Supplementary information

**Synthesis and mesomorphic properties of benzoxazole derivatives with lateral multifluoro substituents**

Qiang Weng¹, Longyan Duan¹, Pei Chen¹, Dingqian Shi¹, Aiai Gao², Xinbing Chen*¹, Zhongwei An*¹,²

¹Key Laboratory of Applied Surface and Colloid Chemistry (MOE); Shaanxi Key Laboratory for Advanced Energy Devices; Shaanxi Engineering Laboratory for Advanced Energy Technology, School of Materials Science and Engineering, Shaanxi Normal University, Xi’an 710119, PR China

²Xi’an Modern Chemistry Research Institute, Xi’an 710065, PR China
Some $^1$H-NMR spectrum of the intermediates and compounds.

Figure 1. $^1$H-NMR spectrum of 7PF(3)PF(3)CHO.

Figure 2. $^1$H-NMR spectrum of 3PF(3)PF(3)SH.

Figure 3. $^1$H-NMR spectrum of 2PF(3)PF(3)SN.
Spectroscopic data for 4-alkoxy-3,3'-difluoro-(1,1'-biphenyl)-4'-carboxaldehyde

(nPF(3)PF(3)CHO):

2PF(3)PF(3)CHO: White crystals, yield 97%; m.p. 59.2-60.9°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 10.36 (s, 1H), 7.93-7.84 (m, 1H), 7.44-7.39 (dd, \(\delta J_{H-H} = 8.0\) Hz, \(\delta J_{H-F} = 1.5\) Hz, \(\delta J_{H-V} = 0.5\) Hz, 1H), 7.36-7.27 (m, 3H, overlap), 7.08-6.98 (m, 1H), 4.21-4.10 (q, \(\delta J_{H-H} = 7.0\) Hz, 2H), 1.52-1.43 (t, \(\delta J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3358, 3084, 2985, 2943, 2895, 2763, 1691, 1620, 1563, 1525, 1483, 1408, 1285, 1256, 1205, 1167, 1134, 1105, 1039, 945, 916, 836, 803, 714, 680, 642, 576, 553, 520, 453. EI-MS m/z (rel. int.): 262.12 (M\(^+\), 45), 233.07 (100), 188.09 (6), 177.09 (9), 151.07 (7).

3PF(3)PF(3)CHO: White crystals, yield 88%; m.p. 45.8-47.1°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 10.36 (s, 1H), 7.93-7.84 (m, 1H), 7.45-7.38 (ddd, \(\delta J_{H-H} = 8.1\) Hz, \(\delta J_{H-H} = 1.6\) Hz, \(\delta J_{H-F} = 0.6\) Hz, 1H), 7.37-7.27 (m, 3H, overlap), 7.07-6.98 (m, 1H), 4.08-3.99 (t, \(\delta J_{H-H} = 6.6\) Hz, 2H), 1.94-1.82 (m, 2H), 1.11-1.02 (t, \(\delta J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3340, 3084, 2971, 2938, 2877, 1686, 1610, 1564, 1521, 1487, 1464, 1403, 1308, 1280, 1200, 1176, 1139, 1110, 1039, 1011, 949, 907, 850, 808, 765, 676, 576, 524, 453. EI-MS m/z (rel. int.): 276.14 (M\(^+\), 45), 233.05 (100), 188.10 (6), 177.07 (8), 151.06 (6).

4PF(3)PF(3)CHO: White crystals, yield 66%; m.p. 72.0-73.7°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 10.37 (s, 1H), 7.93-7.82 (m, 1H), 7.45-7.37 (ddd, \(\delta J_{H-H} = 8.1\) Hz, \(\delta J_{H-H} = 1.6\) Hz, \(\delta J_{H-F} = 0.6\) Hz, 1H), 7.37-7.28 (m, 3H, overlap), 7.08-6.97 (m, 1H), 4.12-4.02 (t, \(\delta J_{H-H} = 6.6\) Hz, 2H), 1.89-1.75 (m, 2H), 1.59-1.44 (m, 2H), 1.03-0.94 (t, \(\delta J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3680, 3335, 3080, 2967, 2938, 2872, 1687, 1607, 1569, 1531, 1493, 1465, 1408, 1309, 1281, 1257, 1201, 1173, 1135, 1106, 1035, 997, 945, 907, 870, 846, 809, 748, 676, 582, 520, 459. EI-MS m/z (rel. int.): 290.16 (M\(^+\), 16), 234.12 (100), 188.10 (6), 177.09 (8), 151.07 (5).

5PF(3)PF(3)CHO: Pale yellow liquid, yield 88%. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 10.35 (s, 1H), 7.92-7.83 (m, 1H), 7.45-7.37 (ddd, \(\delta J_{H-H} = 8.1\) Hz, \(\delta J_{H-H} = 1.6\) Hz, \(\delta J_{H-F} = 0.6\) Hz, 1H), 7.36-7.20 (m, 3H, overlap), 7.07-6.98 (m, 1H), 4.10-4.02 (t, \(\delta J_{H-H} = 6.6\) Hz, 2H), 1.90-1.75 (m, 2H), 1.52-1.29 (m, 4H, overlap), 0.97-0.88 (t, \(\delta J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3368, 3071, 2953, 2867, 2759, 1696, 1616, 1564, 1526, 1488, 1403, 1270, 1205, 1129, 1049, 1006, 950, 855, 808, 681, 610, 576, 520, 454. EI-MS m/z (rel. int.): 304.07 (M\(^+\),
6PF(3)PF(3)CHO: White crystals, yield 86%; m.p. 35.0-36.2°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 10.35 (s, 1H), 7.92-7.83 (m, 1H), 7.44-7.37 (ddd, $^3$J$_{H,H}$ = 8.0 Hz, $^4$J$_{H,H}$ = 1.6 Hz, $^5$J$_{H,F}$ = 0.6 Hz, 1H), 7.37-7.25 (m, 3H, overlap), 7.07-6.97 (m, 1H), 4.10-4.02 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.89-1.77 (m, 2H), 1.53-1.29 (m, 6H, overlap), 0.94-0.85 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H).

IR (KBr, pellet, cm$^{-1}$): 3345, 3071, 2938, 2862, 1687, 1611, 1569, 1521, 1474, 1403, 1309, 1271, 1205, 1167, 1129, 1016, 945, 869, 804, 671, 581, 520, 459. EI-MS m/z (rel. int.): 318.13 (M$^+$, 14), 234.05 (100), 188.03 (5), 177.05(5), 151.02(3).

7PF(3)PF(3)CHO: Pale yellow liquid, yield 65%. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 10.36 (s, 1H), 7.93-7.84 (m, 1H), 7.45-7.38 (ddd, $^3$J$_{H,H}$ = 8.1 Hz, $^4$J$_{H,H}$ = 1.7 Hz, $^5$J$_{H,F}$ = 0.7 Hz, 1H), 7.38-7.26 (m, 3H, overlap), 7.07-6.98 (m, 1H), 4.11-4.02 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.90-1.78 (m, 2H), 1.52-1.26 (m, 8H, overlap), 0.93-0.84 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H).

IR (KBr, pellet, cm$^{-1}$): 3358, 3071, 2928, 2858, 2764, 1696, 1615, 1564, 1526, 1479, 1403, 1308, 1275, 1205, 1129, 1006, 945, 812, 681, 576, 520, 454. EI-MS m/z (rel. int.): 332.12 (M$^+$, 11), 234.05 (100), 188.03 (3), 177.04(4), 151.02(2).

8PF(3)PF(3)CHO: Pale yellow liquid, yield 63%. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 10.36 (s, 1H), 7.92-7.83 (m, 1H), 7.45-7.37 (ddd, $^3$J$_{H,H}$ = 8.1 Hz, $^4$J$_{H,H}$ = 1.6 Hz, $^5$J$_{H,F}$ = 0.6 Hz, 1H), 7.37-7.24 (m, 3H, overlap), 7.08-6.99 (m, 1H), 4.11-4.03 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.90-1.79 (m, 2H), 1.55-1.28 (m, 10H, overlap), 0.96-0.88 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H).

IR (KBr, pellet, cm$^{-1}$): 3670, 3070, 2928, 2858, 2763, 1692, 1616, 1564, 1521, 1488, 1470, 1403, 1309, 1271, 1209, 1167, 1129, 1111, 1021, 945, 856, 804, 723, 676, 648, 605, 577, 520, 454. EI-MS m/z (rel. int.): 346.22 (M$^+$, 8), 234.07 (100), 188.07 (3), 177.06 (3), 151.05 (2).

