

Supporting information

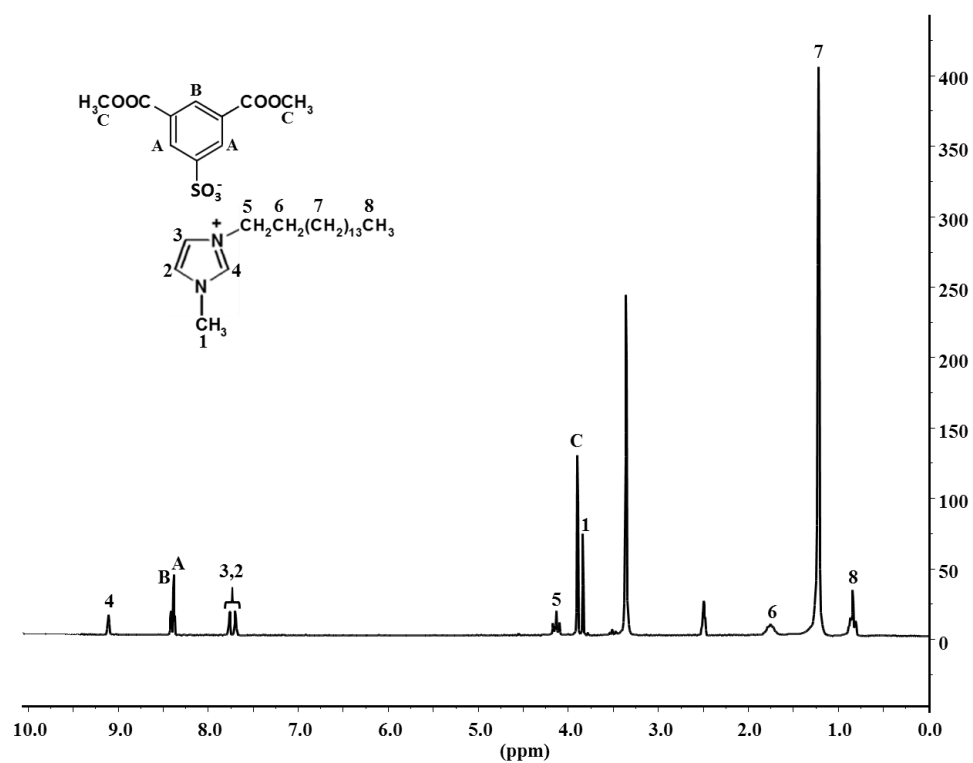


Fig. 1 SI. ^1H NMR spectrum of Hdmim⁺ DMSIP⁻ (IL1).

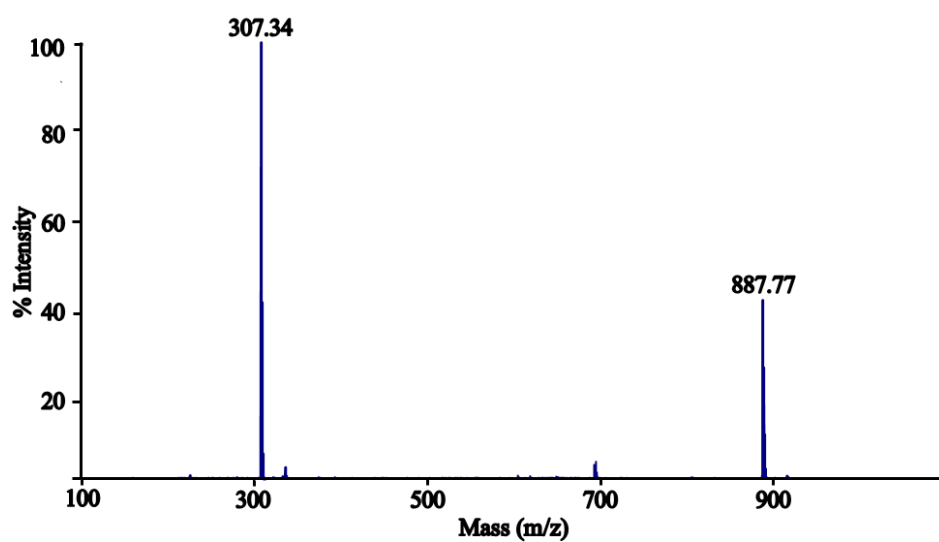


Fig. 2 SI. MALDI spectrum of Hdmim⁺ DMSIP⁻ (IL1).

