Supplementary Materials: $K^+\cdots C_\pi$ and $K^+\cdots F$ Non-Covalent Interactions in π-Functionalized Potassium Fluoroalkoxides

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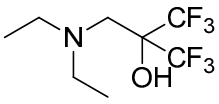
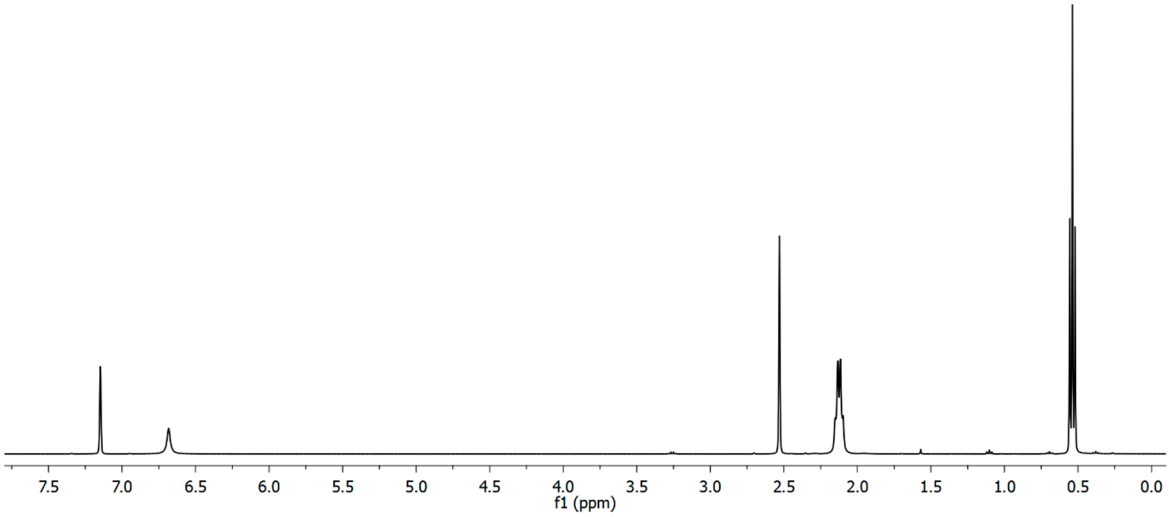
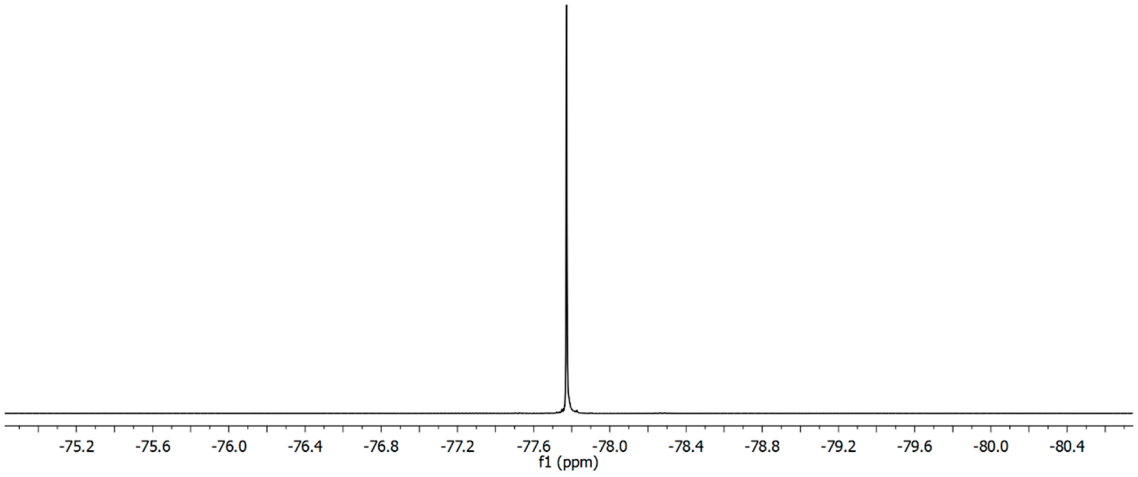
S1. Synthesis of {RO^4}H