10PF(3)PF(3)CHO: White crystals, yield 78%; m.p. 48.1-49.3°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 10.37 (s, 1H), 7.94-7.85 (m, 1H), 7.46-7.38 (ddd, $^3$J$_{H,H}$ = 8.2 Hz, $^4$J$_{H,H}$ = 1.6 Hz, $^5$J$_{H,F}$ = 0.7 Hz, 1H), 7.38-7.26 (m, 3H, overlap), 7.08-6.98 (m, 1H), 4.11-4.03 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.90-1.78 (m, 2H), 1.52-1.25 (m, 14H, overlap), 0.92-0.83 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H).

IR (KBr, pellet, cm$^{-1}$): 3363, 3080, 2920, 2854, 2759, 1692, 1616, 1559, 1521, 1470, 1403, 1314, 1271, 1210, 1168, 1130, 1045, 1017, 950, 870, 851, 809, 723, 671, 615, 572, 520, 449. EI-MS m/z (rel. int.): 374.20 (M$^+$, 8), 234.06 (100), 188.05 (3), 177.03(2), 151.03(1).
Spectroscopic data for Schiff base compounds (nPF(3)PF(3)Sx):

**2PF(3)PF(3)SH**: Yellow crystals, yield 71%; m.p. 151.4°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.01 (s, 1H), 8.24-8.15 (m, 1H), 7.46-7.41 (ddd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.6 Hz, 5J_H-F = 0.4 Hz, 1H), 7.40-7.27 (m, 5H, overlap), 7.25-7.20 (ddd, 3J_H-H = 8.8 Hz, 3J_H-H = 7.4 Hz, 4J_H-H = 1.3 Hz, 1H), 7.09-6.99 (m, 2H, overlap), 6.97-6.89 (ddd, 3J_H-H = 7.9 Hz, 3J_H-H = 7.4 Hz, 4J_H-H = 1.3 Hz, 1H), 4.23-4.12 (q, 3J_H-H = 7.0 Hz, 2H), 1.54-1.45 (t, 3J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3681, 3412, 3047, 2981, 2929, 1621, 1588, 1550, 1526, 1493, 1442, 1399, 1314, 1276, 1248, 1201, 1130, 1045, 979, 927, 856, 827, 808, 7076, 743, 676, 610, 582, 530, 478. EI-MS m/z (rel. int.): 353.24 (M⁺, 94), 324.22 (35), 207.12 (100), 120.06 (18).

**3PF(3)PF(3)SH**: Yellow crystals, yield 89%; m.p. 157.4°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.46-7.40 (ddd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.5 Hz, 5J_H-F = 0.4 Hz, 1H), 7.39-7.27 (m, 5H, overlap), 7.25-7.19 (ddd, 3J_H-H = 8.7 Hz, 3J_H-H = 7.4 Hz, 4J_H-H = 1.4 Hz, 1H), 7.09-7.00 (m, 2H, overlap), 6.97-6.88 (ddd, 3J_H-H = 8.7 Hz, 3J_H-H = 7.4 Hz, 4J_H-H = 1.3 Hz, 1H), 4.09-4.01 (t, 3J_H-H = 6.6 Hz, 2H), 1.96-1.83 (m, 2H), 1.13-1.04 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3415, 3043, 2962, 2877, 1615, 1587, 1554, 1521, 1493, 1441, 1393, 1313, 1270, 1252, 1200, 1152, 1129, 1039, 1006, 973, 912, 860, 832, 808, 775, 737, 681, 609, 581, 525, 477. EI-MS m/z (rel. int.): 367.26 (M⁺, 80), 324.17 (77), 206.10 (18), 120.04 (100).

**4PF(3)PF(3)SH**: Yellow crystals, yield 88%; m.p. 136.9°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.46-7.40 (ddd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.5 Hz, 5J_H-F = 0.4 Hz, 1H), 7.40-7.27 (m, 5H, overlap), 7.25-7.19 (ddd, 3J_H-H = 8.7 Hz, 3J_H-H = 7.3 Hz, 4J_H-H = 1.4 Hz, 1H), 7.09-7.00 (m, 2H, overlap), 6.97-6.88 (ddd, 3J_H-H = 8.7 Hz, 3J_H-H = 7.4 Hz, 4J_H-H = 1.4 Hz, 1H), 4.14-4.05 (t, 3J_H-H = 6.5 Hz, 2H), 1.90-1.78 (m, 2H), 1.59-1.49 (m, 2H), 1.05-0.96 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3406, 3043, 2953, 2867, 1615, 1587, 1554, 1526, 1497, 1393, 1313, 1270, 1242, 1195, 1129, 1063, 1025, 973, 931, 865, 827, 803, 775, 737, 676, 614, 586, 543, 515, 482. EI-MS m/z (rel. int.): 381.27 (M⁺, 81), 324.22 (100), 206.22 (19), 120.08 (99).

**5PF(3)PF(3)SH**: Yellow crystals, yield 88%; m.p. 135.6°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.01 (s, 1H), 8.24-8.15 (m, 1H), 7.45-7.41 (ddd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.8 Hz, 5J_H-F = 0.5 Hz, 1H), 7.40-7.27 (m, 5H, overlap), 7.25-7.19 (ddd, 3J_H-H = 8.8 Hz, 3J_H-H = 7.3 Hz,
6PF(3)PF(3)SH: Yellow crystals, yield 87%; m.p. 120.4°C. 1H-NMR (400 MHz, CDCl3, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.45-7.40 (ddd, 3JHH = 8.2 Hz, 4JHH = 1.6 Hz, 5JHF = 0.4 Hz, 1H), 7.39-7.27 (m, 5H, overlap), 7.25-7.19 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.3 Hz, 4JHH = 1.4 Hz, 1H), 7.08-6.99 (m, 2H, overlap), 6.97-6.88 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.4 Hz, 4JHH = 1.4 Hz, 1H), 4.12-4.04 (t, 3JHH = 6.6 Hz, 2H), 1.91-1.79 (m, 2H), 1.54-1.27 (m, 8H, overlap), 0.94-0.86 (t, 3JHH = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3401, 3042, 2928, 2858, 3685, 3415, 3047, 2944, 2868, 1696, 1616, 1555, 1526, 1488, 1399, 1309, 1276, 1201, 1134, 1058, 1012, 936, 865, 808, 776, 743, 681, 606, 530, 482. El-MS m/z (rel. int.): 395.17 (M⁺, 79), 324.11 (100), 206.06 (13), 120.01 (66).

7PF(3)PF(3)SH: Yellow crystals, yield 94%; m.p. 130.1°C. 1H-NMR (400 MHz, CDCl3, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.15 (m, 1H), 7.45-7.40 (ddd, 3JHH = 8.2 Hz, 4JHH = 1.5 Hz, 5JHF = 0.4 Hz, 1H), 7.39-7.27 (m, 5H, overlap), 7.25-7.17 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.4 Hz, 4JHH = 1.4 Hz, 1H), 7.08-6.99 (m, 2H, overlap), 6.97-6.88 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.4 Hz, 4JHH = 1.4 Hz, 1H), 4.12-4.04 (t, 3JHH = 6.6 Hz, 2H), 1.91-1.79 (m, 2H), 1.54-1.27 (m, 8H, overlap), 0.94-0.86 (t, 3JHH = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3675, 3051, 2929, 2858, 1696, 1611, 1554, 1526, 1488, 1393, 1309, 1271, 1200, 1134, 1035, 1011, 911, 860, 809, 779, 742, 686, 605, 530, 477. El-MS m/z (rel. int.): 423.26 (M⁺, 50), 324.19 (100), 206.23 (19), 119.96 (40).

