

Supporting Information

Influence of the anion on the surface tension of 1-ethyl-3-methylimidazolium-based ionic liquids

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TABLE S.I. 1

Surface tension data measured in this work and percentage relative deviations (RD %) to those reported in literature [1-2].

[C₄mim][Ntf₂]		
<i>T</i> / K	$(\gamma \pm 2u(\gamma)^a) /$ (mN/m)	RD %
298.2	33.35 ± 0.02	0.03
308.2	32.85 ± 0.02	0.17
318.2	32.25 ± 0.02	-0.04
328.2	31.69 ± 0.04	0.00
338.2	31.14 ± 0.04	0.01
343.2	30.76 ± 0.06	0.34
[C₄mim][PF₆]		
<i>T</i> / K	$(\gamma \pm 2u(\gamma)^a) /$ (mN/m)	RD %
298.1	43.81 ± 0.04	0.01
303.2	43.44 ± 0.04	-0.13
313.1	42.72 ± 0.02	-0.36
323.1	42.19 ± 0.02	-0.13
333.1	41.61 ± 0.02	-0.03
343.7	41.07 ± 0.04	0.18
[C₄mim][CF₃SO₃]		
<i>T</i> / K	$(\gamma \pm 2u(\gamma)^a) /$ (mN/m)	RD %
298.1	35.86 ± 0.14	1.58
307.9	35.29 ± 0.16	1.21
318.0	34.95 ± 0.16	1.55
328.1	34.64 ± 0.20	1.98
338.3	34.30 ± 0.10	2.33
[C₄mim][BF₄]		
<i>T</i> / K	$(\gamma \pm 2u(\gamma)^a) /$ (mN/m)	RD %
298.0	45.44 ± 0.16	2.06
307.9	44.57 ± 0.16	1.63
317.9	43.91 ± 0.16	1.66
328.4	43.15 ± 0.16	1.56
338.4	42.49 ± 0.10	1.59
343.1	42.17 ± 0.08	1.59

^aExpanded uncertainty at the 0.95 Confidence Level, $2u(\gamma)$, evaluated from the standard deviation and applying a coverage factor $k = 2$.

[1] M.G. Freire, P.J. Carvalho, A.M. Fernandes, I.M. Marrucho, A.J. Queimada, J.A.P. Coutinho, J. Colloid Interface Sci. 314 (2007) 621-630.

[2] P.J. Carvalho, M.G. Freire, I.M. Marrucho, A.J. Queimada, J.A.P. Coutinho, J. Chem. Eng. Data 53 (2008) 1346-1350.