A solution of diethylamine (1.16 g, 15.86 mmol) was added via syringe to a solution of 2,2-bis(trifluoromethyl)oxirane (3.13 g, 17.38 mmol) in Et_2O (10 mL). The reaction mixture was stirred at room temperature for 2 days. The volatiles were then evaporated under reduced pressure to afford {RO^4}H as a colourless oil. Yield 3.55 g (89%). ^{1}H NMR ([D$_6$]benzene, 400.13 MHz, 298 K): δ 6.67 (s, 1H, O*H*), 2.51 (s, 2H, C*H*$_2$C(CF$_3$)$_2$), 2.09 (q, $^3J_{H-H}$ = 7.2 Hz, 4H, NC*H*$_2$CH$_3$), 0.51 (t, $^3J_{H-H}$ = 7.2 Hz, 6H, NCH$_2$C*H*$_3$) ppm. ^{19}F{^{1}H} NMR (benzene-*d*$_6$, 376.49 MHz, 298 K): δ −77.76 (s, 6F, C*F*$_3$) ppm.

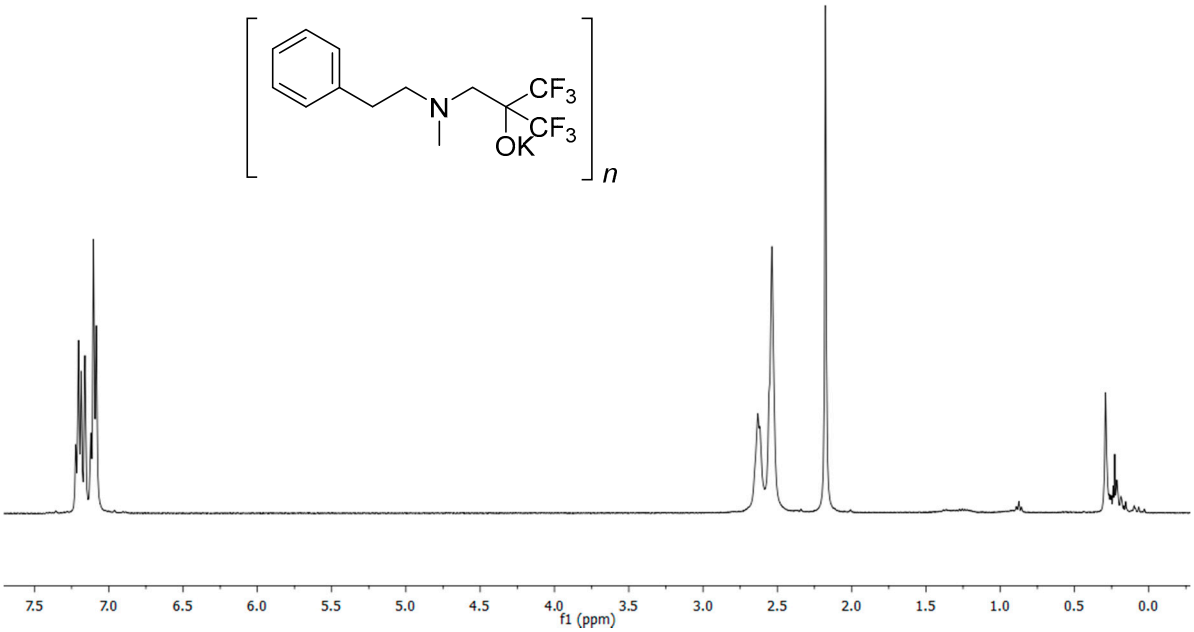


^{1}H NMR spectrum (400.16 MHz, [D$_6$]benzene, 298 K) of {RO^4}H.



