Michael Hummel

List of Publications by Year
in descending order

78 papers	2,891 citations	172457 29 h-index	182427 51 g-index
80 all docs	80 docs citations	80 times ranked	2169 citing authors

#	Article	IF	Citations
1	Chemically Accelerated Stabilization of a Celluloseâ€"Lignin Precursor as a Route to High Yield Carbon Fiber Production. Biomacromolecules, 2022, 23, 839-846.	5.4	10
2	Mechanistic Insights into the Formation of 1-Alkylidene/Arylidene-1,2,4-triazolinium Salts: A Combined NMR/Density Functional Theory Approach. Journal of Organic Chemistry, 2022, 87, 1019-1031.	3.2	0
3	Thermoâ€reversible cellulose micro phaseâ€separation in mixtures of methyltributylphosphonium acetate and Î³â€valerolactone or DMSO. ChemPhysChem, 2022, , .	2.1	2
4	Evaluation of Keratinâ€"Cellulose Blend Fibers as Precursors for Carbon Fibers. ACS Sustainable Chemistry and Engineering, 2022, 10, 8314-8325.	6.7	3
5	Cellulose-lignin composite fibres as precursors for carbon fibres. Part 1 â€" Manufacturing and properties of precursor fibres. Carbohydrate Polymers, 2021, 252, 117133.	10.2	38
6	Fluoroponytailed Brooker's merocyanines: Studies on solution behavior, solvatochromism and supramolecular aggregation. Dyes and Pigments, 2021, 184, 108798.	3.7	4
7	Understanding the influence of key parameters on the stabilisation of cellulose-lignin composite fibres. Cellulose, 2021, 28, 911-919.	4.9	10
8	Effect of boric acid on the stabilisation of cellulose-lignin filaments as precursors for carbon fibres. Cellulose, 2021, 28, 729-739.	4.9	21
9	Ionic and neutral fluorosurfactants containing ferrocene moieties as chromophoric constituents. Journal of Fluorine Chemistry, 2021, 241, 109674.	1.7	1
10	The fiberâ€matrix interface in Ioncell cellulose fiber composites and its implications for the mechanical performance. Journal of Applied Polymer Science, 2021, 138, 50306.	2.6	5
11	Superbase-based protic ionic liquids for cellulose filament spinning. Cellulose, 2021, 28, 533-547.	4.9	25
12	New method for determining the degree of fibrillation of regenerated cellulose fibres. Cellulose, 2021, 28, 31-44.	4.9	17
13	Hydrophobization of the Man-Made Cellulosic Fibers by Incorporating Plant-Derived Hydrophobic Compounds. ACS Sustainable Chemistry and Engineering, 2021, 9, 4915-4925.	6.7	13
14	Effect of single-fiber properties and fiber volume fraction on the mechanical properties of Ioncell fiber composites. Journal of Reinforced Plastics and Composites, 2021, 40, 741-748.	3.1	6
15	Exploring digital image correlation technique for the analysis of the tensile properties of all-cellulose composites. Cellulose, 2021, 28, 4165-4178.	4.9	8
16	Fast and quantitative compositional analysis of hybrid cellulose-based regenerated fibers using thermogravimetric analysis and chemometrics. Cellulose, 2021, 28, 6797-6812.	4.9	6
17	Towards regenerated cellulose fibers with high toughness. Cellulose, 2021, 28, 9547-9566.	4.9	24
18	Evolution of carbon nanostructure during pyrolysis of homogeneous chitosan-cellulose composite fibers. Carbon, 2021, 185, 27-38.	10.3	16

