

REFERENCES

1. Butka, A., Romeo Vale, V., Saracsan, D., Rybarsch, C., Weiss, V.C. and Schroer W., Liquid-liquid phase transition in solutions of ionic liquids with halide anions: Critically and corresponding states, *Pure and Applied Chemistry*, **2008**, *80*, 1613–1630.
2. Reinert, L., Batouche, K., Lévêque, J.M., Muller, F., Bény, J.M., Kebabi, B. and Duclaux, L., Adsorption of imidazolium and pyridinium ionic liquids onto montmorillonite: Characterisation and thermodynamic calculations, *Chemical Engineering Journal*, **2012**, *209*, 13 – 19.
3. Blath, J., Christ, M., Deubler, N., Hirth, T. and Schiestel, T., Gas solubilities in room temperature ionic liquids – correlation between RTIL – molar mass and Henry's law constant, *Chemical Engineering Journal*, **2011**, *172*, 167 – 176.
4. Fan, A., Chuah, G.K. and Jaenicke, S., Phosphonium ionic liquids as highly thermal stable and efficient phase transfer catalyst for solid – liquid Halex reaction, *Catalysis Today*, **2012**, *198*, 300 – 304.
5. Chen X., Souvanhthong, B., Wang, H., Zheng, H., Wang, X. and Huo, M., Polyoxometalate – based ionic liquid as thermoregulated and environmentally friendly catalyst for starch oxidation, *Applied Catalysis B: Environmental*, **2013**, *138 – 139*, 161 – 166.
6. Pégot, B., Macé, Y., Urban, C., Diter, P., Blazejewski, J.C. and Magnier, E., Ionic liquids as new media for electrophilic trifluoromethylation reactions, *Journal of Fluorine Chemistry*, **2012**, *134*, 156 – 159.
7. Balalaie, S., Poursaeed, A., Khoshkholgh, M.J., Bijanzadeh, H.R. and Wolf, E., Zirconium Oxide (NP) – ionic liquid as an efficient media for the domino Knoevenagel hetero Diels-Alder reaction with unactivated alkynes, *Comptes Rendus Chimie*, **2012**, *15*, 283 – 289.

8. Fortuny, A., Coll, M.T. and Sastre, A.M., Use of methyltriocetyl/decylammonium bis 2,4,4 – (trimethylpentyl) phosphinate ionic liquid (ALiCY IL) on the boron extraction in chloride media, *Separation and Purification Technology*, **2012**, *97*, 137 – 141.
9. Rout, A., Venkatesan, K.A., Srinivasan, T.G. and Vasudera Rao, P.R., Extraction behavior of actinides and fission products in amide functionalized ionic liquid, *Separation and Purification Technology*, **2012**, *97*, 164 – 171.
10. Chen, D.X., OuYang, X.K., Wang, Y.G., Yang, L.Y. and He, C.H., Liquid-liquid equilibria of caprolactam from water using room temperature ionic liquids, *Separation and Purification Technology*, **2013**, *104*, 263 -267.
11. Stoimenovski, J., Izgorodina, E.I. and MacFarlane, D.R., Ionicity and proton transfer in protic ionic liquids, *Physical Chemistry Chemical Physics*, **2010**, *12*, 10341 – 10347.
12. Johansson, K.M., Izgorodina, E.I., Forsyth, M. and MacFarlane, D.R., Protic ionic liquids based on the dimeric and oligomeric anions: $[(\text{AcO})_x \text{ H}_{x-1}]^-$, *Physical Chemistry Chemical Physics*, **2008**, *10*, 2972 – 2978.
13. Fumino, K., Wulf, A. and Ludwig, R., The potential role of hydrogen bonding in aprotic and protic ionic liquids, *Physical Chemistry Chemical Physics*, **2009**, *11*, 8790 – 8794.
14. Gabriel, S. and Weiner, J., Ueber einige Abkömmlinge des Propylamins, *Berichte der deutschen chemischen Gesellschaft*, **1888**, *21*, 2669 – 2679.
15. Anouti, M., Sizaret, P.Y., Ghimbeu, C., Galiano, H. and Lemordant, D., Physicochemical characterization of vesicle systems formed mixtures of protic ionic liquids and water, *Colloids and Surfaces: A Physicochemical and Engineering Aspects*, **2012**, *395*, 190 – 198.

