Electronic Supplementary Information (ESI)

Redox-active poly(ionic liquid)s as active materials in energy storage applications

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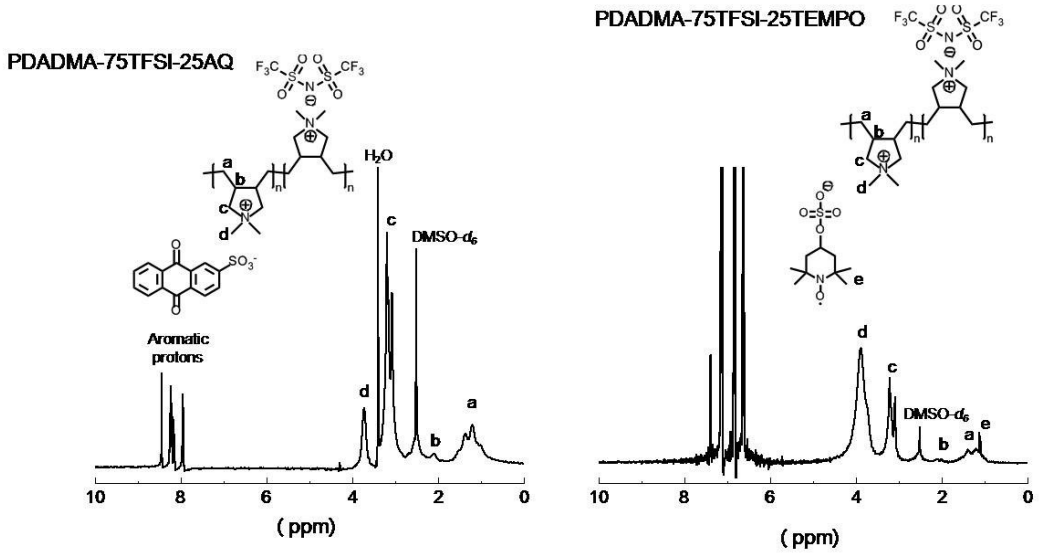

Fig. S 1 ^{1}H NMR spectra of the pyrrolidinium-based poly(ionic liquid)s with 25 mol% of redox-active groups. PDADMA-75TFSI-25AQ (on the left) and PDADMA-75TFSI-25TEMPO (on the right).

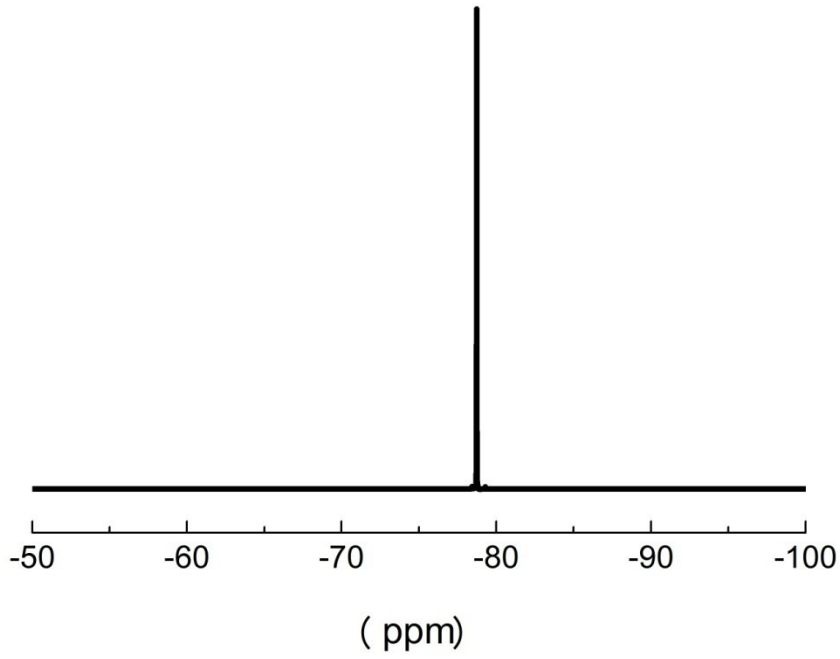

Fig. S 2 ^{19}F NMR spectra of the copolymers combining redox-active and TFSI anions.

