Supplementary Material

DMA (*N*,*N*-dimethylacetamide) (99%) and PivOK were purchased from Acros. [Pd(C3H5)Cl]2 (56.5%) and dppb [1,4-bis(diphenylphosphino)butane] (98%) were purchased from Alfa Aesar. These compounds were not purified before use.

**Preparation of the PdCl(C3H5)(dppb) catalyst:**[15] An oven-dried 40 mL Schlenk tube equipped with a magnetic stirring bar under argon atmosphere, was charged with [Pd(C3H5)Cl]2 (182 mg, 0.5 mmol) and dppb (426 mg, 1 mmol). 10 mL of anhydrous dichloromethane were added, then, the solution was stirred at room temperature for twenty minutes. The solvent was removed in vacuum. The powder was used without purification. (31P 381 MHz, CDCl3) δ = 19.3 (s).

**General procedure for the synthesis of 1-18:** As a typical experiment, the reaction of the 2-halopyridine (1 mmol), fluorobenzene derivative (2.5 mmol) and PivOK (0.154 g, 1.1 mmol) at 150 °C during 16 h in DMA (3 mL) in the presence of PdCl(C3H5)(dppb) (12 mg, 0.02 mmol) (see tables or schemes) under argon affords the arylation product after evaporation of the solvent and filtration on silica gel.

**2-(2,3,4,5-Tetrafluorophenyl)-6-(trifluoromethyl)pyridine (1):** From 1,2,3,4-tetrafluorobenzene (268 µL, 2.5 mmol) and 2-bromo-6-(trifluoromethyl)pyridine (226 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 85:15) to afford the desired compound **1** (201 mg, 68%) as a white solid mp = 58–60 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.04 – 7.93 (m, 2H), 7.77 – 7.70 (m, 1H), 7.70 – 7.64 (m, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 151.8 (m), 148.2 (q, *J* = 35.7 Hz), 147.9 (td, *J* = 3.8 and 237.8 Hz), 146.5 (md, *J* = 246.5 Hz), 146.4 (md, *J* = 247.5 Hz), 141.9 (ddd, *J* = 5.6, 17.1 and 245.1 Hz), 138.4, 135.5 (ddd, *J* = 3.1, 12.6 and 18.4 Hz), 126.5 (d, *J* = 11.5 Hz), 121.3 (q, *J* = 274.6 Hz), 119.2 (q, *J* = 2.8 Hz), 110.8 (td, *J* = 2.9 and 22.3 Hz). 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -138.2 (td, *J* = 8.5 and 12.9 Hz), -145.1 (ddd, *J* = 7.3, 13.4 and 20.9 Hz), -156.5 (ddd, *J* = 3.3, 9.1 and 20.5 Hz). Elemental analysis: calcd (%) for C12H4F7N (295.16): C 48.83, H 1.37; found: C 49.12, H 1.57.

**2-(3,5-Dichloro-2-fluorophenyl)-6-(trifluoromethyl)pyridine (2):** From 2,4-dichloro-1-fluorobenzene (293 µL, 2.5 mmol) and 2-bromo-6-(trifluoromethyl)pyridine (226 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 90:10) to afford the desired compound **2** (189 mg, 61%) as a white solid mp = 62–64 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.07 – 7.95 (m, 3H), 7.73 (dd, *J* = 2.5, 6.2 Hz, 1H), 7.51 (dd, *J* = 2.7, 6.0 Hz, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 154.9 (d, *J* = 252.7 Hz), 151.6 (d, *J* = 3.0 Hz), 148.5 (q, *J* = 35.0 Hz), 138.2, 131.2, 130.1 (d, *J* = 4.3 Hz), 129.4 (d, *J* = 2.2 Hz), 128.2 (d, *J* = 12.7 Hz), 126.9 (d, *J* = 11.1 Hz), 122.9 (d, *J* = 20.6 Hz), 121.3 (q, *J* = 273.5 Hz), 120.1 (m). 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -68.3, -121.5. Elemental analysis: calcd (%) for C12H5Cl2F4N (310.07): C 46.48, H 1.63; found: C 46.67, H 1.34.