16. Wu, T., Sun, I., Sung, S., Chen, B., Wang, H. and Su, S., High conductivity and low viscosity of Brönsted acidic ionic liquid with oligomeric anion, Journal of the Taiwan Institute of Chemical Engineers, **2011**, *42*, 874 – 881.
17. Iglesias, M., Gonzalez – Olmos, R., Cota, I. and Medina, F., Brönsted ionic liquids: Study of physico-chemical properties and catalytic activity in Aldol-condensations, Chemical Engineering Journal, **2010**, *162*, 802 – 808.
18. Janus, E., Goc-Maciejewska, I., Łożyński and M., Pernak, J., Diels-Alder reaction in protic ionic liquids, Tetrahedron Letters, **2006**, *47*, 4079 – 4083.
19. Rosa, C.D, Ormachea, C., Kneeteman, M.N., Adam, C., Mancini, P.M.E., Diels-Alder reaction of N-tosylpirroles developed in protic ionic liquids: Theoretical studies using DFT methods, Tetrahedron Letters, **2011**, *52*, 6754 – 6757.
20. Majumdar, S., De, J., Hossain, J. and Basak, A., Formylation of amines catalyzed by protic ionic liquids under solvent-free condition, Tetrahedron Letters, **2013**, *54*, 262 – 266.
21. Dengler, J.E., Doroodian, A. and Rieger, B., Protic metal-containing ionic liquids as catalysts: Cooperative effects between anion and cation, Journal of Organometallic Chemistry, **2011**, *696*, 3831 – 3835.
22. Shukla, S.K., Murulana, L.C. and Ebenso, E.E., Inhibitive effect of imidazolium based aprotic ionic liquids on mild steel corrosion in hydrochloric acid medium, International Journal of Electrochemical Science, **2011**, *6*, 4286 – 4295.
23. Fericola, A., Navarra, M.A. and Panero, S., Aprotic ionic liquids as electrolyte components in protonic membranes, Journal of Applied Chemistry, **2008**, *38*, 993-996.

24. Mondal, A.N., Tripathi, B.P. and Shahi, V.K., Highly stable aprotic ionic liquid doped anhydrous proton conducting polymer electrolyte membrane for high-temperature applications, *Journal of Material Chemistry*, **2011**, *21*, 4117 – 4124.
25. Waligora, L. and Galinski, M., Ferrocene as a reference redox couple for aprotic ionic liquids, *Electroanalysis*, **2009**, *21*, 2221 – 2227
26. Xu, M., Ivey, D.G., Xie, Z., and Qu, W., Electrochemical behavior of Zn/Zn(II) couples in aprotic ionic liquids based on pyrrolidinium and imidazolium cations and bis(trifluoromethanesulfonyl)imide and dicyanamide anions, *Electrochimica Acta*, **2013**, *89*, 756 – 762.
27. Azaceta, E., Chavhan, S., Rossi, P., Paderi, M., Fantini, S., Ungureanu, M., Miguel, O. and Grande, H., Tena-zaera, R., NiO cathodic electrochemical deposition from an aprotic ionic liquid: Building metal oxide n-p heterojunctions, *Electrochimica Acta*, **2012**, *71*, 39 – 43.
28. Noritomi, H., Minamisawa, K., Kamiya, R. and Kato, S., Thermal stability of proteins in the presence of aprotic ionic liquids, *Journal of Biomedical Science and Engineering*, **2011**, *4*, 94 – 99.
29. Hayes, R., El Abedin, S.Z. and Atkin, R., Pronounced structure in confined aprotic ionic room-temperature ionic liquids, *Journal of Physical Chemistry B*, **2009**, *113*, 7049 – 7052.
30. Chowdhury, S.A., Scott, J.L. and MacFarlane, D.R., Ternary mixtures of phosphonium ionic liquid + organic solvents + water, *Pure and Applied Chemistry*, **2008**, *80*, 1325 – 1335.
31. Crosthwaite, J.M., Aki, S.N.V.K, Maginn, E.J. and Brennecke, J.F., Liquid phase behaviour of imidazolium-based ionic liquid with alcohols, *Journal of Physical Chemistry B*, **2004**, *108*, 5113 – 5119.