8PF(3)PF(3)SH: Yellow crystals, yield 90%; m.p. 110.2°C. 1H-NMR (400 MHz, CDCl3, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.45-7.40 (ddd, 3JHH = 8.2 Hz, 4JHH = 1.5 Hz, 5JHF = 0.4 Hz, 1H), 7.39-7.27 (m, 5H, overlap), 7.25-7.17 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.4 Hz, 4JHH = 1.5 Hz, 1H), 7.08-6.99 (m, 2H, overlap), 6.97-6.88 (ddd, 3JHH = 8.8 Hz, 3JHH = 7.4 Hz, 4JHH = 1.4 Hz, 1H), 4.12-4.03 (t, 3JHH = 6.6 Hz, 2H), 1.91-1.79 (m, 2H), 1.53-1.26 (m, 10H, overlap), 0.94-0.85 (t, 3JHH = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3411, 3046, 2920, 2853,
10PF(3)PF(3)SH: Yellow crystals, yield 86%; m.p. 107.0°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): δ (ppm) 9.01 (s, 1H), 8.23-8.14 (m, 1H), 7.45-7.40 (dd, $^3$J$_{HH}$ = 8.2 Hz, $^4$J$_{HH}$ = 1.7 Hz, $^5$J$_{HF}$ = 0.5 Hz, 1H), 7.39-7.27 (m, 5H, overlap), 7.25-7.19 (dd, $^3$J$_{HH}$ = 8.8 Hz, $^4$J$_{HH}$ = 7.4 Hz, $^4$J$_{HH}$ = 1.5 Hz, 1H), 7.08-6.99 (m, 2H, overlap), 6.97-6.88 (dd, $^3$J$_{HH}$ = 8.8 Hz, $^3$J$_{HH}$ = 7.4 Hz, $^4$J$_{HH}$ = 1.4 Hz, 1H), 4.12-4.04 (t, $^3$J$_{HH}$ = 6.6 Hz, 2H), 1.91-1.79 (m, 2H), 1.53-1.25 (m, 14H, overlap), 0.93-0.85 (t, $^3$J$_{HH}$ = 7.0 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3406, 3046, 2919, 2848, 1620, 1592, 1549, 1526, 1488, 1393, 1313, 1275, 1242, 1195, 1129, 1021, 978, 931, 865, 808, 775, 742, 681, 614, 534, 477. EI-MS m/z (rel. int.): 465.10 (M$^+$, 100), 323.94 (89), 206.22 (38), 120.08 (58).

2PF(3)PF(3)SM: Yellow crystals, yield 66%; m.p. 139.2°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.45-7.41 (dd, $^3$J$_{HH}$ = 8.1 Hz, $^4$J$_{HH}$ = 1.2 Hz, 1H), 7.40-7.28 (m, 3H, overlap), 7.16 (s, 1H), 7.10 (s, 1H), 7.07-7.00 (m, 2H, overlap), 6.96-6.89 (d, $^3$J$_{HH}$ = 8.2 Hz, 1H), 4.23-4.12 (q, $^3$J$_{HH}$ = 7.0 Hz, 2H), 2.33 (s, 3H), 1.54-1.45 (t, $^3$J$_{HH}$ = 7.0 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3439, 3043, 2985, 2933, 2862, 1611, 1559, 1526, 1498, 1441, 1403, 1352, 1309, 1271, 1247, 1214, 1186, 1153, 1129, 1101, 1040, 978, 922, 865, 809, 784, 681, 591, 558, 530, 477. EI-MS m/z (rel. int.): 367.22 (M$^+$, 100), 338.41 (13), 206.09 (12), 134.12 (59).

3PF(3)PF(3)SM: Yellow crystals, yield 71%; m.p. 139.2°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): δ (ppm) 9.00 (s, 1H), 8.23-8.14 (m, 1H), 7.46-7.40 (dd, $^3$J$_{HH}$ = 8.2 Hz, $^4$J$_{HH}$ = 1.4 Hz, 1H), 7.39-7.27 (m, 3H, overlap), 7.15 (s, 1H), 7.11 (s, 1H), 7.08-7.00 (m, 2H, overlap), 6.96-6.89 (d, $^3$J$_{HH}$ = 8.2 Hz, 1H), 4.09-4.01 (t, $^3$J$_{HH}$ = 6.6 Hz, 2H), 2.33 (s, 3H), 1.96-1.83 (m, 2H), 1.13-1.04 (t, $^3$J$_{HH}$ = 7.2 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3411, 3028, 2971, 2943, 2876, 1610, 1554, 1525, 1497, 1469, 1393, 1356, 1308, 1270, 1242, 1218, 1190, 1134, 1101, 1039, 1006, 978, 935, 911, 860, 812, 779, 676, 647, 614, 562, 529, 477. EI-MS m/z (rel. int.): 381.28 (M$^+$, 100), 338.19 (52), 206.10 (16), 134.09 (77).

4PF(3)PF(3)SM: Yellow crystals, yield 82%; m.p. 131.6°C. $^1$H-NMR (400 MHz, CDCl$_3$,
TMS): δ (ppm) 9.00 (s, 1H), 8.22-8.13 (m, 1H), 7.45-7.39 (dd, 3JH-H = 8.2 Hz, 4JH-H = 1.4 Hz, 1H), 7.39-7.27 (m, 3H, overlap), 7.15 (s, 1H), 7.13 (s, 1H), 7.07-7.00 (m, 2H, overlap), 6.96-6.89 (d, 3JH-H = 8.2 Hz, 1H), 4.13-4.05 (t, 3JH-H = 6.6 Hz, 2H), 2.33 (s, 3H), 1.90-1.78 (m, 2H), 1.59-1.47 (m, 2H), 1.05-0.96 (t, 3JH-H = 7.2 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3415, 3038, 2948, 2872, 1611, 1554, 1531, 1503, 1470, 1399, 1352, 1309, 1271, 1239, 1214, 1191, 1130, 1096, 1068, 1040, 1002, 978, 940, 860, 809, 781, 738, 681, 658, 610, 563, 535, 477.

EI-MS m/z (rel. int.): 395.31 (M⁺, 100), 338.19 (69), 206.21 (13), 134.15 (93).

5PF(3)PF(3)SM: Yellow crystals, yield 77%; m.p. 120.4°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.00 (s, 1H), 8.22-8.13 (m, 1H), 7.45-7.40 (dd, 3JH-H = 8.2 Hz, 4JH-H = 1.7 Hz, 1H), 7.39-7.27 (m, 3H, overlap), 7.15 (s, 1H), 7.13 (s, 1H), 7.06-7.00 (m, 2H, overlap), 6.96-6.88 (d, 3JH-H = 8.2 Hz, 1H), 4.12-4.03 (t, 3JH-H = 6.6 Hz, 2H), 2.32 (s, 3H), 1.92-1.80 (m, 2H), 1.54-1.33 (m, 4H, overlap), 0.99-0.91 (t, 3JH-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3699, 3430, 3043, 2939, 2867, 1606, 1549, 1503, 1393, 1313, 1275, 1247, 1186, 1129, 1049, 865, 812, 732, 681, 595, 473. EI-MS m/z (rel. int.): 409.21 (M⁺, 100), 338.12 (80), 206.02 (11), 134.02 (58).

6PF(3)PF(3)SM: Yellow crystals, yield 69%; m.p. 119.1°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.00 (s, 1H), 8.22-8.14 (m, 1H), 7.46-7.40 (dd, 3JH-H = 8.3 Hz, 4JH-H = 1.5 Hz, 1H), 7.39-7.28 (m, 3H, overlap), 7.15 (s, 1H), 7.13 (s, 1H), 7.06-7.00 (m, 2H, overlap), 6.95-6.88 (d, 3JH-H = 8.2 Hz, 1H), 4.12-4.04 (t, 3JH-H = 6.6 Hz, 2H), 2.33 (s, 3H), 1.91-1.79 (m, 2H), 1.53-1.30 (m, 6H, overlap), 0.96-0.88 (t, 3JH-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3420, 3033, 2939, 2859, 1611, 1549, 1531, 1498, 1399, 1356, 1304, 1271, 1242, 1219, 1191, 1139, 1096, 1011, 940, 855, 804, 681, 605, 567, 539, 477. EI-MS m/z (rel. int.): 423.28 (M⁺, 100), 338.15 (84), 206.06 (9), 134.02 (8).
Yellow crystals, yield 90%; m.p. 124.9°C. 1H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.01 (s, 1H), 8.23-8.14 (m, 1H), 7.45-7.41 (dd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.4 Hz, 1H), 7.39-7.28 (m, 3H, overlap), 7.16 (s, 1H), 7.11 (s, 1H), 7.07-7.01 (m, 2H, overlap), 6.96-6.89 (d, 3J_H-H = 8.2 Hz, 1H), 4.12-4.04 (t, 3J_H-H = 6.6 Hz, 2H), 2.33 (s, 3H), 1.91-1.79 (m, 2H), 1.54-1.27 (m, 10H, overlap), 0.94-0.85 (t, 3J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3411, 3038, 2924, 2858, 1725, 1611, 1554, 1526, 1503, 1470, 1398, 1357, 1308, 1270, 1238, 1214, 1190, 1129, 1096, 1034, 996, 935, 855, 808, 780, 681, 648, 614, 563, 534, 473. EI-MS m/z (rel. int.): 451.38 (M⁺, 97), 337.94 (100), 205.90 (27), 134.10 (47).