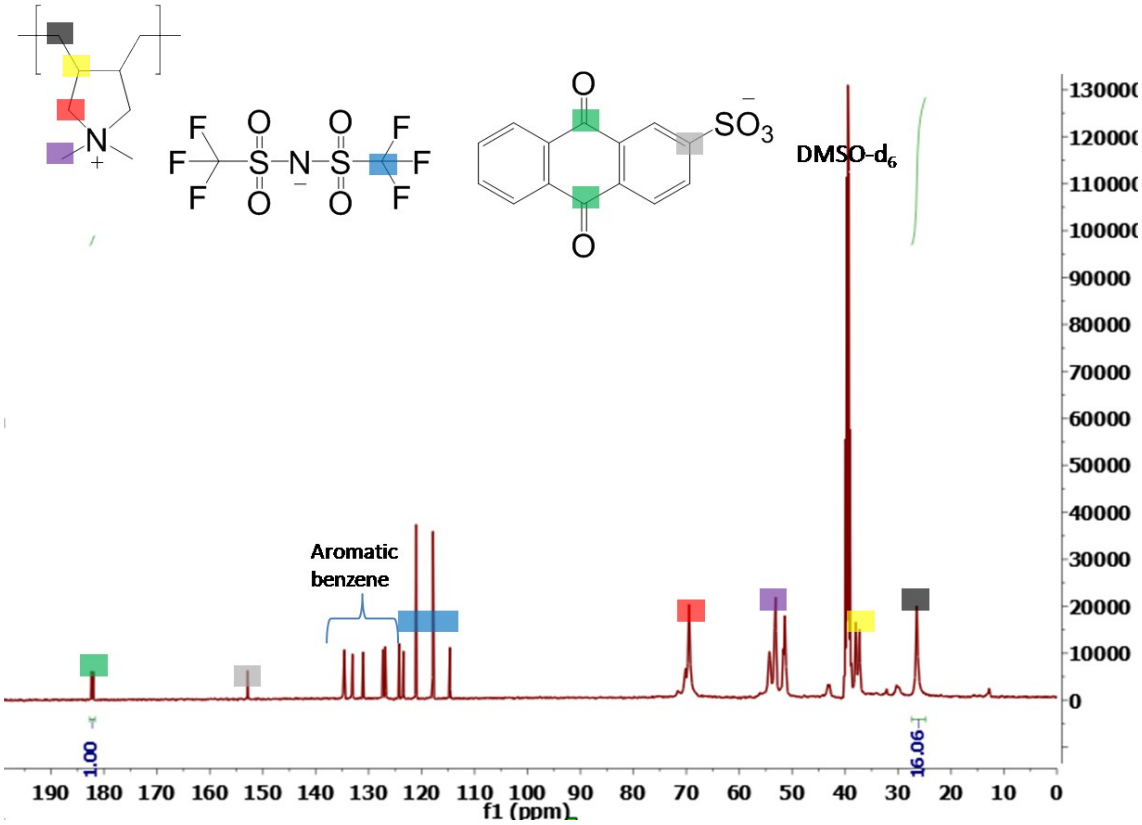

Fig. S 3 Quantitative ^{13}C NMR spectrum of PDADMA-90TFSI-10TEMPO.

