

Supplementary information for

Anion exchange membranes composed of perfluoroalkylene chains and ammonium-functionalized oligophenylenes

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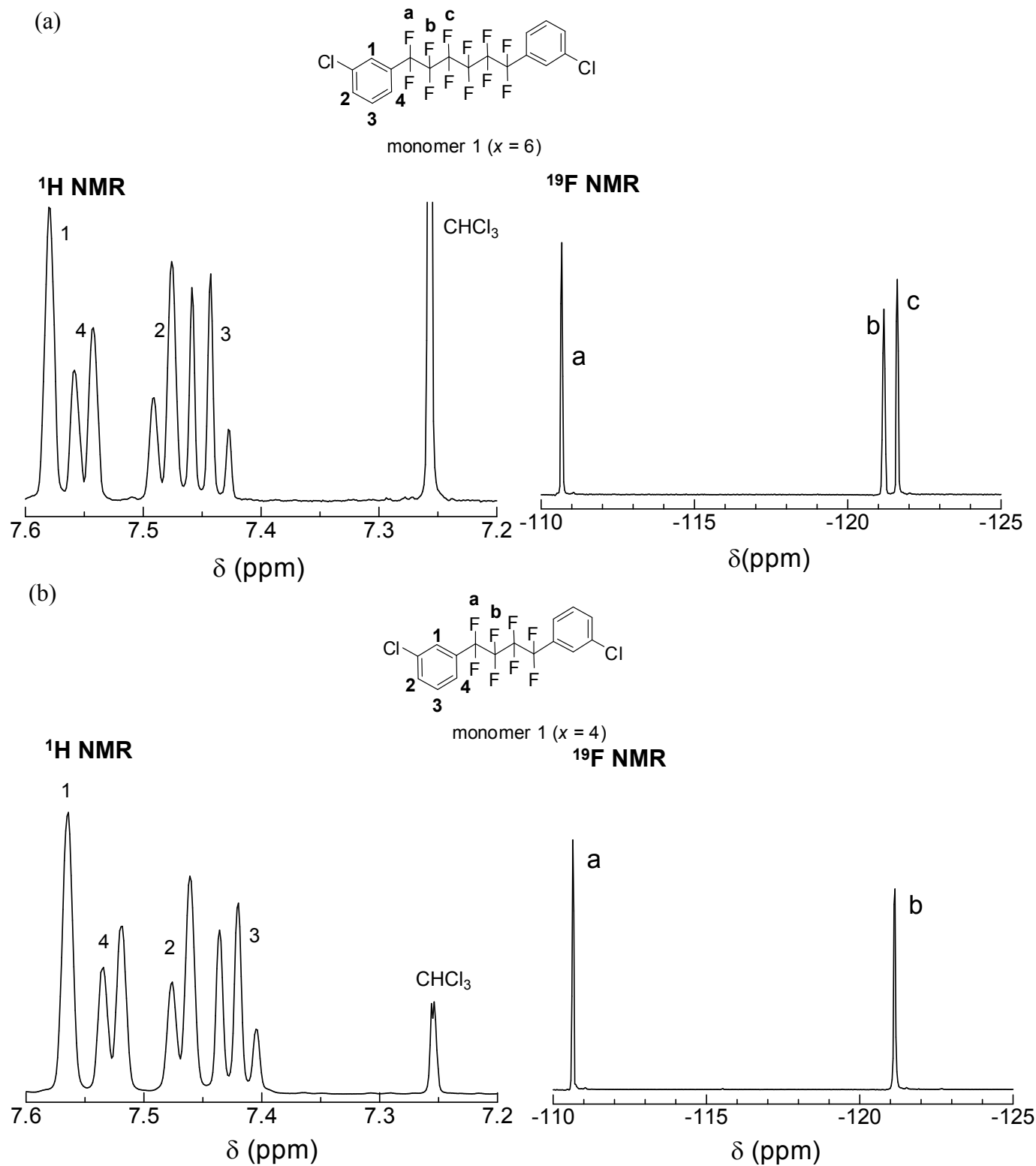


Fig. S1. ^1H and ^{19}F NMR spectra of the monomer **1**(a) $x = 6$ and (b) $x = 4$ in CDCl_3 .