Yellow crystals, yield 89%; m.p. 109.7°C. 1H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.01 (s, 1H), 8.23-8.14 (m, 1H), 7.46-7.39 (dd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.6 Hz, 1H), 7.39-7.28 (m, 3H, overlap), 7.15 (s, 1H), 7.12 (s, 1H), 7.07-6.99 (m, 2H, overlap), 6.96-6.89 (d, 3J_H-H = 8.2 Hz, 1H), 4.12-4.04 (t, 3J_H-H = 6.6 Hz, 2H), 2.33 (s, 3H), 1.91-1.79 (m, 2H), 1.52-1.27 (m, 14H, overlap), 0.93-0.85 (t, 3J_H-H = 6.9 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3685, 3420, 3037, 2923, 2853, 1729, 1616, 1549, 1526, 1498, 1470, 1398, 1356, 1304, 1270, 1242, 1219, 1191, 1139, 1096, 1044, 1011, 978, 935, 855, 812, 784, 723, 681, 653, 610, 535, 477. EI-MS m/z (rel. int.): 479.46 (M⁺, 79), 338.26 (100), 234.01 (11), 134.12 (63).

Yellow crystals, yield 84%; m.p. 163.7°C. 1H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.07 (s, 1H), 8.29-8.23 (d, 4J_H-H = 2.5 Hz, 1H), 8.20-8.11 (m, 2H, overlap), 7.79 (s, 1H), 7.48-7.41 (dd, 3J_H-H = 8.1 Hz, 4J_H-H = 1.2 Hz, 1H), 7.41-7.30 (m, 3H, overlap), 7.12-7.07 (d, 3J_H-H = 9.0 Hz, 1H), 7.07-7.00 (m, 1H), 4.22-4.12 (q, 3J_H-H = 7.0 Hz, 2H), 1.53-1.45 (t, 3J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3675, 3363, 3071, 2981, 2915, 2877, 1607, 1582, 1559, 1521, 1441, 1389, 1337, 1303, 1275, 1157, 1129, 1106, 1039, 978, 945, 902, 865, 822, 808, 784, 747, 718, 681, 624, 567, 533, 472.

Yellow crystals, yield 63%; m.p. 145.7°C. 1H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 9.10 (s, 1H), 8.31-8.26 (d, 4J_H-H = 2.5 Hz, 1H), 8.21-8.13 (m, 2H, overlap), 7.80 (s, 1H), 7.50-7.43 (dd, 3J_H-H = 8.1 Hz, 4J_H-H = 1.4 Hz, 1H), 7.42-7.32 (m, 3H, overlap), 7.15-7.09 (d, 3J_H-H = 8.9 Hz, 1H), 7.08-7.01 (m, 1H), 4.10-4.02 (t, 3J_H-H = 6.6 Hz, 2H), 1.94-1.84 (m, 2H), 1.13-1.04 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3383, 3079, 3042,
2966, 2881, 1616, 1578, 1554, 1516, 1493, 1436, 1398, 1342, 1276, 1201, 1158, 1134, 1106, 1040, 1007, 978, 945, 894, 869, 832, 808, 784, 747, 681, 615, 563, 535, 477.

**4PF(3)PF(3)SN**: Yellow crystals, yield 75%; m.p. 131.6°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 9.08 (s, 1H), 8.29-8.24 (d, \(J_{H-H} = 2.6\) Hz, 1H), 8.20-8.12 (m, 2H, overlap), 7.80 (s, 1H), 7.48-7.41 (dd, \(J_{H-H} = 8.2\) Hz, \(J_{H-H} = 1.4\) Hz, 1H), 7.41-7.30 (m, 3H, overlap), 7.12-7.08 (d, \(J_{H-H} = 8.9\) Hz, 1H), 7.08-7.00 (m, 1H), 4.14-4.05 (t, \(J_{H-H} = 6.6\) Hz, 2H), 1.90-1.78 (m, 2H), 1.59-1.46 (m, 2H), 1.05-0.96 (t, \(J_{H-H} = 7.2\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3396, 3071, 2957, 2933, 2877, 1611, 1583, 1526, 1493, 1441, 1403, 1380, 1337, 1280, 1224, 1153, 1129, 1106, 1030, 1002, 950, 907, 860, 822, 799, 742, 681, 653, 615, 553, 473.

**5PF(3)PF(3)SN**: Yellow crystals, yield 83%; m.p. 143.7°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 9.07 (s, 1H), 8.29-8.23 (d, \(J_{H-H} = 2.6\) Hz, 1H), 8.21-8.11 (m, 2H, overlap), 7.88 (s, 1H), 7.48-7.41 (dd, \(J_{H-H} = 8.1\) Hz, \(J_{H-H} = 1.4\) Hz, 1H), 7.41-7.30 (m, 3H, overlap), 7.12-7.08 (d, \(J_{H-H} = 9.0\) Hz, 1H), 7.07-6.99 (m, 1H), 4.12-4.04 (t, \(J_{H-H} = 6.6\) Hz, 2H), 1.92-1.80 (m, 2H), 1.54-1.33 (m, 4H, overlap), 0.99-0.90 (t, \(J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3665, 3250, 3084, 2943, 2862, 1616, 1582, 1502, 1446, 1393, 1347, 1270, 1209, 1157, 1129, 1049, 1016, 955, 865, 799, 742, 643, 543, 473.

**6PF(3)PF(3)SN**: Yellow crystals, yield 60%; m.p. 146.2°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 9.09 (s, 1H), 8.30-8.25 (d, \(J_{H-H} = 2.6\) Hz, 1H), 8.20-8.13 (m, 2H, overlap), 7.86 (s, 1H), 7.49-7.42 (dd, \(J_{H-H} = 8.2\) Hz, \(J_{H-H} = 1.4\) Hz, 1H), 7.42-7.31 (m, 3H, overlap), 7.14-7.08 (d, \(J_{H-H} = 9.0\) Hz, 1H), 7.08-7.00 (m, 1H), 4.13-4.04 (t, \(J_{H-H} = 6.6\) Hz, 2H), 1.91-1.79 (m, 2H), 1.55-1.30 (m, 6H, overlap), 0.96-0.87 (t, \(J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3260, 3085, 2920, 2859, 1616, 1583, 1503, 1446, 1393, 1347, 1276, 1209, 1134, 1016, 950, 870, 799, 742, 648, 544, 473.

**7PF(3)PF(3)SN**: Yellow crystals, yield 75%; m.p. 144.8°C. \(^1\)H-NMR (400 MHz, CDCl\(_3\), TMS): \(\delta\) (ppm) 9.07 (s, 1H), 8.29-8.23 (d, \(J_{H-H} = 2.6\) Hz, 1H), 8.20-8.12 (m, 2H, overlap), 7.90 (s, 1H), 7.48-7.41 (dd, \(J_{H-H} = 8.2\) Hz, \(J_{H-H} = 1.5\) Hz, 1H), 7.40-7.29 (m, 3H, overlap), 7.13-7.07 (d, \(J_{H-H} = 9.0\) Hz, 1H), 7.07-7.00 (m, 1H), 4.12-4.04 (t, \(J_{H-H} = 6.6\) Hz, 2H), 1.91-1.79 (m, 2H), 1.53-1.28 (m, 8H, overlap), 0.94-0.85 (t, \(J_{H-H} = 7.0\) Hz, 3H). IR (KBr, pellet, cm\(^{-1}\)): 3665, 3255, 3089, 2919, 2853, 1615, 1577, 1507, 1446, 1398, 1346, 1281, 1205, 1129, 1077, 1016, 959, 865, 803, 742, 647, 548, 473.
**8PF(3)PF(3)SN**: Yellow crystals, yield 90%; m.p. 143.4°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 9.09 (s, 1H), 8.31-8.25 (d, $^4$J$_{H,H}$ = 2.5 Hz, 1H), 8.21-8.13 (m, 2H, overlap), 7.90 (s, 1H), 7.49-7.42 (dd, $^3$J$_{H,H}$ = 8.2 Hz, $^4$J$_{H,H}$ = 1.2 Hz, 1H), 7.41-7.31 (m, 3H, overlap), 7.14-7.08 (d, $^3$J$_{H,H}$ = 9.0 Hz, 1H), 7.08-7.01 (m, 1H), 4.13-4.05 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.92-1.80 (m, 2H), 1.54-1.27 (m, 10H, overlap), 0.93-0.85 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3670, 3263, 3084, 2923, 2853, 1607, 1577, 1554, 1502, 1441, 1393, 1356, 1270, 1209, 1157, 1129, 1077, 1021, 959, 860, 822, 799, 747, 652, 628, 548, 473.

