

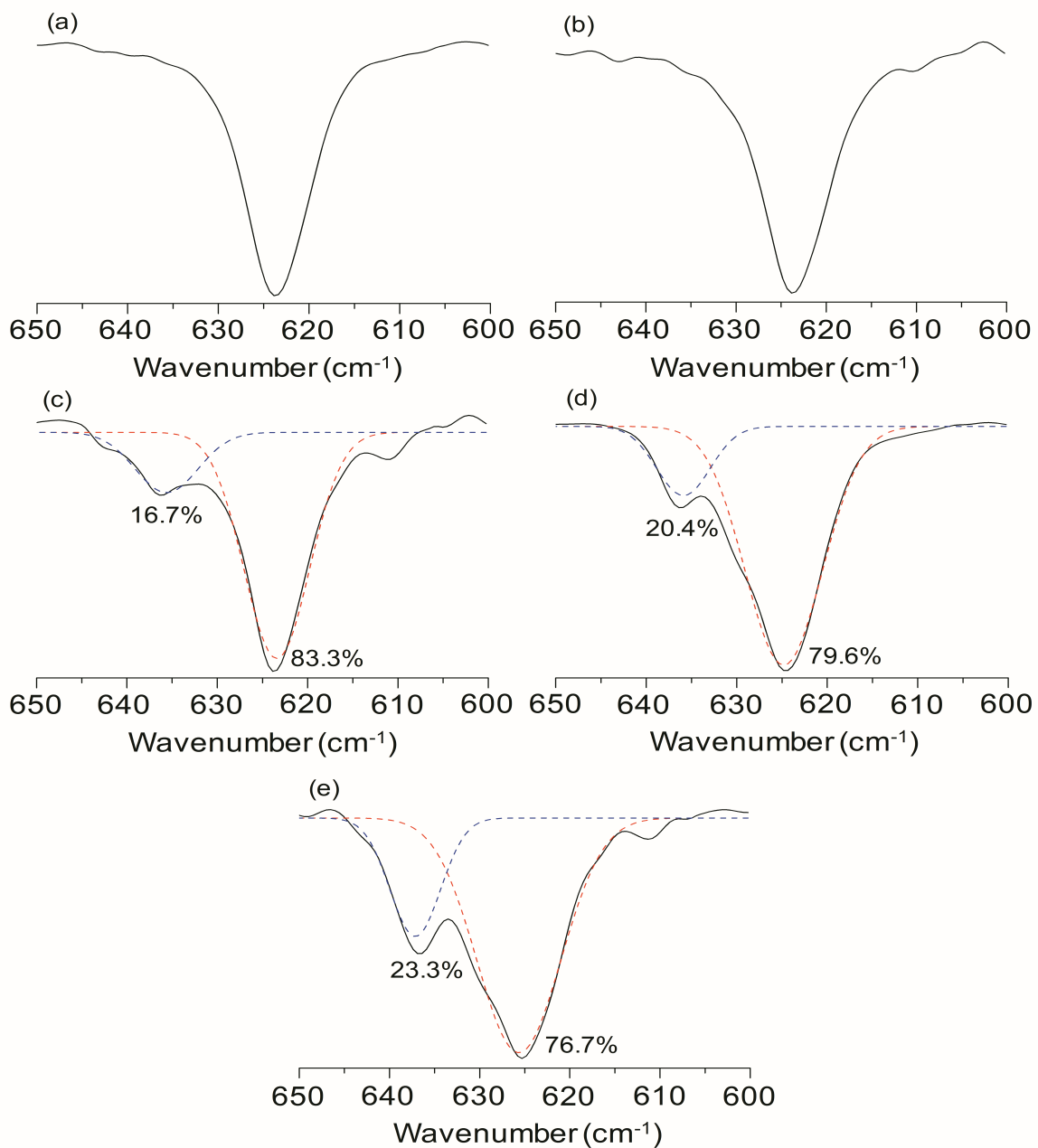
## **Electronic Supplementary Information**

**Synthesis and characterization of highly conductive organic-inorganic hybrid polymer electrolyte based on amine terminated triblock polyethers and its application in electrochromic devices**

