

Supplementary information for “Magnetic Resonance Imaging of the Rheology of Ionic Liquid Colloidal Suspensions”

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Additional Experimental

The shear rate ranges accessed by the Couette cell in the MRI experiments are 12.7 – 2.9 s^{-1} for $\omega = 1 \text{ Hz}$; 28.4 – 6.5 s^{-1} for $\omega = 2 \text{ Hz}$; 44.1 – 10.1 s^{-1} for $\omega = 2.9 \text{ Hz}$ and 65.1 – 14.8 s^{-1} for $\omega = 4 \text{ Hz}$. These values were calculated using equation S1, where $K = r_i/r_o$, $R = r/r_o$, $r_o = 5.7 \text{ mm}$, $r_i = 2.6 \text{ mm}$ and $n = 1$.

$$\dot{\gamma} = \frac{2\Omega}{n} \frac{R^{-2/n}}{1 - K^{-2/n}} \quad (\text{S1})$$

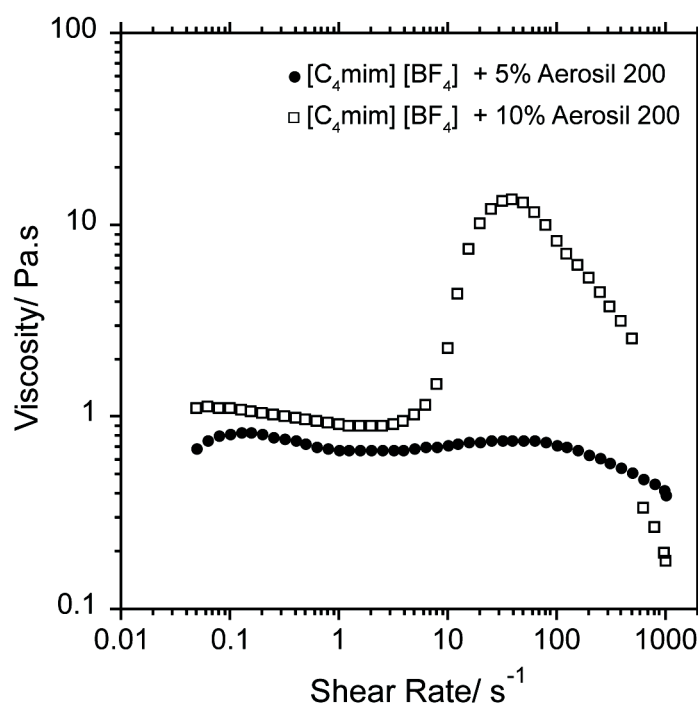


Figure S1 Plot of viscosity vs shear rate for $[\text{C}_4\text{mim}][\text{BF}_4]$ with 5 and 10% w/w Aerosil 200.