Blake Alexander Simmons

List of Publications by Year
in descending order

400 papers	27,621 citations	5248 83 h-index	8835 145 g-index
420 all docs	420 docs citations	420 times ranked	26998 citing authors

#	Article	IF	Citations
1	MaxBin 2.0: an automated binning algorithm to recover genomes from multiple metagenomic datasets. Bioinformatics, 2016, 32, 605-607.	1.8	1,574
2	Comparison of dilute acid and ionic liquid pretreatment of switchgrass: Biomass recalcitrance, delignification and enzymatic saccharification. Bioresource Technology, 2010, 101, 4900-4906.	4.8	926
3	The challenge of enzyme cost in the production of lignocellulosic biofuels. Biotechnology and Bioengineering, 2012, 109, 1083-1087.	1.7	792
4	Influence of Connectivity and Porosity on Ligand-Based Luminescence in Zinc Metalâ˘'Organic Frameworks. Journal of the American Chemical Society, 2007, 129, 7136-7144.	6.6	625
5	MaxBin: an automated binning method to recover individual genomes from metagenomes using an expectation-maximization algorithm. Microbiome, 2014, 2, 26.	4.9	521
6	The Status, Quality, and Expansion of the NIH Full-Length cDNA Project: The Mammalian Gene Collection (MGC). Genome Research, 2004, 14, 2121-2127.	2.4	486
7	Dielectrophoretic Concentration and Separation of Live and Dead Bacteria in an Array of Insulators. Analytical Chemistry, 2004, 76, 1571-1579.	3.2	429
8	Design of low-cost ionic liquids for lignocellulosic biomass pretreatment. Green Chemistry, 2015, 17, 1728-1734.	4.6	384
9	In vivo lipidomics using single-cell Raman spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3809-3814.	3.3	378
10	Transition of Cellulose Crystalline Structure and Surface Morphology of Biomass as a Function of Ionic Liquid Pretreatment and Its Relation to Enzymatic Hydrolysis. Biomacromolecules, 2011, 12, 933-941.	2.6	373
11	Visualization of biomass solubilization and cellulose regeneration during ionic liquid pretreatment of switchgrass. Biotechnology and Bioengineering, 2009, 104, 68-75.	1.7	354
12	A single-base resolution map of an archaeal transcriptome. Genome Research, 2010, 20, 133-141.	2.4	348
13	Synthesis of three advanced biofuels from ionic liquid-pretreated switchgrass using engineered <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19949-19954.	3.3	333
14	Insulator-based dielectrophoresis for the selective concentration and separation of live bacteria in water. Electrophoresis, 2004, 25, 1695-1704.	1.3	313
15	Technoâ€economic analysis of a lignocellulosic ethanol biorefinery with ionic liquid preâ€treatment. Biofuels, Bioproducts and Biorefining, 2011, 5, 562-569.	1.9	303
16	Understanding the Interactions of Cellulose with Ionic Liquids: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2010, 114, 4293-4301.	1.2	299
17	A mosaic monoploid reference sequence for the highly complex genome of sugarcane. Nature Communications, 2018, 9, 2638.	5.8	299
18	Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3587-95.	3.3	285

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19	Recent innovations in analytical methods for the qualitative and quantitative assessment of lignin. Renewable and Sustainable Energy Reviews, 2015, 49, 871-906.	8.2	282
20	Biomass pretreatment using deep eutectic solvents from lignin derived phenols. Green Chemistry, 2018, 20, 809-815.	4.6	235
21	Advances in modifying lignin for enhanced biofuel production. Current Opinion in Plant Biology, 2010, 13, 312-319.	3.5	211
22	Ionic liquid tolerant hyperthermophilic cellulases for biomass pretreatment and hydrolysis. Green Chemistry, 2010, 12, 338.	4.6	211
23	Human ORFeome Version 1.1: A Platform for Reverse Proteomics. Genome Research, 2004, 14, 2128-2135.	2.4	208
24	Morphology of CdS Nanocrystals Synthesized in a Mixed Surfactant System. Nano Letters, 2002, 2, 263-268.	4.5	207
25	Influence of physico-chemical changes on enzymatic digestibility of ionic liquid and AFEX pretreated corn stover. Bioresource Technology, 2011, 102, 6928-6936.	4.8	203
