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	Dissolution of Wood in Ionic Liquids. Journal of Agricultural and Food Chemistry, 2007, 55, 9142-9148.	5.2	850
2	Role of Solvent Parameters in the Regeneration of Cellulose from Ionic Liquid Solutions. Biomacromolecules, 2012, 13, 2896-2905.	5.4	236
3	Distillable Acidâ€“Base Conjugate Ionic Liquids for Cellulose Dissolution and Processing. Angewandte Chemie - International Edition, 2011, 50, 6301-6305.	13.8	208
4	Ioncell-F: A High-strength regenerated cellulose fibre. Nordic Pulp and Paper Research Journal, 2015, 30, 43-57.	0.7	190
5	Predicting Cellulose Solvating Capabilities of Acidâ€“Base Conjugate Ionic Liquids. ChemSusChem, 2013, 6, 2161-2169.	6.8	121
6	Identification of Side-Chain Structures in a Poplar Lignin Using Three-Dimensional HMQCâˆ’HOHAHA NMR Spectroscopy. Journal of Agricultural and Food Chemistry, 1998, 46, 5113-5117.	5.2	94
7	Some aspects of quantitative 2D NMR. Journal of Magnetic Resonance, 2005, 174, 237-244.	2.1	78
8	Impact of Amphiphilic Biomass-Dissolving Ionic Liquids on Biological Cells and Liposomes. Environmental Science & Technology, 2015, 49, 1870-1878.	10.0	78
9	Tosylation and acylation of cellulose in 1-allyl-3-methylimidazolium chloride. Cellulose, 2008, 15, 481-488.	4.9	76
10	Getting Closer to Absolute Molar Masses of Technical Lignins. ChemSusChem, 2018, 11, 3259-3268.	6.8	76
11	Effect of Ionic Liquids on Zebrafish (<i>Danio rerio</i>) Viability, Behavior, and Histology; Correlation between Toxicity and Ionic Liquid Aggregation. Environmental Science & Technology, 2016, 50, 7116-7125.	10.0	74
12	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
13	Relative and inherent reactivities of imidazolium-based ionic liquids: the implications for lignocellulose processing applications. RSC Advances, 2012, 2, 8020.	3.6	72
14	Amphiphilic and Phaseâ€Separable Ionic Liquids for Biomass Processing. ChemSusChem, 2014, 7, 1422-1434.	6.8	60
15	Highly water repellent aerogels based on cellulose stearoyl esters. Polymer Chemistry, 2011, 2, 1789.	3.9	58
16	Ionic Liquids for the Production of Man-Made Cellulosic Fibers: Opportunities and Challenges. Advances in Polymer Science, 2015, , 133-168.	0.8	58
17	Oxidative Coupling of Phenols and the Biosynthesis of Lignin. ACS Symposium Series, 1998, , 131-147.	0.5	57
18	Liquid-State NMR Analysis of Nanocelluloses. Biomacromolecules, 2018, 19, 2708-2720.	5.4	57

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19	Noncovalent attachment of pyro-pheophorbidea to a carbon nanotube. Chemical Communications, 2007, , 519-521.	4.1	50
20	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
21	Quantitative two-dimensional HSQC experiment for high magnetic field NMR spectrometers. Journal of Magnetic Resonance, 2010, 202, 24-33.	2.1	49
22	Enhancement of ionic liquid-aided fractionation of birchwood. Part 1: autohydrolysis pretreatment. RSC Advances, 2013, 3, 16365.	3.6	45
23	Synthesis of Cellulose Methylcarbonate in Ionic Liquids using Dimethylcarbonate. ChemSusChem, 2015, 8, 77-81.	6.8	41
24	Homogenous esterification of cellulose pulp in [DBNH][OAc]. Cellulose, 2017, 24, 5341-5354.	4.9	41
25	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
26	Hydrophobic Interactions Determining Functionalized Lignocellulose Solubility in Dialkylimidazolium Chlorides, as Probed by ³¹P NMR. Biomacromolecules, 2009, 10, 458-463.	5.4	38
27	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
28	Dissolution enthalpies of cellulose in ionic liquids. Carbohydrate Polymers, 2014, 113, 67-76.	10.2	36
29	Efficiency of hydrophobic phosphonium ionic liquids and DMSO as recyclable cellulose dissolution and regeneration media. RSC Advances, 2017, 7, 17451-17461.	3.6	36
30	On the solubility of wood in non-derivatising ionic liquids. Green Chemistry, 2013, 15, 2374.	9.0	35
31	Fast and highly efficient acetylation of xylans in ionic liquid systems. Cellulose, 2013, 20, 2813-2824.	4.9	35
32	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
33	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
34	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
35	2D Assignment and quantitative analysis of cellulose and oxidized celluloses using solution-state NMR spectroscopy. Cellulose, 2020, 27, 7929-7953.	4.9	34
36	Nanostructurally Controllable Strong Wood Aerogel toward Efficient Thermal Insulation. ACS Applied Materials & Interfaces, 2022, 14, 24697-24707.	8.0	34