32. Wu, C.T., Marsh, K.N., Deer, A.V. and Boxall, J.A., Liquid-liquid equilibria of room temperature ionic liquids and butan-1-ol, *Journal of Chemical and Engineering Data*, **2003**, *48*, 486 – 491.
33. Shifflet, M.B. and Niehaus, A.M., Liquid-liquid equilibria in binary mixtures containing substituted benzenes with ionic liquid 1-ethyl-3-methylimidazolium Bis (trifluoromethylsulfonyl) imide, *Journal of Chemical and Engineering Data*, **2010**, *55*, 346 – 353.
34. Ravilla, U.K. and Benerjee, T., Liquid-liquid equilibria of imidazolium based ionic liquid + pyridine + hydrocarbon at 298.15 K: Experiments and correlations, *Fluid Phase Equilibria*, **2012**, *324*, 17 – 27.
35. Marciniak, A. and Królikowski, M., Ternary liquid-liquid equilibria of bis (trifluoromethylsulfonyl) – amide based ionic liquids + methanol + heptane, *Fluid Phase Equilibria*, **2012**, *318*, 56 – 60.
36. Hwang, I.C., Park, S.J. and Kwon, R.H., Liquid-liquid equilibria for ternary mixtures of methyl tert-amyl ether + methanol (or ethanol) + imidazolium – based ionic liquids at 298.15 K, *Fluid Phase Equilibria*, **2012**, *316*, 11-16.
37. Marciniak, A. and Królikowski, M., Ternary (liquid-liquid) equilibria of {trifluoroethylsulfonate based ionic liquids + thiophene + heptane}, *The Journal of Chemical Thermodynamics*, **2012**, *49*, 154 – 158.
38. Sakal, S.A, Shen, C. and Li, C.X., (Liquid+liquid) equilibria of {benzene + 2 ionic liquids} at different temperature and atmospheric pressure, *The Journal of Chemical Thermodynamics*, **2012**, *49*, 81 – 86.
39. Marciniak, A. and Karczemna E., Influence of the ionic liquid structure on thiophene solubility, *Fluid Phase Equilibria*, **2011**, *3017*, 160 – 165.

40. Atkins P.W. and de Paula, J., (2006), Atkins' Physical Chemistry, W.H. Freeman
41. Mulder, M.H.V. and Smolders, C.A., On the mechanism of separation of ethanol/water mixtures by pervaporation I. Calculation of concentration profiles, *Journal of Membrane Science*, **1984**, *17*, 289 – 307.
42. Card, J.C and Farrell, L.M., (1982), Separation of alcohol-water mixtures using salts, Oak Ridge National Laboratory.
43. Zhao, Z., Dong, H. and Zhuang, H., The research progress of CO₂ capture of ionic liquids, *Chinese Journal of Chemical Engineering*, **2012**, *20*, 120 – 129.
44. Zhao, W., He, G., Nie, F., Zhang, L., Feng, H. and Liu, H., Membrane liquid loss mechanism of supported ionic liquid membrane for gas separation, *Journal of Membrane Science*, **2012**, *411 – 412*, 73 – 80.
45. Singh, P.K., Sujana, J., Mora, A.K. and Nath, S., Probing the DNA-ionic liquid interaction using an ultrafast molecular rotor, *Journal of Photochemistry and Photobiology A: Chemistry*, **2012**, *246*, 16 – 22.
46. Arnantor, S.A., Electrochemical synthesis of polyphenylene in new ionic liquid, *Synthetic metals*, **1997**, *84*, 295 – 296.
47. Lanteleme, F., Kaplan, B., Groult, H., Devilliers, D., Mechanism for elemental carbon formation in molecular ionic liquids, *Journal of Molecular Liquids*, **1999**, *83*, 255 – 269.
48. Suarez, P.A.Z., Dullius, J.E.L., Einloft, S., De Souza, R.F. and Dupont, J., The use of new ionic liquids in two-phase catalytic hydrogenation reaction by rhodium complexes, *Polyhedron*, **1996**, *15*, 1217 – 1219.

