Supporting Information for

How Does Electronic Polarizability or Scaled-Charge Affect the Interfacial Properties of Room Temperature Ionic Liquids?

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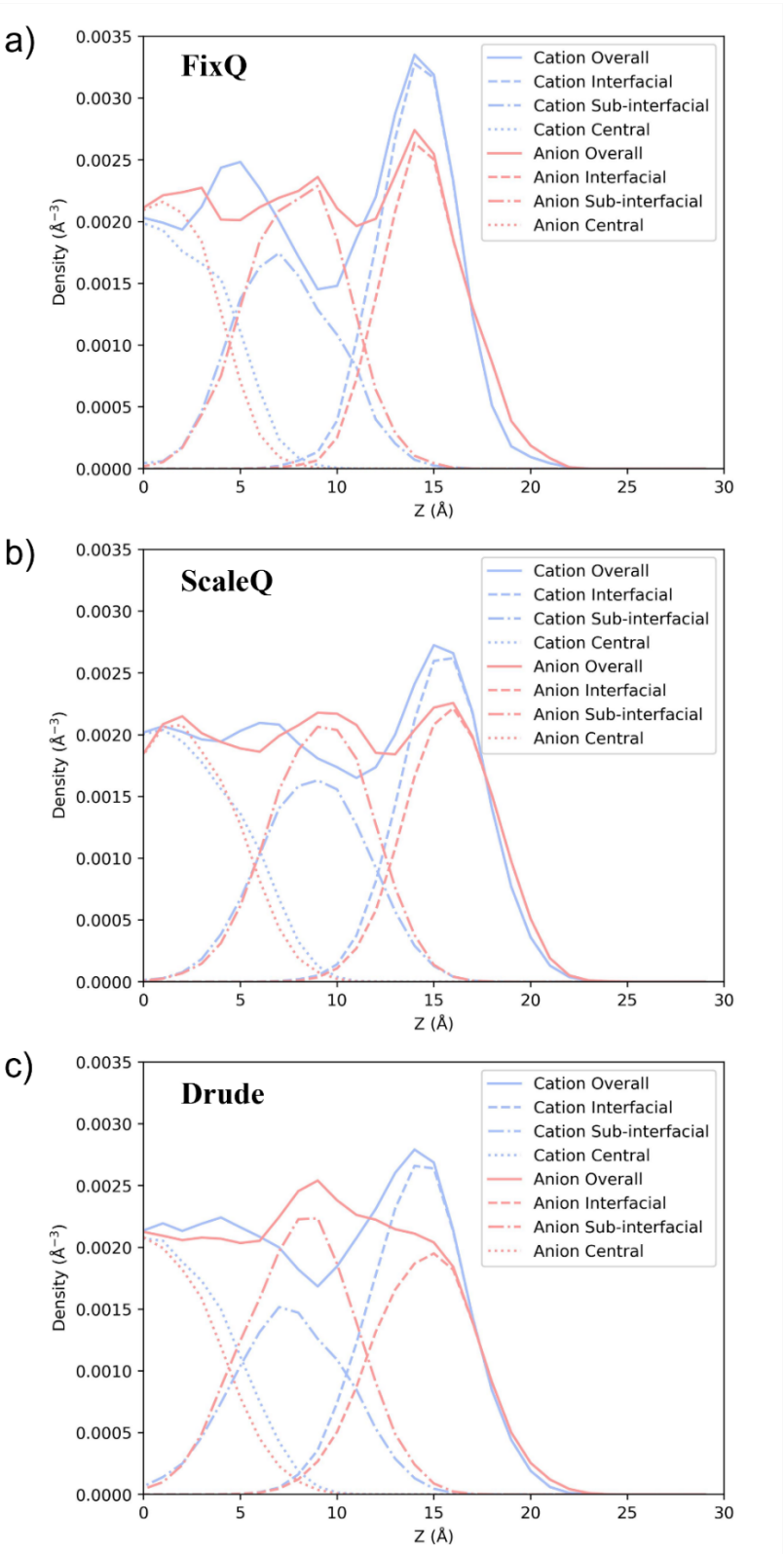

Figure S1. Number density profiles for the center of mass (COM) of cations and anions using a) FixQ, b) ScaleQ, and c) Drude models, with the liquid phase thickness of ~ 40 Å.