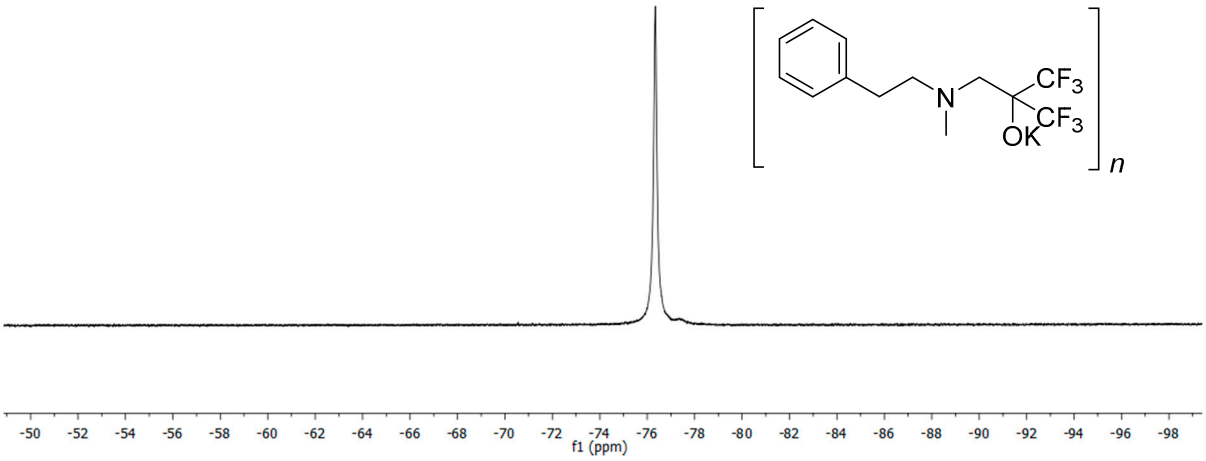
^{19}F NMR spectrum (376.53 MHz, [D$_6$]benzene, 298 K) of {RO^4}H

S2. ^{1}H NMR spectrum of [{RO^{1}}K]$_n$



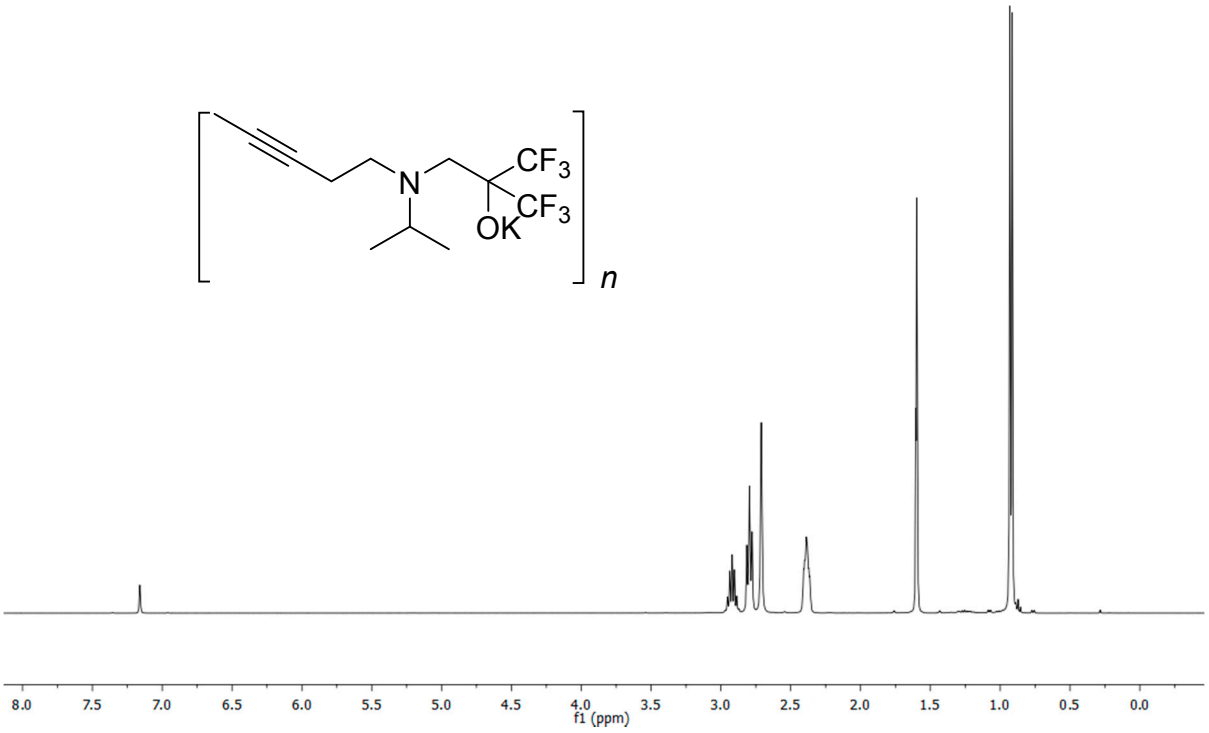
^{1}H NMR spectrum (400.13 MHz, [D$_6$]benzene, 298 K) of [**1**]$_n$.

