

Table S1 Parameters obtained from DLS:

System	R_h , nm	Polydispersity
T1304	14.1	0.17
Effect of alkyl chain length ($C_n\text{mimCl}$, $n=4,6,8$ and 10)		
T1304 +10 mM $C_4\text{mimCl}$	14.1	0.12
T1304 +50 mM $C_4\text{mimCl}$	14.1	0.14
T1304 +10 mM $C_6\text{mimCl}$	14.0	0.18
T1304 +50 mM $C_6\text{mimCl}$	13.6	0.20
T1304 +25 mM $C_8\text{mimCl}$	13.3	0.21
T1304 +50 mM $C_8\text{mimCl}$	12.1	0.13
T1304 +25 mM $C_{10}\text{mimCl}$	9.1	0.24
T1304 +50 mM $C_{10}\text{mimCl}$	7.8	0.29
Effect of anion ($C_8\text{mimX}$, $X=\text{Cl}^-$, BF_4^-, CF_3SO_3^- and PF_6^-)		
T1304 +25 mM $C_8\text{mimCl}$	13.3	0.21
T1304 +50 mM $C_8\text{mimCl}$	12.1	0.13
T1304 +10 mM $C_8\text{mimBF}_4$	13.7	0.17
T1304 +25 mM $C_8\text{mimBF}_4$	12.9	0.20
T1304 +50 mM $C_8\text{mimBF}_4$	11.4	0.15
T1304 +10 mM $C_8\text{mimCF}_3\text{SO}_3$	13.8	0.20
T1304 +25 mM $C_8\text{mimCF}_3\text{SO}_3$	13.0	0.17
T1304 +50 mM $C_8\text{mimCF}_3\text{SO}_3$	11.0	0.23
T1304 +5 mM $C_8\text{mimPF}_6$	14.5	0.11
T1304 +10 mM $C_8\text{mimPF}_6$	15.7	0.09
T1304 +25 mM $C_8\text{mimPF}_6$	15.8	0.07

Fig. S1 ^1H NMR spectrum of 5% T1304 in the presence of different ILs [(i) none, (ii) 30mM C_4mimCl (iii) 30mM C_6mimCl (iv) 30mM C_8mimCl and (v) 30mM $\text{C}_{10}\text{mimCl}$] varying in alkyl chain length fused with the imidazolium head group.