**2-(2-Fluoro-5-methoxyphenyl)-6-(trifluoromethyl)pyridine (3):** From 4-fluoroanisole (283 µL, 2.5 mmol) and 2-bromo-6-(trifluoromethyl)pyridine (226 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 95:5) to afford the desired compound **3** (149 mg, 55%) a colorless oil. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.05 (d, *J* = 8.1 Hz, 1H), 7.95 (t, *J* = 7.8 Hz, 1H), 7.65 (dd, *J* = 3.7, 6.8 Hz, 2H), 7.12 (dd, *J* = 9.0, 10.7 Hz, 1H), 7.00 – 6.93 (m, 1H), 3.89 (s, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 156.1, 155.2 (d, *J* = 244.2 Hz), 153.6, 148.2 (q, *J* = 35.0 Hz), 137.8, 127.0 (d, *J* = 11.6 Hz), 126.1 (d, *J* = 12.7 Hz), 121.5 (q, *J* = 273.5 Hz), 118.9 (q, *J* = 2.9 Hz), 117.2 (d, *J* = 1.9 Hz), 117.1 (d, *J* = 31.5 Hz), 114.8 (d, *J* = 2.7 Hz), 55.9. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -68.3, -127.7. Elemental analysis: calcd (%) for C13H9F4NO (271.21): C 57.57, H 3.34; found: C 57.41, H 3.28.

**2-(3-Chloro-2-fluoro-5-methoxyphenyl)-6-(trifluoromethyl)pyridine (4):** From 3-chloro-4-fluoroanisole (317 µL, 2.5 mmol) and 2-bromo-6-(trifluoromethyl)pyridine (226 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 95:5) to afford the desired compound **4** (156 mg, 51%) as a white solid mp = 68–71 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.16 (d, *J* = 8.1 Hz, 1H), 7.93 – 7.90 (m, 1H), 7.87 (d, *J* = 10.0 Hz, 1H), 7.63 (dd, *J* = 0.9, 7.8 Hz, 1H), 7.05 (d, *J* = 5.9 Hz, 1H), 3.90 (s, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 155.7, 152.9, 150.8 (d, *J* = 245.3 Hz), 138.1, 127.4 (d, *J* = 12.8 Hz), 127.0 (d, *J* = 11.1 Hz), 122.3, 122.1, 120.0, 119.4 (d, *J* = 2.9 Hz), 117.4, 114.0, 56.0. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -68.3, -121.5. Elemental analysis: calcd (%) for C13H8ClF4NO (305.66): C 51.08, H 2.64; found: C 51.19, H 2.78.

**2-Methoxy-6-(2,3,4,5-tetrafluorophenyl)pyridine (5):** From 1,2,3,4-tetrafluorobenzene (268 µL, 2.5 mmol) and 2-bromo-6-methoxypyridine (188 mg, 1 mmol), the residue was purified by flash chromatography on silica gel gel (petroleum ether-Et2O, 95:5) to afford the desired compound **5** (190 mg, 74%) a yelow solid mp = 70–73 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 7.91 – 7.80 (m, 1H), 7.69 (t, *J* = 8.8 Hz, 1H), 7.47 (dd, *J* = 1.5, 7.6 Hz, 1H), 6.79 (d, *J* = 8.3 Hz, 1H), 4.03 (s, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 163.7, 147.1 (m), 147.0 (md, *J* = 250.1 Hz), 146.1 (md, *J* = 248.9 Hz), 141.1 (md, *J* = 250.7 Hz), 140.4 (md, *J* = 250.7 Hz), 139.3, 123.2 (ddd, *J* = 3.9, 6.8 and 10.2 Hz), 117.1 (d, *J* = 13.0 Hz), 111.1 (td, *J* = 3.0, 20.2 Hz), 111.1, 53.3. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -139.6 (dt, *J* = 13.9 and 24.3 Hz), -142.2 (td, *J* = 7.0 and 13.6 Hz), -155.3 – -156.8 (m). Elemental analysis: calcd (%) for C12H7F4NO (257.19): C 56.04, H 2.74; found: C 56.19, H 2.98.

