

Materials

All ionic liquid samples including [C8MIm] BF₄ were prepared in our laboratory via established literature methods.¹ Residual halide ions from the immediate synthetic precursor [C8MIm] Cl, were removed by sequential washing with water before drying in-vacuo for 24 hrs (65 °C, 3 × 10⁻² mbar). Prior to investigation in UHV, [H₂O] < 30 ppm. The purity of all samples was also assessed by ¹H, ¹³C NMR, and coulometric Karl Fischer. All spectroscopic data being consistent with that already published.¹

1 J. D. Holbrey and K. R. Seddon, *J. Chem. Soc., Dalton Trans.*, 1999, 2133 – 2140.