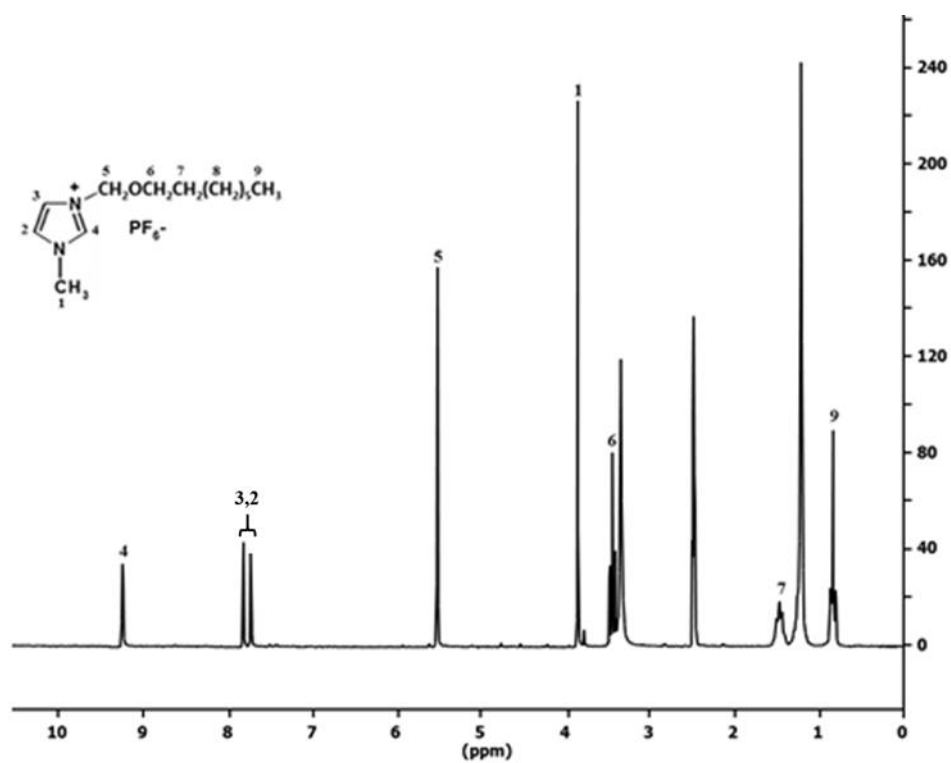


Fig. 3 SI. ^1H NMR OOMmim $^+$ PF $_6^-$ (IL2).