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37	Cationic wood cellulose films with high strength and bacterial anti-adhesive properties. Cellulose, 2014, 21, 3573-3583.	4.9	31
38	Fractionation of Lignocellulosic Materials with Ionic Liquids. 1. Effect of Mechanical Treatment. Industrial & Engineering Chemistry Research, 2011, 50, 12349-12357.	3.7	30
39	Solutionâ€State Oneâ€•and Twoâ€Dimensional NMR Spectroscopy of Highâ€Molecularâ€Weight Cellulose. ChemSusChem, 2016, 9, 880-892.	6.8	29
40	Reactive dissolution of cellulose and pulp through acylation in pyridine. Cellulose, 2012, 19, 1295-1304.	4.9	27
41	Application of mild autohydrolysis to facilitate the dissolution of wood chips in direct-dissolution solvents. Green Chemistry, 2016, 18, 3286-3294.	9.0	26
42	High-Performance Acetylated Ioncell-F Fibers with Low Degree of Substitution. ACS Sustainable Chemistry and Engineering, 2018, 6, 9418-9426.	6.7	26
43	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
44	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
45	NH Tautomerism in the Natural Chlorin Derivatives. Journal of Organic Chemistry, 2000, 65, 3700-3707.	3.2	24
46	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
47	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
48	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
49	Amination and thiolation of chloroacetyl cellulose through reactive dissolution in N,N-dimethylformamide. Carbohydrate Polymers, 2015, 116, 60-66.	10.2	19
50	Stability of Criegee Intermediates Formed by Ozonolysis of Different Double Bonds. Journal of Physical Chemistry A, 2015, 119, 2318-2325.	2.5	18
51	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
52	Cationic cellulose betainate for wastewater treatment. Cellulose, 2015, 22, 1861-1872.	4.9	18
53	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
54	Physico-chemical characterization of aqueous solutions of superbase ionic liquids with cellulose dissolution capability. Fluid Phase Equilibria, 2022, 556, 113414.	2.5	15

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55	Light-Harvesting Nanorods Based on Pheophorbide-Appending Cellulose. Biomacromolecules, 2013, 14, 3223-3230.	5.4	14
56	Quantitative, equal carbon response HSQC experiment, QEC-HSQC. Journal of Magnetic Resonance, 2016, 271, 34-39.	2.1	14
57	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
58	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 2702-2717.	5.4	14
59	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
60	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
61	Highly regioselective surface acetylation of cellulose and shaped cellulose constructs in the gas-phase. Green Chemistry, 2022, 24, 5604-5613.	9.0	12
62	Preparation of cellulose and pulp carbamates through a reactive dissolution approach. RSC Advances, 2014, 4, 22434.	3.6	11
63	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
64	Inhibition of hyperthermostable xylanases by superbase ionic liquids. Process Biochemistry, 2020, 95, 148-156.	3.7	10
65	Clustered Single Cellulosic Fiber Dissolution Kinetics and Mechanisms through Optical Microscopy under Limited Dissolving Conditions. Biomacromolecules, 2018, 19, 1635-1645.	5.4	7
66	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
67	Automating the NMR analysis of base oils: Finding napthene signals. Fuel, 2013, 111, 543-554.	6.4	6
68	Effect of self-assembly via Ï€-stacking to morphology and crystallinity on tritylated cellulose. Materials Letters, 2009, 63, 473-476.	2.6	5
69	Phase-separation of cellulose from ionic liquid upon cooling: preparation of microsized particles. Cellulose, 2021, 28, 10921-10938.	4.9	4
70	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
71	CHAPTER 5: REDUCTION OF BIOMASS RECALCITRANCE VIA IONIC LIQUID PRETREATMENTS. Materials and Energy, 2014, , 95-125.	0.1	3
72	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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73	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
74	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
75	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
76	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
77	Thermoâ€reversible cellulose micro phaseâ€separation in mixtures of methyltributylphosphonium acetate and Î³â€valerolactone or DMSO. ChemPhysChem, 2022, , .	2.1	2
78	Enhanced activity of hyperthermostable Pyrococcus horikoshii endoglucanase in superbase ionic liquids. Biotechnology Letters, 0, , .	2.2	2
79	Opportunities with Wood Dissolved in Ionic Liquids. ACS Symposium Series, 2010, , 343-363.	0.5	1
80	Modification of Lignocellulosics in the Dissolved State for Added Functionality. , 2020, , 65-90.		0