S3. ^{19}F NMR spectrum of [{RO^{1}}K]$_n$



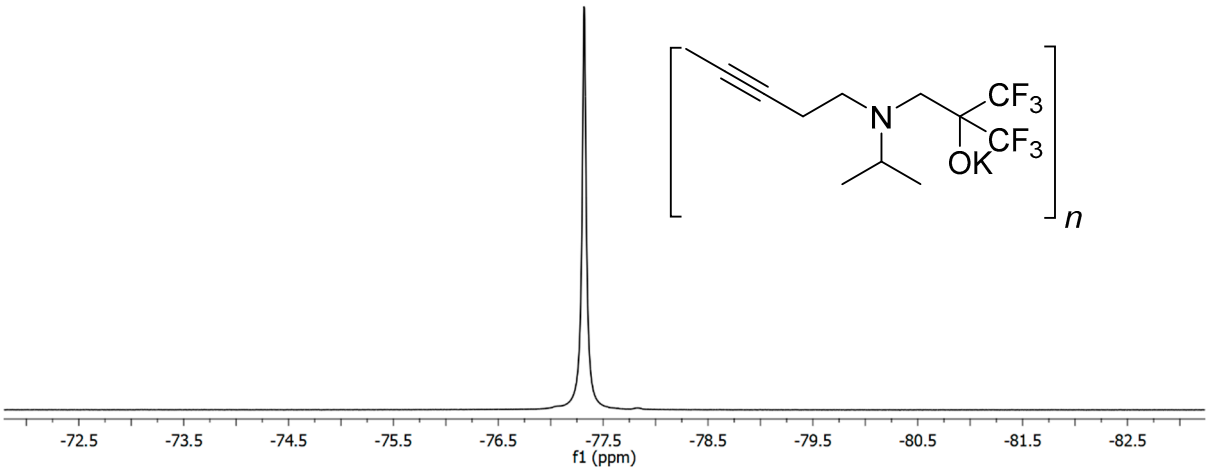
^{19}F NMR spectrum (376.49 MHz, [D$_6$]benzene, 298 K) of [**1**]$_n$.

S4. ^{1}H NMR spectrum of [{RO^{2}}K]$_{n}$



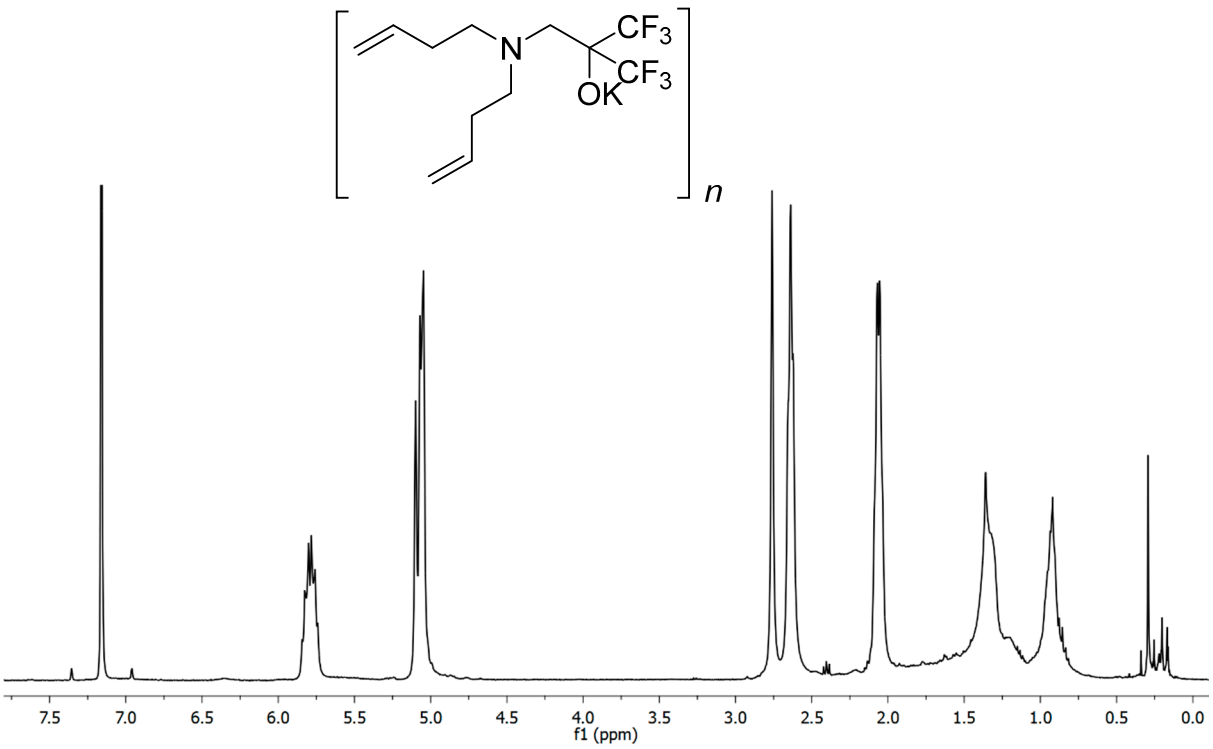
^{1}H NMR spectrum (400.13 MHz, [D$_{6}$]benzene, 298 K) of [**2**]$_{n}$.

