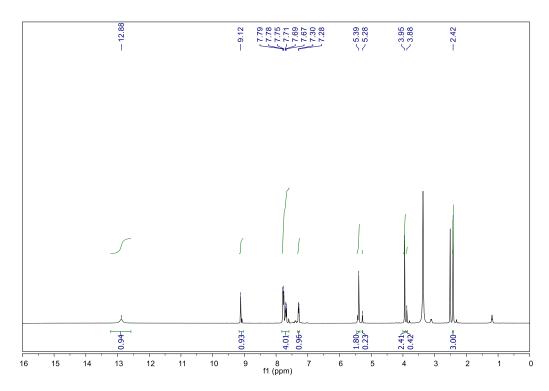
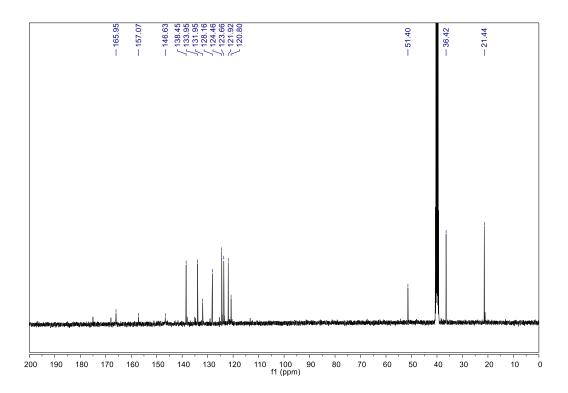


Figure S52. <sup>1</sup>H NMR of Compound 18.



**Figure S53**. <sup>13</sup>C NMR of Compound **18**.

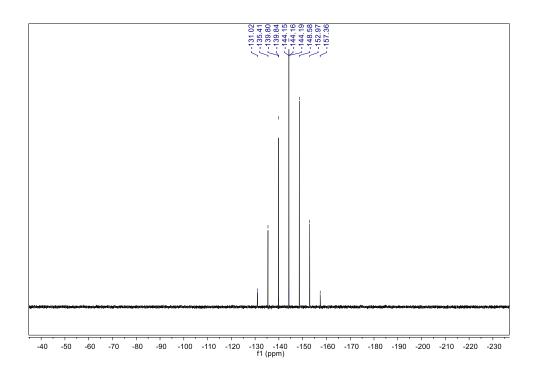


Figure S54. <sup>31</sup>P NMR of Compound 18.

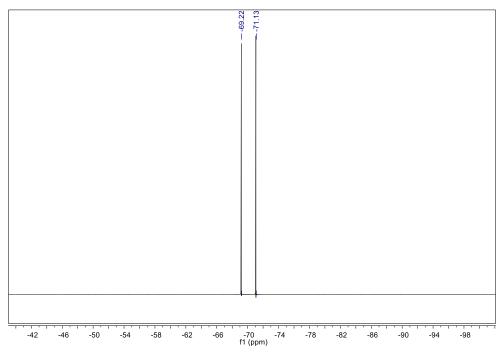


Figure S55.  $^{19}$ F NMR of Compound 18.

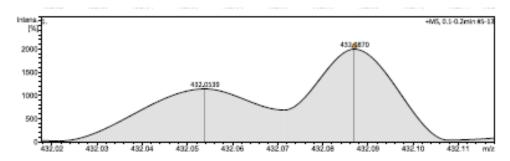


Figure S56. HRMS (ESI) of Compound 18.

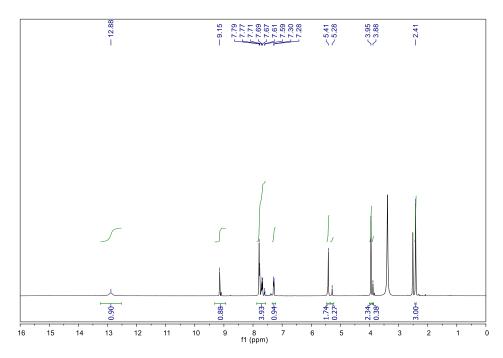
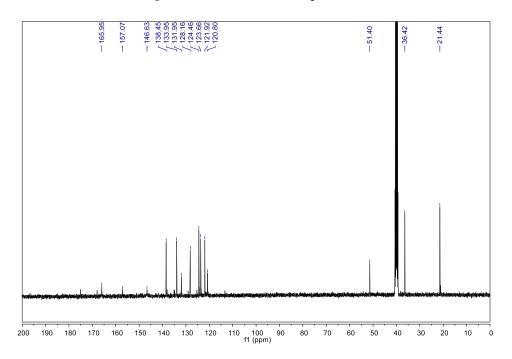


Figure S57. <sup>1</sup>H NMR of Compound 19.



