Supporting Information for: Nanoscale Density Fluctuations in Ionic Liquid Binary Mixtures with nonamphiphilic Compounds: First Experimental Evidence

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Figure S1. Radial distribution functions of interest. Plain letters refers to DAB-containing systems, while letters with prime stands for DME-containing mistures. (a) N_{DAB}-N_{DAB}; (b) N_{cation}-N_{anion}; (c) N_{DAB}-N_{anion}; (d) N_{DAB}-N_{cation}; (a') O_{DME}-O_{DME}; (b') N_{cation}-N_{anion}; (c') O_{DME}-N_{anion}; (d') O_{DME}-N_{cation}. 90% EAN (gray); 70% EAN (brown); 50% EAN (cyan); 40% EAN (purple); 30% EAN (pink); 10% EAN (green).

It is evident how mixtures that exhibit the LqE show enhanced homomolecular interactions and decreased eteromolecular ones, thus indicating the tendency to go through an unmixed state.







Figure S2. Experimental (symbols black) and computed (solid red) SWAXS patterns comparisons. (a) EP1; (b) EP3; (c) EP5; (d) EP7; (e) EP9; (f) ED4; (g) ED5; (h) ED7; (i) ED9; (j) EAN; (k) DAB; (l) DME.

The models are always in great accord with the experimental data and are capable of reproducing the LqE when experimentally observable.