

# Correction to “Solute Diffusion in Ionic Liquids, NMR Measurements and Comparisons to Conventional Solvents”

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## Supporting Information

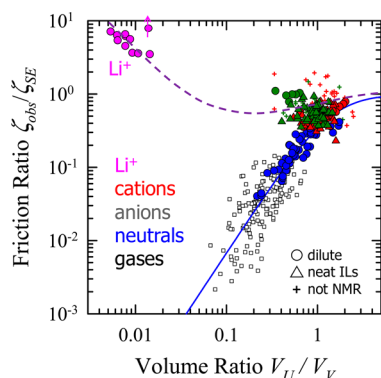
During further studies of solute diffusion in ionic liquids, we found that the atomic volume of  $\text{Li}^+$  listed in the Supporting Information and used in making Figure 9 was far too large:  $25.3 \text{ \AA}^3$  versus the more appropriate value  $1.2 \text{ \AA}^3$  ( $r \sim 0.66 \text{ \AA}$ ).<sup>1</sup> We do not know the origin of this erroneous value for  $\text{Li}^+$ . We have checked numerous other values of solute and solvent volumes in the working spreadsheets and found no other comparable errors.

As illustrated in Figure 1, correction of this error changes the appearance of the original Figure 9 by greatly expanding the range of  $V_U/V_V$  values plotted. It also produces a much greater separation of the  $\text{Li}^+$  data from the other points compared to the original version. These changes have no significant effect on the discussion or conclusions of the original report. They do, however, lessen the quantitative similarity between the trends in the ionic solute data in ionic liquids (Figure 1) versus water (Figure 10).

Equation 7, describing the dependence of  $\zeta_{\text{obs}}/\zeta_{\text{SE}}$  upon  $V_U/V_V$  was also incorrect. The corrected equation is:

$$\zeta_{\text{obs}}/\zeta_{\text{SE}} = \{1 + a(V_U/V_V)^{-p}\}^{-1} \quad (7)$$

The corrected Figure 9 is:



**Figure 9.** Ratio of observed to SE friction plotted versus the ratio of solute-to-solvent volumes for ionic and neutral solutes in ionic liquids. The neutral solute data (blue) are from the present work, and the blue curve is the fit from Figure 6. Circles are tracer diffusion data, and triangles are self-diffusion data. Smaller “+” symbols are assorted solution data from electrochemical measurements (Tables SI-3–5). The  $\text{Li}^+$  datum overlaid with an arrow indicates a deviant point at coordinates (0.011, 25).<sup>2</sup>

## ASSOCIATED CONTENT

### Supporting Information

An Excel spreadsheet containing corrected tabulations of solute and solvent properties and diffusion data. This material is available free of charge via the Internet at <http://pubs.acs.org>.

## REFERENCES

- (1) Marcus, Y. *Ion Properties*; Marcel Dekker: New York, 1997.
- (2) Wu, T.-Y.; Hao, L.; Kuo, C.-W.; Lin, Y.-C.; Su, S.-G.; Kuo, P.-L.; Sun, I. W. Ionic Conductivity and Diffusion in Lithium Tetrafluoroborate Doped 1-Methyl-3-Pentylimidazolium Tetrafluoroborate Ionic Liquid. *Int. J. Electrochem. Sci.* **2012**, *7*, 2047–2064.