**Figure S58**. <sup>13</sup>C NMR of Compound **19**.

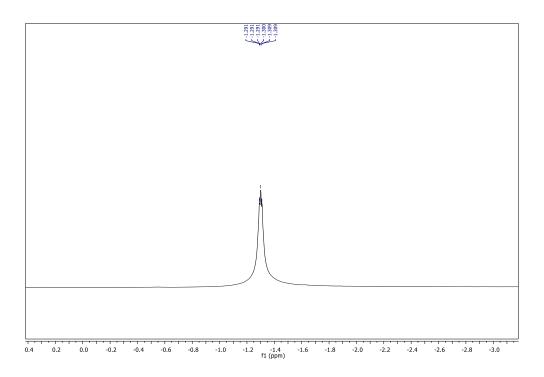
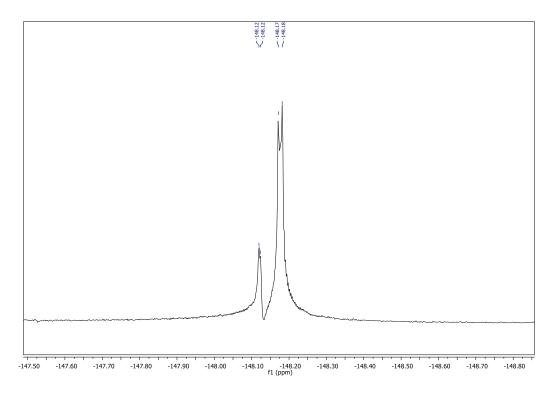


Figure S59. <sup>11</sup>B NMR of Compound 19.



**Figure S60**. <sup>19</sup>F NMR of Compound **19**.

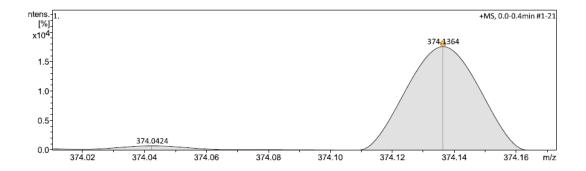


Figure S61. HRMS (ESI) of Compound 19.

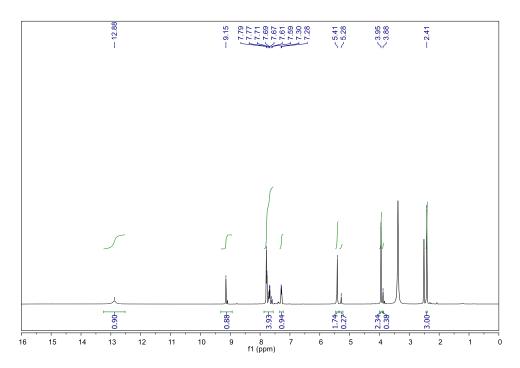


Figure S62. <sup>1</sup>H NMR of Compound 20.

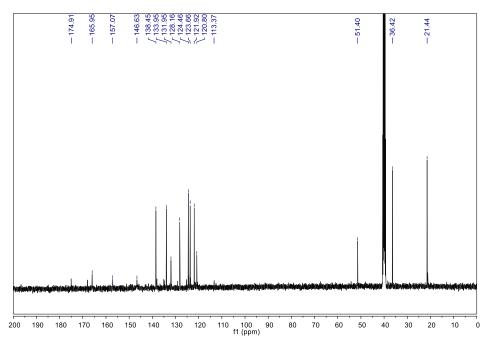


Figure S63. <sup>13</sup>C NMR of Compound 20.

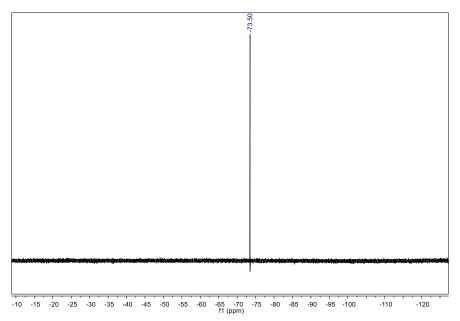


Figure S64. <sup>19</sup>F NMR of Compound 20.

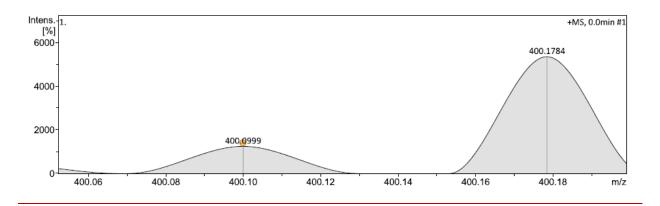


Figure S65. HRMS (ESI) of Compound 20.

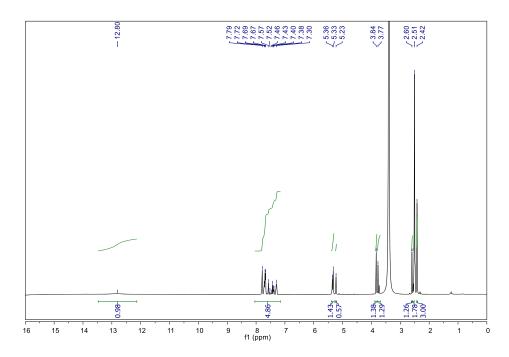


Figure S66. <sup>1</sup>H NMR of Compound 21.