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19	Air gap spinning of a cellulose solution in [<scp>DBNH</scp>][<scp>OAc</scp>] ionic liquid with a novel vertically arranged spinning bath to simulate a closed loop operation in the IoncellÂ® process. Journal of Applied Polymer Science, 2021, 138, 49787.	2.6	16
20	Spinneret geometry modulates the mechanical properties of man-made cellulose fibers. Cellulose, 2021, 28, 11165-11181.	4.9	4
21	Effect of Enzymatic Depolymerization of Cellulose and Hemicelluloses on the Direct Dissolution of Prehydrolysis Kraft Dissolving Pulp. Biomacromolecules, 2021, 22, 4805-4813.	5.4	5
22	Cellulose Fibers for High-Performance Textiles Functionalized with Incorporated Gold and Silver Nanoparticles. ACS Sustainable Chemistry and Engineering, 2020, 8, 649-658.	6.7	29
23	Cellulose-lignin composite fibers as precursors for carbon fibers: Part 2 â€“ The impact of precursor properties on carbon fibers. Carbohydrate Polymers, 2020, 250, 116918.	10.2	31
24	Green Conducting Cellulose Yarns for Machine-Sewn Electronic Textiles. ACS Applied Materials & Interfaces, 2020, 12, 56403-56412.	8.0	39
25	2-Mercaptoimidazolium halides: structural diversity, stability and spontaneous racemisation. CrystEngComm, 2020, 22, 6034-6046.	2.6	2
26	Close Packing of Cellulose and Chitosan in Regenerated Cellulose Fibers Improves Carbon Yield and Structural Properties of Respective Carbon Fibers. Biomacromolecules, 2020, 21, 4326-4335.	5.4	30
27	Exploring Large Ductility in Cellulose Nanopaper Combining High Toughness and Strength. ACS Nano, 2020, 14, 11150-11159.	14.6	45
28	Activation of carbon tow electrodes for use in iron aqueous redox systems for electrochemical applications. Journal of Materials Chemistry C, 2020, 8, 7755-7764.	5.5	4
29	Unidirectional All-Cellulose Composites from Flax via Controlled Impregnation with Ionic Liquid. Polymers, 2020, 12, 1010.	4.5	16
30	Fungal Treatment Modifies Kraft Lignin for Lignin- and Cellulose-Based Carbon Fiber Precursors. ACS Omega, 2020, 5, 6130-6140.	3.5	18
31	Swelling and dissolution kinetics of natural and man-made cellulose fibers in solvent power tuned ionic liquid. Cellulose, 2020, 27, 7399-7415.	4.9	17
32	New insights into the air gap conditioning effects during the dry-jet wet spinning of an ionic liquid-cellulose solution. Cellulose, 2020, 27, 4931-4948.	4.9	13
33	Upcycling of cotton polyester blended textile waste to new man-made cellulose fibers. Waste Management, 2019, 97, 88-96.	7.4	117
34	Evaluation of post-consumer cellulosic textile waste for chemical recycling based on cellulose degree of polymerization and molar mass distribution. Textile Reseach Journal, 2019, 89, 5067-5075.	2.2	15
35	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
36	Stochastic transient Liquid-Solid Phase Separation reveals multi-level Dispersion States of Particles in Suspension. Applied Rheology, 2019, 29, 41-57.	5.2	0

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37	Recycling of vat and reactive dyed textile waste to new colored man-made cellulose fibers. Green Chemistry, 2019, 21, 5598-5610.	9.0	57
38	Solid-state NMR method for the quantification of cellulose and polyester in textile blends. Carbohydrate Polymers, 2019, 207, 11-16.	10.2	43
39	Ionic liquids and gamma-valerolactone as case studies for green solvents in the deconstruction and refining of biomass. Current Opinion in Green and Sustainable Chemistry, 2019, 18, 20-24.	5.9	16
40	Enhanced stabilization of cellulose-lignin hybrid filaments for carbon fiber production. Cellulose, 2018, 25, 723-733.	4.9	71
41	High performance man-made cellulosic fibres from recycled newsprint. Green Chemistry, 2018, 20, 160-169.	9.0	42
42	Filament spinning of unbleached birch kraft pulps: Effect of pulping intensity on the processability and the fiber properties. Carbohydrate Polymers, 2018, 179, 145-151.	10.2	31
43	High-Performance Acetylated Ioncell-F Fibers with Low Degree of Substitution. ACS Sustainable Chemistry and Engineering, 2018, 6, 9418-9426.	6.7	26
44	Structural analysis of Ioncell-F fibres from birch wood. Carbohydrate Polymers, 2018, 181, 893-901.	10.2	33
45	Phase-out-compliant fluorosurfactants: unique methimazolium derivatives including room temperature ionic liquids. Green Chemistry, 2017, 19, 3225-3237.	9.0	22
46	Understanding the role of water in the interaction of ionic liquids with wood polymers. Carbohydrate Polymers, 2017, 168, 121-128.	10.2	16
47	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
48	The effect of hydration on the micromechanics of regenerated cellulose fibres from ionic liquid solutions of varying draw ratios. Carbohydrate Polymers, 2016, 151, 1110-1114.	10.2	8
49	Influence of process parameters on the structure formation of manâ€made cellulosic fibers from ionic liquid solution. Journal of Applied Polymer Science, 2016, 133, .	2.6	36
50	Advantages of regenerated cellulose fibres as compared to flax fibres in the processability and mechanical performance of thermoset composites. Composites Part A: Applied Science and Manufacturing, 2016, 84, 377-385.	7.6	31
51	Cellulose fractionation with IONCELL-P. Carbohydrate Polymers, 2016, 150, 99-106.	10.2	23
52	Celluloseâ€Derived Carbon Fibers Produced via a Continuous Carbonization Process: Investigating Precursor Choice and Carbonization Conditions. Macromolecular Chemistry and Physics, 2016, 217, 2517-2524.	2.2	30
53	IONCELL-P&F: Pulp Fractionation and Fiber Spinning with Ionic Liquids. Industrial & Engineering Chemistry Research, 2016, 55, 8225-8233.	3.7	47
54	Renewable Highâ€Performance Fibers from the Chemical Recycling of Cotton Waste Utilizing an Ionic Liquid. ChemSusChem, 2016, 9, 3250-3258.	6.8	92

