

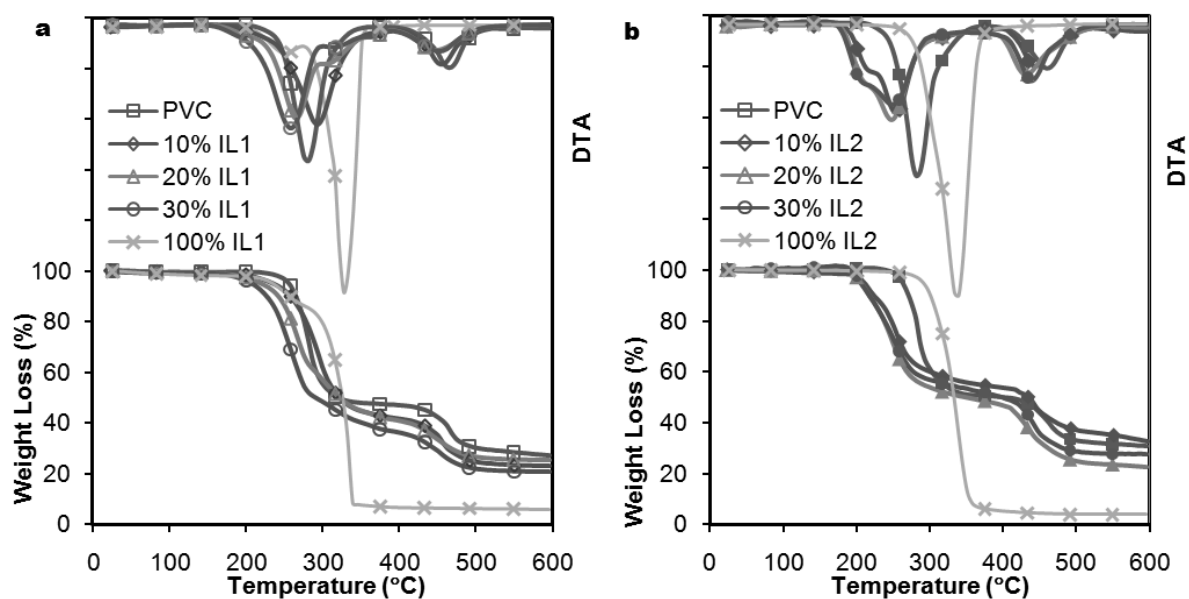


Fig. S1 TGA curves (DTA and weight loss) for blends of PVC with (a) 1-ethylpyridinium docusate (IL1) and (b) tributyl(2-hydroxyethyl)phosphonium docusate (IL2).