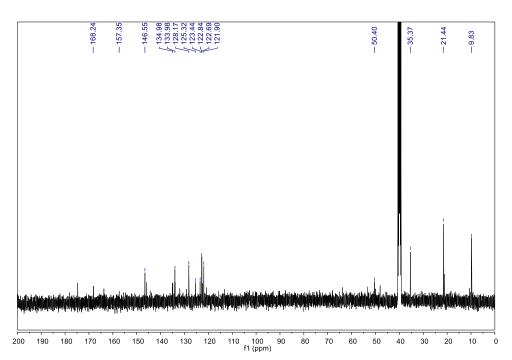


Figure S67. <sup>13</sup>C NMR of Compound 21.

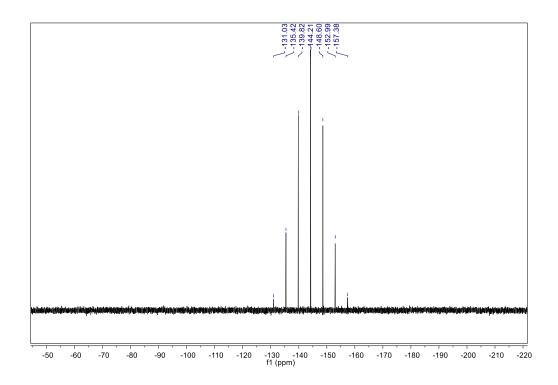


Figure S68. <sup>31</sup>P NMR of Compound 21.

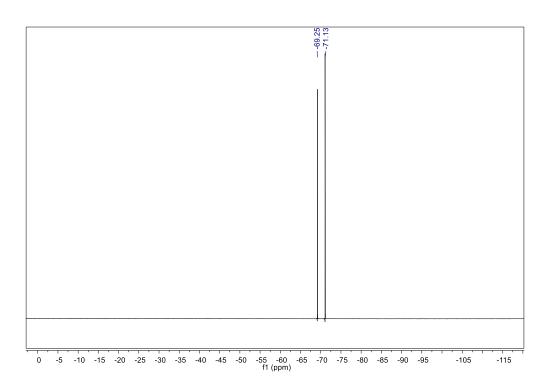


Figure S69. 19F NMR of Compound 21.

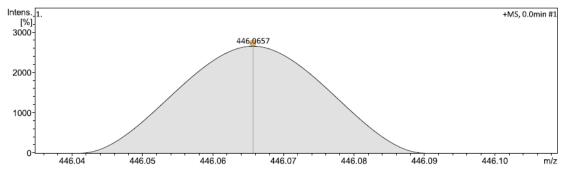


Figure S70. HRMS (ESI) of Compound 21.

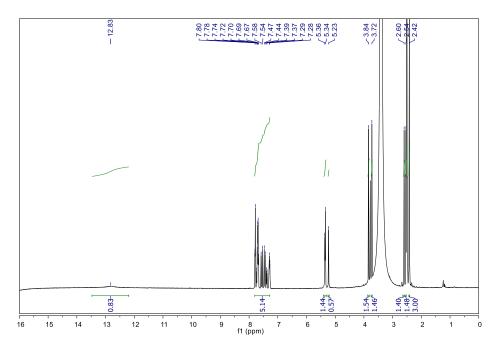
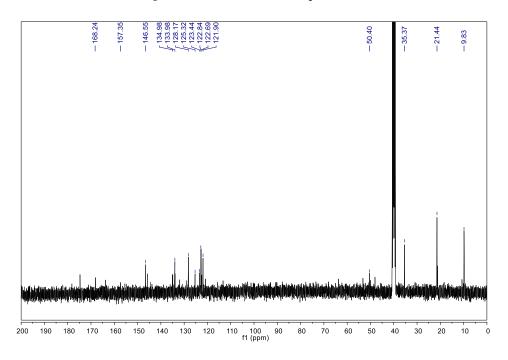
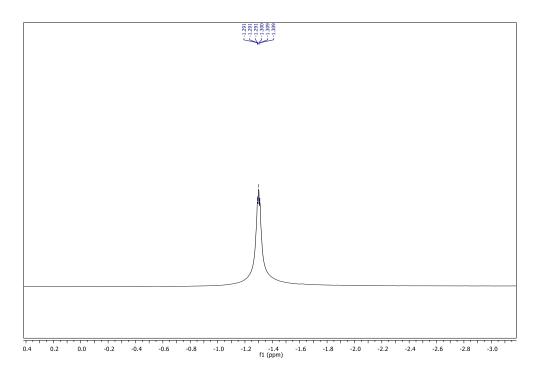


Figure S71. <sup>1</sup>H NMR of Compound 22.



**Figure S72**. <sup>13</sup>C NMR of Compound **22**.



**Figure S73**. <sup>11</sup>B NMR of Compound **22**.

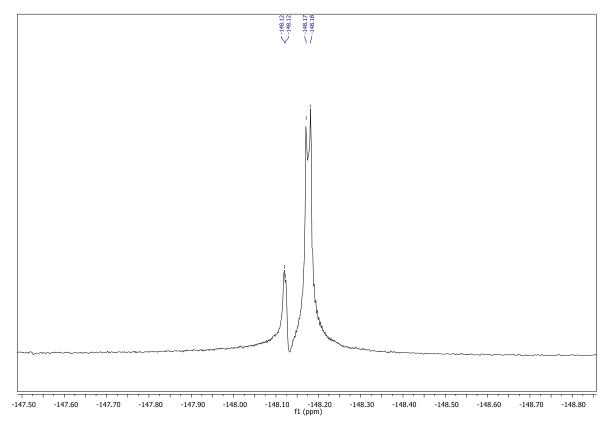


Figure S74. <sup>19</sup>F NMR of Compound 22.