S5. ^{19}F NMR spectrum of [{RO^{2}}K]$_{n}$



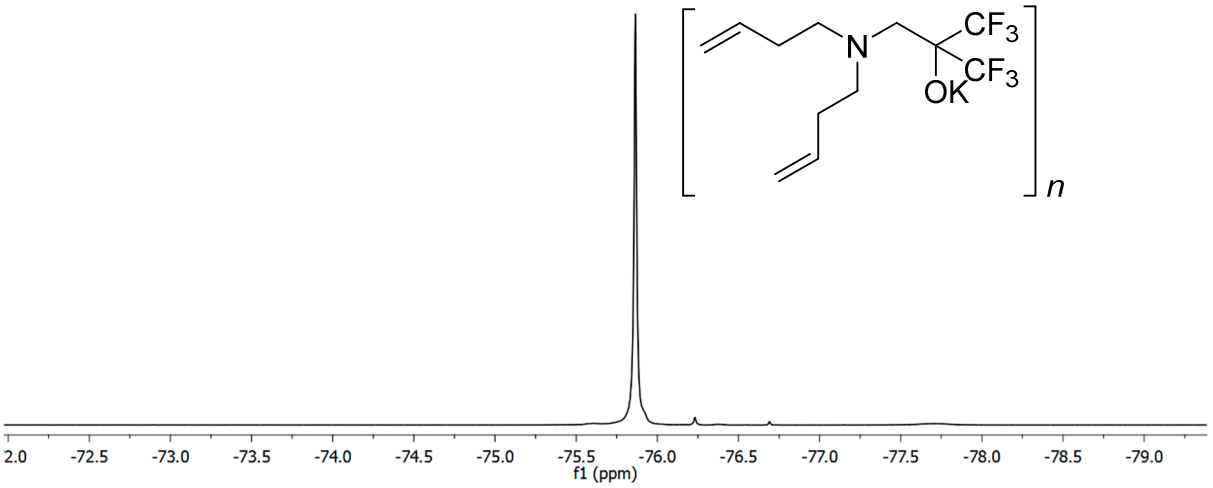
^{19}F NMR spectrum (376.44 MHz, [D$_{6}$]benzene, 298 K) of [**2**]$_{n}$.