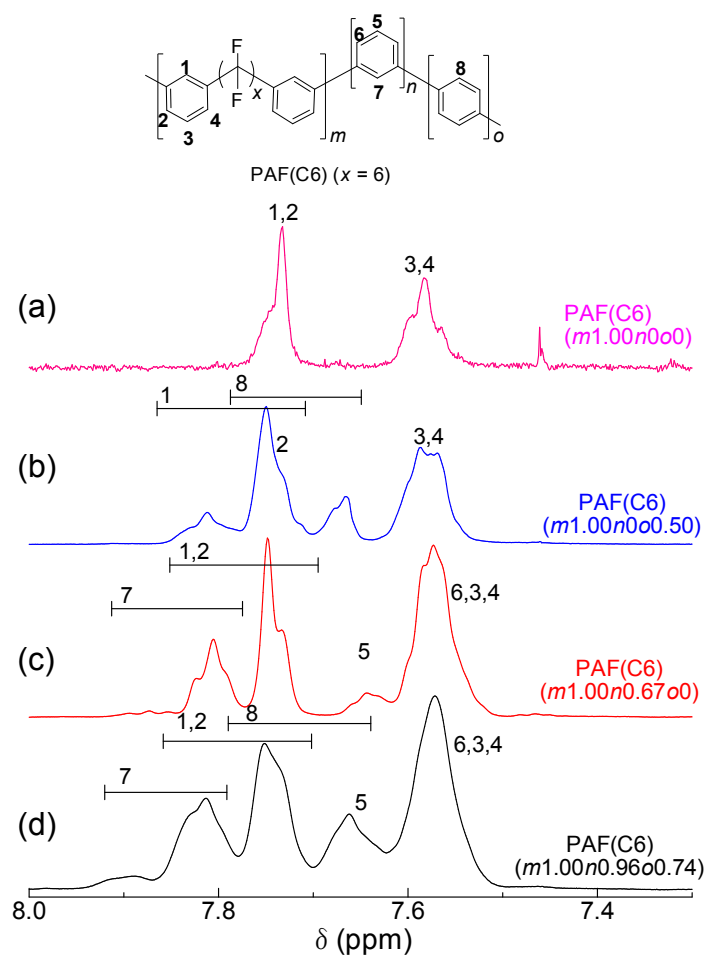


Fig. S2. ^1H NMR spectra of precursor copolymers PAF(C6) ($x = 6$); (a) $m1.00n0o0$, (b) $m1.00n0o0.50$, (c) $m1.00n0.67o0$, and (d) $m1.00n0.96o0.74$ in CDCl_3 .

