

Supporting Information

Binary Ionic Liquid with a Common Cation: Insight into Nanoscopic Mixing by Infrared Spectroscopy

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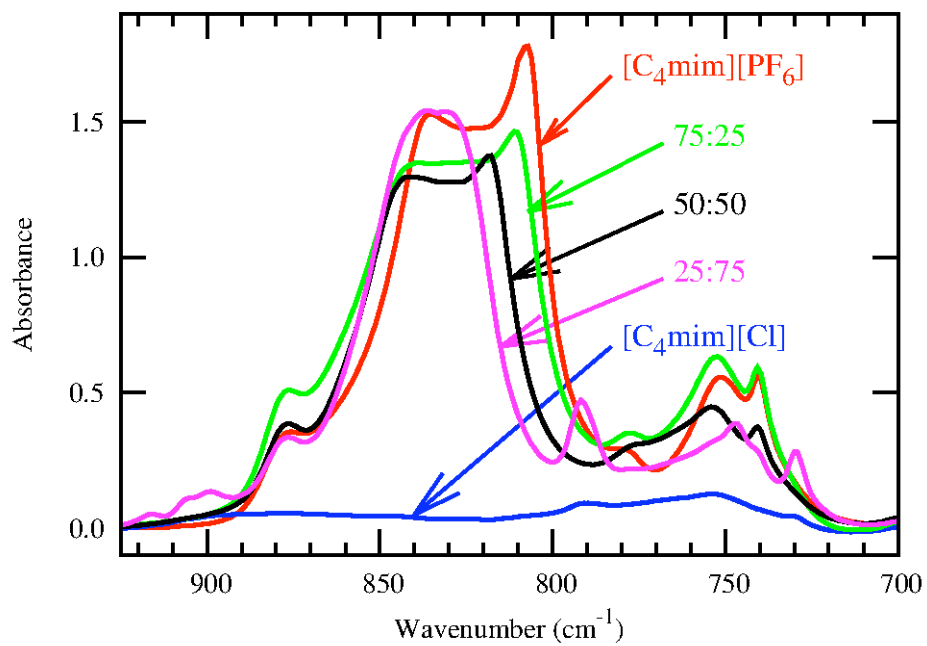


Figure S1: IR signal of PF_6^- anion bands for $[\text{C}_4\text{mim}][\text{PF}_6]/[\text{C}_4\text{mim}]\text{Cl}$ mixtures at molar ratio of 0, 0.25, 0.50, 0.75 and 1.