49. Fischer, T., Sethi, A. and Welton, T., Woolf, J., Diels-Alder reactions in room-temperature ionic liquids, *Tetrahedron Letters*, **1999**, *40*, 793 – 796.
50. Lee, C.W., Diels-Alder reactions in chloroaluminate ionic liquids: acceleration and selectivity enhancement, *Tetrahedron letters*, **1999**, *40*, 2461 – 2464.
51. Wassercheid, P. and Welton, T., (2002), *Ionic liquids in synthesis*, Weinheim: Wiley-VCH.
52. Dománska, U. and Krolikowski, M., Extraction of butan-1-ol from water with ionic liquids at $T = 308.15\text{ K}$, *The Journal of Chemical Thermodynamics*, **2012**, *53*, 108 – 113.
53. Fallanza, M., Ortiz, A., Gorri, D. and Ortiz, I., Experimental study of the separation of propane/propylene mixtures by supported ionic liquid membranes containing Ag^+ - RTILs as carrier, *Separation and Purification Technology*, **2012**, *97*, 83 – 89.
54. Tonova, K., Separation of poly- and disaccharides by biphasic systems based on ionic liquids, *Separation and Purification Technology*, **2012**, *89*, 57 -65.
55. Matsud, G., Liebert, V., Tochigi and K., Gmehling, J., Influence of sulfate-based anion ionic liquids on the separation factor of the binary azeotropic system acetone + methanol, *Fluid Phase Equilibria*, **2013**, *340*, 27 – 30.
56. Chenghoum, M., Bahnous, M., Bouraiou, A., Bouacida, S. and Belfaitah, A., An efficient and rapid intramolecular aza-Michael addition of 2'-aminochalcones using ionic liquid as recyclable reaction media, *Tetrahedron Letters*, **2012**, *53*, 4059 – 4061.