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55	Ioncell-F: ionic liquid-based cellulosic textile fibers as an alternative to viscose and Lyocell. Textile Reseach Journal, 2016, 86, 543-552.	2.2	138
56	Cellulose regeneration and spinnability from ionic liquids. Soft Matter, 2016, 12, 1487-1495.	2.7	74
57	Upcycling of waste paper and cardboard to textiles. Green Chemistry, 2016, 18, 858-866.	9.0	96
58	Comparison of pulp species in IONCELL-P: selective hemicellulose extraction method with ionic liquids. Holzforschung, 2016, 70, 291-296.	1.9	21
59	Highâ€Strength Composite Fibers from Celluloseâ€"Lignin Blends Regenerated from Ionic Liquid Solution. ChemSusChem, 2015, 8, 4030-4039.	6.8	99
60	Ioncell-F: A High-strength regenerated cellulose fibre. Nordic Pulp and Paper Research Journal, 2015, 30, 43-57.	0.7	190
61	From colloidal spheres to nanofibrils: Extensional flow properties of mineral pigment and mixtures with micro and nanofibrils under progressive double layer suppression. Journal of Colloid and Interface Science, 2015, 446, 31-43.	9.4	23
62	Ionic Liquids for the Production of Man-Made Cellulosic Fibers: Opportunities and Challenges. Advances in Polymer Science, 2015, , 133-168.	0.8	58
63	Influence of molar mass distribution on the final properties of fibers regenerated from cellulose dissolved in ionic liquid by dry-jet wet spinning. Polymer, 2015, 75, 1-9.	3.8	70
64	Monitoring of cellulose depolymerization in 1-ethyl-3-methylimidazolium acetate by shear and elongational rheology. Carbohydrate Polymers, 2015, 117, 355-363.	10.2	36
65	Dry jet-wet spinning of strong cellulose filaments from ionic liquid solution. Cellulose, 2014, 21, 4471-4481.	4.9	126
66	Ionic liquid extraction method for upgrading eucalyptus kraft pulp to high purity dissolving pulp. Cellulose, 2014, 21, 3655-3666.	4.9	54
67	Enhancement of ionic liquid-aided fractionation of birchwood. Part 1: autohydrolysis pretreatment. RSC Advances, 2013, 3, 16365.	3.6	45
68	Predicting Cellulose Solvating Capabilities of Acidâ€"Base Conjugate Ionic Liquids. ChemSusChem, 2013, 6, 2161-2169.	6.8	121
69	Separation of Hemicellulose and Cellulose from Wood Pulp by Means of Ionic Liquid/Cosolvent Systems. Biomacromolecules, 2013, 14, 1741-1750.	5.4	115
70	Role of Solvent Parameters in the Regeneration of Cellulose from Ionic Liquid Solutions. Biomacromolecules, 2012, 13, 2896-2905.	5.4	236
71	The 1â€‰:â€‰1 and 1â€‰:â€‰2 salts of 1,4-diazabicyclo[2.2.2]octane and bis(trifluoromethylsulfonyl)amine: thermal behaviour and polymorphism. CrystEngComm, 2011, 13, 5439.	2.6	12
72	Improved Synthesis of 3-Nitrosalicylic Acid. Synthetic Communications, 2010, 40, 3353-3357.	2.1	5

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73	Non-Halide Ionic Liquids for Solvation, Extraction, and Processing of Cellulosic Materials. ACS Symposium Series, 2010, , 229-259.	0.5	7
74	Novel linear acetylpentanedionato complexes for metalâ€“organic framework construction. CrystEngComm, 2008, 10, 327-334.	2.6	7
75	Synthesis and Crystal Structures of 1-Alkoxy-3-alkylimidazolium Salts Including Ionic Liquids, 1-Alkylimidazole 3-oxides and 1-Alkylimidazole Perhydrates. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2008, 63, 447-464.	0.7	27
76	N,N'-Di(alkyloxy)imidazolium Salts: New Patent-free Ionic Liquids and NHC Precatalysts. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2007, 62, 295-308.	0.7	39
77	The Homoleptic Square-Antiprismatic Chelate Tetrakis(3-acetyl-2,4-pentanedionato)zirconium(IV):â€‰ A Promising Coordination Motif for Tetrahedral Metalâˆ'Organic Frameworks. Crystal Growth and Design, 2006, 6, 1720-1725.	3.0	6
78	Effect of graphitic additives on the rheology of cellulose solutions for the preparation of templated carbon fiber precursors. Journal of Applied Polymer Science, 0, , .	2.6	1