**2-(2,5-Difluorophenyl)-6-methoxypyridine (6):** From 1,4-difluorobenzene (257 µL, 2.5 mmol) and 2-bromo-6-methoxypyridine (188 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 95:5) to afford the desired compound **6** (152 mg, 69%) as colorless oil. 1H NMR (400 MHz, CDCl3) δ (ppm) 7.90 (ddd, *J* = 3.3, 6.1, 9.5 Hz, 1H), 7.67 (t, *J* = 7.8 Hz, 1H), 7.51 (d, *J* = 7.6 Hz, 1H), 7.17 – 7.10 (m, 1H), 7.05 (ddd, *J* = 3.5, 6.3, 9.0 Hz, 1H), 6.77 (d, *J* = 8.2 Hz, 1H), 4.04 (s, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 163.6, 158.9 (dd, *J* = 2.3 and 240.6 Hz), 156.7 (dd, *J* = 2.3 and 247.6 Hz), 148.8 (dd, *J* = 1.8 and 3.6 Hz), 139.1, 117.3, 117.0 (dd, *J* = 4.6 and 32.3 Hz), 116.8 (d, *J* = 3.5 Hz), 116.6, 116.4 (dd, *J* = 12.5 and 27.7 Hz), 110.5, 53.3. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -119.1 (d, *J* = 18.3 Hz), -121.6 (d, *J* = 18.4 Hz). Elemental analysis: calcd (%) for C12H9F2NO (221.21): C 65.16, H 4.10; found: C 56.19, H 2.98.

**2-(2-Fluoro-5-(trifluoromethyl)phenyl)-6-methoxypyridine (7):** From 1-fluoro-4-(trifluoromethyl)benzene (293 µL, 2.5 mmol) and 2-bromo-6-methoxypyridine (188 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 90:10) to afford the desired compound **7** (195 mg, 72%) as colorless oil. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.47 (dd, *J* = 2.4, 7.2 Hz, 1H), 7.69 (t, *J* = 7.8 Hz, 1H), 7.66 – 7.60 (m, 1H), 7.50 (dd, *J* = 2.0 and 7.5 Hz, 1H), 7.34 – 7.20 (m, 1H), 6.79 (d, *J* = 8.3 Hz, 1H), 4.05 (d, *J* = 2.1 Hz, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 163.8, 162.3 (d, *J* = 255.6 Hz), 148.5 (d, *J* = 3.2 Hz), 139.2, 128.7 (m), 127.7 (d, *J* = 12.2 Hz), 127.1 (d, *J* = 3.7 Hz), 127.0 (d, *J* = 3.7 Hz), 123.8 (q, *J* = 270.1 Hz), 117.3 (d, *J* = 11.9 Hz), 117.0 (d, *J* = 25.0 Hz), 110.7, 53.4. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -62.1, -110.6. Elemental analysis: calcd (%) for C13H9F4NO (271.21): C 57.57, H 3.34; found: C 57.45, H 3.69.

**Cyclopropyl(4-fluoro-3-(6-methoxypyridin-2-yl)phenyl)methanone (8):** From cyclopropyl(4-fluorophenyl)methanone (360 µL, 2.5 mmol) and 2-bromo-6-methoxypyridine (188 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 70:30) to afford the desired compound **8** (160 mg, 59%) as a white solid mp = 68–72 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.84 (dd, *J* = 2.4, and 7.6 Hz, 1H), 8.05 (ddd, *J* = 2.4, 4.7 and 8.5 Hz, 1H), 7.68 (dd, *J* = 7.4 and 8.2 Hz, 1H), 7.48 (ddd, *J* = 0.8, 2.1 and 7.4 Hz, 1H), 7.27 (dd, *J* = 2.0 and 10.6 Hz, 1H), 6.78 (d, *J* = 8.3 Hz, 1H), 4.06 (s, 3H), 2.74 (tt, *J* = 4.5 and 7.8 Hz, 1H), 1.29 (dt, *J* = 3.2 and 4.3 Hz, 2H), 1.15 – 1.02 (m, 2H). 13C NMR (100 MHz, CDCl3)δ (ppm) 199.1, 163.8, 163.3 (d, *J* = 257.0 Hz), 149.3 (d, *J* = 3.1 Hz), 139.1, 134.5 (d, *J* = 3.3 Hz), 131.5 (d, *J* = 4.5 Hz), 130.0 (d, *J* = 9.9 Hz), 127.2 (d, *J* = 11.8 Hz), 117.3 (d, *J* = 11.1 Hz), 116.6 (d, *J* = 24.3 Hz), 110.3, 53.3, 17.1, 11.7. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -109.3. Elemental analysis: calcd (%) for C16H14FNO2 (271.29): C 70.84, H 5.20; found: C 71.01, H 5.12.