26	From lignin association to nano-/micro-particle preparation: extracting higher value of lignin. Green Chemistry, 2016, 18, 5693-5700.	4.6	203
27	Transforming biomass conversion with ionic liquids: process intensification and the development of a high-gravity, one-pot process for the production of cellulosic ethanol. Energy and Environmental Science, 2016, 9, 1042-1049.	15.6	201
28	A comparative study of ethanol production using dilute acid, ionic liquid and AFEXâ„¢ pretreated corn stover. Biotechnology for Biofuels, 2014, 7, 72.	6.2	199
29	Overexpression of the maize<i>Corngrass1</i>microRNA prevents flowering, improves digestibility, and increases starch content of switchgrass. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17550-17555.	3.3	185
30	Characterization of Trapped Lignin-Degrading Microbes in Tropical Forest Soil. PLoS ONE, 2011, 6, e19306.	1.1	178
31	One-pot ionic liquid pretreatment and saccharification of switchgrass. Green Chemistry, 2013, 15, 2579.	4.6	175
32	Targeted Discovery of Glycoside Hydrolases from a Switchgrass-Adapted Compost Community. PLoS ONE, 2010, 5, e8812.	1.1	170
33	Next-generation ammonia pretreatment enhances cellulosic biofuel production. Energy and Environmental Science, 2016, 9, 1215-1223.	15.6	169
34	An insulator-based (electrodeless) dielectrophoretic concentrator for microbes in water. Journal of Microbiological Methods, 2005, 62, 317-326.	0.7	163
35	Investigation of inter- and intraspecies variation through genome sequencing of Aspergillus section Nigri. Nature Genetics, 2018, 50, 1688-1695.	9.4	160
36	Technoeconomic analysis of biofuels: A wiki-based platform for lignocellulosic biorefineries. Biomass and Bioenergy, 2010, 34, 1914-1921.	2.9	153

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37	Supramolecular Self-Assembled Chaos: Polyphenolic Ligninâ€™s Barrier to Cost-Effective Lignocellulosic Biofuels. Molecules, 2010, 15, 8641-8688.	1.7	151
38	Survey of renewable chemicals produced from lignocellulosic biomass during ionic liquid pretreatment. Biotechnology for Biofuels, 2013, 6, 14.	6.2	151
39	Rhodosporidium toruloides: a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. Biotechnology for Biofuels, 2017, 10, 241.	6.2	150
40	Triacylglycerol accumulation and profiling in the model diatoms Thalassiosira pseudonana and Phaeodactylum tricornutum (Baccilariophyceae) during starvation. Journal of Applied Phycology, 2009, 21, 669-681.	1.5	149
41	From lignin subunits to aggregates: insights into lignin solubilization. Green Chemistry, 2017, 19, 3272-3281.	4.6	149
42	Next-generation biomass feedstocks for biofuel production. Genome Biology, 2008, 9, 242.	13.9	144
43	Biomass deconstruction to sugars. Biotechnology Journal, 2011, 6, 1086-1102.	1.8	140
44	Biosynthesis and incorporation of sideâ€chainâ€truncated lignin monomers to reduce lignin polymerization and enhance saccharification. Plant Biotechnology Journal, 2012, 10, 609-620.	4.1	140
45	Impact of ionic liquid pretreated plant biomass on Saccharomyces cerevisiae growth and biofuel production. Green Chemistry, 2011, 13, 2743.	4.6	139
46	Understanding pretreatment efficacy of four cholinium and imidazolium ionic liquids by chemistry and computation. Green Chemistry, 2014, 16, 2546-2557.	4.6	138
47	Lignin fate and characterization during ionic liquid biomass pretreatment for renewable chemicals and fuels production. Green Chemistry, 2014, 16, 1236-1247.	4.6	137
48	Machine learning for metabolic engineering: A review. Metabolic Engineering, 2021, 63, 34-60.	3.6	135
49	The effect of ionic liquid cation and anion combinations on the macromolecular structure of lignins. Green Chemistry, 2011, 13, 3375.	4.6	134
50	Understanding the impact of ionic liquid pretreatment on eucalyptus. Biofuels, 2010, 1, 33-46.	1.4	129
