

Supporting Information:

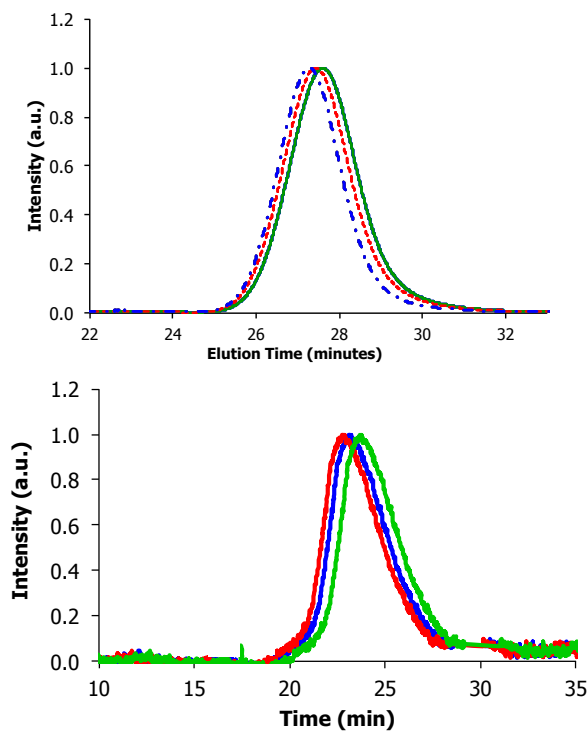


Figure 1: SEC traces of poly(VBIm-*co*-DEGMEMA) (top figure) and A-BC-A triblock copolymers poly(sty-*b*-(MVBIm-Tf₂N-*co*-DEGMEMA)-*b*-sty) (bottom figure).

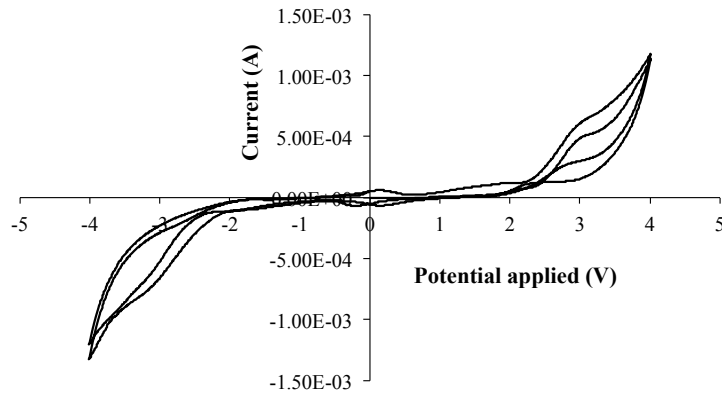


Figure 2: Cyclic voltammetry showing electrochemical stability from - 4 V to + 4 V.

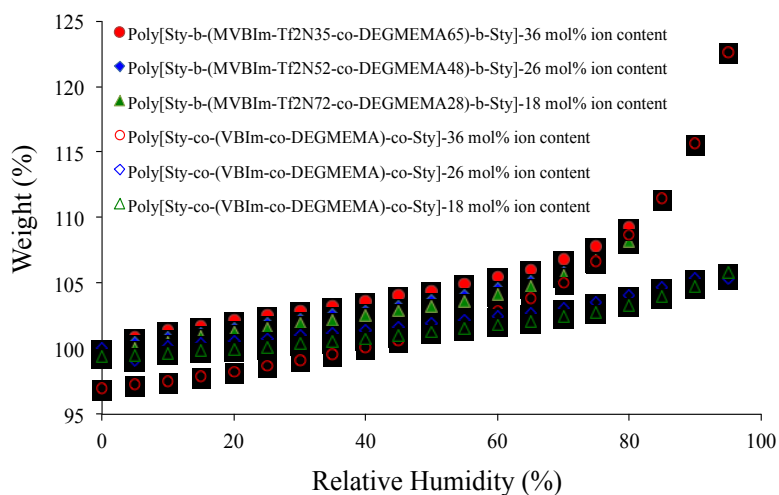


Figure 3: TGA-SA of A-BC-A triblock copolymers poly(sty-*b*-(MVBIm-Tf₂N-co-DEGMEMA)-*b*-sty) and random copolymers with similar ion content.

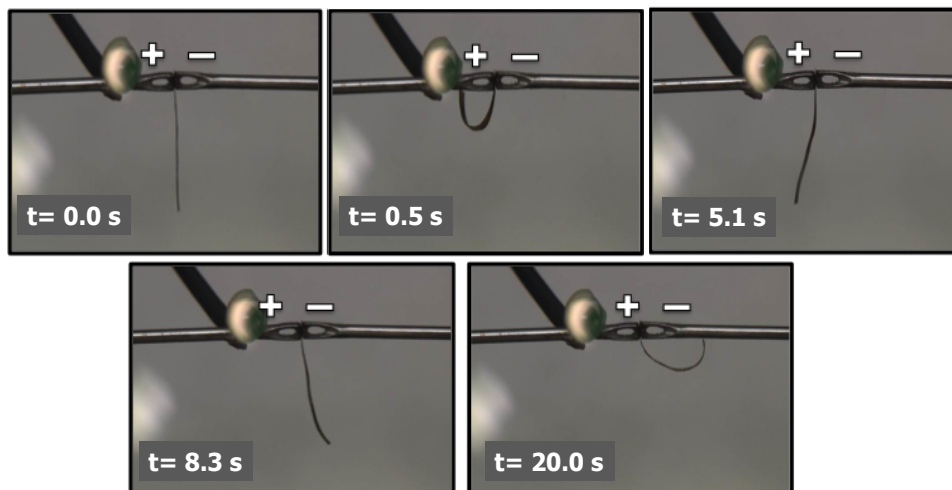


Figure 4: Still images of electromechanical transducer made from poly[Sty-*b*-(MVBIm-Tf₂N₅₂-co-DEGMEMA₄₈)-*b*-Sty] having 26 mol% ion content under applied potential of 4 V.