**2-(3,5-Dichloro-2-fluorophenyl)-6-methoxypyridine (9):** From 2,4-dichloro-1-fluorobenzene (293 µL, 2.5 mmol) and 2-bromo-6-methoxypyridine (188 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 90:10) to afford the desired compound **9** (144 mg, 53%) as a white solid mp = 77–79 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.01 (dd, *J* = 2.7, 6.0 Hz, 1H), 7.68 (dd, *J* = 7.4 and 8.3 Hz, 1H), 7.49 – 7.39 (m, 2H), 6.79 (dd, *J* = 0.7 and 8.2 Hz, 1H), 4.03 (s, 3H). 13C NMR (100 MHz, CDCl3)δ (ppm) 163.8, 154.8 (d, *J* = 251.2 Hz), 148.0, 139.2, 129.9 (d, *J* = 4.2 Hz), 129.5 (m), 129.0, 122.8 (d, *J* = 21.7 Hz), 117.4 (d, *J* = 12.0 Hz), 111.1, 53.4. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -120.5. Elemental analysis: calcd (%) for C12H8Cl2FNO (272.10): C 52.97, H 2.96; found: C 52.75, H 3.08.

**4-(6-(2,3,4,5-Tetrafluorophenyl)pyridin-2-yl)morpholine (10):** From 1,2,3,4-tetrafluorobenzene (268 µL, 2.5 mmol) and 4-(6-bromopyridin-2-yl)morpholine (242 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 80:20) to afford the desired compound **10** (222 mg, 71%) as a white solid mp = 144–145 ºC.. 1H NMR (400 MHz, CDCl3) δ (ppm) 7.82 – 7.70 (m, 1H), 7.61 (ddd, *J* = 1.9, 7.5 and 8.5 Hz, 1H), 7.22 (dt, *J* = 2.2 and 7.5 Hz, 1H), 6.68 (dd, *J* = 1.4 and 8.5 Hz, 1H), 3.91 – 3.85 (m, 4H), 3.63 – 3.55 (m, 4H). 13C NMR (100 MHz, CDCl3)δ (ppm) 159.1, 147.9, 147.0 (md, *J* = 247.5 Hz), 146.1 (md, *J* = 248.7 Hz), 141.0 (dtd, *J* = 3.4, 14.8 and 253.1 Hz), 140.2 (dtd, *J* = 3.4, 14.6 and 256.1 Hz), 138.4, 124.0 (ddd, *J* = 3.7, 6.7 and 9.9 Hz), 114.2 (d, *J* = 11.9 Hz), 111.14 (td, *J* = 3.0 and 20.8 Hz), 106.8, 66.7, 45.4. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -139.7 – -139.9 (m), -141.7 – -142.8 (m), -155.7 – -157.2 (m). Elemental analysis: calcd (%) for C15H12F4N2O (312.27): C 57.70, H 3.87; found: C 57.97, H 4.05.