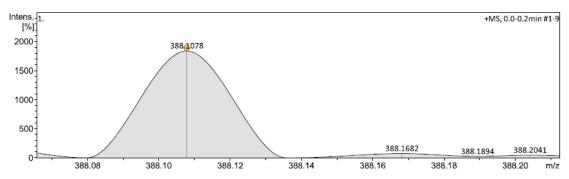


Figure S75. HRMS (ESI) of Compound 22.

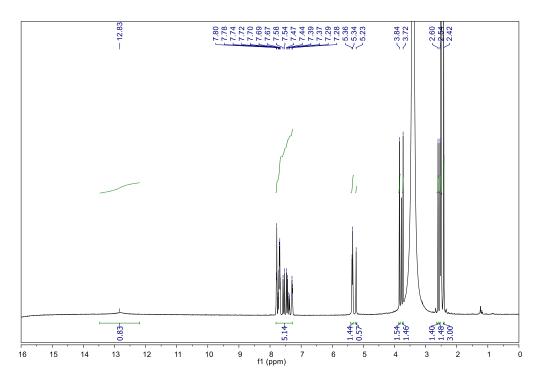


Figure S76. <sup>1</sup>H NMR of Compound 23.

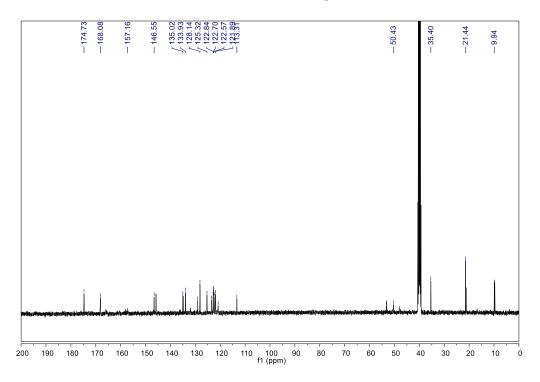


Figure S77. <sup>13</sup>C NMR of Compound 23.

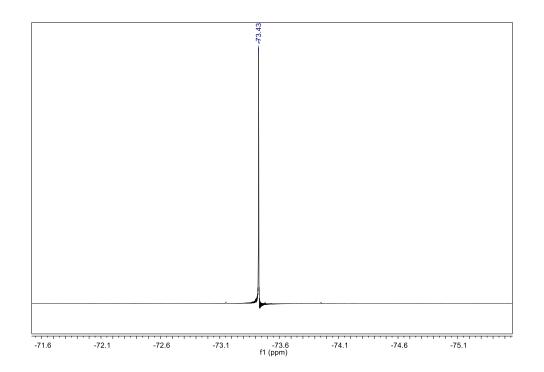


Figure S78. 19F NMR of Compound 23.

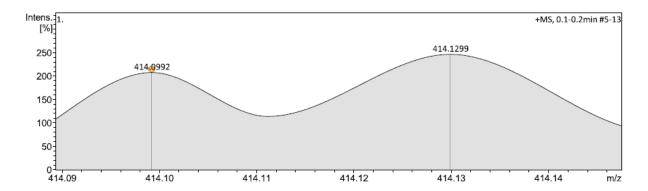


Figure S79. HRMS (ESI) of Compound 23.

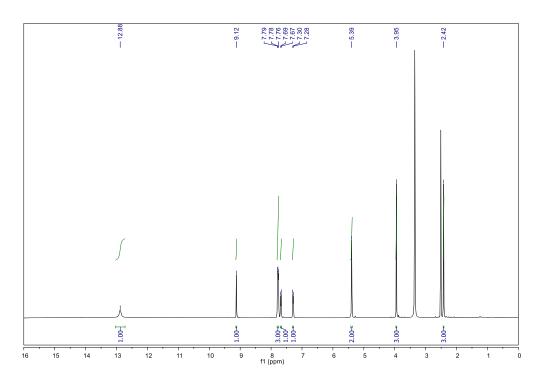


Figure S80. <sup>1</sup>H NMR of Compound 24.

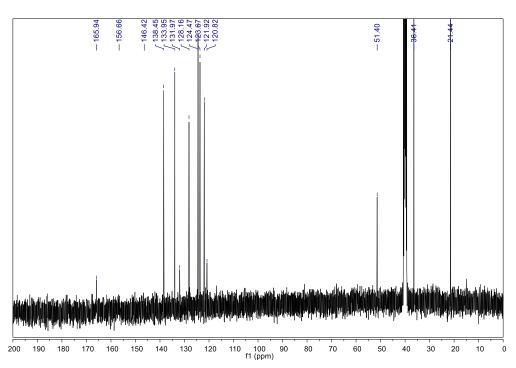


Figure S81. <sup>13</sup>C NMR of Compound 24.

