Blake A Simmons

List of Publications by Year
in descending order

293 papers	21,727 citations	8159 76 h-index	12558 132 g-index
300 all docs	300 docs citations	300 times ranked	19745 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	MaxBin: an automated binning method to recover individual genomes from metagenomes using an expectation-maximization algorithm. Microbiome, 2014, 2, 26.	4.9	521
5	Dielectrophoretic Concentration and Separation of Live and Dead Bacteria in an Array of Insulators. Analytical Chemistry, 2004, 76, 1571-1579.	3.2	429
6	Design of low-cost ionic liquids for lignocellulosic biomass pretreatment. Green Chemistry, 2015, 17, 1728-1734.	4.6	384
7	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
8	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
9	Visualization of biomass solubilization and cellulose regeneration during ionic liquid pretreatment of switchgrass. Biotechnology and Bioengineering, 2009, 104, 68-75.	1.7	354
10	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
11	Insulator-based dielectrophoresis for the selective concentration and separation of live bacteria in water. Electrophoresis, 2004, 25, 1695-1704.	1.3	313
12	Technoâ€economic analysis of a lignocellulosic ethanol biorefinery with ionic liquid preâ€treatment. Biofuels, Bioproducts and Biorefining, 2011, 5, 562-569.	1.9	303
13	Understanding the Interactions of Cellulose with Ionic Liquids: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2010, 114, 4293-4301.	1.2	299
14	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
15	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
16	Advances in modifying lignin for enhanced biofuel production. Current Opinion in Plant Biology, 2010, 13, 312-319.	3.5	211
17	Ionic liquid tolerant hyperthermophilic cellulases for biomass pretreatment and hydrolysis. Green Chemistry, 2010, 12, 338.	4.6	211
18	Morphology of CdS Nanocrystals Synthesized in a Mixed Surfactant System. Nano Letters, 2002, 2, 263-268.	4.5	207

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19	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
20	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
21	One-pot ionic liquid pretreatment and saccharification of switchgrass. Green Chemistry, 2013, 15, 2579.	4.6	175
22	Targeted Discovery of Glycoside Hydrolases from a Switchgrass-Adapted Compost Community. PLoS ONE, 2010, 5, e8812.	1.1	170
23	Next-generation ammonia pretreatment enhances cellulosic biofuel production. Energy and Environmental Science, 2016, 9, 1215-1223.	15.6	169
24	An insulator-based (electrodeless) dielectrophoretic concentrator for microbes in water. Journal of Microbiological Methods, 2005, 62, 317-326.	0.7	163
25	Investigation of inter- and intraspecies variation through genome sequencing of Aspergillus section Nigri. Nature Genetics, 2018, 50, 1688-1695.	9.4	160
26	Technoeconomic analysis of biofuels: A wiki-based platform for lignocellulosic biorefineries. Biomass and Bioenergy, 2010, 34, 1914-1921.	2.9	153
27	Survey of renewable chemicals produced from lignocellulosic biomass during ionic liquid pretreatment. Biotechnology for Biofuels, 2013, 6, 14.	6.2	151
28	Rhodosporidium toruloides: a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. Biotechnology for Biofuels, 2017, 10, 241.	6.2	150
29	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
30	From lignin subunits to aggregates: insights into lignin solubilization. Green Chemistry, 2017, 19, 3272-3281.	4.6	149
31	Next-generation biomass feedstocks for biofuel production. Genome Biology, 2008, 9, 242.	13.9	144
32	Biomass deconstruction to sugars. Biotechnology Journal, 2011, 6, 1086-1102.	1.8	140
33	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
34	Impact of ionic liquid pretreated plant biomass on Saccharomyces cerevisiae growth and biofuel production. Green Chemistry, 2011, 13, 2743.	4.6	139
35	Understanding pretreatment efficacy of four cholinium and imidazolium ionic liquids by chemistry and computation. Green Chemistry, 2014, 16, 2546-2557.	4.6	138
36	Lignin fate and characterization during ionic liquid biomass pretreatment for renewable chemicals and fuels production. Green Chemistry, 2014, 16, 1236-1247.	4.6	137

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37	Machine learning for metabolic engineering: A review. Metabolic Engineering, 2021, 63, 34-60.	3.6	135
38	The effect of ionic liquid cation and anion combinations on the macromolecular structure of lignins. Green Chemistry, 2011, 13, 3375.	4.6	134
39	Understanding the impact of ionic liquid pretreatment on eucalyptus. Biofuels, 2010, 1, 33-46.	1.4	129
40	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
41	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
42	A comparative genomics study of 23 Aspergillus species from section Flavi. Nature Communications, 2020, 11, 1106.	5.8	125
43	A facile method for the recovery of ionic liquid and lignin from biomass pretreatment. Green Chemistry, 2011, 13, 3255.	4.6	124
44	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
45	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
46	Comparison of Different Biomass Pretreatment Techniques and Their Impact on Chemistry and Structure. Frontiers in Energy Research, 2015, 2, .	1.2	118
47	One-pot integrated biofuel production using low-cost biocompatible protic ionic liquids. Green Chemistry, 2017, 19, 3152-3163.	4.6	115
48	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. ACS Sustainable Chemistry and Engineering, 2017, 5, 8171-8180.	3.2	115
49	Monitoring and Analyzing Process Streams Towards Understanding Ionic Liquid Pretreatment of Switchgrass (Panicum virgatum L.). Bioenergy Research, 2010, 3, 134-145.	2.2	114
50	Recovery of Sugars from Ionic Liquid Biomass Liquor by Solvent Extraction. Bioenergy Research, 2010, 3, 123-133.	2.2	112
51	Assessment of Lignocellulosic Biomass Using Analytical Spectroscopy: an Evolution to High-Throughput Techniques. Bioenergy Research, 2014, 7, 1-23.	2.2	111
52	Potential for Genetic Improvement of Sugarcane as a Source of Biomass for Biofuels. Frontiers in Bioengineering and Biotechnology, 2015, 3, 182.	2.0	109
53	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
54	Enzyme activities of aerobic lignocellulolytic bacteria isolated from wet tropical forest soils. Systematic and Applied Microbiology, 2014, 37, 60-67.	1.2	103