**4-(6-(2,5-Difluorophenyl)pyridin-2-yl)morpholine (11):** From 1,4-difluorobenzene (257 µL, 2.5 mmol) and 4-(6-bromopyridin-2-yl)morpholine (242 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 85:15) to afford the desired compound **11** (185 mg, 67%) as an orange solid mp = 58–59 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 7.82 (ddd, *J* = 3.3, 6.1 and 9.5 Hz, 1H), 7.60 (t, *J* = 8.6 Hz, 1H), 7.29 (dd, *J* = 2.3 and 7.5 Hz, 1H), 7.10 (ddd, *J* = 4.5, 9.0 and 10.5 Hz, 1H), 7.06 – 6.98 (m, 1H), 6.66 (d, *J* = 8.5 Hz, 1H), 4.00 – 3.80 (m, 4H), 3.80 – 3.51 (m, 4H). 13C NMR (100 MHz, CDCl3)δ (ppm) 159.1, 158.9 (dd, *J* = 2.9 and 241.8 Hz), 156.8 (dd, *J* = 2.9 and 241.8 Hz), 149.7 (dd, *J* = 1.8 and 3.3 Hz), 138.2, 129.1 (dd, *J* = 7.7 and 13.5 Hz), 117.3 (dd, *J* = 8.6 and 26.7 Hz), 116.8 (dd, *J* = 3.7 and 25.3 Hz), 116.2 (dd, *J* = 9.1 and 24.5 Hz), 114.4 (d, *J* = 12.0 Hz), 106.3, 66.8, 45.5. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -119.1 (d, *J* = 18.3 Hz), -121.7 (d, *J* = 18.3 Hz). Elemental analysis: calcd (%) for C15H14F2N2O (276.29): C 65.21, H 5.11; found: C 64.98, H 4.86.

**Cyclopropyl(4-fluoro-3-(6-morpholinopyridin-2-yl)phenyl)methanone (12):** From cyclopropyl(4-fluorophenyl)methanone (360 µL, 2.5 mmol) and 4-(6-bromopyridin-2-yl)morpholine (242 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 70:30) to afford the desired compound **12** (157 mg, 48%) as a white solid mp = 76–79 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.73 (dd, *J* = 2.4 and 7.6 Hz, 1H), 8.04 (ddd, *J* = 2.4, 4.7 and 8.6 Hz, 1H), 7.62 (dd, *J* = 7.5 and 8.4 Hz, 1H), 7.27 – 7.21 (m, 2H), 6.72 – 6.62 (m, 1H), 3.93 – 3.84 (m, 4H), 3.66 – 3.57 (m, 4H), 2.72 (tt, *J* = 4.6 and 7.8 Hz, 1H), 1.30 – 1.26 (m, 2H), 1.12 – 1.05 (m, 2H). 13C NMR (100 MHz, CDCl3)δ (ppm) 199.2, 163.4 (d, *J* = 257.8 Hz), 159.3, 150.2 (d, *J* = 2.7 Hz), 138.1, 134.5 (d, *J* = 3.2 Hz), 131.6 (d, *J* = 4.6 Hz), 129.9 (d, *J* = 9.9 Hz), 128.0 (d, *J* = 12.1 Hz), 116.5 (d, *J* = 24.3 Hz), 114.5 (d, *J* = 10.1 Hz), 106.2, 66.8, 45.6, 17.1, 11.7. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -109.5. Elemental analysis: calcd (%) for C19H19FN2O2 (326.37): C 69.92, H 5.87; found: C 70.13, H 6.09.

**4-(6-(3-Chloro-2-fluoro-5-methoxyphenyl)pyridin-2-yl)morpholine (13):** From 3-chloro-4-fluoroanisole (317 µL, 2.5 mmol) and 4-(6-bromopyridin-2-yl)morpholine (242 mg, 1 mmol), the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 85:15) to afford the desired compound **13** (132 mg, 41%) as while solid mp = 123–125 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 7.61 (dd, *J* = 7.5 and 8.5 Hz, 1H), 7.46 (dd, *J* = 3.2 and 5.6 Hz, 1H), 7.22 (dd, *J* = 2.6 and 7.5 Hz, 1H), 6.97 (dd, *J* = 3.2 and 5.5 Hz, 1H), 6.67 (d, *J* = 8.5 Hz, 1H), 3.91 – 3.85 (m, 4H), 3.85 (s, 3H), 3.62 – 3.57 (m, 4H). 13C NMR (100 MHz, CDCl3)δ (ppm) 159.1, 155.3 (d, *J* = 2.7 Hz), 150.8 (d, *J* = 245.8 Hz), 138.1, 129.5 (d, *J* = 13.1 Hz), 121.9 (d, *J* = 20.8 Hz), 114.5 (d, *J* = 10.5 Hz), 114.3 (d , *J* = 2.2 Hz), 106.4, 66.8, 56.0, 45.5. 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -129.1. Elemental analysis: calcd (%) for C16H16ClFN2O2 (322.76): C 59.54, H 5.00; found: C 59.69, H 4.96.