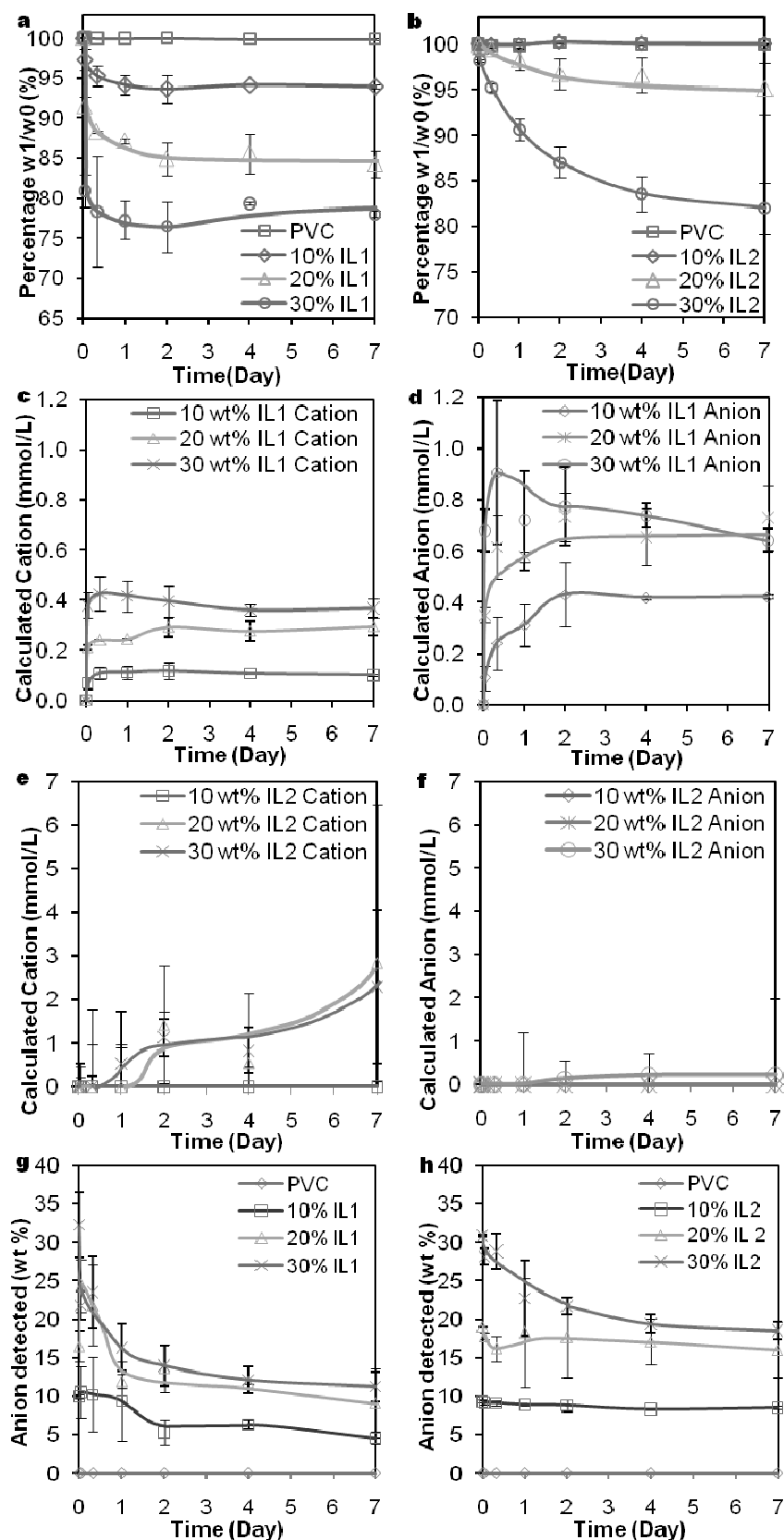


Fig. S2 Leaching test determined through weight loss (w_1/w_0) (a) PVC-IL1 and (b) PVC-IL2; IL precursor concentration detected from composite (c) cation of PVC-IL1, (d) anion of PVC-IL1, (e) cation of PVC-IL2, (f) anion of PVC-IL2 and FTIR-ATR quantitative analysis of (g) PVC-IL1 and (h) PVC-IL2 based on reduction of docusate peaks.