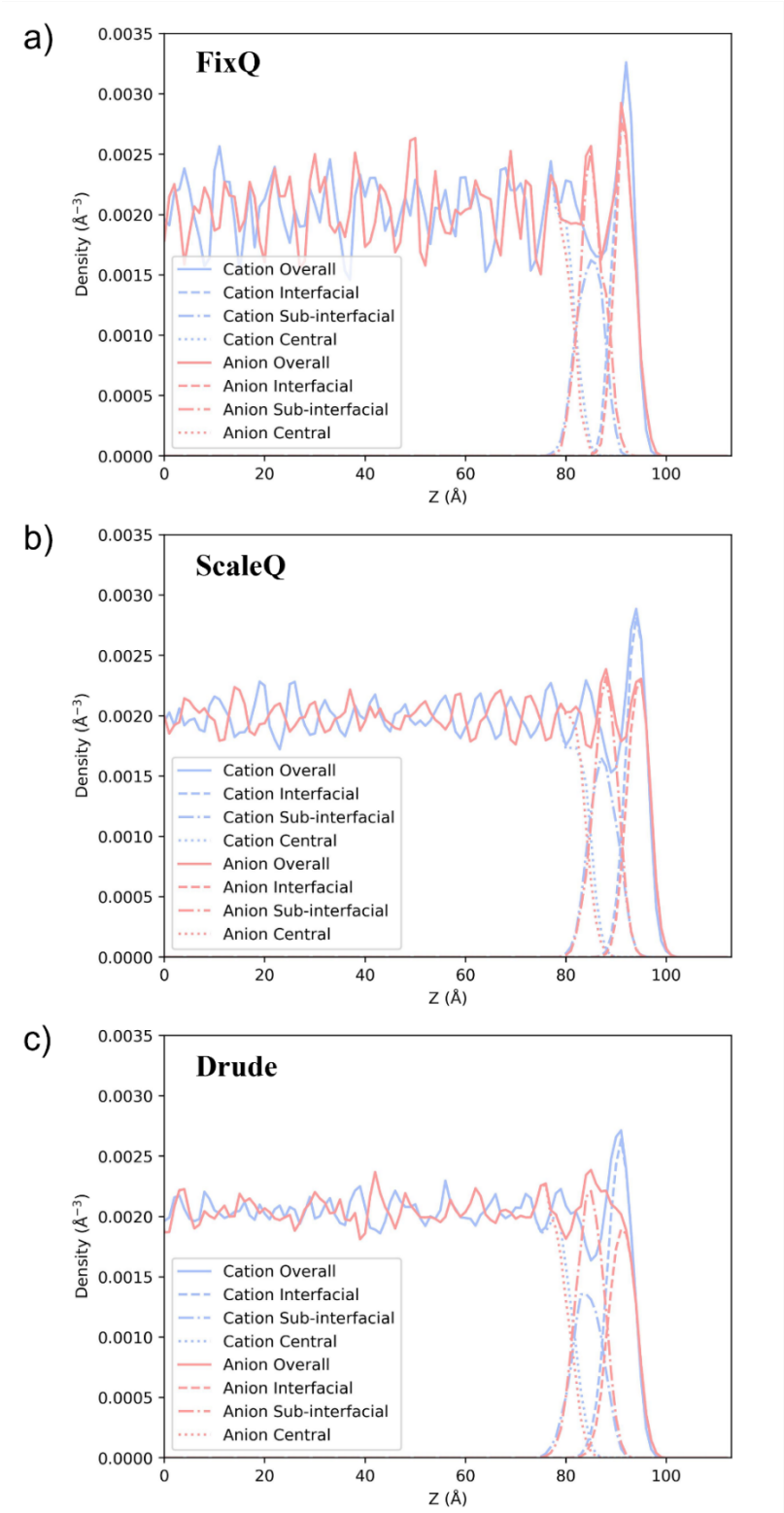

Figure S2. Number density profiles for the center of mass (COM) of cations and anions using a) FixQ, b) ScaleQ, and c) Drude models, with the liquid phase thickness of ~ 190 Å.

Table S1. The residence time of cations and anions in the interfacial and sub-interfacial layers using the FixQ model.

Residence Time (ns)	Cation Interfacial	Cation Sub-interfacial	Anion Interfacial	Anion Sub-interfacial
System # 1	36.1 ±6.6	5.71 ±0.85	22.7 ±3.2	14.2 ±1.1
System # 2	36.5 ±5.4	5.97 ±0.38	21.4 ±1.8	12.5 ±1.0
System # 3	38.6 ±4.6	6.09 ±1.13	23.6 ±3.4	14.3 ±2.6

Table S2. The residence time of cations and anions in the interfacial and sub-interfacial layers using the ScaleQ model.

Residence Time (ns)	Cation Interfacial	Cation Sub-interfacial	Anion Interfacial	Anion Sub-interfacial
System # 1	5.31 ± 0.33	1.22 ±0.06	4.97 ±0.14	2.18 ±0.25
System # 2	5.46 ±0.23	1.20 ±0.07	5.32 ±347.26	2.46 ±0.23
System # 3	5.00 ±0.35	1.10 ±0.07	5.26 ±0.46	2.46 ±0.15

Table S3. The residence time of cations and anions in the interfacial and sub-interfacial layers using the Drude model.

Residence Time (ns)	Cation Interfacial	Cation Sub-interfacial	Anion Interfacial	Anion Sub-interfacial
System # 1	4.52 ±0.17	0.819 ±0.020	3.16 ±0.08	1.61 ±0.11
System # 2	4.82 ±0.19	0.841 ±0.029	3.36 ±0.16	1.69 ±0.09
System # 3	4.32 ±0.23	0.810 ±0.050	3.19 ±0.30	1.66 ±0.04