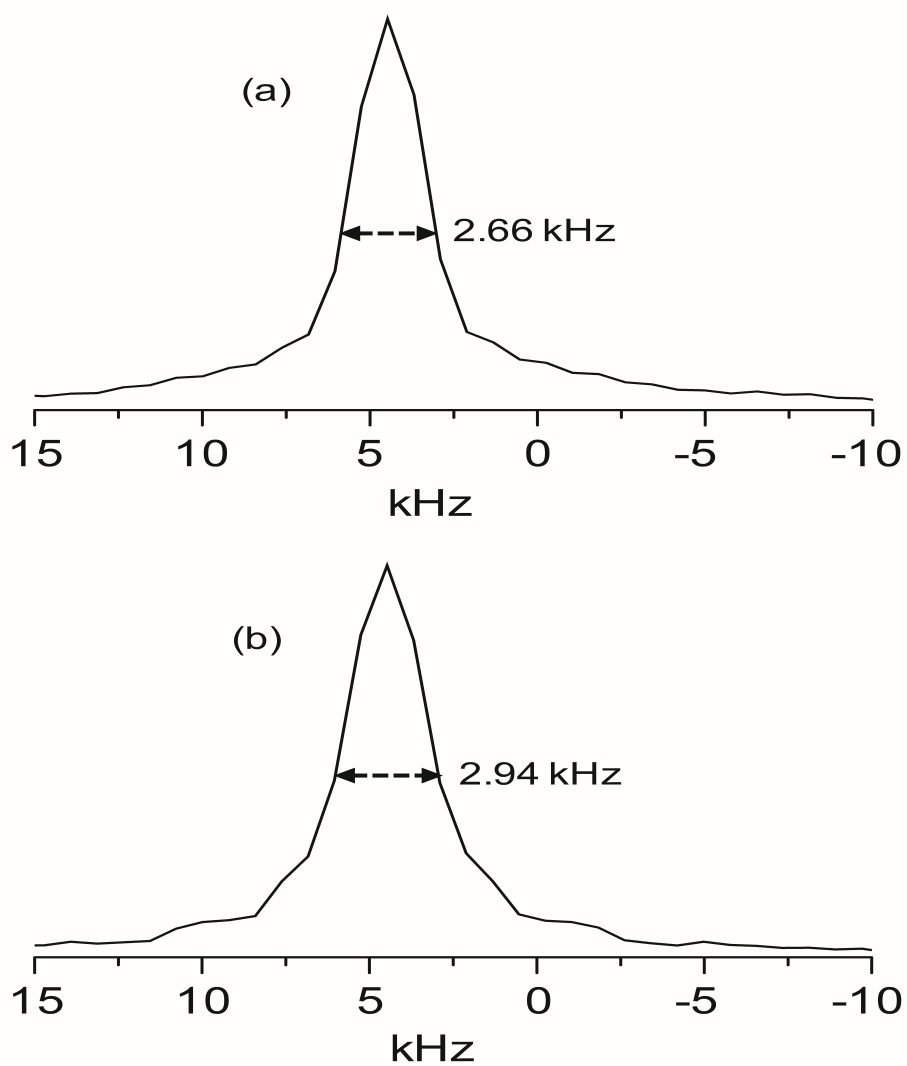
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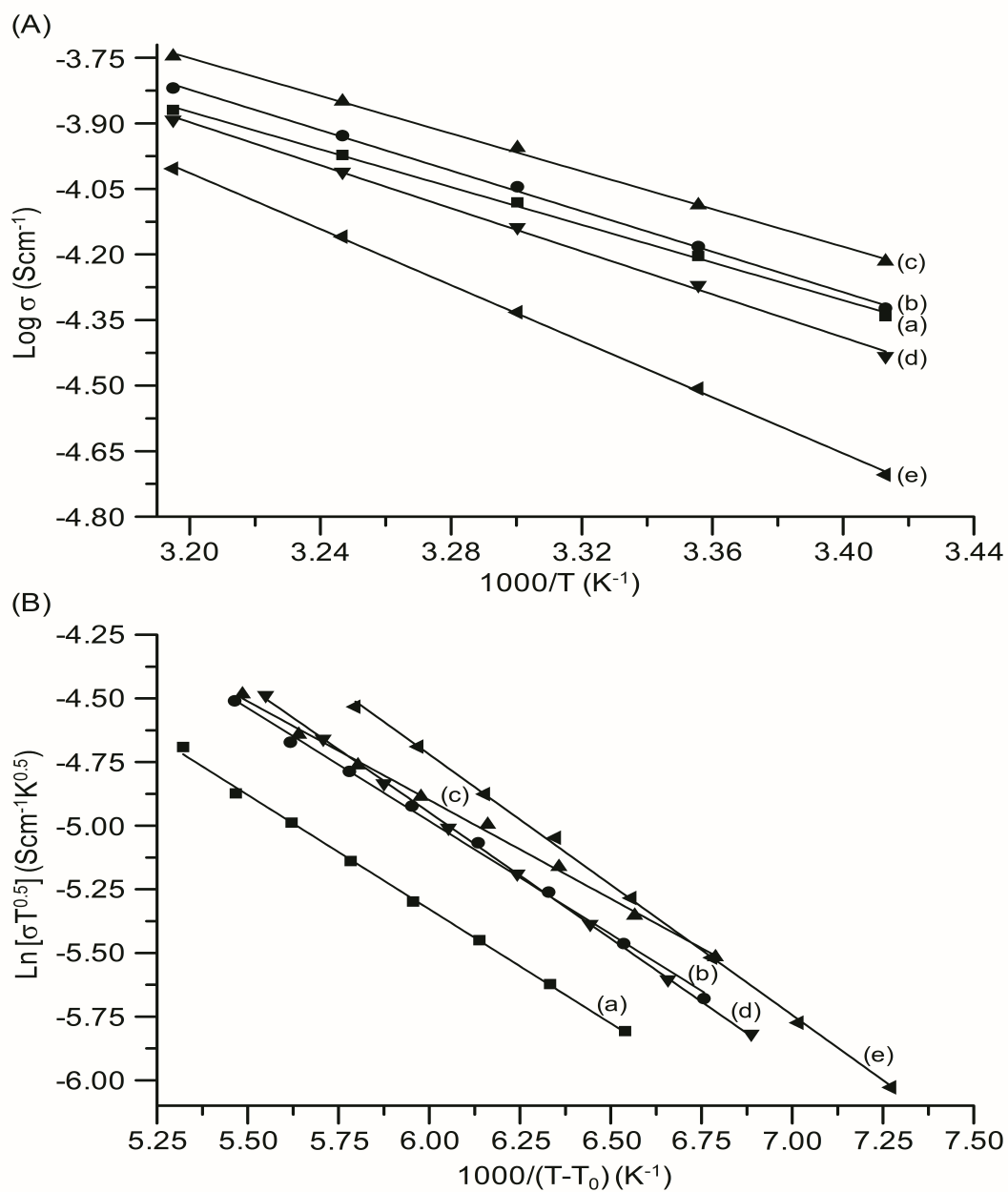
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