**10PF(3)PF(3)SN**: Yellow crystals, yield 97%; m.p. 144.0°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 9.08 (s, 1H), 8.30-8.24 (d, $^4$J$_{H,H}$ = 2.6 Hz, 1H), 8.20-8.13 (m, 2H, overlap), 7.90 (s, 1H), 7.49-7.41 (dd, $^3$J$_{H,H}$ = 8.2 Hz, $^4$J$_{H,H}$ = 1.4 Hz, 1H), 7.41-7.30 (m, 3H, overlap), 7.13-7.08 (d, $^3$J$_{H,H}$ = 9.0 Hz, 1H), 7.07-7.01 (m, 1H), 4.12-4.04 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.91-1.79 (m, 2H), 1.53-1.26 (m, 14H, overlap), 0.92-0.84 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3373, 3084, 2923, 2853, 1610, 1554, 1521, 1441, 1403, 1346, 1280, 1205, 1162, 1134, 1110, 1044, 1011, 978, 949, 898, 860, 812, 789, 742, 628, 548, 477.

**Spectroscopic data for benzoxazole compounds (nPF(3)PF(3)Bx):**

**2PF(3)PF(3)BH**: White crystals, yield 64%; m.p. 147.8°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 8.29-8.20 (m, 1H), 7.86-7.79 (m, 1H), 7.64-7.57 (m, 1H), 7.48-7.44 (dd, $^3$J$_{H,H}$ = 8.2 Hz, $^4$J$_{H,H}$ = 1.7 Hz, 1H), 7.44-7.31 (m, 5H, overlap), 7.06-6.97 (m, 1H), 4.20-4.10 (q, $^3$J$_{H,H}$ = 7.0 Hz, 2H), 1.52-1.44 (t, $^3$J$_{H,H}$ = 7.0 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3051, 2976, 2938, 2895, 1615, 1569, 1531, 1479, 1446, 1403, 1346, 1308, 1275, 1247, 1214, 1139, 1044, 955, 921, 893, 855, 794, 742, 694, 624, 567, 515, 468. EI-MS m/z (rel. int.): 351.16 (M$^+$, 40), 323.14 (100), 294.11 (8), 175.04(4). EA: Calc. for C$_{21}$H$_{15}$F$_2$NO$_2$: C: 71.82, H: 4.20, N: 3.94; Found: C: 71.79, H: 4.30, N: 3.99.

**3PF(3)PF(3)BH**: White crystals, yield 92%; m.p. 155.0°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 8.31-8.22 (m, 1H), 7.88-7.79 (m, 1H), 7.66-7.57 (m, 1H), 7.50-7.45 (dd, $^3$J$_{H,H}$ = 8.2 Hz, $^4$J$_{H,H}$ = 1.7 Hz, 1H), 7.45-7.34 (m, 5H, overlap), 7.09-6.99 (m, 1H), 4.09-4.01 (t, $^3$J$_{H,H}$ = 6.6 Hz, 2H), 1.95-1.83 (m, 2H), 1.12-1.03 (t, $^3$J$_{H,H}$ = 7.1 Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3062, 2972, 2939, 2877, 1734, 1616, 1573, 1521, 1483, 1408, 1347, 1309, 1271, 1243, 1210, 1130, 1026, 1007, 950, 917, 861, 803, 751, 695, 624, 595, 567, 515, 459. EI-MS m/z (rel. int.):
365.23 (M⁺, 22), 323.17 (100), 294.14 (7), 175.07(3). EA: Calc. for C₂₂H₁₇F₂NO₂: C: 72.38, H: 4.43, N: 3.85; Found: C: 72.32, H: 4.69, N: 3.83.

**4PF(3)PF(3)BH:** White crystals, yield 84%; m.p. 128.4°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.30-8.21 (m, 1H), 7.87-7.80 (m, 1H), 7.65-7.58 (m, 1H), 7.49-7.45 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.7 Hz, 1H), 7.45-7.31 (m, 5H, overlap), 7.08-6.99 (m, 1H), 4.12-4.04 (t, ³J_H-H = 6.6 Hz, 2H), 1.90-1.78 (m, 2H), 1.59-1.46 (m, 2H), 1.04-0.96 (t, ³J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3061, 2957, 2933, 2872, 1733, 1611, 1569, 1526, 1484, 1403, 1347, 1309, 1276, 1242, 1209, 1134, 1068, 1030, 1007, 950, 922, 865, 794, 751, 695, 652, 595, 572, 520, 464. EI-MS m/z (rel. int.): 379.25 (M⁺, 22), 323.17 (100), 294.28 (6), 175.04(3). EA: Calc. for C₂₂H₁₇F₂NO₂: C: 73.08, H: 4.84, N: 3.64; Found: C: 72.81, H: 5.05, N: 3.69.

**5PF(3)PF(3)BH:** White crystals, yield 87%; m.p. 100.6°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.28-8.19 (m, 1H), 7.86-7.79 (m, 1H), 7.65-7.56 (m, 1H), 7.47-7.43 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.8 Hz, 1H), 7.43-7.29 (m, 5H, overlap), 7.05-6.96 (m, 1H), 4.09-4.01 (t, ³J_H-H = 6.6 Hz, 2H), 1.89-1.80 (m, 2H), 1.53-1.32 (m, 4H, overlap), 0.98-0.90 (t, ³J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3685, 3056, 2948, 2867, 1781, 1620, 1569, 1526, 1479, 1408, 1304, 1275, 1247, 1209, 1129, 1058, 1021, 955, 926, 869, 832, 804, 751, 624, 577, 525, 459. EI-MS m/z (rel. int.): 393.26 (M⁺, 15), 323.17 (100), 294.13 (7), 175.05(3). EA: Calc. for C₂₃H₁₉F₂NO₂: C: 73.37, H: 5.09, N: 3.56; Found: C: 73.27, H: 5.38, N: 3.56.

**6PF(3)PF(3)BH:** White crystals, yield 73%; m.p. 91.3°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.30-8.21 (m, 1H), 7.87-7.80 (m, 1H), 7.65-7.58 (m, 1H), 7.49-7.45 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.8 Hz, 1H), 7.45-7.33 (m, 5H, overlap), 7.08-6.98 (m, 1H), 4.11-4.03 (t, ³J_H-H = 6.6 Hz, 2H), 1.91-1.78 (m, 2H), 1.54-1.31 (m, 6H, overlap), 0.96-0.87 (t, ³J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3056, 2933, 2858, 1780, 1610, 1568, 1525, 1484, 1403, 1346, 1308, 1270, 1209, 1134, 1034, 996, 926, 860, 798, 742, 628, 571, 529, 463. EI-MS m/z (rel. int.): 407.20 (M⁺, 14), 323.11 (100), 294.11 (4), 174.96(1). EA: Calc. for C₂₃H₂₁F₂NO₂: C: 73.65, H: 5.40, N: 3.43; Found: C: 73.69, H: 5.69, N: 3.44.

**7PF(3)PF(3)BH:** White crystals, yield 88%; m.p. 100.6°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.30-8.21 (m, 1H), 7.87-7.79 (m, 1H), 7.65-7.58 (m, 1H), 7.49-7.45 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.8 Hz, 1H), 7.45-7.33 (m, 5H, overlap), 7.07-6.98 (m, 1H), 4.11-4.03 (t, ³J_H-H = 6.6 Hz, 2H), 1.90-1.78 (m, 2H), 1.53-1.28 (m, 8H, overlap), 0.94-0.85 (t, ³J_H-H = 7.0 Hz, 3H).
IR (KBr, pellet, cm⁻¹): 3657, 3056, 2920, 2858, 1781, 1615, 1569, 1521, 1474, 1403, 1308, 1275, 1242, 1129, 1030, 1011, 955, 926, 865, 837, 799, 751, 624, 576, 525, 458. EI-MS m/z (rel. int.): 421.28 (M⁺, 9), 323.08 (100), 294.07 (8), 175.14(1). EA: Calc. for C₂₆H₂₅F₂NO₂: C: 74.09, H: 5.71, N: 3.34; Found: C: 74.09, H: 5.98, N: 3.32.