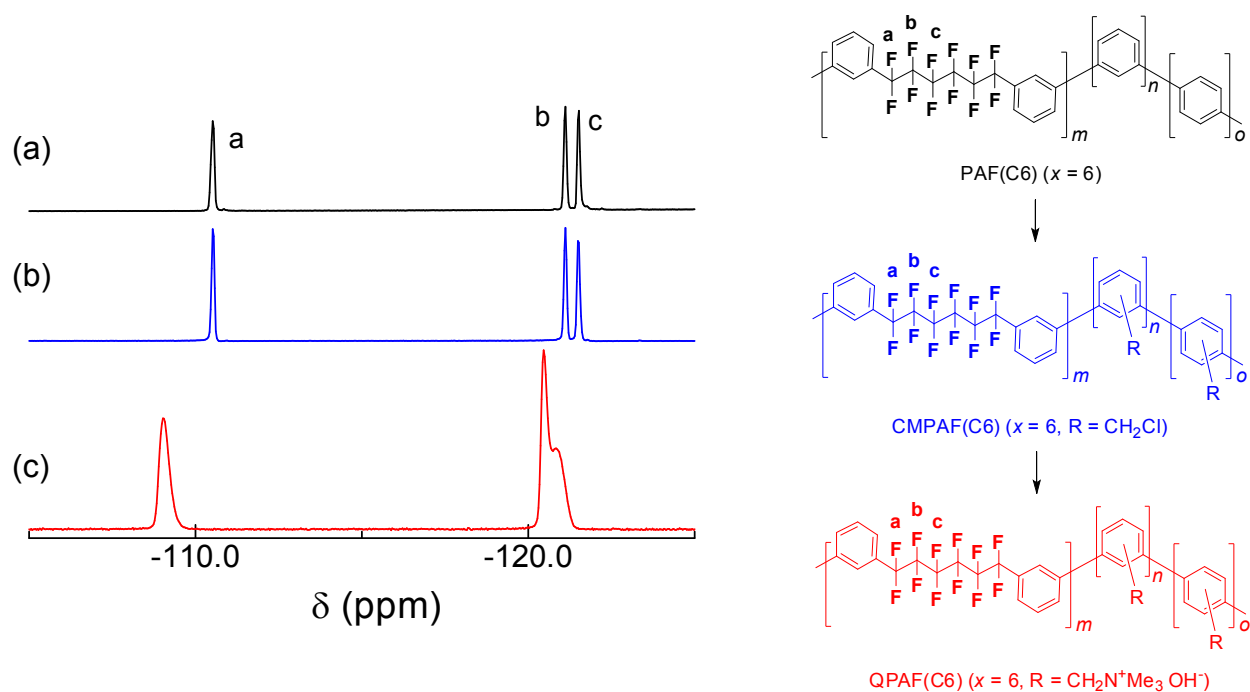


Fig. S3. ^{19}F NMR spectra of (a) precursor copolymer PAF(C6)-2 in CDCl_3 , (b) CMPAF(C6)-2 in CDCl_3 , and (c) QPAF(C6)-2 in $\text{DMSO}-d_6$.

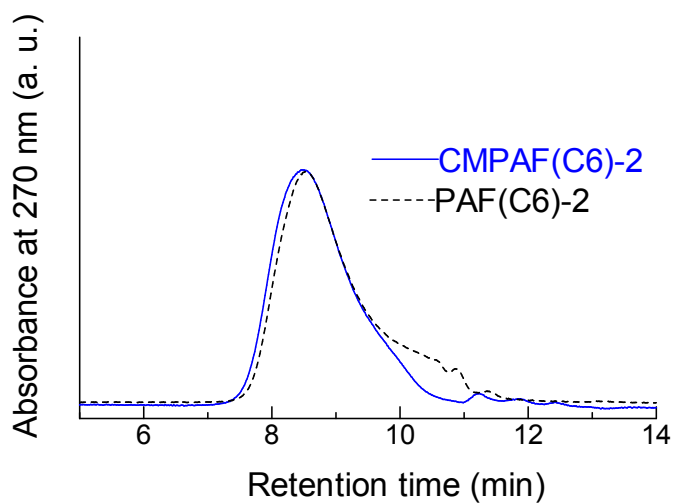


Fig. S4. GPC profiles of PAF(C6)-2 and CMPAF(C6)-2.

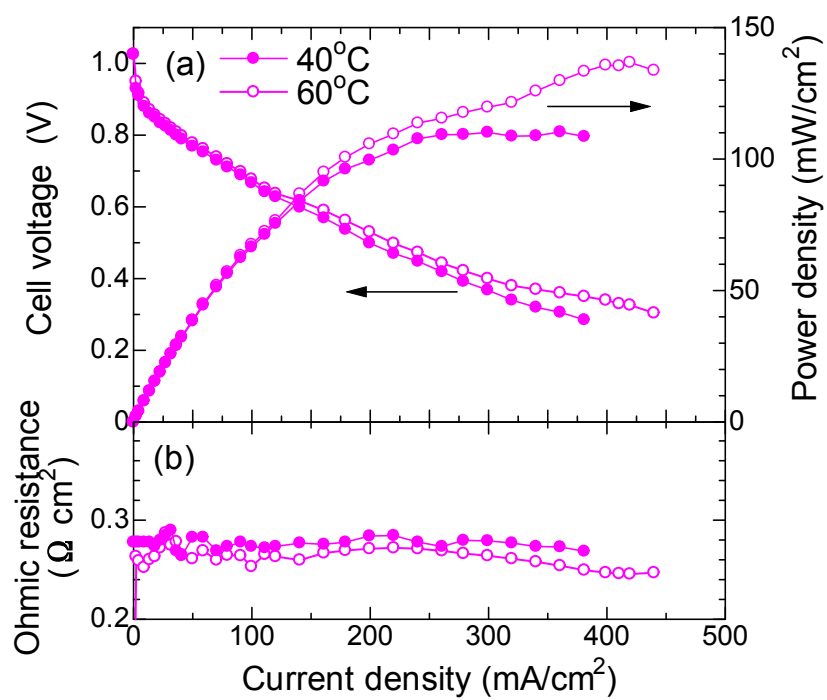


Fig. S7. (a) Fuel cell performance and (b) ohmic resistance of MEA using QPAF(C6)-4 as membrane and electrode binder at 40 °C and 60 °C.