

# Molecular dynamics simulations of ionic liquid-vapour interfaces: Effect of cation symmetry on structure at the interface

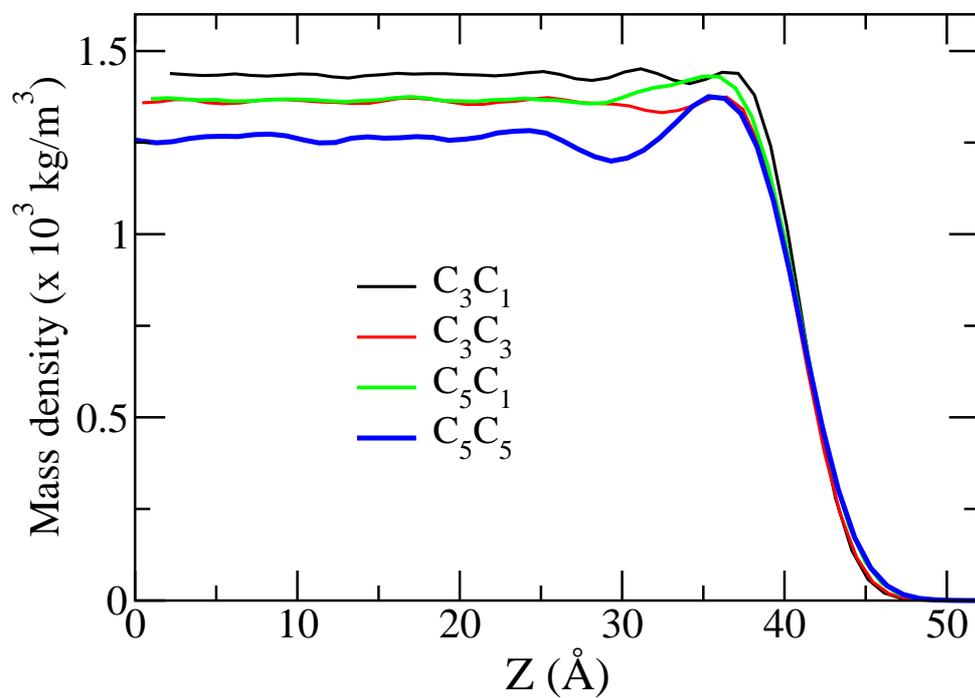
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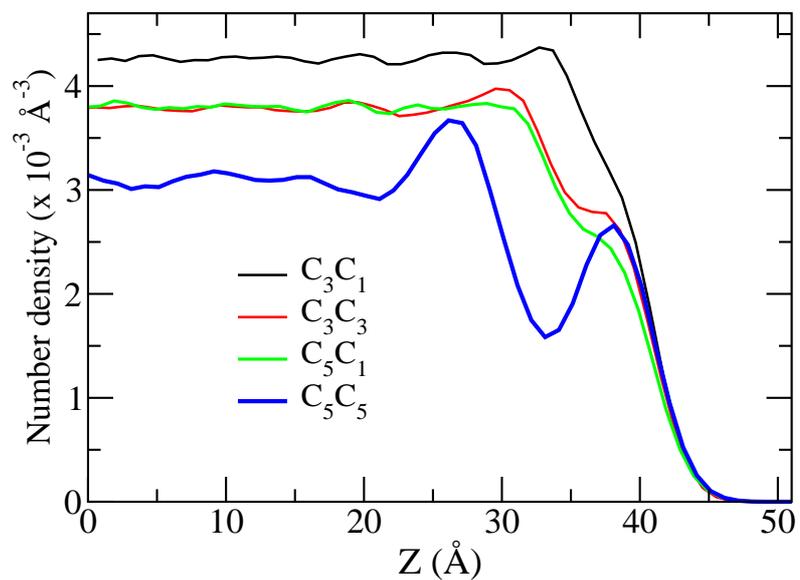
**Electronic Supplementary Information**