8PF(3)PF(3)BH: White crystals, yield 84%; m.p. 98.0°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.29-8.20 (m, 1H), 7.87-7.79 (m, 1H), 7.64-7.57 (m, 1H), 7.48-7.44 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.8 Hz, 1H), 7.44-7.32 (m, 5H, overlap), 7.06-6.97 (m, 1H), 4.10-4.02 (t, ³J_H-H = 6.6 Hz, 2H), 1.90-1.78 (m, 2H), 1.53-1.26 (m, 10H, overlap), 0.93-0.85 (t, ³J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3685, 3056, 2923, 2853, 1738, 1616, 1574, 1526, 1484, 1455, 1408, 1347, 1309, 1271, 1248, 1214, 1176, 1135, 1030, 997, 950, 932, 889, 870, 799, 751, 695, 625, 572, 525, 469. EI-MS m/z (rel. int.): 435.27 (M⁺, 13), 323.18 (100), 294.11 (6), 175.07(2). EA: Calc. for C₂₇H₂₇F₂NO₂: C: 74.35, H: 6.08, N: 3.13; Found: C: 74.46, H: 6.25, N: 3.22.

10PF(3)PF(3)BH: White crystals, yield 88%; m.p. 100.3°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.28-8.19 (m, 1H), 7.86-7.79 (m, 1H), 7.64-7.56 (m, 1H), 7.48-7.43 (dd, ³J_H-H = 8.2 Hz, ⁴J_H-H = 1.7 Hz, 1H), 7.43-7.29 (m, 5H, overlap), 7.06-6.96 (m, 1H), 4.10-4.01 (t, ³J_H-H = 6.6 Hz, 2H), 1.90-1.80 (m, 2H), 1.52-1.26 (m, 14H, overlap), 0.92-0.84 (t, ³J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3061, 2920, 2853, 1738, 1610, 1569, 1526, 1484, 1403, 1337, 1275, 1252, 1209, 1177, 1134, 1030, 954, 926, 865, 799, 747, 694, 628, 576, 525, 463. EI-MS m/z (rel. int.): 463.44 (M⁺, 12), 323.18 (100), 294.11 (6), 175.07(2). EA: Calc. for C₂₉H₃₁F₂NO₂: C: 75.14, H: 6.53, N: 3.03; Found: C: 75.14, H: 6.74, N: 3.02.

2PF(3)PF(3)BM: White crystals, yield 68%; m.p. 156.3°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.27-8.19 (m, 1H), 7.63-7.58 (d, ³J_H-H = 1.5 Hz, 1H), 7.49-7.30 (m, 5H, overlap), 7.22-7.14 (dd, ³J_H-H = 8.3 Hz, ⁴J_H-H = 1.5 Hz, 1H), 7.07-6.98 (m, 1H), 4.21-4.10 (q, ³J_H-H = 7.0 Hz, 2H), 2.49 (s, 3H), 1.52-1.44 (t, ³J_H-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 365.19 (M⁺, 82), 337.20 (100), 308.15 (18), 231.09 (13), 78.03(40). EA: Calc. for C₂₂H₁₇F₂NO₂: C: 71.93, H: 4.55, N: 3.77; Found: C: 72.32, H: 4.69, N: 3.83.

3PF(3)PF(3)BM: White crystals, yield 86%; m.p. 130.6°C. ¹H-NMR (400 MHz, CDCl₃,
TMS): δ (ppm) 8.28-8.19 (m, 1H), 7.63-7.58 (d, 4J_H-H = 1.5 Hz, 1H), 7.50-7.31 (m, 5H, overlap), 7.22-7.15 (dd, 3J_H-H = 8.2 Hz, 4J_H-H = 1.5 Hz, 1H), 7.08-6.99 (m, 1H), 4.09-4.00 (t, 3J_H-H = 6.6 Hz, 2H), 2.49 (s, 3H), 1.95-1.83 (m, 2H), 1.12-1.03 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3075, 2971, 2910, 2877, 1734, 1611, 1574, 1521, 1479, 1408, 1332, 1309, 1275, 1200, 1139, 1030, 1006, 978, 950, 927, 865, 808, 761, 737, 690, 638, 595, 548, 464. EI-MS m/z (rel. int.): 379.26 (M⁺, 31), 337.20 (100), 308.16 (11), 231.11 (7), 78.02(29). EA: Calc. for C23H19F2NO2: C: 72.97, H: 4.64, N: 3.57; Found: C: 72.81, H: 5.05, N: 3.69.

4PF(3)PF(3)BM: White crystals, yield 88%; m.p. 113.3°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.29-8.20 (m, 1H), 7.63-7.58 (d, 4J_H-H = 1.5 Hz, 1H), 7.51-7.31 (m, 5H, overlap), 7.22-7.15 (dd, 3J_H-H = 8.3 Hz, 4J_H-H = 1.5 Hz, 1H), 7.07-6.99 (m, 1H), 4.13-4.05 (t, 3J_H-H = 6.6 Hz, 2H), 2.50 (s, 3H), 1.90-1.78 (m, 2H), 1.59-1.48 (m, 2H), 1.04-0.96 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3056, 2957, 2929, 2872, 1729, 1611, 1574, 1521, 1475, 1413, 1332, 1314, 1276, 1196, 1134, 1063, 1026, 997, 955, 922, 865, 809, 761, 738, 695, 643, 596, 572, 549, 520, 464. EI-MS m/z (rel. int.): 393.37 (M⁺, 27), 337.20 (100), 307.96 (5), 231.02 (4), 78.05(32). EA: Calc. for C23H19F2NO2: C: 73.16, H: 5.15, N: 3.52; Found: C: 73.27, H: 5.38, N: 3.56.

5PF(3)PF(3)BM: White crystals, yield 90%; m.p. 105.9°C. ¹H-NMR (400 MHz, CDCl₃, TMS): δ (ppm) 8.27-8.17 (m, 1H), 7.62-7.57 (d, 4J_H-H = 1.6 Hz, 1H), 7.50-7.29 (m, 5H, overlap), 7.21-7.13 (dd, 3J_H-H = 8.3 Hz, 4J_H-H = 1.7 Hz, 1H), 7.07-6.96 (m, 1H), 4.10-4.01 (t, 3J_H-H = 6.6 Hz, 2H), 2.48 (s, 3H), 1.89-1.80 (m, 2H), 1.53-1.33 (m, 4H, overlap), 0.98-0.90 (t, 3J_H-H = 7.1 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3685, 3065, 2953, 2868, 1880, 1611, 1573, 1521, 1475, 1413, 1309, 1267, 1181, 1134, 1058, 1017, 932, 870, 804, 738, 695, 638, 592, 554, 469. EI-MS m/z (rel. int.): 407.16 (M⁺, 3061, 2938, 2862, 1611, 1574, 1521, 1474, 1408, 1313, 1267, 1209, 1181, 1129, 1058, 1025, 926, 865, 804, 742, 694, 638, 591, 553, 468. EI-MS m/z (rel.
7PF(3)PF(3)BN: White crystals, yield 96%; m.p.99.7°C. 1H-NMR (400 MHz, CDCl₃, TMS):
δ (ppm) 8.29-8.20 (m, 1H), 7.63-7.58 (d, 4Jₜ-H = 1.6 Hz, 1H), 7.51-7.31 (m, 5H, overlap), 7.22-7.15 (dd, 3Jₕ-H = 8.3 Hz, 4Jₜ-H = 1.7 Hz, 1H), 7.08-6.99 (m, 1H), 4.11-4.03 (t, 3Jₜ-H = 6.6 Hz, 2H), 2.49 (s, 3H), 1.91-1.79 (m, 2H), 1.54-1.27 (m, 8H, overlap), 0.94-0.85 (t, 3Jₜ-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3633, 3066, 2929, 2854, 1610, 1569, 1516, 1474, 1408, 1313, 1266, 1185, 1129, 1025, 926, 869, 803, 737, 694, 638, 595, 548, 468. EI-MS m/z (rel. int.): 435.23 (M⁺, 18), 337.13 (100), 308.04 (7), 230.92 (2), 78.01(16). EA: Calc. for C₂₇H₂₅F₂NO₂: C: 74.45, H: 6.09, N: 3.14; Found: C: 74.46, H: 6.25, N: 3.22.