**2-(2,3,4,5-Tetrafluorophenyl)quinoline (14):** From 1,2,3,4-tetrafluorobenzene (268 µL, 2.5 mmol), 2-chloroquinoline (163 mg, 1 mmol), and *n*- tetrabutylammonium bromide (484 mg, 1.5 mmol) the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 90:10) to afford the desired compound **14** (122 mg, 44%) as while solid mp = 127–130 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.29 (d, *J* = 8.6 Hz, 1H), 8.18 (d, *J* = 8.5 Hz, 1H), 8.02 – 7.83 (m, 3H), 7.80 (ddd, *J* = 1.5, 6.9 and 8.4 Hz, 1H), 7.63 (t, *J* = 7.5 Hz, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 149.6, 147.1, 146.2 (dm, *J* = 246.2 Hz), 145.1 (md, *J* = 250.8 Hz), 140.1 (md, *J* = 248.2 Hz), 139.8 (md, *J* = 256.5 Hz), 135.9, 129.1, 128.6, 126.5, 126.4, 126.2 (d, *J* = 3.9 Hz), 122.8 (m), 120.6 (d, *J* = 9.5 Hz), 111.1 (dd, *J* = 20.3 Hz, 2.7 Hz). This product is known and NMR are identical to those reported in the literature.[10]

**2-(2,5-Difluorophenyl)quinoline (15):** From 1,4-difluorobenzene (257 µL, 2.5 mmol), 2-chloroquinoline (163 mg, 1 mmol), and *n*- tetrabutylammonium bromide (484 mg, 1.5 mmol) the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 95:5) to afford the desired compound **15** (63 mg, 26%) as while solid mp = 59–62 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.25 (d, *J* = 8.6 Hz, 1H), 8.20 (d, *J* = 8.5 Hz, 1H), 7.97 – 7.86 (m, 3H), 7.78 (ddd, *J* = 1.5, 6.8 and 8.4 Hz, 1H), 7.60 (ddd, *J* = 1.2, 6.8 and 8.1 Hz, 1H), 7.24 – 7.09 (m, 2H). 13C NMR (100 MHz, CDCl3)δ (ppm) 159.1 (dd, *J* = 3.1 and 242.7 Hz), 158.0, 156.8 (dd, *J* = 3.1 and 242.7 Hz), 152.7, 148.3, 136.4, 129.8 (d, *J* = 5.0 Hz), 127.5, 127.4, 127.0, 122.1 (d, *J* = 9.3 Hz), 117.6 (dd, *J* = 3.5 and 25.7 Hz), 117.6 (d, *J* = 8.5 Hz), 117.3 (dd, *J* = 2.2 and 8.9 Hz), 117.1 (d, *J* = 8.8 Hz). 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -118.7 (d, *J* = 18.2 Hz), -123.1 (d, *J* = 18.4 Hz). Elemental analysis: calcd (%) for C15H9F2N (241.24): C 74.68, H 3.76; found: C 74.97, H 3.55.

**2-(6-Chloro-2,3-difluorophenyl)quinoline (16):** From 4-chloro-1,2-difluorobenzene (279 µL, 2.5 mmol), 2-chloroquinoline (163 mg, 1 mmol), and *n*- tetrabutylammonium bromide (484 mg, 1.5 mmol) the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 95:5) to afford the desired compound **16** (113 mg, 41%) as while solid mp = 98–100 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.28 (d, *J* = 8.6 Hz, 1H), 8.25 – 8.18 (m, 1H), 7.96 (dt, *J* = 2.4 and 5.7 Hz, 1H), 7.89 (dtd, *J* = 2.3, 2.5 and 8.5 Hz, 2H), 7.79 (ddd, *J* = 1.5, 6.9 and 8.4 Hz, 1H), 7.62 (ddd, *J* = 1.2, 6.8 and 8.1 Hz, 1H), 7.30 (ddd, *J* = 2.8, 6.5 and 9.3 Hz, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 151.4 (m), 150.9 (dd, *J* = 15.1 and 252.1 Hz), 148.2, 148.0 (dd, *J* = 15.1 and 252.1 Hz), 136.7, 130.7 (d, *J* = 10.2 Hz), 130.0, 129.8, 129.3 (dd, *J* = 4.3 and 9.0 Hz), 127.5, 127.5, 127.3, 126.0 (dd, *J* = 1.8 and 3.5 Hz), 121.9 (d, *J* = 8.6 Hz), 118.2 (d, *J* = 20.5 Hz). 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -134.7 (d, *J* = 20.5 Hz), -144.4 (d, *J* = 22.4 Hz). Elemental analysis: calcd (%) for C15H8ClF2N (275.68): C 65.35, H 2.93; found: C 65.49, H 3.08.