57. Bradford, B.N. and Miller, K.M., Michael addition kinetics of ethyl acetoacetate and 2-ethylhexyl acrylate in ionic liquids, *Tetrahedron Letters*, **2012**, *53*, 1855 – 1858.
58. Balalaie, S., Poursaeed, A., Khoshkholgh, M.J., Bijanzadeh, H.R. and Wolf, E., Zirconium Oxide (NP) – ionic liquid as an efficient media for the domino knoevenagel hetero Diels-Alder reaction with unactivated alkynes, *Comptes Rendus Chimie*, **2012**, *15*, 283 – 289.
59. Jin, J., Wen, Z., Liang, X., Cui, Y. and Wu, X., Gel polymer electrolyte with ionic liquid for high performance lithium sulfur battery, *Solid State Ionics*, **2012**, *225*, 604 – 607.
60. Wang M., Shan, Z., Tian, J., Yang, K., Liu, X., Liu, H. and Zhu, K., Mixtures of unsaturated imidazolium based ionic liquid and organic carbonate as electrolyte for Li-ion batteries, *Electrochimica Acta*, **2013**, *95*, 301 – 307.
61. Hofmann, A., Schulz, M. and Hanemann, T., Gel electrolytes based in ionic liquids for advanced lithium polymer batteries, *Electrochimica Acta*, **2013**, *89*, 823 – 831.
62. Yan, Y., Yin, Y., Xin, S., Su, J., Guo, Y.G., Wan, L.J., High-safety lithium-sulfur battery with prelithiated Si/C anode an ionic liquid electrolyte, *Electrochimica Acta*, **2013**, *91*, 58 – 61.
63. Balducci, A., Jeong, S.S., Kim, G.T., Passerini, S., Winter, M., Schmuck, M., Appeteccchi, G.B., Marcilla, R., Mecerreyes, D., Barsukov, V., Khomenkov, V., Cantero, I., De Meatza, I., Hozapfel, M. and Tran, N., Development of safe, green and high performance ionic liquids-based batteries (ILLIBATT project), *Journal of Power Sources*, **2011**, *196*, 9719 – 9730.
64. Haerens, K., Matthijs, E., Chmielarz, A. and Van der Bruggen, B., The use of ionic liquids based on choline chloride for metal deposition: A green alternative?, *Journal of Environmental Management*, **2009**, *90*, 3245 – 3252.

65. Zhang, Y., Yu, P. and Luo, Y., Absorption of CO₂ by amino acid-functionalized and traditional dicationic ionic liquids: Properties, Henry's law constants and mechanisms, *Chemical Engineering Journal*, **2013**, *214*, 355 – 363.
66. Yoshizawa, M., Xu, W. and Angell C.A., Ionic liquids by proton transfer: Vapor pressure, conductivity, and the relevance of ΔpKa from aqueous solutions. *Journal of the American Chemical Society*, **2003**, *125*, 15411 – 15419.
67. Qu, J., Truhan, J.J., Dai, S., Luo, H. and Blau, P.J., Ionic liquids with ammonium cations as lubricants or additives, *Tribol Letters*, **2006**, *22*, 207 – 214.
68. Greaves, T.L. and Drummond, C.J., Protic ionic liquids: Properties and applications, *Chemical Reviews*, **2008**, *108*, 206 – 237.
69. Brady, J.W. and Schmidt, R.K., The role of hydrogen bonding in carbohydrates : Molecular dynamics simulations of maltose in aqueous solution, *Journal of Physical Chemistry*, **1993**, *97*, 958 – 966.
70. Sedov, I.A. and Solomonov, B.N., Gibbs free energy of hydrogen bonding of aliphatic alcohols with liquid water at 298 K, *Fluid Phase Equilibria*, **2012**, *315*, 16 – 20.
71. Wilfred, C.D., Chong, F.K., Man, Z., Bustam, M.A., Mutalib, M.I.M. and Chan, Z.P., Extraction of dibenzothiophene from dodecane using ionic liquids, *Fuel Processing*, **2012**, *93*, 85 – 89.
72. Alvarez-Guerra, E. and Irabien, A., Extraction of lactoferin with hydrophobic ionic liquids, *Separation and Purification Technology*, **2012**, *98*, 432 – 440.
73. Bai, L., Nie, Y., Dong, H. and Zhang, X., Protic ionic liquids extract asphaltenes from direct coal liquefaction residue at room temperature., *Fuel Processing Technology*, **2013**, *108*, 94 – 100.