51	Understanding the role of water during ionic liquid pretreatment of lignocellulose: co-solvent or anti-solvent?. Green Chemistry, 2014, 16, 3830-3840.	4.6	129
52	Linking secondary metabolites to gene clusters through genome sequencing of six diverse <i>Aspergillus</i> species. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E753-E761.	3.3	126
53	The completion of the Mammalian Gene Collection (MGC). Genome Research, 2009, 19, 2324-2333.	2.4	125
54	A comparative genomics study of 23 Aspergillus species from section Flavi. Nature Communications, 2020, 11, 1106.	5.8	125

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55	Mechanical properties of cubic zinc carboxylate IRMOF-1 metal-organic framework crystals. Physical Review B, 2007, 76, .	1.1	124
56	A facile method for the recovery of ionic liquid and lignin from biomass pretreatment. Green Chemistry, 2011, 13, 3255.	4.6	124
57	Impact of Ionic Liquid Pretreatment Conditions on Cellulose Crystalline Structure Using 1-Ethyl-3-methylimidazolium Acetate. Journal of Physical Chemistry B, 2012, 116, 10049-10054.	1.2	121
58	Understanding cost drivers and economic potential of two variants of ionic liquid pretreatment for cellulosic biofuel production. Biotechnology for Biofuels, 2014, 7, 86.	6.2	120
59	Comparison of Different Biomass Pretreatment Techniques and Their Impact on Chemistry and Structure. Frontiers in Energy Research, 2015, 2, .	1.2	118
60	One-pot integrated biofuel production using low-cost biocompatible protic ionic liquids. Green Chemistry, 2017, 19, 3152-3163.	4.6	115
61	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. ACS Sustainable Chemistry and Engineering, 2017, 5, 8171-8180.	3.2	115
62	Monitoring and Analyzing Process Streams Towards Understanding Ionic Liquid Pretreatment of Switchgrass (Panicum virgatum L.). Bioenergy Research, 2010, 3, 134-145.	2.2	114
63	Recovery of Sugars from Ionic Liquid Biomass Liquor by Solvent Extraction. Bioenergy Research, 2010, 3, 123-133.	2.2	112
64	Identification of a haloalkaliphilic and thermostable cellulase with improved ionic liquid tolerance. Green Chemistry, 2011, 13, 2083.	4.6	111
65	Assessment of Lignocellulosic Biomass Using Analytical Spectroscopy: an Evolution to High-Throughput Techniques. Bioenergy Research, 2014, 7, 1-23.	2.2	111
66	The ORFeome Collaboration: a genome-scale human ORF-clone resource. Nature Methods, 2016, 13, 191-192.	9.0	111
67	Microstructure Determination of AOT + Phenol Organogels Utilizing Small-Angle X-ray Scattering and Atomic Force Microscopy. Journal of the American Chemical Society, 2001, 123, 2414-2421.	6.6	110
68	Potential for Genetic Improvement of Sugarcane as a Source of Biomass for Biofuels. Frontiers in Bioengineering and Biotechnology, 2015, 3, 182.	2.0	109
69	Techno-economic analysis and life-cycle greenhouse gas mitigation cost of five routes to bio-jet fuel blendstocks. Energy and Environmental Science, 2019, 12, 807-824.	15.6	109
70	Enzyme activities of aerobic lignocellulolytic bacteria isolated from wet tropical forest soils. Systematic and Applied Microbiology, 2014, 37, 60-67.	1.2	103
71	Strategies for Enhancing the Effectiveness of Metagenomic-based Enzyme Discovery in Lignocellulolytic Microbial Communities. Bioenergy Research, 2010, 3, 146-158.	2.2	100
72	Glycoside Hydrolase Activities of Thermophilic Bacterial Consortia Adapted to Switchgrass. Applied and Environmental Microbiology, 2011, 77, 5804-5812.	1.4	99

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73	Comparing the Recalcitrance of Eucalyptus, Pine, and Switchgrass Using Ionic Liquid and Dilute Acid Pretreatments. Bioenergy Research, 2013, 6, 14-23.	2.2	99
74	Functional genomics of lipid metabolism in the oleaginous yeast Rhodosporidium toruloides. ELife, 2018, 7, .	2.8	98
75	A Thermophilic Ionic Liquid-Tolerant Cellulase Cocktail for the Production of Cellulosic Biofuels. PLoS ONE, 2012, 7, e37010.	1.1	98
