Ilkka KilpelÃ¤inen

List of Publications by Year
in descending order

80 papers	3,854 citations	126907 33 h-index	123424 61 g-index
87 all docs	87 docs citations	87 times ranked	3821 citing authors

#	Article	IF	Citations
1	Physico-chemical characterization of aqueous solutions of superbase ionic liquids with cellulose dissolution capability. Fluid Phase Equilibria, 2022, 556, 113414.	2.5	15
2	Thermoâ€reversible cellulose micro phaseâ€separation in mixtures of methyltributylphosphonium acetate and Î³â€valerolactone or DMSO. ChemPhysChem, 2022, , .	2.1	2
3	Nanostructurally Controllable Strong Wood Aerogel toward Efficient Thermal Insulation. ACS Applied Materials & Interfaces, 2022, 14, 24697-24707.	8.0	34
4	Highly regioselective surface acetylation of cellulose and shaped cellulose constructs in the gas-phase. Green Chemistry, 2022, 24, 5604-5613.	9.0	12
5	Incorporated diffusion ordered heteronuclear multiple bond correlation spectroscopy, 3D iDOSY-HMBC. Merging of diffusion delay with long polarization transfer delay of HMBC. Journal of Magnetic Resonance, 2021, 323, 106892.	2.1	3
6	Kraft Processâ€"Formation of Secoisolariciresinol Structures and Incorporation of Fatty Acids in Kraft Lignin. Journal of Agricultural and Food Chemistry, 2021, 69, 5955-5965.	5.2	7
7	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 2702-2717.	5.4	14
8	Heat of mixing profile, complexation curve and spectroscopic investigation of binary mixtures containing bicyclic BrÃ¸nsted superbase DBN with hydrogen ethanoate. Journal of Chemical Thermodynamics, 2021, 161, 106516.	2.0	2
9	Phase-separation of cellulose from ionic liquid upon cooling: preparation of microsized particles. Cellulose, 2021, 28, 10921-10938.	4.9	4
10	Modification of Lignocellulosics in the Dissolved State for Added Functionality. , 2020, , 65-90.		0
11	2D Assignment and quantitative analysis of cellulose and oxidized celluloses using solution-state NMR spectroscopy. Cellulose, 2020, 27, 7929-7953.	4.9	34
12	Inhibition of hyperthermostable xylanases by superbase ionic liquids. Process Biochemistry, 2020, 95, 148-156.	3.7	10
13	Crystallinity reduction and enhancement in the chemical reactivity of cellulose by non-dissolving pre-treatment with tetrabutylphosphonium acetate. Cellulose, 2020, 27, 5545-5562.	4.9	39
14	Physical Properties of 7-Methyl-1,5,7-triazabicyclo[4.4.0]dec-5-ene (mTBD). International Journal of Thermophysics, 2019, 40, 1.	2.1	12
15	Binary mixtures of ionic liquids-DMSO as solvents for the dissolution and derivatization of cellulose: Effects of alkyl and alkoxy side chains. Carbohydrate Polymers, 2019, 212, 206-214.	10.2	26
16	Liquid-State NMR Analysis of Nanocelluloses. Biomacromolecules, 2018, 19, 2708-2720.	5.4	57
17	Clustered Single Cellulosic Fiber Dissolution Kinetics and Mechanisms through Optical Microscopy under Limited Dissolving Conditions. Biomacromolecules, 2018, 19, 1635-1645.	5.4	7
18	Screening of glycoside hydrolases and ionic liquids for fibre modification. Journal of Chemical Technology and Biotechnology, 2018, 93, 818-826.	3.2	3