**2-(3,5-Dichloro-2-fluorophenyl)quinoline (17):** From 2,4-dichloro-1-fluorobenzene (293 µL, 2.5 mmol), 2-chloroquinoline (163 mg, 1 mmol), and *n*-tetrabutylammonium bromide (484 mg, 1.5 mmol) the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 90:10) to afford the desired compound **17** (73 mg, 25%) %) as a white solid mp = 144–146 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.28 (dd, *J* = 1.9 and 8.5 Hz, 1H), 8.19 (d, *J* = 8.5 Hz, 1H), 8.05 (dd, *J* = 2.7 and 5.7 Hz, 1H), 7.94 – 7.84 (m, 2H), 7.79 (td, *J* = 1.8 and 7.8 Hz, 1H), 7.62 (t, *J* = 7.2 Hz, 1H), 7.56 – 7.47 (m, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 155.0 (d, *J* = 252.1 Hz), 151.7 (d, *J* = 2.4 Hz), 148.2, 136.7, 130.7, 130.3 (d, *J* = 13.7 Hz), 130.1, 129.9 (d, *J* = 4.2 Hz), 129.8, 129.7 (d, *J* = 2.6 Hz), 127.5, 127.5, 127.3, 122.8 (d, *J* = 20.4 Hz), 121.9 (d, *J* = 8.6 Hz). 19F{1H} NMR (376 MHz, CDCl3) δ (ppm) -121.6. Elemental analysis: calcd (%) for C15H8Cl2FN (292.13): C 61.67, H 2.76; found: C 61.97, H 2.54.

**2-(2,3-Dichloro-6-fluorophenyl)quinoline (18):** From 1,2-dichloro-4-fluorobenzene (293 µL, 2.5 mmol), 2-chloroquinoline (163 mg, 1 mmol), and *n*-tetrabutylammonium bromide (484 mg, 1.5 mmol) the residue was purified by flash chromatography on silica gel (petroleum ether-Et2O, 85:15) to afford the desired compound **18** as a (114 mg, 39%) as a white solid mp = 145–147 ºC. 1H NMR (400 MHz, CDCl3) δ (ppm) 8.34 (d, *J* = 7.4 Hz, 1H), 8.26 (d, *J* = 8.6 Hz, 1H), 8.19 (d, *J* = 8.0 Hz, 1H), 7.93 – 7.86 (m, 2H), 7.79 (ddd, *J* = 1.5, 6.9, 8.4 Hz, 1H), 7.61 (ddd, *J* = 1.2, 6.9, 8.1 Hz, 1H), 7.37 (d, *J* = 10.2 Hz, 1H). 13C NMR (100 MHz, CDCl3)δ (ppm) 158.7 (d, *J* = 253.2 Hz), 151.5, 148.2, 136.6, 133.9 (d, *J* = 10.8 Hz), 132.5 (d, *J* = 3.9 Hz), 129.9 (d, *J* = 25.2 Hz), 128.8 (d, *J* = 3.6 Hz), 127.8, 127.7, 127.5, 127.4, 127.1, 121.8 (d, *J* = 9.5 Hz), 118.6 (d, *J* = 28.0 Hz). 9F{1H} NMR (376 MHz, CDCl3) δ (ppm) -117.0 Elemental analysis: calcd (%) for C15H8Cl2FN (292.13): C 61.67, H 2.76; found: C 61.48, H 3.04.