76	Engineering high-level production of fatty alcohols by Saccharomyces cerevisiae from lignocellulosic feedstocks. Metabolic Engineering, 2017, 42, 115-125.	3.6	97
77	Scale-up and evaluation of high solid ionic liquid pretreatment and enzymatic hydrolysis of switchgrass. Biotechnology for Biofuels, 2013, 6, 154.	6.2	94
78	The zeta potential of cyclo-olefin polymer microchannels and its effects on insulative (electrodeless) dielectrophoresis particle trapping devices. Electrophoresis, 2005, 26, 1792-1799.	1.3	93
79	Evidence supporting dissimilatory and assimilatory lignin degradation in Enterobacter lignolyticus SCF1. Frontiers in Microbiology, 2013, 4, 280.	1.5	92
80	An Investigation on the Economic Feasibility of Macroalgae as a Potential Feedstock for Biorefineries. Bioenergy Research, 2015, 8, 1046-1056.	2.2	92
81	Engineering and Two-Stage Evolution of a Lignocellulosic Hydrolysate-Tolerant Saccharomyces cerevisiae Strain for Anaerobic Fermentation of Xylose from AFEX Pretreated Corn Stover. PLoS ONE, 2014, 9, e107499.	1.1	91
82	Expression of a bacterial 3â€dehydroshikimate dehydratase reduces lignin content and improves biomass saccharification efficiency. Plant Biotechnology Journal, 2015, 13, 1241-1250.	4.1	90
83	Exploring the effect of different plant lignin content and composition on ionic liquid pretreatment efficiency and enzymatic saccharification of Eucalyptus globulus L. mutants. Bioresource Technology, 2012, 117, 352-359.	4.8	89
84	Recent developments in materials synthesis in surfactant systems. Current Opinion in Colloid and Interface Science, 2002, 7, 288-295.	3.4	88
85	Low-temperature combustion chemistry of biofuels: pathways in the initial low-temperature (550) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	88
86	Thermoascus aurantiacus is a promising source of enzymes for biomass deconstruction under thermophilic conditions. Biotechnology for Biofuels, 2012, 5, 54.	6.2	88
87	The impact of ionic liquid pretreatment on the chemistry and enzymatic digestibility of Pinus radiata compression wood. Green Chemistry, 2012, 14, 778.	4.6	87
88	Theory, practice and prospects of X-ray and neutron scattering for lignocellulosic biomass characterization: towards understanding biomass pretreatment. Energy and Environmental Science, 2015, 8, 436-455.	15.6	87
89	Global transcriptome response to ionic liquid by a tropical rain forest soil bacterium, <i>Enterobacter lignolyticus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2173-82.	3.3	85
90	Impact of high biomass loading on ionic liquid pretreatment. Biotechnology for Biofuels, 2013, 6, 52.	6.2	85

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91	An auto-inducible mechanism for ionic liquid resistance in microbial biofuel production. Nature Communications, 2014, 5, 3490.	5.8	85
92	Lignin depolymerization by fungal secretomes and a microbial sink. Green Chemistry, 2016, 18, 6046-6062.	4.6	84
93	Three Novel Rice Genes Closely Related to the ArabidopsisIRX9, IRX9L, and IRX14 Genes and Their Roles in Xylan Biosynthesis. Frontiers in Plant Science, 2013, 4, 83.	1.7	83
94	Comparison of the impact of ionic liquid pretreatment on recalcitrance of agave bagasse and switchgrass. Bioresource Technology, 2013, 127, 18-24.	4.8	82
95	Modifying plants for biofuel and biomaterial production. Plant Biotechnology Journal, 2014, 12, 1246-1258.	4.1	82
96	MOF-Based Catalysts for Selective Hydrogenolysis of Carbonâ€“Oxygen Ether Bonds. ACS Catalysis, 2016, 6, 55-59.	5.5	82
97	Comparison of enzymatic reactivity of corn stover solids prepared by dilute acid, AFEXâ„¢, and ionic liquid pretreatments. Biotechnology for Biofuels, 2014, 7, 71.	6.2	81
98	Molecular Dynamics Study of Polysaccharides in Binary Solvent Mixtures of an Ionic Liquid and Water. Journal of Physical Chemistry B, 2011, 115, 10251-10258.	1.2	80
99	Impact of mixed feedstocks and feedstock densification on ionic liquid pretreatment efficiency. Biofuels, 2013, 4, 63-72.	1.4	80