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19	High-Performance Acetylated Ioncell-F Fibers with Low Degree of Substitution. ACS Sustainable Chemistry and Engineering, 2018, 6, 9418-9426.	6.7	26
20	Getting Closer to Absolute Molar Masses of Technical Lignins. ChemSusChem, 2018, 11, 3259-3268.	6.8	76
21	Efficiency of hydrophobic phosphonium ionic liquids and DMSO as recyclable cellulose dissolution and regeneration media. RSC Advances, 2017, 7, 17451-17461.	3.6	36
22	WtFâ€Nano: Oneâ€Pot Dewatering and Waterâ€Free Topochemical Modification of Nanocellulose in Ionic Liquids or Î³â€Valerolactone. ChemSusChem, 2017, 10, 4879-4890.	6.8	14
23	Homogenous esterification of cellulose pulp in [DBNH][OAc]. Cellulose, 2017, 24, 5341-5354.	4.9	41
24	Peroxidases Bound to the Growing Lignin Polymer Produce Natural Like Extracellular Lignin in a Cell Culture of Norway Spruce. Frontiers in Plant Science, 2016, 7, 1523.	3.6	35
25	Solutionâ€State Oneâ€and Twoâ€Dimensional NMR Spectroscopy of Highâ€Molecularâ€Weight Cellulose. ChemSusChem, 2016, 9, 880-892.	6.8	29
26	Quantitative, equal carbon response HSQC experiment, QEC-HSQC. Journal of Magnetic Resonance, 2016, 271, 34-39.	2.1	14
27	Experimental and Theoretical Thermodynamic Study of Distillable Ionic Liquid 1,5-Diazabicyclo[4.3.0]non-5-enium Acetate. Industrial & Engineering Chemistry Research, 2016, 55, 10445-10454.	3.7	35
28	ME-CAGEBIRD r,X -CPMG-HSQMBC. A phase sensitive, multiplicity edited long range HSQC with absorptive line shapes. Journal of Magnetic Resonance, 2016, 272, 114-122.	2.1	2
29	Effect of Ionic Liquids on Zebrafish (Danio rerio) Viability, Behavior, and Histology; Correlation between Toxicity and Ionic Liquid Aggregation. Environmental Science & Technology, 2016, 50, 7116-7125.	10.0	74
30	Application of mild autohydrolysis to facilitate the dissolution of wood chips in direct-dissolution solvents. Green Chemistry, 2016, 18, 3286-3294.	9.0	26
31	Ioncell-F: A High-strength regenerated cellulose fibre. Nordic Pulp and Paper Research Journal, 2015, 30, 43-57.	0.7	190
32	Impact of Amphiphilic Biomass-Dissolving Ionic Liquids on Biological Cells and Liposomes. Environmental Science & Technology, 2015, 49, 1870-1878.	10.0	78
33	Stability of Criegee Intermediates Formed by Ozonolysis of Different Double Bonds. Journal of Physical Chemistry A, 2015, 119, 2318-2325.	2.5	18
34	Effect of ionic liquids on the interaction between liposomes and common wastewater pollutants investigated by capillary electrophoresis. Journal of Chromatography A, 2015, 1405, 178-187.	3.7	18
35	Cationic cellulose betainate for wastewater treatment. Cellulose, 2015, 22, 1861-1872.	4.9	18
36	Ionic Liquids for the Production of Man-Made Cellulosic Fibers: Opportunities and Challenges. Advances in Polymer Science, 2015, , 133-168.	0.8	58

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37	Cellulose fatty acid esters as sustainable film materials â€“ effect of side chain structure on barrier and mechanical properties. RSC Advances, 2015, 5, 80702-80708.	3.6	34
38	Synthesis of Cellulose Methylcarbonate in Ionic Liquids using Dimethylcarbonate. ChemSusChem, 2015, 8, 77-81.	6.8	41
39	Amination and thiolation of chloroacetyl cellulose through reactive dissolution in N,N-dimethylformamide. Carbohydrate Polymers, 2015, 116, 60-66.	10.2	19
40	CHAPTER 5: REDUCTION OF BIOMASS RECALCITRANCE VIA IONIC LIQUID PRETREATMENTS. Materials and Energy, 2014, , 95-125.	0.1	3
41	Amphiphilic and Phaseâ€Separable Ionic Liquids for Biomass Processing. ChemSusChem, 2014, 7, 1422-1434.	6.8	60
42	Oxygen delignification of conventional and high alkali cooked softwood Kraft pulps, and study of the residual lignin structure. RSC Advances, 2014, 4, 17469-17477.	3.6	19
43	Preparation of cellulose and pulp carbamates through a reactive dissolution approach. RSC Advances, 2014, 4, 22434.	3.6	11
44	Dissolution enthalpies of cellulose in ionic liquids. Carbohydrate Polymers, 2014, 113, 67-76.	10.2	36
45	Cationic wood cellulose films with high strength and bacterial anti-adhesive properties. Cellulose, 2014, 21, 3573-3583.	4.9	31
46	On the solubility of wood in non-derivatising ionic liquids. Green Chemistry, 2013, 15, 2374.	9.0	35
47	Enhancement of ionic liquid-aided fractionation of birchwood. Part 1: autohydrolysis pretreatment. RSC Advances, 2013, 3, 16365.	3.6	45
48	Automating the NMR analysis of base oils: Finding napthene signals. Fuel, 2013, 111, 543-554.	6.4	6
49	Predicting Cellulose Solvating Capabilities of Acidâ€“Base Conjugate Ionic Liquids. ChemSusChem, 2013, 6, 2161-2169.	6.8	121
50	Light-Harvesting Nanorods Based on Pheophorbide-Appending Cellulose. Biomacromolecules, 2013, 14, 3223-3230.	5.4	14
51	Pervaporation recovery of [AMIM]Cl during wood dissolution; effect of [AMIM]Cl properties on the membrane performance. Journal of Membrane Science, 2013, 444, 9-15.	8.2	3
52	Fractionation of Lignocellulosic Materials Using Ionic Liquids: Part 2. Effect of Particle Size on the Mechanisms of Fractionation. Industrial & Engineering Chemistry Research, 2013, 52, 3958-3966.	3.7	25
53	On the reactivity of the Melanocarpus albomyces laccase and formation of coniferyl alcohol dehydropolymer (DHP) in the presence of ionic liquid 1-allyl-3-methylimidazolium chloride. Journal of Molecular Catalysis B: Enzymatic, 2013, 85-86, 169-177.	1.8	13
54	Fast and highly efficient acetylation of xylans in ionic liquid systems. Cellulose, 2013, 20, 2813-2824.	4.9	35