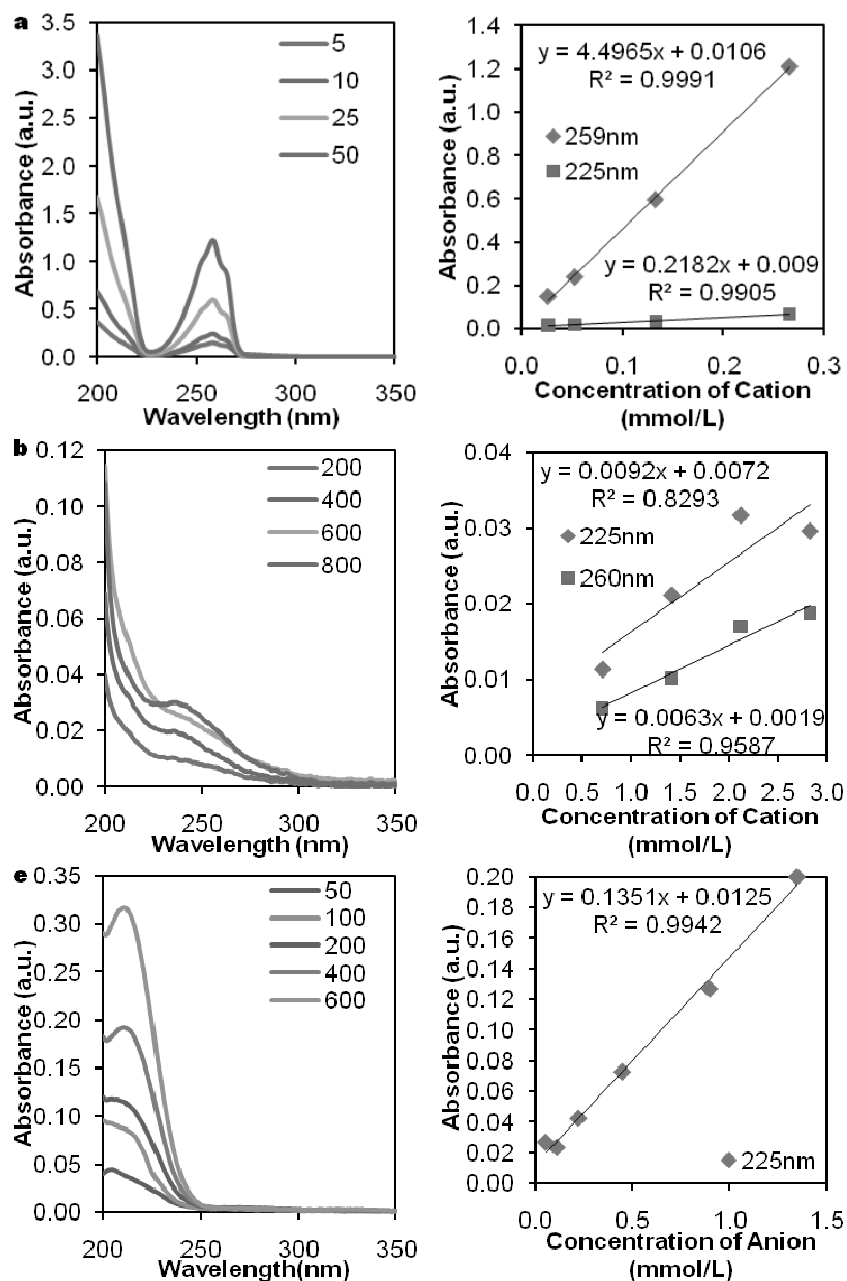


Fig. S3 Absorbance spectra (left) and calibration curves at the indicated wavelengths (right) for PBS solution containing known amount of IL precursors: (a) 1-ethylpyridinium bromide (cationic precursor for IL1), (b) tributyl(2-hydroxyethyl)phosphonium chloride (cationic precursor for IL2), and (c) sodium docusate (anionic precursor for both IL1 and IL2), established using UV-vis spectrophotometry.

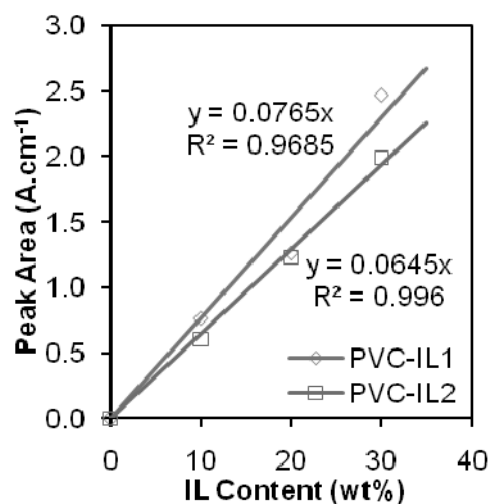


Fig. S4 Calibration curve for the sulfonate group peak in PVC filled with known wt% of 1-ethylpyridinium docusate (IL1), and tributyl(2-hydroxyethyl)phosphonium docusate (IL2) from FTIR-ATR measurements.

Table S1: Concentration of ILs and their ionic precursors in PBS test solution.

IL and IL Components	Concentration(mg/mL)
IL1	2.02
IL1 cationic precursor (1-ethylpyridinium bromide)	0.41
IL1 anionic precursor (sodium docusate)	1.61
IL2	6.09
IL2 cationic precursor (tributyl(2-hydroxyethyl)phosphonium chloride)	2.25
IL2 anionic precursor (sodium docusate)	3.84