100	Sample concentration and impedance detection on a microfluidic polymer chip. Biomedical Microdevices, 2008, 10, 661-670.	1.4	79
101	Phylogenomically Guided Identification of Industrially Relevant GH1 Î²-Glucosidases through DNA Synthesis and Nanostructure-Initiator Mass Spectrometry. ACS Chemical Biology, 2014, 9, 2082-2091.	1.6	78
102	Community dynamics of celluloseâ€adapted thermophilic bacterial consortia. Environmental Microbiology, 2013, 15, 2573-2587.	1.8	77
103	Survey of Lignin-Structure Changes and Depolymerization during Ionic Liquid Pretreatment. ACS Sustainable Chemistry and Engineering, 2017, 5, 10116-10127.	3.2	77
104	Demonstrating a separation-free process coupling ionic liquid pretreatment, saccharification, and fermentation with <i>Rhodosporidium toruloides</i> to produce advanced biofuels. Green Chemistry, 2018, 20, 2870-2879.	4.6	77
105	Complete genome sequence of â€œEnterobacter lignolyticusâ€•SCF1. Standards in Genomic Sciences, 2011, 5, 69-85.	1.5	76
106	Thermally Cleavable Surfactants Based on Furanâ^'Maleimide Dielsâ^'Alder Adducts. Langmuir, 2005, 21, 3259-3266.	1.6	75
107	Characterization of agave bagasse as a function ofÂionic liquid pretreatment. Biomass and Bioenergy, 2015, 75, 180-188.	2.9	74
108	Evaluation of agave bagasse recalcitrance using AFEXâ„¢, autohydrolysis, and ionic liquid pretreatments. Bioresource Technology, 2016, 211, 216-223.	4.8	74

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109	Adaptive laboratory evolution of Pseudomonas putida KT2440 improves p-coumaric and ferulic acid catabolism and tolerance. Metabolic Engineering Communications, 2020, 11, e00143.	1.9	73
110	Efficient dehydration and recovery of ionic liquid after lignocellulosic processing using pervaporation. Biotechnology for Biofuels, 2017, 10, 154.	6.2	72
111	Characteristics of Isopentanol as a Fuel for HCCI Engines. SAE International Journal of Fuels and Lubricants, 0, 3, 725-741.	0.2	71
112	A droplet-to-digital (D2D) microfluidic device for single cell assays. Lab on A Chip, 2015, 15, 225-236.	3.1	70
113	Catalytic transfer hydrogenolysis of ionic liquid processed biorefinery lignin to phenolic compounds. Green Chemistry, 2017, 19, 215-224.	4.6	70
114	Characterization of Lignin Streams during Bionic Liquid-Based Pretreatment from Grass, Hardwood, and Softwood. ACS Sustainable Chemistry and Engineering, 2018, 6, 3079-3090.	3.2	70
115	Biochemical characterization and crystal structure of endoglucanase Cel5A from the hyperthermophilic Thermotoga maritima. Journal of Structural Biology, 2010, 172, 372-379.	1.3	65
116	Understanding tissue specific compositions of bioenergy feedstocks through hyperspectral Raman imaging. Biotechnology and Bioengineering, 2011, 108, 286-295.	1.7	65
117	Discovery and characterization of ionic liquid-tolerant thermophilic cellulases from a switchgrass-adapted microbial community. Biotechnology for Biofuels, 2014, 7, 15.	6.2	65
118	New Experimental Density Data and Soft-SAFT Models of Alkylimidazolium ([C_{<i>n</i>}C₁im]⁺) Chloride (Cl^{â€“}), Methylsulfate ([MeSO₄]^{âˆ’}), and Dimethylphosphate ([Me₂PO₄]^{âˆ’}) Based Ionic Liquids. Journal of Physical Chemistry B, 2014, 118, 6206-6221.	1.2	65
119	Comparison of different pretreatments for the production of bioethanol and biomethane from corn stover and switchgrass. Bioresource Technology, 2015, 183, 101-110.	4.8	65
120	Impact of engineered lignin composition on biomass recalcitrance and ionic liquid pretreatment efficiency. Green Chemistry, 2016, 18, 4884-4895.	4.6	64
121	Low cost ionic liquidâ€“water mixtures for effective extraction of carbohydrate and lipid from algae. Faraday Discussions, 2017, 206, 93-112.	1.6	64
122	Addition of a carbohydrate-binding module enhances cellulase penetration into cellulose substrates. Biotechnology for Biofuels, 2013, 6, 93.	6.2	63