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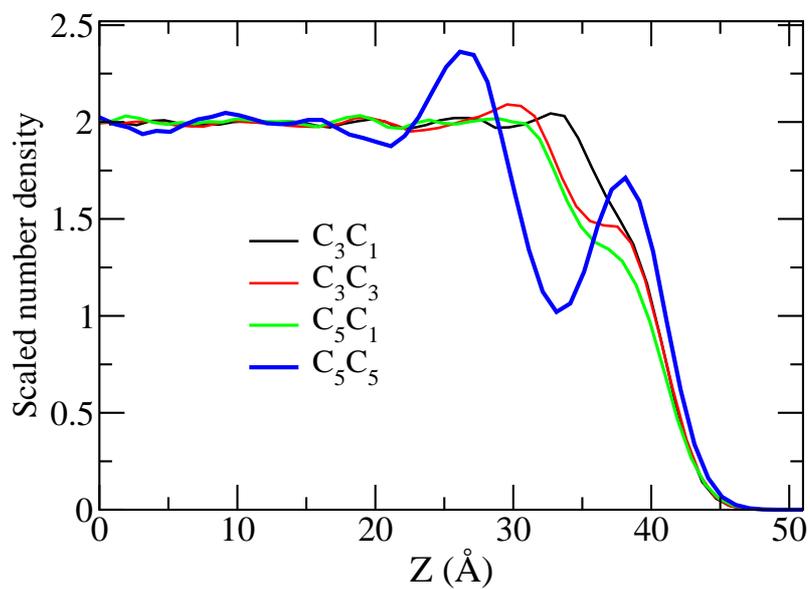
<sup>1</sup>Author for Correspondence. Email:bala@jncasr.ac.in



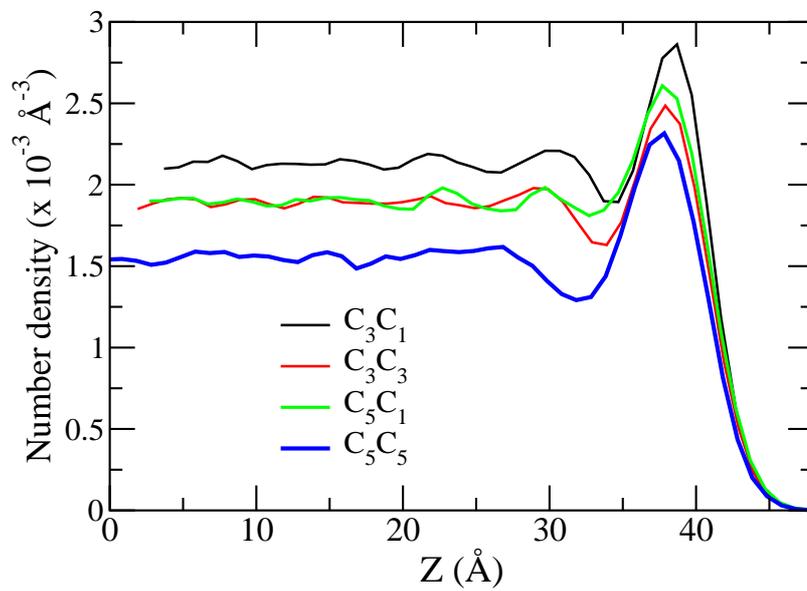
**Figure S1:** Mass density profiles of all the systems along the surface normal direction. The inflection points of the profiles at the interface are matched.



**Figure S2:** Number density profile of methyl groups along the surface normal direction. The inflection points of the profiles at the interface are matched.

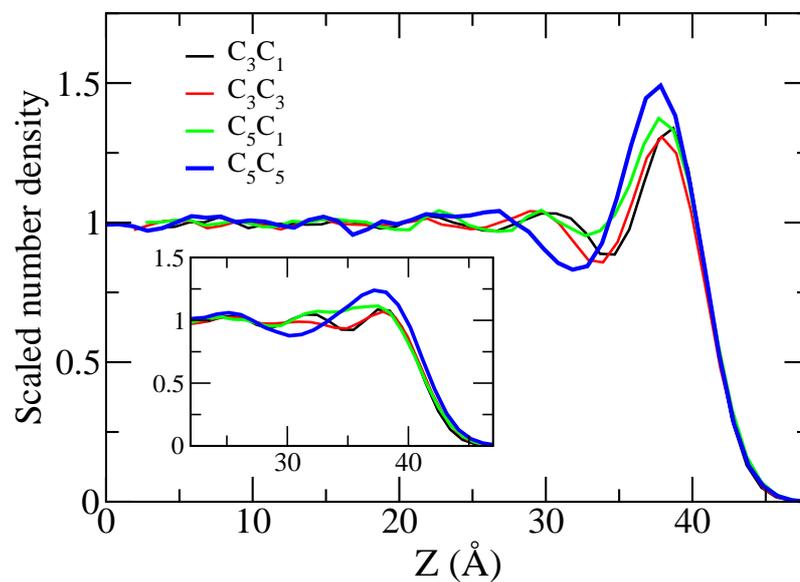


**Figure S3:** Scaled number density profile of methyl groups along the surface normal direction. The inflection points of the profiles at the interface are matched.

