

Correction to “Thermodynamic Studies of Ionic Hydration and Interactions for Amino Acid Ionic Liquids in Aqueous Solutions at 298.15 K”

Dilip H. Dagade,* Kavita R. Madkar, Sandeep P. Shinde, and Seema S. Barge

J. Phys. Chem. B **2013**, *117* (4), 1031–1043. DOI: 10.1021/jp310924m

In Table 7 of the original manuscript, we reported the values of pair interaction terms for solute particles (A_{22}) and osmotic

Table 7. Nonelectrolyte Solute–Solute Interaction Parameter (ω), Pair Interaction Terms for Solute Particles (A_{22}), Osmotic Second Virial Coefficient (NB_{22}^*), and Pitzer Interaction Parameters for Amino Acid Ionic Liquids in Aqueous Solutions at 298.15 K

AAIL	ω (kg·mol ⁻¹)	A_{22}	$10^{-3} \times NB_{22}^*$ (mm ³ ·mol ⁻¹)	$\beta^{(0)}$ (kg·mol ⁻¹)	$\beta^{(1)}$ (kg·mol ⁻¹)	$\sigma(\phi)$
[Emim][Gly]	-0.18	-19.639	-27.6	0.1116	-0.3682	0.0046
[Emim][Ala]	-0.10	-11.102	65.9	0.1225	-0.2710	0.0022
[Emim][Val]	-0.04	-4.674	157.8	0.1625	-0.3167	0.0044
[Emim][Leu]	0.02	1.972	227.0	0.1723	-0.2550	0.0035
[Emim][Ile]	0.06	6.525	265.0	0.1966	-0.2757	0.0057

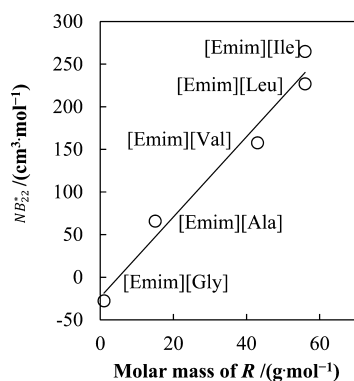


Figure 8. Correlation of the osmotic second virial coefficient with the molar mass of the side chain (R) of the amino acid anion of AAIL at 298.15 K.

second virial coefficients (NB_{22}^*) for amino acid ionic liquids at 298.15 K. However, these values are incorrect due to a minor mistake in the A_{22} calculations. After rectifying the error in calculations, Table 7 in the original article should be the Table 7 given below. The corresponding changes in Figures 8 and 9 in the original manuscript are also needed, and the updated Figures 8 and 9 are given below.

The first two sentences in the last paragraph on page 1038 should be as follows: The osmotic second virial coefficients (NB_{22}^*) are positive for the studied ILs, except for [Emim][Gly] where the value of NB_{22}^* is negative, and their magnitude increases with an increase in the hydrophobicity of ILs through the increase in the alkyl chain length of amino acid anion on going from glycine to L-leucine. The positive values of NB_{22}^* indicate that the repulsive type of ion-pair–ion-pair interactions dominates as the anion becomes more hydrophobic.

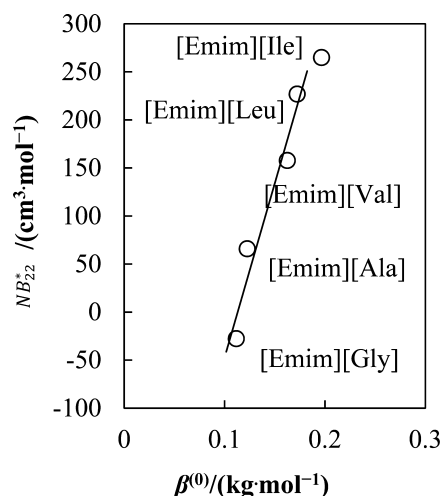


Figure 9. Correlation of the osmotic second virial coefficient (NB_{22}^*) with Pitzer ion interaction parameter ($\beta^{(0)}$) for amino acid ionic liquids in aqueous solutions at 298.15 K.

Published: August 5, 2013