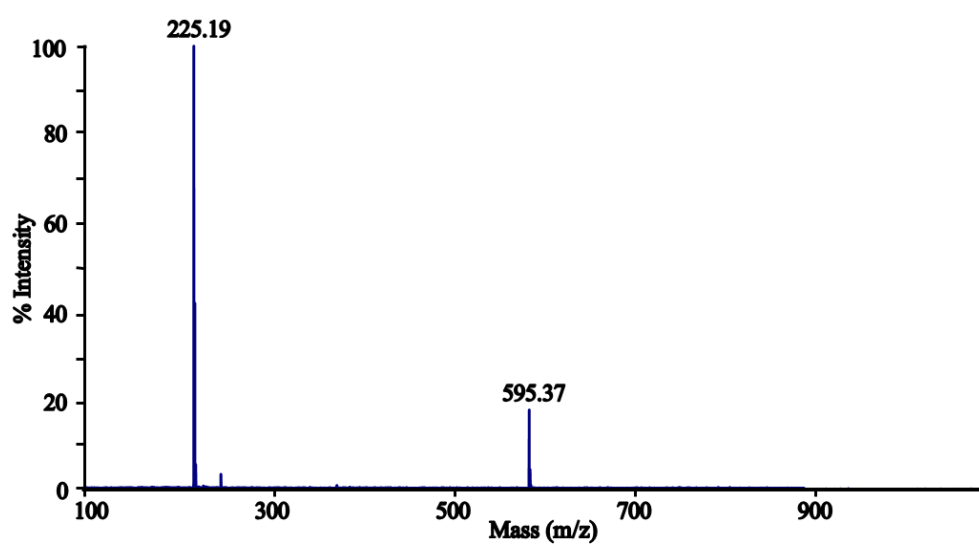


Fig. 4 SI. MALDI spectrum of OOMmim $^+$ PF $_6^-$ (IL2).

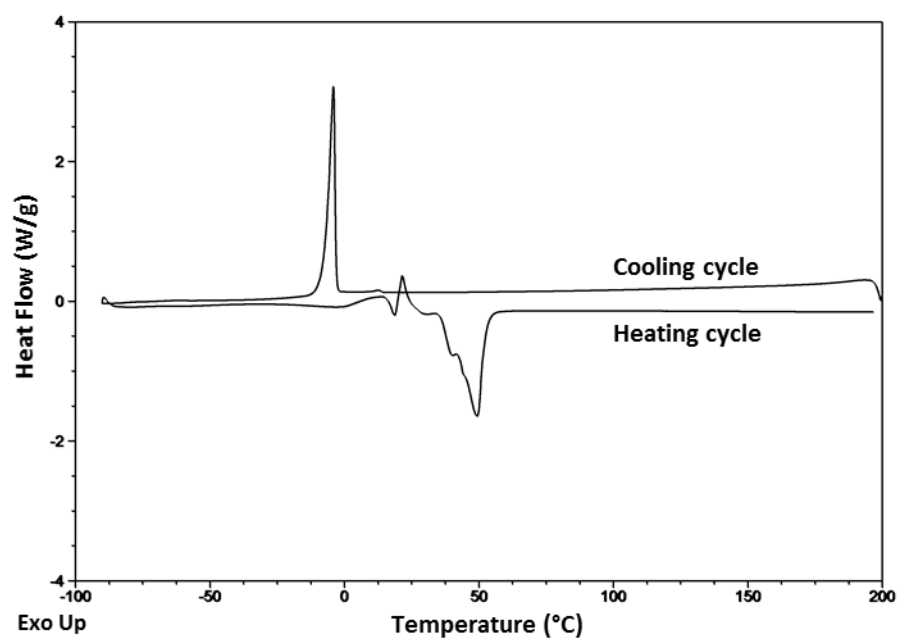


Fig. 5 SI. DSC of Hdmim⁺ DMSIP⁻ (IL1).