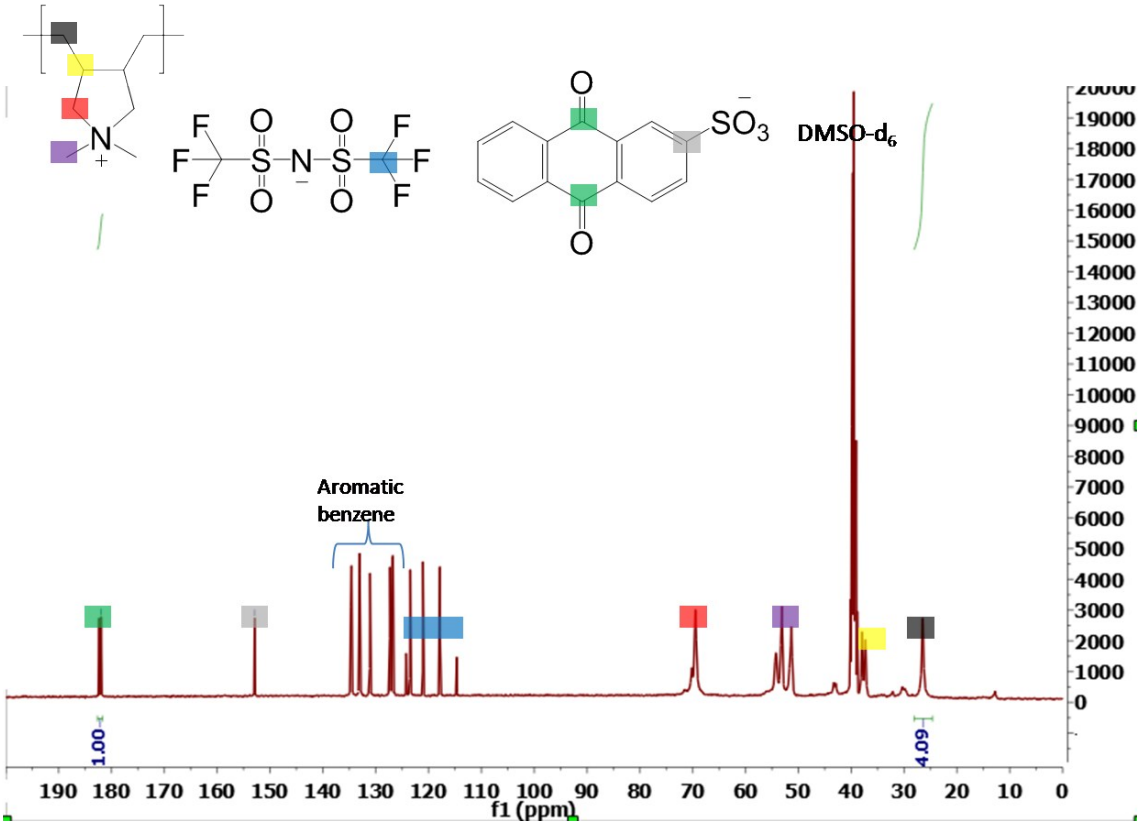

Fig. S 4 Quantitative ^{13}C NMR spectrum of PDADMA-75TFSI-25TEMPO.

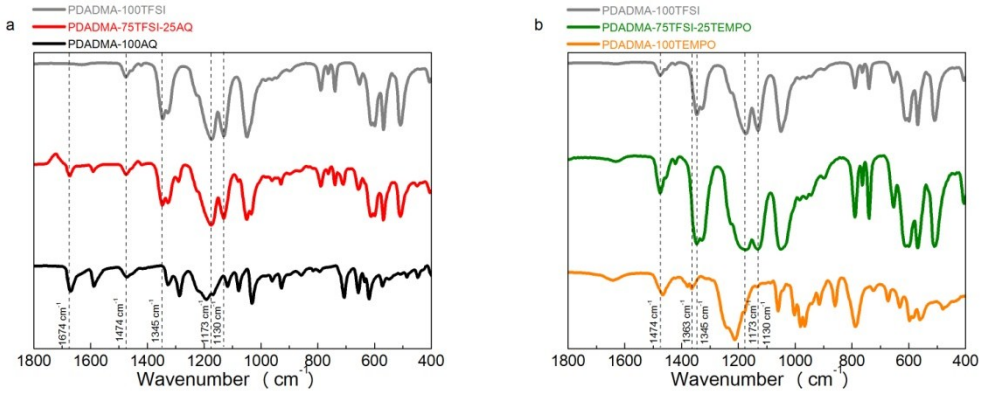

Fig. S 5 FTIR-ATR spectra of the pyrrolidinium-based poly(ionic liquid)s. (a) PDADMA-100TFSI (grey), PDADMA-75TFSI-25AQ (red) and PDADMA-100AQ (black). (b) PDADMA-100TFSI (grey), PDADMA-75TFSI-25TEMPO (green) and PDADMA-100TEMPO (orange).

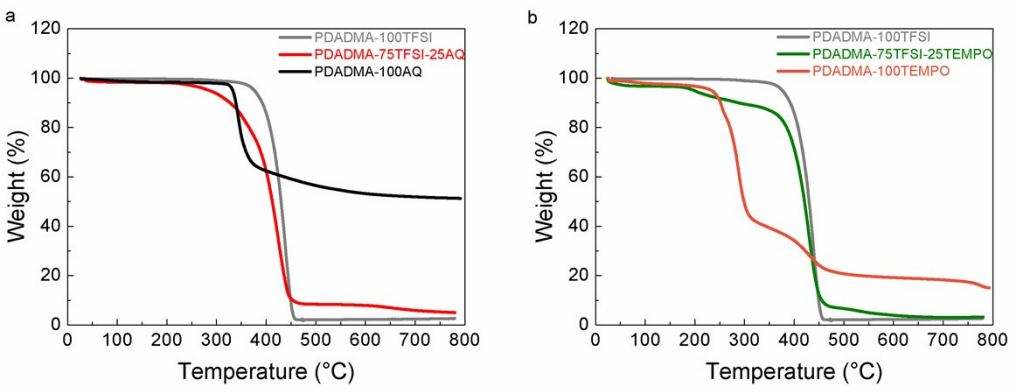

Fig. S 6 TGA curves for redox-active poly(ionic liquid)s: (a) PDADMA-100TFSI (grey), PDADMA-75TFSI-25AQ (red) and PDADMA-100AQ (black). (b) PDADMA-100TFSI (grey), PDADMA-75TFSI-25TEMPO (green) and PDADMA-100TEMPO (orange).