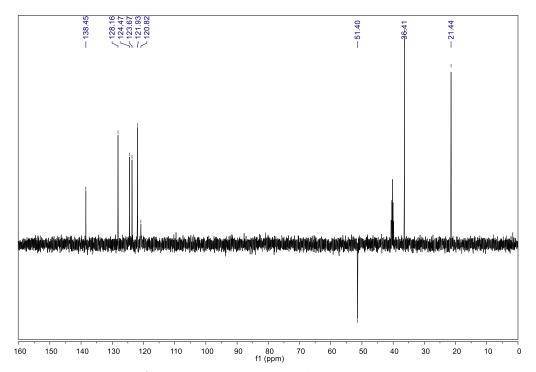


Figure S82. Dept-135 NMR of Compound 24.

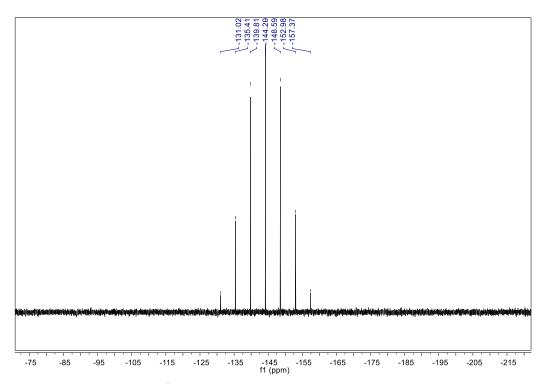


Figure S83. <sup>31</sup>P NMR of Compound 24.

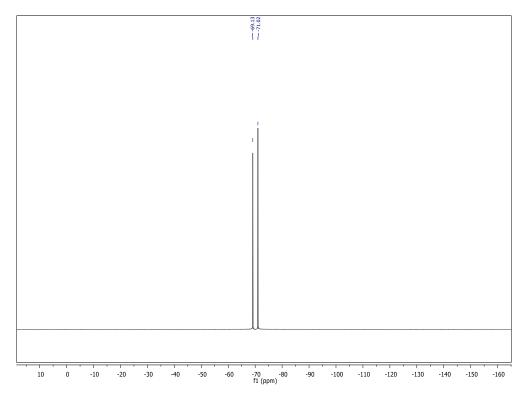


Figure S84. 19F NMR of Compound 24.

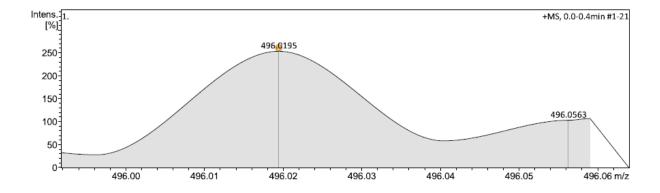


Figure S85. HRMS (ESI) of Compound 24.

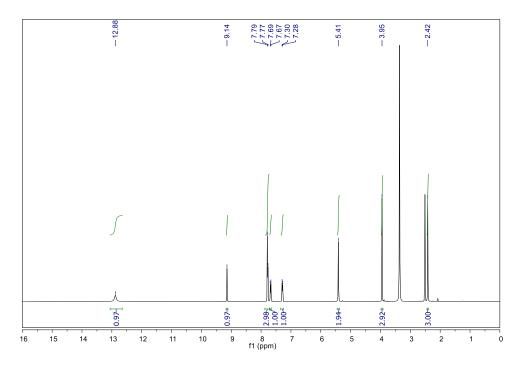


Figure S86. <sup>1</sup>H NMR of Compound 25.

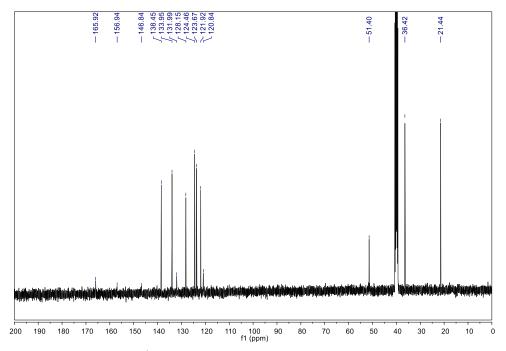


Figure S87. <sup>13</sup>C NMR of Compound 25.

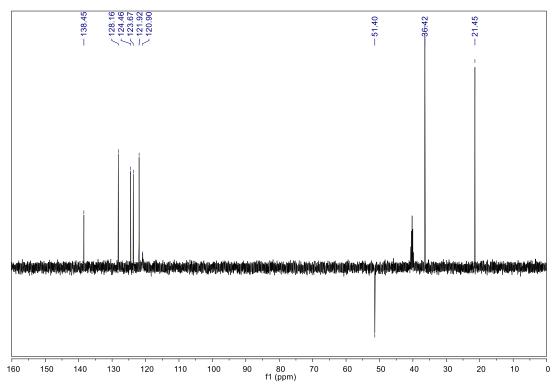


Figure S88. Dept-135 NMR of Compound 25.