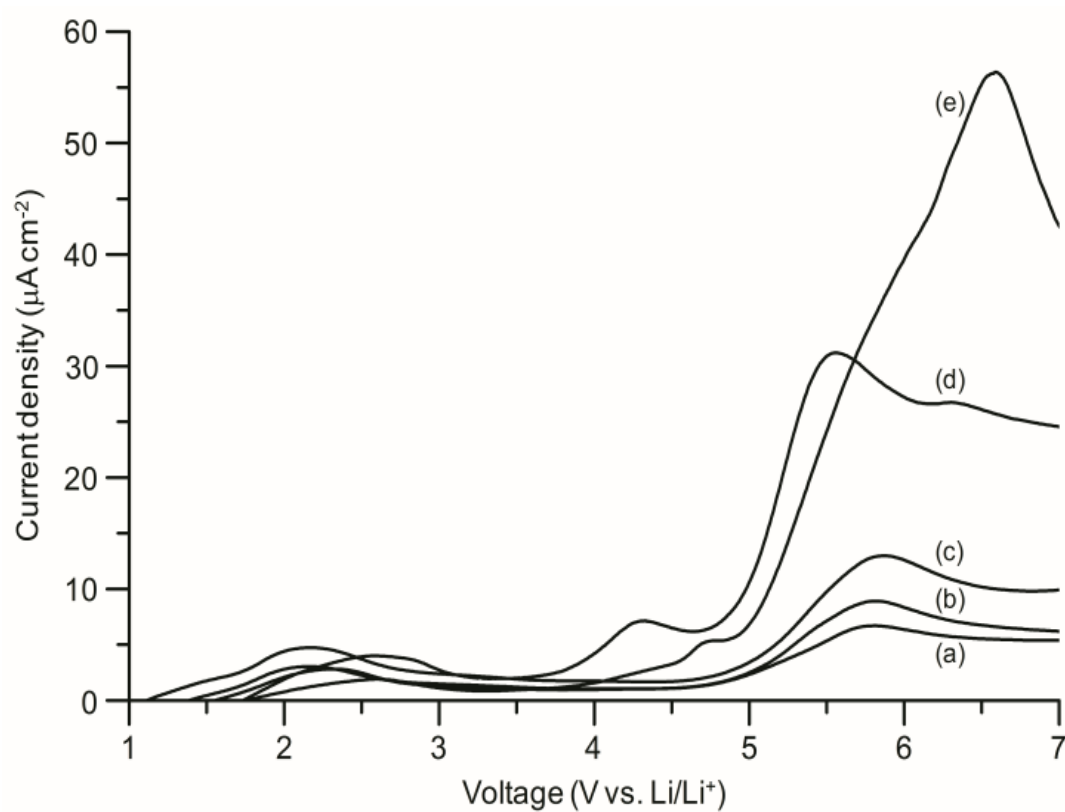
**Fig. S1.** Deconvoluted FTIR spectra (for  $\text{ClO}_4^-$ ) of EGM-X hybrid electrolytes, where X = (a) 48, (b) 40, (c) 32, (d) 24, (e) 16, and (f) 8.