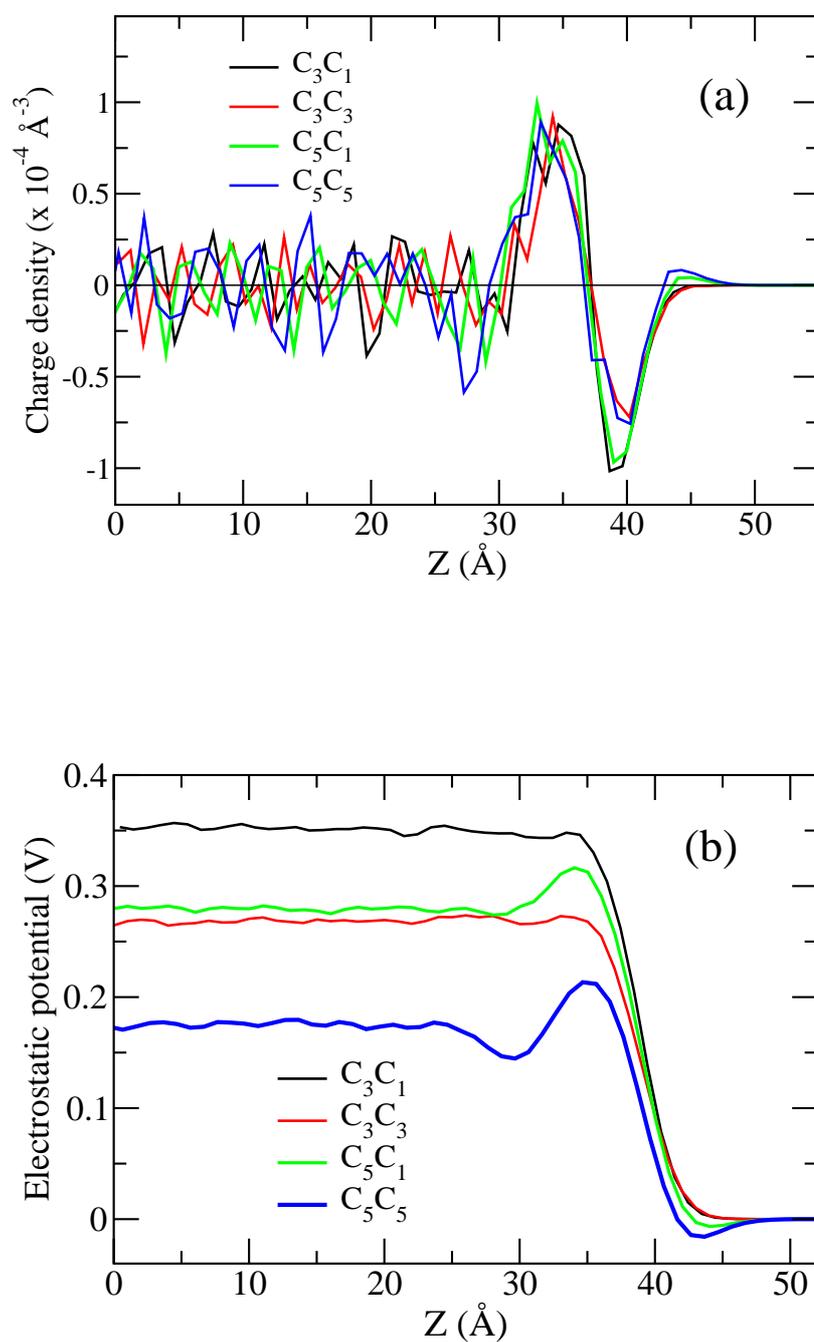


**Figure S4:** Cation number density profiles along the surface normal direction.

The inflection points of the profiles at the interface are matched.



**Figure S5:** Scaled cation number density profiles of all liquids along the surface normal direction. Inset: Corresponding data for anions. The inflection points of the profiles at the interface are matched.



**Figure S6:** (a) Charge density profiles as a function of distance along the surface normal. (b) Electrostatic potential profiles in the surface normal direction. The inflection points of the profiles at the interface are matched.