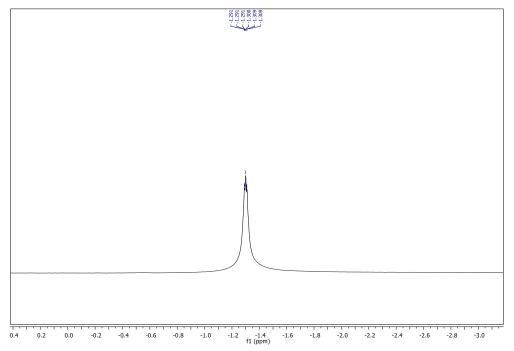


Figure S89. 11B NMR of Compound 25.

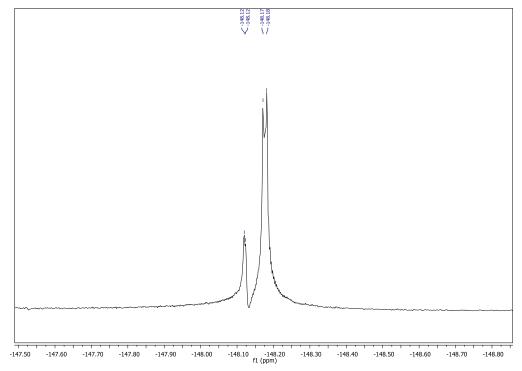


Figure S90. 19F NMR of Compound 25.

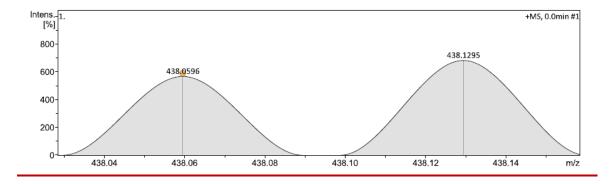


Figure S91. HRMS (ESI) of Compound 25.

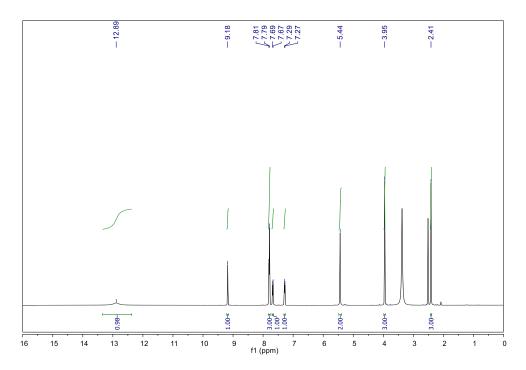


Figure S92. ¹H NMR of Compound 26.

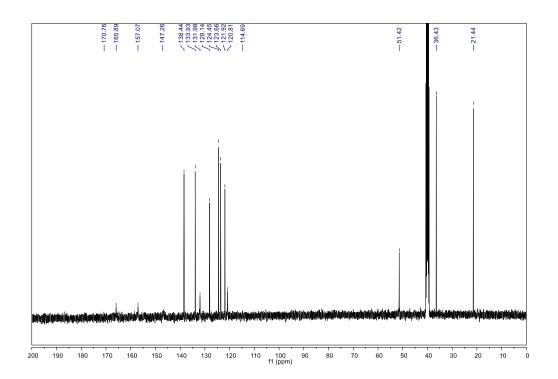


Figure S93. <sup>13</sup>C NMR of Compound 26.

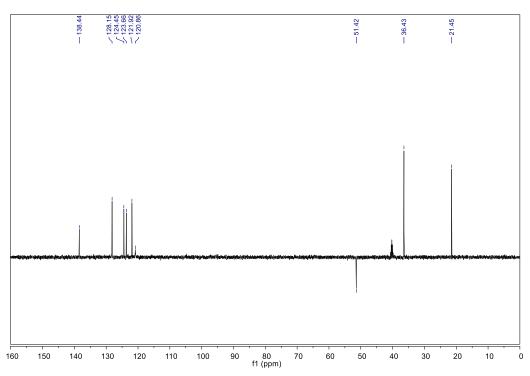


Figure S94. Dept-135 NMR of Compound 26.

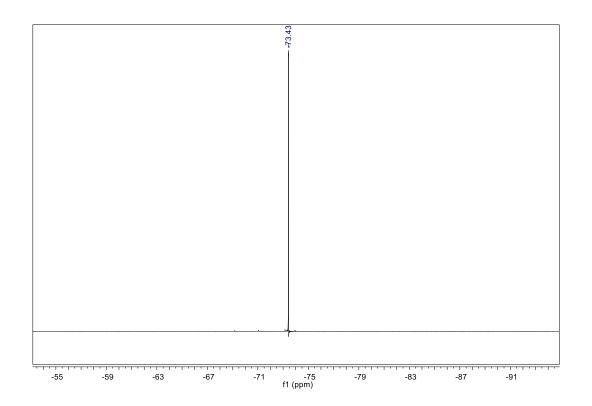


Figure S95. 19F NMR of Compound 26.

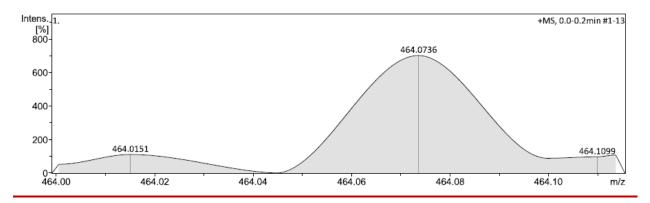


Figure S96. HRMS (ESI) of Compound 26.