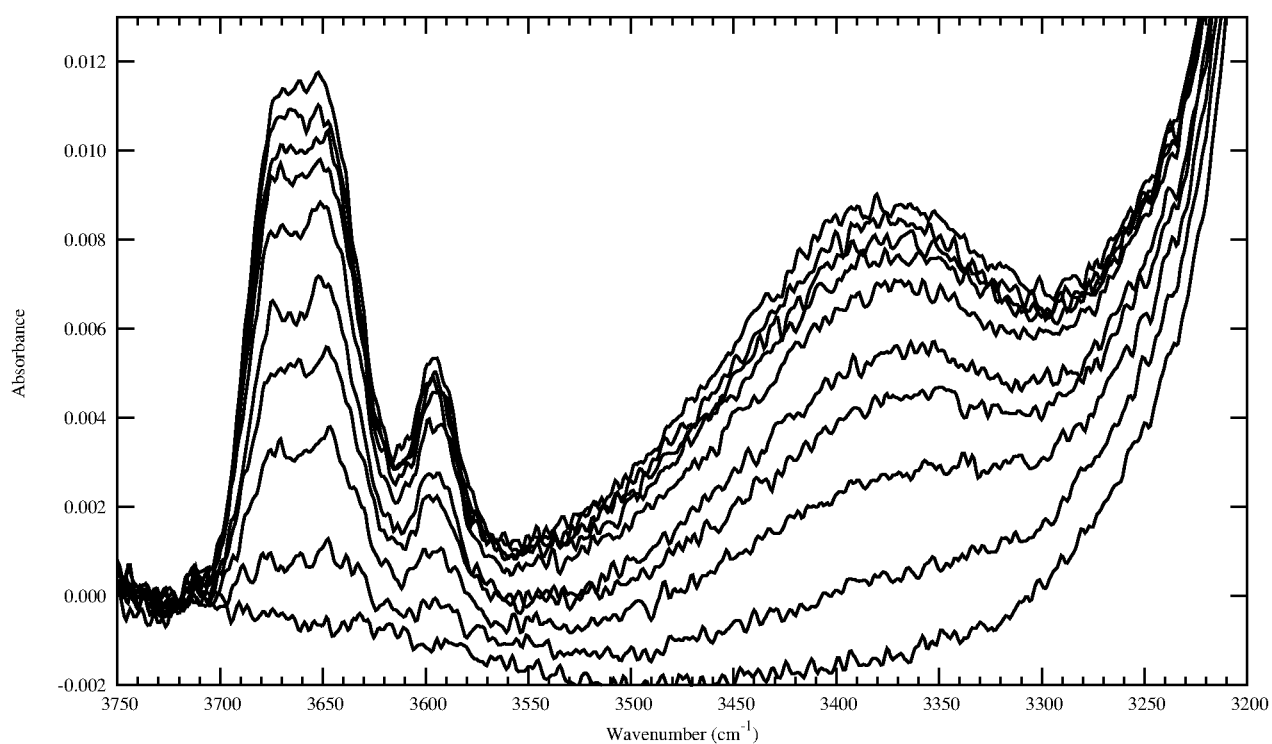


Figure S2: Evolution of the water bands with time in mixture of 90/10 ratio of $[\text{C}_4\text{mim}][\text{PF}_6]/[\text{C}_4\text{mim}]\text{Cl}$. Spectra were recorded after 0, 2, 4, 6, 10, 15, 20, 25, 30 and 35 min (from bottom to top).

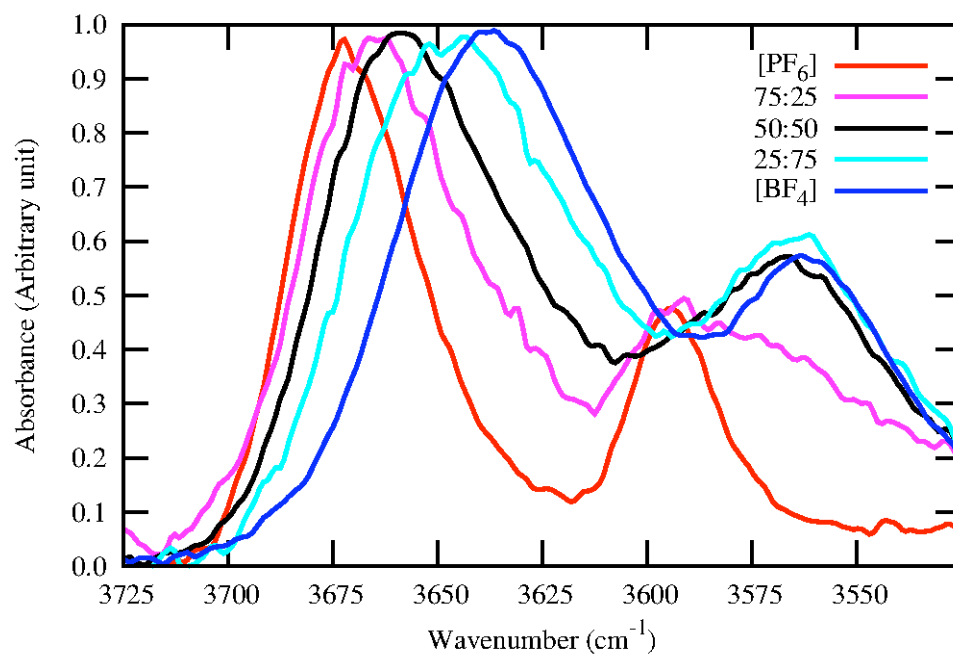


Figure S3: Normalized IR bands in the OH stretching region for mixtures of wet $[\text{C}_4\text{mim}][\text{PF}_6]/[\text{C}_4\text{mim}][\text{BF}_4]$ at molar ratio of 0, 0.25, 0.50, 0.75 and 1.