S6. ^{1}H NMR spectrum of [{RO^{3}}K]$_n$



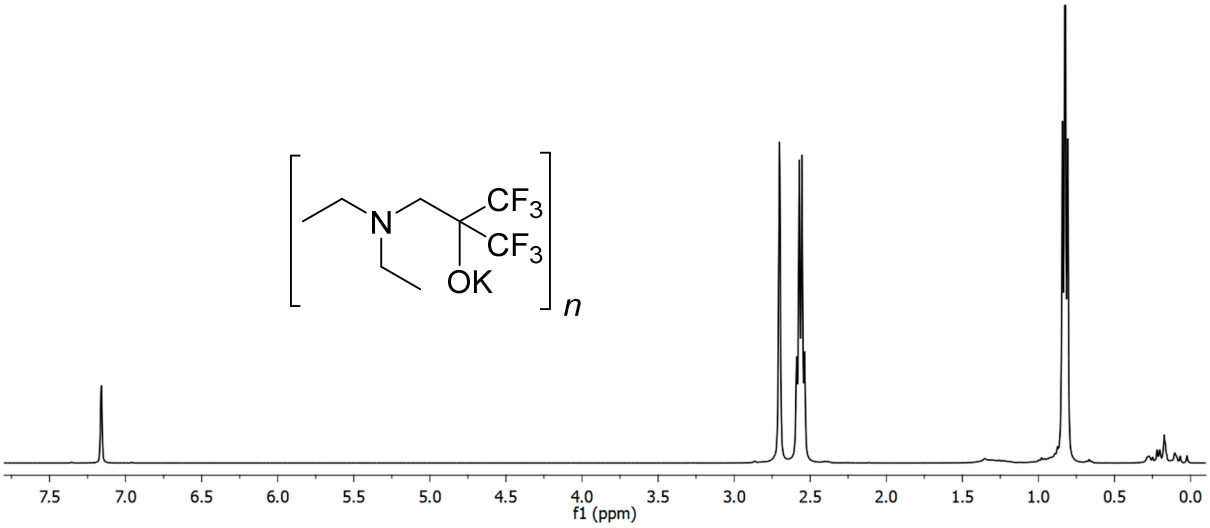
^{1}H NMR spectrum (400.13 MHz, [D$_6$]benzene, 298 K) of [**3**]$_n$.

S7. ^{19}F NMR spectrum of [{RO^{3}}K]$_n$



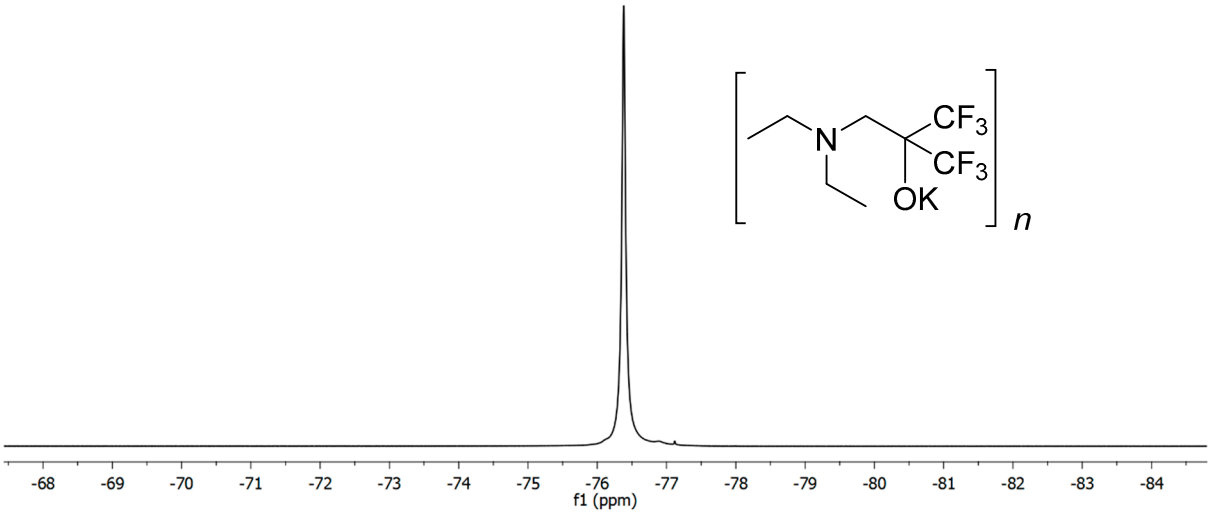
^{19}F NMR spectrum (376.49 MHz, [D$_6$]benzene, 298 K) of [**3**]$_n$.

S8. ^{1}H NMR spectrum of [{RO^{4}}K]$_n$



^{1}H NMR spectrum (400.16 MHz, [D$_6$]benzene, 298 K) of [**4**]$_n$.

S9. ^{19}F NMR spectrum of [{RO^{4}}K]$_n$



^{19}F NMR spectrum (376.53 [D$_6$]benzene, 298 K) of [**4**]$_n$.