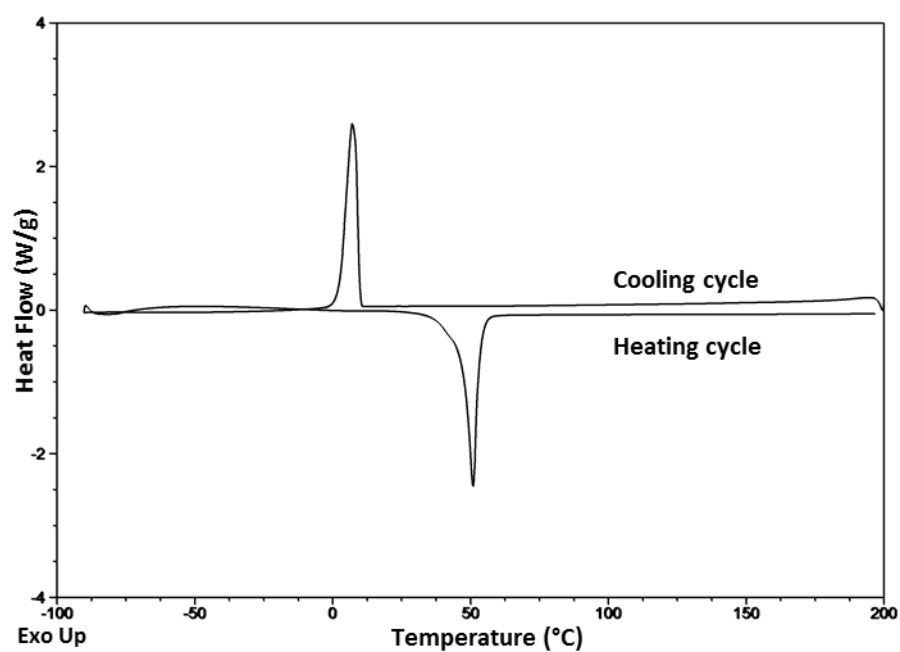


Fig. 6 SI. DSC OOMmim⁺ PF₆⁻ (IL2).

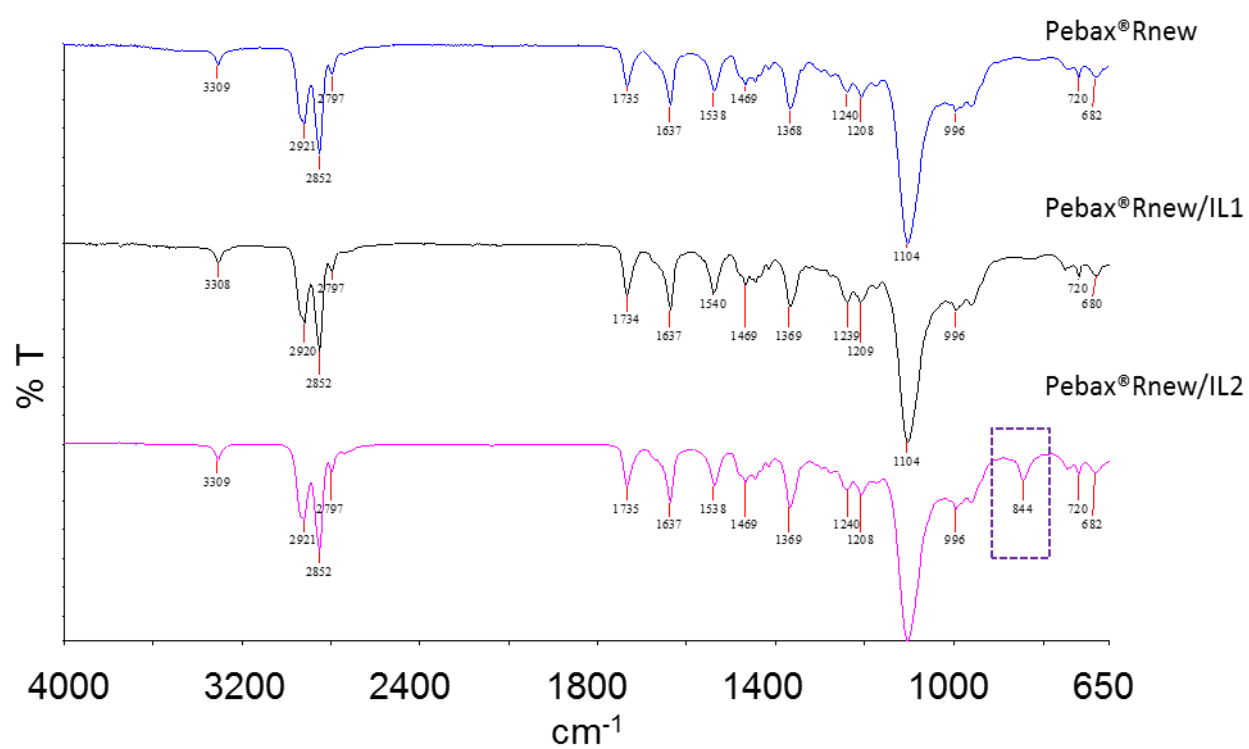


Fig. 7 SI. FTIR spectra for neat Pebax®Rnew and blends at 5 wt.% loading of ILs.