8PF(3)PF(3)BN: White crystals, yield 88%; m.p. 75.8°C. 1H-NMR (400 MHz, CDCl₃, TMS):
δ (ppm) 8.28-8.19 (m, 1H), 7.63-7.58 (d, 4Jₜ-H = 1.6 Hz, 1H), 7.50-7.30 (m, 5H, overlap), 7.22-7.14 (dd, 3Jₕ-H = 8.3 Hz, 4Jₜ-H = 1.6 Hz, 1H), 7.07-6.98 (m, 1H), 4.11-4.02 (t, 3Jₜ-H = 6.6 Hz, 2H), 2.49 (s, 3H), 1.90-1.78 (m, 2H), 1.54-1.27 (m, 10H, overlap), 0.93-0.85 (t, 3Jₜ-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3680, 3056, 2923, 2853, 1610, 1568, 1521, 1479, 1413, 1308, 1275, 1214, 1177, 1134, 1029, 1001, 950, 921, 865, 798, 760, 737, 694, 638, 596, 553, 468. EI-MS m/z (rel. int.): 449.21 (M⁺, 17), 337.13 (100), 308.10 (10), 231.10 (4), 78.03(13). EA: Calc. for C₂₈H₂₇F₂NO₂: C: 74.71, H: 6.52, N: 3.12; Found: C: 74.81, H: 6.50, N: 3.12.

10PF(3)PF(3)BN: White crystals, yield 95%; m.p. 79.8°C. 1H-NMR (400 MHz, CDCl₃, TMS):
δ (ppm) 8.27-8.18 (m, 1H), 7.63-7.57 (d, 4Jₜ-H = 1.7 Hz, 1H), 7.50-7.30 (m, 5H, overlap), 7.22-7.14 (dd, 3Jₕ-H = 8.3 Hz, 4Jₜ-H = 1.6 Hz, 1H), 7.07-6.97 (m, 1H), 4.10-4.02 (t, 3Jₜ-H = 6.6 Hz, 2H), 2.49 (s, 3H), 1.90-1.78 (m, 2H), 1.52-1.22 (m, 14H, overlap), 0.92-0.84 (t, 3Jₜ-H = 7.0 Hz, 3H). IR (KBr, pellet, cm⁻¹): 3689, 3052, 2918, 2920, 2854, 1615, 1564, 1521, 1479, 1403, 1270, 1247, 1209, 1172, 1129, 1030, 950, 921, 865, 794, 742, 699, 643, 591, 515, 444. EI-MS m/z (rel. int.): 477.46 (M⁺, 15), 337.18 (100), 308.15 (12), 231.16 (4), 78.04(15). EA: Calc. for C₃₀H₂₉F₂NO₂: C: 75.62, H: 7.03, N: 2.94; Found: C: 75.45, H: 6.96, N: 2.93.

2PF(3)PF(3)BN: White crystals, yield 36%; m.p. 177.9 °C. 1H-NMR (400 MHz, CDCl₃, TMS):
δ (ppm) 8.72-8.67 (d, 4Jₜ-H = 2.2 Hz, 1H), 8.37-8.32 (dd, 3Jₜ-H = 8.9 Hz, 4Jₜ-H = 2.2 Hz, 1H), 8.30-8.24 (m, 1H), 7.75-7.68 (d, 3Jₜ-H = 8.9 Hz, 1H), 7.54-7.49 (dd, 3Jₜ-H = 8.2 Hz, 4Jₜ-H
= 1.6 Hz, 1H), 7.48-7.43 (dd, $^3J_{H,F} = 12.1$ Hz, $^4J_{H,H} = 1.5$ Hz, 1H), 7.42-7.33 (m, 2H, overlap), 7.10-7.01 (m, 1H), 4.23-4.12 (q, $^3J_{H,H} = 7.0$ Hz, 2H), 1.54-1.45 (t, $^3J_{H,H} = 7.0$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3670, 3099, 2990, 2923, 2877, 1771, 1620, 1564, 1521, 1488, 1436, 1403, 1337, 1313, 1270, 1172, 1134, 1034, 950, 921, 888, 860, 808, 779, 742, 689, 638, 600, 576, 533, 449. EI-MS m/z (rel. int.): 396.23 (M+, 51), 368.14 (100), 322.24 (29), 91.05(55). EA: Calc. for C$_2$H$_4$F$_3$N$_2$O$_4$: C: 63.46, H: 3.75, N: 6.90; Found: C: 63.64, H: 3.56, N: 7.07.

3PF(3)PF(3)BN: White crystals, yield 58%; m.p. 154.2°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 8.73-8.67 (d, $^4J_{H,H} = 2.2$ Hz, 1H), 8.39-8.31 (dd, $^3J_{H,H} = 8.9$ Hz, $^4J_{H,H} = 2.3$ Hz, 1H), 8.31-8.23 (m, 1H), 7.76-7.68 (d, $^3J_{H,H} = 8.9$ Hz, 1H), 7.54-7.49 (dd, $^3J_{H,H} = 8.3$ Hz, $^4J_{H,H} = 1.7$ Hz, 1H), 7.48-7.43 (dd, $^3J_{H,F} = 12.2$ Hz, $^4J_{H,H} = 1.7$ Hz, 1H), 7.42-7.33 (m, 2H, overlap), 7.10-7.01 (m, 1H), 4.10-4.02 (t, $^3J_{H,H} = 6.6$ Hz, 2H), 1.96-1.84 (m, 2H), 1.13-1.04 (t, $^3J_{H,H} = 7.1$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3104, 2972, 2882, 1762, 1616, 1569, 1521, 1483, 1437, 1408, 1347, 1314, 1267, 1209, 1134, 1053, 1021, 978, 950, 917, 865, 813, 743, 690, 643, 605, 577, 539, 444. EI-MS m/z (rel. int.): 410.36 (M+, 17), 368.17 (100), 322.14 (40), 90.99(56). EA: Calc. for C$_2$H$_4$F$_3$N$_2$O$_4$: C: 64.34, H: 3.85, N: 6.71; Found: C: 64.39, H: 3.93, N: 6.83.

4PF(3)PF(3)BN: White crystals, yield 77%; m.p. 141.9°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 8.72-8.66 (d, $^4J_{H,H} = 2.2$ Hz, 1H), 8.38-8.31 (dd, $^3J_{H,H} = 8.9$ Hz, $^4J_{H,H} = 2.2$ Hz, 1H), 8.31-8.22 (m, 1H), 7.75-7.68 (d, $^3J_{H,H} = 8.9$ Hz, 1H), 7.53-7.48 (dd, $^3J_{H,H} = 8.3$ Hz, $^4J_{H,H} = 1.7$ Hz, 1H), 7.48-7.42 (dd, $^3J_{H,F} = 12.2$ Hz, $^4J_{H,H} = 1.6$ Hz, 1H), 7.42-7.33 (m, 2H, overlap), 7.10-7.01 (m, 1H), 4.14-4.06 (t, $^3J_{H,H} = 6.6$ Hz, 2H), 1.90-1.78 (m, 2H), 1.58-1.48 (m, 2H), 1.05-0.96 (t, $^3J_{H,H} = 7.1$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3108, 2962, 2872, 1772, 1616, 1574, 1526, 1484, 1441, 1413, 1342, 1313, 1290, 1257, 1177, 1129, 1058, 1035, 1002, 955, 922, 893, 870, 817, 794, 747, 694, 633, 591, 567, 539, 463. EI-MS m/z (rel. int.): 424.17 (M+, 14), 368.16 (100), 322.22 (22), 91.05(47). EA: Calc. for C$_2$H$_4$F$_3$N$_2$O$_4$: C: 64.90, H: 4.29, N: 6.47; Found: C: 65.09, H: 4.27, N: 6.60.