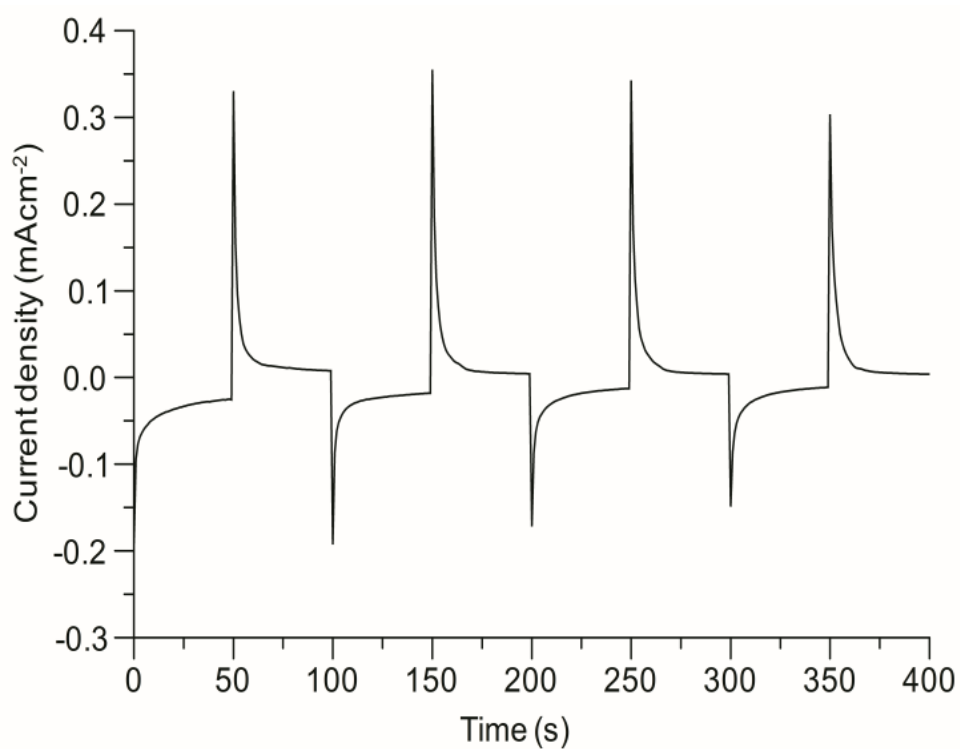
**Fig. S2.** Projection of  $^1\text{H}$  dimension of 2D  $^1\text{H}$ - $^{13}\text{C}$  WISE NMR spectra associated with the peak at 70 ppm in the  $^{13}\text{C}$  dimension for EGM-X hybrid electrolytes, where X = (a) 24 and (b) 8.



**Fig. S3.** (A) Arrhenius (20–40 °C) and (B) VTF fitting (45–80 °C) of the conductivity data of EGM-X hybrid electrolytes with X= (a) 40, (b) 32, (c) 24, (d) 16, and (e) 8.



**Fig. S4.** Linear sweep voltammetry curves of the cell prepared with EGM-X hybrid electrolytes with various [O]/[Li] ratios, X = (a) 40, (b) 32, (c) 24, (d) 16, and (e) 8.



**Fig. S5** Chronoamperometry measurements of glass/ITO/WO<sub>3</sub>/EGM-24/ITO/glass electrochromic device with potential steps of -3 and +3 V at every 50 s (4 cycles).