

## Accepted Manuscript

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PII: S0167-7322(17)34576-2  
DOI: doi:[10.1016/j.molliq.2017.12.009](https://doi.org/10.1016/j.molliq.2017.12.009)  
Reference: MOLLIQ 8305  
To appear in: *Journal of Molecular Liquids*  
Received date: 29 September 2017  
Revised date: 1 December 2017  
Accepted date: 4 December 2017

Please cite this article as: Kazuyoshi Kaneko, Yukihiro Yoshimura, Akio Shimizu , Water concentration dependence of the refractive index of various ionic liquid-water mixtures. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Molliq(2017), doi:[10.1016/j.molliq.2017.12.009](https://doi.org/10.1016/j.molliq.2017.12.009)

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# Water concentration dependence of the refractive index of various ionic liquid-water mixtures

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Keywords: Refractive index; Water; Ionic Liquid

## Abstract

The refractive indices of various ionic liquid (IL)-water mixtures were measured across the entire composition range from pure water to pure IL. The maximum deviation in the refractive index relative to that calculated for the corresponding ideal solution exhibited good linear correlation with the refractive index of the pure IL. On the other hand, the IL concentration corresponding to the maximum deviation was about 25 mol% regardless of the IL species. Therefore, the IL concentration dependence of the normalized deviation between ideal and experimental (pure water and pure IL are 0 and maximum deviation of the refractive index is

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