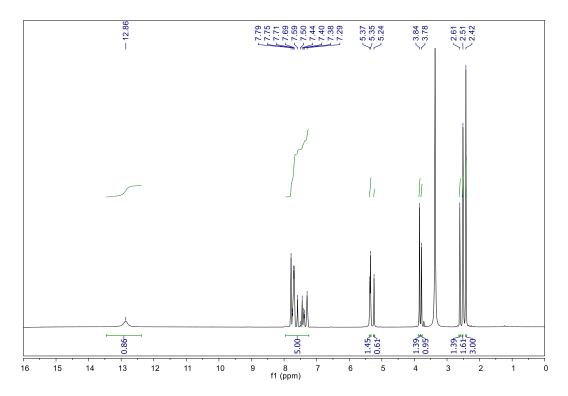


Figure S97. <sup>1</sup>H NMR of Compound 27.

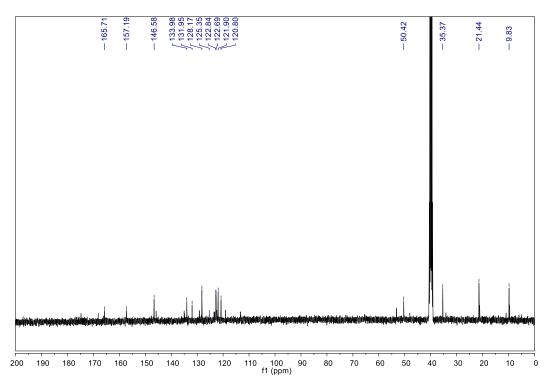


Figure S98. <sup>13</sup>C NMR of Compound 27.

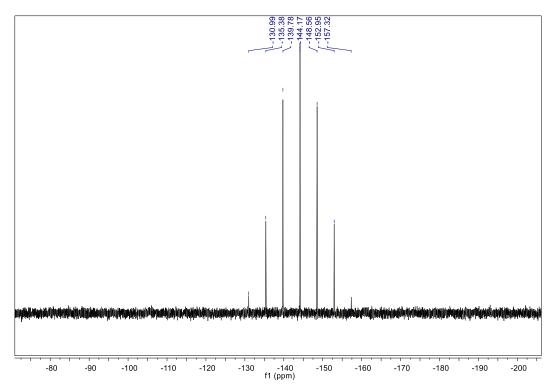
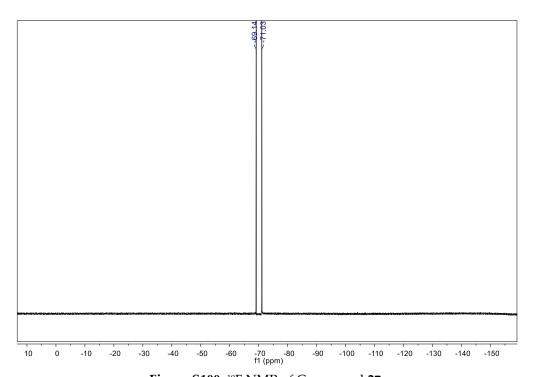


Figure S99. 31P NMR of Compound 27.



**Figure S100**. <sup>19</sup>F NMR of Compound **27**.

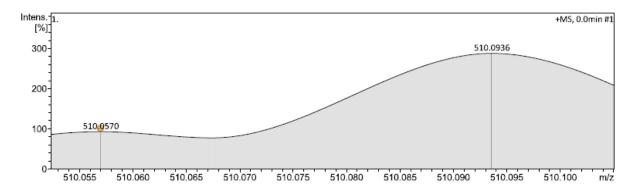


Figure S101. HRMS (ESI) of Compound 27.

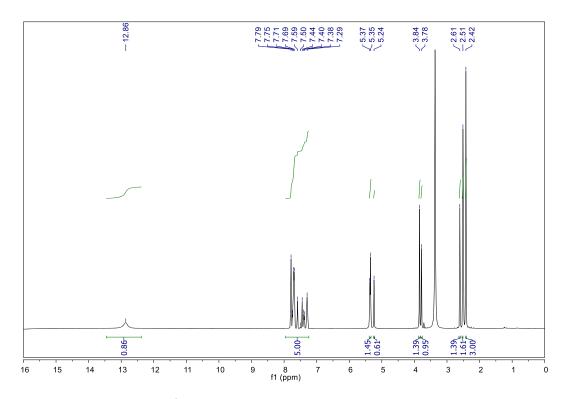


Figure S102. <sup>1</sup>H NMR of Compound 28.

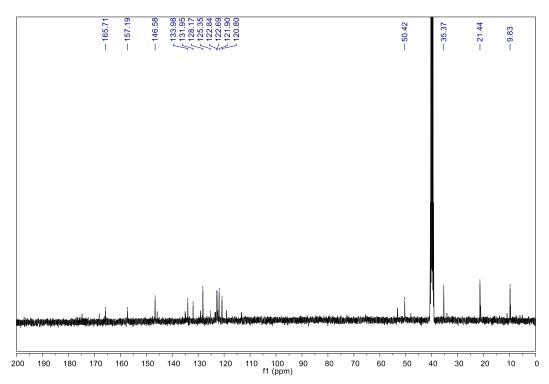


Figure S103. <sup>13</sup>C NMR of Compound 28.