123	CO2 enabled process integration for the production of cellulosic ethanol using bionic liquids. Energy and Environmental Science, 2016, 9, 2822-2834.	15.6	63
124	Biocompatible Choline-Based Deep Eutectic Solvents Enable One-Pot Production of Cellulosic Ethanol. ACS Sustainable Chemistry and Engineering, 2018, 6, 8914-8919.	3.2	63
125	Production and extraction of sugars from switchgrass hydrolyzed in ionic liquids. Biotechnology for Biofuels, 2013, 6, 39.	6.2	62
126	Proteogenomic Analysis of a Thermophilic Bacterial Consortium Adapted to Deconstruct Switchgrass. PLoS ONE, 2013, 8, e68465.	1.1	62

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127	Refining the phylum Chlorobi by resolving the phylogeny and metabolic potential of the representative of a deeply branching, uncultivated lineage. ISME Journal, 2016, 10, 833-845.	4.4	62
128	Treatment of lignite and thermal coal with low cost amino acid based ionic liquid-water mixtures. Fuel, 2017, 202, 296-306.	3.4	62
129	Solubilization and Upgrading of High Polyethylene Terephthalate Loadings in a Lowâ€Costing Bifunctional Ionic Liquid. ChemSusChem, 2018, 11, 781-792.	3.6	62
130	Simulations Reveal Conformational Changes of Methylhydroxyl Groups during Dissolution of Cellulose I_{Î²} in Ionic Liquid 1-Ethyl-3-methylimidazolium Acetate. Journal of Physical Chemistry B, 2012, 116, 8131-8138.	1.2	61
131	Understanding changes in lignin of Panicum virgatum and Eucalyptus globulus as a function of ionic liquid pretreatment. Bioresource Technology, 2012, 126, 156-161.	4.8	60
132	Rapid determination of syringyl: Guaiacyl ratios using FTâ€Raman spectroscopy. Biotechnology and Bioengineering, 2012, 109, 647-656.	1.7	60
133	Rapid room temperature solubilization and depolymerization of polymeric lignin at high loadings. Green Chemistry, 2016, 18, 6012-6020.	4.6	60
134	Generation of a platform strain for ionic liquid tolerance using adaptive laboratory evolution. Microbial Cell Factories, 2017, 16, 204.	1.9	60
135	SbCOMT (Bmr12) is involved in the biosynthesis of tricin-lignin in sorghum. PLoS ONE, 2017, 12, e0178160.	1.1	59
136	Sustainable bioproduction of the blue pigment indigoidine: Expanding the range of heterologous products in<i>R. toruloides</i>to include non-ribosomal peptides. Green Chemistry, 2019, 21, 3394-3406.	4.6	57
137	Accumulation of high-value bioproducts <i>in planta</i> can improve the economics of advanced biofuels. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8639-8648.	3.3	57
138	Understanding the impact of ionic liquid pretreatment on cellulose and lignin via thermochemical analysis. Biomass and Bioenergy, 2013, 54, 276-283.	2.9	55
139	Chemoselective Methylation of Phenolic Hydroxyl Group Prevents Quinone Methide Formation and Repolymerization During Lignin Depolymerization. ACS Sustainable Chemistry and Engineering, 2017, 5, 3913-3919.	3.2	55
140	Structural features affecting the enzymatic digestibility of pine wood pretreated with ionic liquids. Biotechnology and Bioengineering, 2016, 113, 540-549.	1.7	52
141	Development of an E. coli strain for one-pot biofuel production from ionic liquid pretreated cellulose and switchgrass. Green Chemistry, 2016, 18, 4189-4197.	4.6	52
142	Short-chain ketone production by engineered polyketide synthases in Streptomyces albus. Nature Communications, 2018, 9, 4569.	5.8	52
143	Unveiling high-resolution, tissue specific dynamic changes in corn stover during ionic liquid pretreatment. RSC Advances, 2013, 3, 2017-2027.	1.7	51
144	Engineering Corynebacterium glutamicum to produce the biogasoline isopentenol from plant biomass hydrolysates. Biotechnology for Biofuels, 2019, 12, 41.	6.2	51

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145	Spatial Compartmentalization of Nanoparticles into Strands of a Self-Assembled Organogel. Nano Letters, 2002, 2, 1037-1042.	4.5	50