5PF(3)PF(3)BN: White crystals, yield 37%; m.p. 102.5°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): $\delta$ (ppm) 8.74-8.64 (d, $^4J_{H,H} = 2.1$ Hz, 1H), 8.37-8.31 (dd, $^3J_{H,H} = 8.9$ Hz, $^4J_{H,H} = 2.1$ Hz, 1H), 8.29-8.22 (m, 1H), 7.75-7.67 (d, $^3J_{H,H} = 8.9$ Hz, 1H), 7.54-7.47 (dd, $^3J_{H,H} = 8.2$ Hz, $^4J_{H,H} = 1.6$ Hz, 1H), 7.47-7.41 (dd, $^3J_{H,F} = 12.2$ Hz, $^4J_{H,H} = 1.6$ Hz, 1H), 7.41-7.33 (m, 2H, overlap),
7.09-7.00 (m, 1H), 4.12-4.04 (t, $^3J_{H-H} = 6.6$ Hz, 2H), 1.92-1.80 (m, 2H), 1.53-1.34 (m, 4H, overlap), 1.01-0.91 (t, $^3J_{H-H} = 7.0$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3685, 3104, 2929, 2867, 1790, 1616, 1578, 1536, 1483, 1413, 1347, 1281, 1196, 1139, 1073, 1025, 978, 945, 898, 865, 804, 743, 695, 648, 596, 544, 468. El-MS m/z (rel. int.): 438.13 (M$^+$, 13), 368.07 (100), 322.07 (21), 91.13(16). EA: Calc. for C$_{24}$H$_{20}$F$_2$N$_2$O$_4$: C: 65.26, H: 4.38, N: 6.34; Found: C: 65.75, H: 4.60, N: 6.39.

**6PF(3)PF(3)BN:** White crystals, yield 50%; m.p. 107.1°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS):

δ (ppm) 8.72-8.66 (d, $^4J_{H-H} = 2.3$ Hz, 1H), 8.38-8.30 (dd, $^3J_{H-H} = 8.9$ Hz, $^4J_{H-H} = 2.3$ Hz, 1H), 8.30-8.22 (m, 1H), 7.75-7.68 (d, $^3J_{H-H} = 8.9$ Hz, 1H), 7.52-7.48 (dd, $^3J_{H-H} = 8.3$ Hz, $^4J_{H-H} = 1.7$ Hz, 1H), 7.47-7.42 (dd, $^3J_{H-F} = 12.2$ Hz, $^4J_{H-H} = 1.7$ Hz, 1H), 7.41-7.32 (m, 2H, overlap), 7.09-7.00 (m, 1H), 4.12-4.04 (t, $^3J_{H-H} = 6.6$ Hz, 2H), 1.94-1.77 (m, 2H), 1.54-1.31 (m, 6H, overlap), 0.95-0.87 (t, $^3J_{H-H} = 7.0$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3675, 3103, 2961, 2928, 2858, 1794, 1616, 1574, 1531, 1483, 1446, 1413, 1342, 1281, 1196, 1134, 1073, 1030, 993, 945, 899, 865, 804, 738, 695, 595, 544, 469. El-MS m/z (rel. int.): 452.17 (M$^+$, 8), 368.10 (100), 322.13 (19), 90.96(16). EA: Calc. for C$_{24}$H$_{22}$F$_2$N$_2$O$_4$: C: 65.96, H: 4.68, N: 6.13; Found: C: 66.36, H: 4.90, N: 6.19.

**7PF(3)PF(3)BN:** White crystals, yield 46%; m.p. 100.3°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS):

δ (ppm) 8.73-8.68 (d, $^4J_{H-H} = 2.3$ Hz, 1H), 8.39-8.32 (dd, $^3J_{H-H} = 8.9$ Hz, $^4J_{H-H} = 2.3$ Hz, 1H), 8.32-8.23 (m, 1H), 7.76-7.69 (d, $^3J_{H-H} = 8.9$ Hz, 1H), 7.54-7.50 (dd, $^3J_{H-H} = 8.3$ Hz, $^4J_{H-H} = 1.7$ Hz, 1H), 7.49-7.43 (dd, $^3J_{H-F} = 12.1$ Hz, $^4J_{H-H} = 1.6$ Hz, 1H), 7.43-7.33 (m, 2H, overlap), 7.10-7.01 (m, 1H), 4.13-4.05 (t, $^3J_{H-H} = 6.6$ Hz, 2H), 1.92-1.80 (m, 2H), 1.53-1.28 (m, 8H, overlap), 0.94-0.86 (t, $^3J_{H-H} = 7.0$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3670, 3104, 2923, 2858, 1621, 1573, 1531, 1479, 1446, 1413, 1342, 1314, 1281, 1134, 1035, 950, 889, 865, 799, 743, 695, 643, 587, 539, 454. El-MS m/z (rel. int.): 466.51 (M$^+$, 4), 368.12 (100), 322.15 (26), 91.07(15). EA: Calc. for C$_{26}$H$_{24}$F$_2$N$_2$O$_4$: C: 66.69, H: 4.80, N: 5.95; Found: C: 66.94, H: 5.19, N: 6.01.

**8PF(3)PF(3)BN:** White crystals, yield 47%; m.p. 107.4°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS):

δ (ppm) 8.73-8.67 (d, $^4J_{H-H} = 2.3$ Hz, 1H), 8.38-8.33 (dd, $^3J_{H-H} = 8.9$ Hz, $^4J_{H-H} = 2.3$ Hz, 1H), 8.33-8.23 (m, 1H), 7.76-7.69 (d, $^3J_{H-H} = 8.9$ Hz, 1H), 7.55-7.49 (dd, $^3J_{H-H} = 8.3$ Hz, $^4J_{H-H} = 1.7$ Hz, 1H), 7.49-7.43 (dd, $^3J_{H-F} = 12.1$ Hz, $^4J_{H-H} = 1.6$ Hz, 1H), 7.43-7.35 (m, 2H, overlap),
7.10-7.00 (m, 1H), 4.13-4.04 (t, $^3J_{HH} = 6.6$ Hz, 2H), 1.91-1.81 (m, 2H), 1.52-1.29 (m, 10H, overlap), 0.93-0.86 (t, $^3J_{HH} = 6.9$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3108, 2920, 2867, 1729, 1616, 1569, 1531, 1479, 1441, 1408, 1347, 1309, 1281, 1262, 1181, 1134, 1030, 993, 950, 922, 894, 860, 813, 747, 695, 643, 591, 539, 469. EI-MS m/z (rel. int.): 480.31 (M$^+$, 12), 368.25 (100), 322.10 (10), 91.04(16). EA: Calc. for C$_{27}$H$_{26}$F$_2$N$_2$O$_4$: C: 67.51, H: 5.27, N: 5.82; Found: C: 67.49, H: 5.45, N: 5.83.

10PF(3)PF(3)BN: White crystals, yield 66%; m.p. 107.1°C. $^1$H-NMR (400 MHz, CDCl$_3$, TMS): δ (ppm) 8.73-8.67 (d, $^4J_{HH} = 2.3$ Hz, 1H), 8.39-8.32 (dd, $^3J_{HH} = 8.9$ Hz, $^4J_{HH} = 2.3$ Hz, 1H), 8.31-8.24 (m, 1H), 7.76-7.69 (d, $^3J_{HH} = 8.9$ Hz, 1H), 7.54-7.49 (dd, $^3J_{HH} = 8.3$ Hz, $^4J_{HH} = 1.7$ Hz, 1H), 7.48-7.43 (dd, $^3J_{HH} = 12.1$ Hz, $^4J_{HH} = 1.7$ Hz, 1H), 7.42-7.35 (m, 2H, overlap), 7.10-7.00 (m, 1H), 4.13-4.04 (t, $^3J_{HH} = 6.6$ Hz, 2H), 1.91-1.79 (m, 2H), 1.54-1.25 (m, 14H, overlap), 0.92-0.84 (t, $^3J_{HH} = 7.0$ Hz, 3H). IR (KBr, pellet, cm$^{-1}$): 3680, 3104, 2920, 2849, 1733, 1615, 1573, 1530, 1487, 1464, 1436, 1412, 1346, 1318, 1280, 1261, 1209, 1177, 1134, 1067, 1054, 1029, 983, 949, 893, 870, 808, 742, 689, 642, 596, 538, 468. EI-MS m/z (rel. int.): 508.58 (M$^+$, 5), 368.11 (100), 321.85 (14), 91.10(10). EA: Calc. for C$_{29}$H$_{30}$F$_2$N$_2$O$_4$: C: 68.29, H: 5.95, N: 5.51; Found: C 68.49, H: 5.95, N: 5.51.