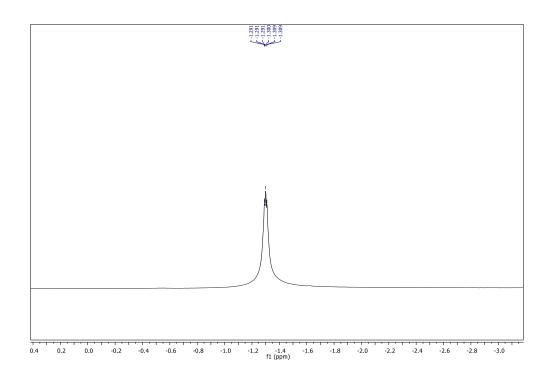


Figure S104. <sup>11</sup>B NMR of Compound 28.

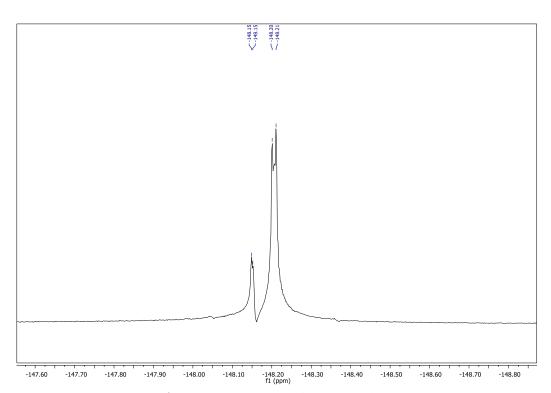


Figure S105. 19F NMR of Compound 28.

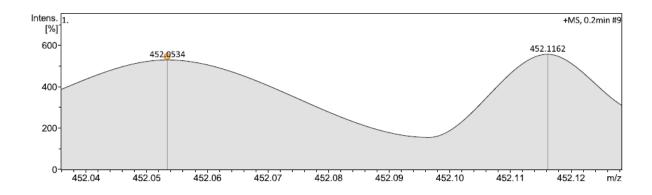


Figure S106. HRMS (ESI) of Compound 28.

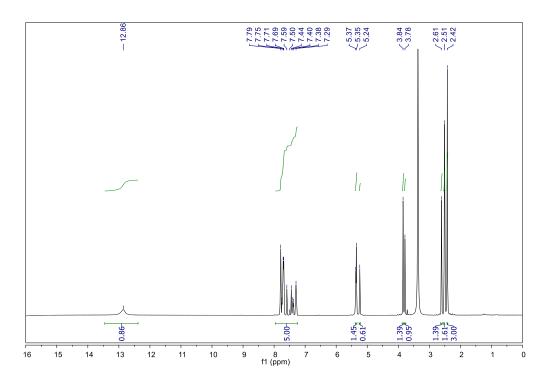


Figure S107. <sup>1</sup>H NMR of Compound 29.

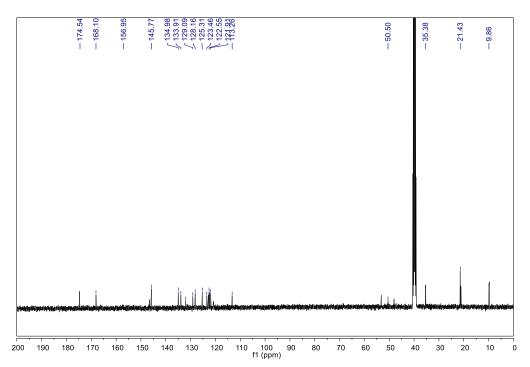


Figure S108. <sup>13</sup>C NMR of Compound 29.

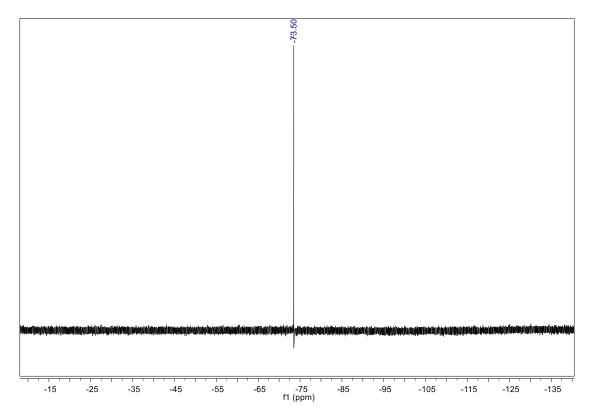


Figure S109. <sup>19</sup>F NMR of Compound 29.

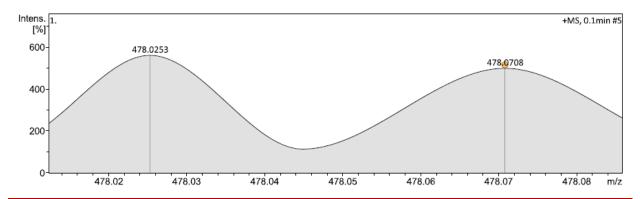


Figure S109. HRMS (ESI) of Compound 29.