74. Dai, S., Yu, M. and Luo, H., Solvent extraction of Sr^{2+} and Cs^+ based on hydrophobic protic ionic liquids., *Zeitschrift für Naturforschung*, **2007**, *62a*, 281 – 291.
75. Flory, P.J., Thermodynamics of high polymer solutions, *Journal of Chemical Physic*, **1942**, *10*, 51 – 61.
76. Clark, E.A. and Lipson, J.E.G., LCST and UCST behavior in polymer solutions and blends, *Polymer*, **2012**, *53*, 536 – 545.
77. Pietsch, C. and Hoogenboom, R., Schubert, U.S., PMMA based soluble polymeric temperature sensors based on UCST transition and solvatochromic dyes, *Polymer Chemistry*, **2010**, *1*, 1005 – 1008.
78. Ward, M.A. and Georgiou, T.K., Thermoresponsive polymers for biomedical applications, *Polymers*, **2011**, *3*, 1215 – 1242.
79. Schaljohann, D., Thermo – and pH- responsive polymers in drug delivery, *Advanced Drug Delivery Reviews*, **2006**, *58*, 1655 – 1670.
80. Sato, T., Katayama, K., Suzuki and T., Shiomi, T., UCST and LCST behaviour in polymer blends containing poly (methyl methacrylate-statstyrene), *Polymer*, **1998**, *39*, 773 – 780.
81. Kohno, Y. and Ohno, H., Temperature-responsive ionic liquid / water interfaces: Relation between hydrophilicity of ions and dynamic phase change, *Physical Chemistry Chemical Physics*, **2012**, *14*, 5063 – 5070.
82. Khupse, N.D. and Kumar, A., Ionic liquids: New materials with wide applications, *Indian Journal of Chemistry*, **2010**, *49A*, 635 – 648.

83. Bonhôte, P., Dias, A. and Papageorgiou, N., Kalyanasundaram, K., Grätzel, M., Hydrophobic, highly conductive ambient-temperature molten salts, **1996**, *35*, 1168 – 1178.
84. Hamill, N.A., Seddon, K.R., Stark, A. and Torres, M.J., Viscosity and density of 1-alkylimidazolium ionic liquid, American Chemical Society Symposium Series, **2002**, *819*, 34-49.
85. Tokuda, H., Hayamizu, K., Ishii, K., Md. Abu, S. and Watanabe, M., Physicochemical properties and structures of room temperature ionic liquids. 2. Variation of alkyl chain length in imidazolium cation, Journal of Physical Chemistry B, **2005**, *109*, 6103 – 6110.
86. Marsh, K.N., Boxall, J.A. and Lichtenthaler, R., Room temperature ionic liquids and their mixtures – A review, Fluid Phase Equilibria, **2004**, *219*, 93 – 98.
87. Heintz, A., Lehmann, J.K. and Wertz, C., Thermodynamic properties of mixtures containing ionic liquids. 3 liquid–liquid equilibria of binary mixtures of 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide with propan-1-ol, butan-1-ol, and pentan-1-ol, Journal of Chemical and Engineering Data, **2003**, *48*, 472 – 474.
88. Arce, A., Earle, M.J., Katdare, S.P., Rodríguez, H. and Seddon, K.R., Phase equilibria of mixtures of mutually immiscible ionic liquids, Fluid Phase Equilibria, **2007**, *261*, 427 – 433.
89. Królikowska, M. and Karpińska, M., Phase equilibria study of the (N-octylisoquinolinium thiocyanate ionic liquid + aliphatic and aromatic hydrocarbon, or thiophene) binary systems, The Journal of Chemical Thermodynamics, **2013**, *63*, 128 – 134.
90. Fukumoto, K. and Ohno, H., LCST-Type phase changes of a mixture of water and ionic liquids derived from amino acids, Chemical Communications, **2007**, *46*, 1852 – 1855.

91. Zhang L., Han, J., Dongshun, D. and Jianbing, J., Selection of ionic liquids as entrainers for separation of water and 2-propanol, *Fluid Phase Equilibria*, **2007**, 255, 179 – 185.
92. Freire, M.G., Santos, L.M.N.B.F., Fernandes, A.M., Cautinho, J.A.P. and Marrucho, I.M., An overview of the mutual solubilities of water – imidazolium – based ionic liquids systems, *Fluid Phase Equilibria*, **2007**, 261, 449 – 454.