146	Functional Antibody Immobilization on 3-Dimensional Polymeric Surfaces Generated by Reactive Ion Etching. Langmuir, 2005, 21, 7621-7625.	1.6	50
147	Vibrational Spectra of Methane Clathrate Hydrates from Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2006, 110, 6428-6431.	1.2	50
148	Low-distortion, high-strength bonding of thermoplastic microfluidic devices employing case-II diffusion-mediated permeant activation. Lab on A Chip, 2007, 7, 1825.	3.1	50
149	Structure and mechanism of NOV1, a resveratrol-cleaving dioxygenase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14324-14329.	3.3	50
150	A toolset of constitutive promoters for metabolic engineering of Rhodosporidium toruloides. Microbial Cell Factories, 2019, 18, 117.	1.9	50
151	Review of advances in the development of laccases for the valorization of lignin to enable the production of lignocellulosic biofuels and bioproducts. Biotechnology Advances, 2022, 54, 107809.	6.0	50
152	Discovery of Microorganisms and Enzymes Involved in High-Solids Decomposition of Rice Straw Using Metagenomic Analyses. PLoS ONE, 2013, 8, e77985.	1.1	50
153	Life-Cycle Greenhouse Gas and Water Intensity of Cellulosic Biofuel Production Using Cholinium Lysinate Ionic Liquid Pretreatment. ACS Sustainable Chemistry and Engineering, 2017, 5, 10176-10185.	3.2	49
154	Glycoside Hydrolases from a targeted Compost Metagenome, activity-screening and functional characterization. BMC Biotechnology, 2012, 12, 38.	1.7	48
155	The role of organic matter amendment level on soil heating, organic acid accumulation, and development of bacterial communities in solarized soil. Applied Soil Ecology, 2016, 106, 37-46.	2.1	48
156	Impact of lignin polymer backbone esters on ionic liquid pretreatment of poplar. Biotechnology for Biofuels, 2017, 10, 101.	6.2	48
157	Performance impact of dynamic surface coatings on polymeric insulator-based dielectrophoretic particle separators. Analytical and Bioanalytical Chemistry, 2008, 390, 847-855.	1.9	47
158	Effect of Ionic Liquid Treatment on the Structures of Lignins in Solutions: Molecular Subunits Released from Lignin. Langmuir, 2012, 28, 11850-11857.	1.6	47
159	Changes in microbial dynamics during long-term decomposition in tropical forests. Soil Biology and Biochemistry, 2013, 66, 60-68.	4.2	47
160	Theoretical Insights into the Role of Water in the Dissolution of Cellulose Using IL/Water Mixed Solvent Systems. Journal of Physical Chemistry B, 2015, 119, 14339-14349.	1.2	46
161	Small Angle Neutron Scattering Study of Microstructural Transitions in a Surfactant-Based Gel Mesophase. Langmuir, 2002, 18, 624-632.	1.6	45
162	The Development of Polymeric Devices as Dielectrophoretic Separators and Concentrators. MRS Bulletin, 2006, 31, 120-124.	1.7	45

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163	Addressing the Need for Alternative Transportation Fuels: The Joint BioEnergy Institute. ACS Chemical Biology, 2008, 3, 17-20.	1.6	44
164	Co-production of ethanol, biogas, protein fodder and natural fertilizer in organic farming â€" Evaluation of a concept for a farm-scale biorefinery. Bioresource Technology, 2012, 104, 440-446.	4.8	44
165	Structural and Biochemical Characterization of the Early and Late Enzymes in the Lignin Î²-Aryl Ether Cleavage Pathway from Sphingobium sp. SYK-6. Journal of Biological Chemistry, 2016, 291, 10228-10238.	1.6	44
166	Activation of lignocellulosic biomass for higher sugar yields using aqueous ionic liquid at low severity process conditions. Biotechnology for Biofuels, 2016, 9, 160.	6.2	44
167	Sequential enzymatic saccharification and fermentation of ionic liquid and organosolv pretreated agave bagasse for ethanol production. Bioresource Technology, 2017, 225, 191-198.	4.8	44
168	Neutron Reflectometry and QCM-D Study of the Interaction of Cellulases with Films of Amorphous Cellulose. Biomacromolecules, 2011, 12, 2216-2224.	2.6	43
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