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55	Relative and inherent reactivities of imidazolium-based ionic liquids: the implications for lignocellulose processing applications. RSC Advances, 2012, 2, 8020.	3.6	72
56	Role of Solvent Parameters in the Regeneration of Cellulose from Ionic Liquid Solutions. Biomacromolecules, 2012, 13, 2896-2905.	5.4	236
57	Reactive dissolution of cellulose and pulp through acylation in pyridine. Cellulose, 2012, 19, 1295-1304.	4.9	27
58	Highly water repellent aerogels based on cellulose stearoyl esters. Polymer Chemistry, 2011, 2, 1789.	3.9	58
59	Fractionation of Lignocellulosic Materials with Ionic Liquids. 1. Effect of Mechanical Treatment. Industrial & Engineering Chemistry Research, 2011, 50, 12349-12357.	3.7	30
60	Distillable Acidâ€“Base Conjugate Ionic Liquids for Cellulose Dissolution and Processing. Angewandte Chemie - International Edition, 2011, 50, 6301-6305.	13.8	208
61	1H, 13C and 15N resonance assignments of the major extracytoplasmic domain of the cell shape-determining protein MreC from Bacillus subtilis. Biomolecular NMR Assignments, 2010, 4, 235-238.	0.8	2
62	Quantitative two-dimensional HSQC experiment for high magnetic field NMR spectrometers. Journal of Magnetic Resonance, 2010, 202, 24-33.	2.1	49
63	Opportunities with Wood Dissolved in Ionic Liquids. ACS Symposium Series, 2010, , 343-363.	0.5	1
64	A new method for rapid degree of substitution and purity determination of chloroform-soluble cellulose esters, using 31P NMR. Analytical Methods, 2010, 2, 1499.	2.7	50
65	Effect of self-assembly via Ï€-stacking to morphology and crystallinity on tritylated cellulose. Materials Letters, 2009, 63, 473-476.	2.6	5
66	Highly compatible wood thermoplastic composites from lignocellulosic material modified in ionic liquids: Preparation and thermal properties. Journal of Applied Polymer Science, 2009, 111, 2468-2476.	2.6	36
67	A new protection group strategy for cellulose in an ionic liquid: simultaneous protection of two sites to yield 2,6-di-O-substituted mono-p-methoxytrityl cellulose. Tetrahedron Letters, 2009, 50, 1744-1747.	1.4	17
68	Hydrophobic Interactions Determining Functionalized Lignocellulose Solubility in Dialkylimidazolium Chlorides, as Probed by ³¹P NMR. Biomacromolecules, 2009, 10, 458-463.	5.4	38
69	In Situ Determination of Lignin Phenolics and Wood Solubility in Imidazolium Chlorides Using³¹P NMR. Journal of Agricultural and Food Chemistry, 2009, 57, 8236-8243.	5.2	72
70	Synthesis, characterisation and application of novel self-assembled comb-like liquid crystalline biphenyl-cellulose as UV absorber for paper. Journal of Materials Chemistry, 2009, 19, 639-644.	6.7	10
71	Tosylation and acylation of cellulose in 1-allyl-3-methylimidazolium chloride. Cellulose, 2008, 15, 481-488.	4.9	76
72	Noncovalent attachment of pyro-pheophorbidea to a carbon nanotube. Chemical Communications, 2007, , 519-521.	4.1	50

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73	Dissolution of Wood in Ionic Liquids. Journal of Agricultural and Food Chemistry, 2007, 55, 9142-9148.	5.2	850
74	Titanium and Zirconium Benzyl Complexes Bearing Bulky Bis(amido)cyclodiphosph(III)azanes:â€‰ Synthesis, Structure, Activation, and Ethene Polymerization Studies. Organometallics, 2006, 25, 463-471.	2.3	23
75	NMR solution structure and characterization of substrate binding site of the PPIase domain of PrsA protein fromBacillus subtilis. FEBS Letters, 2006, 580, 1822-1826.	2.8	19
76	Some aspects of quantitative 2D NMR. Journal of Magnetic Resonance, 2005, 174, 237-244.	2.1	78
77	NH Tautomerism in the Natural Chlorin Derivatives. Journal of Organic Chemistry, 2000, 65, 3700-3707.	3.2	24
78	Oxidative Coupling of Phenols and the Biosynthesis of Lignin. ACS Symposium Series, 1998, , 131-147.	0.5	57
79	Identification of Side-Chain Structures in a Poplar Lignin Using Three-Dimensional HMQCâ^'HOHAHA NMR Spectroscopy. Journal of Agricultural and Food Chemistry, 1998, 46, 5113-5117.	5.2	94
80	Enhanced activity of hyperthermostable Pyrococcus horikoshii endoglucanase in superbase ionic liquids. Biotechnology Letters, 0, , .	2.2	2