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55	Strategies for Enhancing the Effectiveness of Metagenomic-based Enzyme Discovery in Lignocellulolytic Microbial Communities. Bioenergy Research, 2010, 3, 146-158.	2.2	100
56	Glycoside Hydrolase Activities of Thermophilic Bacterial Consortia Adapted to Switchgrass. Applied and Environmental Microbiology, 2011, 77, 5804-5812.	1.4	99
57	Comparing the Recalcitrance of Eucalyptus, Pine, and Switchgrass Using Ionic Liquid and Dilute Acid Pretreatments. Bioenergy Research, 2013, 6, 14-23.	2.2	99
58	Functional genomics of lipid metabolism in the oleaginous yeast Rhodosporidium toruloides. ELife, 2018, 7, .	2.8	98
59	A Thermophilic Ionic Liquid-Tolerant Cellulase Cocktail for the Production of Cellulosic Biofuels. PLoS ONE, 2012, 7, e37010.	1.1	98
60	Engineering high-level production of fatty alcohols by Saccharomyces cerevisiae from lignocellulosic feedstocks. Metabolic Engineering, 2017, 42, 115-125.	3.6	97
61	Scale-up and evaluation of high solid ionic liquid pretreatment and enzymatic hydrolysis of switchgrass. Biotechnology for Biofuels, 2013, 6, 154.	6.2	94
62	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
63	An Investigation on the Economic Feasibility of Macroalgae as a Potential Feedstock for Biorefineries. Bioenergy Research, 2015, 8, 1046-1056.	2.2	92
64	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
65	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
66	Low-temperature combustion chemistry of biofuels: pathways in the initial low-temperature (550) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.3	88
67	Thermoascus aurantiacus is a promising source of enzymes for biomass deconstruction under thermophilic conditions. Biotechnology for Biofuels, 2012, 5, 54.	6.2	88
68	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
69	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
70	Impact of high biomass loading on ionic liquid pretreatment. Biotechnology for Biofuels, 2013, 6, 52.	6.2	85
71	An auto-inducible mechanism for ionic liquid resistance in microbial biofuel production. Nature Communications, 2014, 5, 3490.	5.8	85
72	Lignin depolymerization by fungal secretomes and a microbial sink. Green Chemistry, 2016, 18, 6046-6062.	4.6	84

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73	Comparison of the impact of ionic liquid pretreatment on recalcitrance of agave bagasse and switchgrass. Bioresource Technology, 2013, 127, 18-24.	4.8	82
74	Modifying plants for biofuel and biomaterial production. Plant Biotechnology Journal, 2014, 12, 1246-1258.	4.1	82
75	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
76	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
77	Impact of mixed feedstocks and feedstock densification on ionic liquid pretreatment efficiency. Biofuels, 2013, 4, 63-72.	1.4	80
78	Sample concentration and impedance detection on a microfluidic polymer chip. Biomedical Microdevices, 2008, 10, 661-670.	1.4	79
79	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
80	Community dynamics of celluloseâ€adapted thermophilic bacterial consortia. Environmental Microbiology, 2013, 15, 2573-2587.	1.8	77
81	Survey of Lignin-Structure Changes and Depolymerization during Ionic Liquid Pretreatment. ACS Sustainable Chemistry and Engineering, 2017, 5, 10116-10127.	3.2	77
82	Thermally Cleavable Surfactants Based on Furanâ^'Maleimide Dielsâ^'Alder Adducts. Langmuir, 2005, 21, 3259-3266.	1.6	75
83	Characterization of agave bagasse as a function ofÂionic liquid pretreatment. Biomass and Bioenergy, 2015, 75, 180-188.	2.9	74
84	Evaluation of agave bagasse recalcitrance using AFEXâ„¢, autohydrolysis, and ionic liquid pretreatments. Bioresource Technology, 2016, 211, 216-223.	4.8	74
85	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
86	Efficient dehydration and recovery of ionic liquid after lignocellulosic processing using pervaporation. Biotechnology for Biofuels, 2017, 10, 154.	6.2	72
87	A droplet-to-digital (D2D) microfluidic device for single cell assays. Lab on A Chip, 2015, 15, 225-236.	3.1	70
88	Catalytic transfer hydrogenolysis of ionic liquid processed biorefinery lignin to phenolic compounds. Green Chemistry, 2017, 19, 215-224.	4.6	70
89	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
90	Biochemical characterization and crystal structure of endoglucanase Cel5A from the hyperthermophilic Thermotoga maritima. Journal of Structural Biology, 2010, 172, 372-379.	1.3	65

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91	Understanding tissue specific compositions of bioenergy feedstocks through hyperspectral Raman imaging. Biotechnology and Bioengineering, 2011, 108, 286-295.	1.7	65
92	Discovery and characterization of ionic liquid-tolerant thermophilic cellulases from a switchgrass-adapted microbial community. Biotechnology for Biofuels, 2014, 7, 15.	6.2	65
93	Impact of engineered lignin composition on biomass recalcitrance and ionic liquid pretreatment efficiency. Green Chemistry, 2016, 18, 4884-4895.	4.6	64
94	Low cost ionic liquidâ€“water mixtures for effective extraction of carbohydrate and lipid from algae. Faraday Discussions, 2017, 206, 93-112.	1.6	64
95	Addition of a carbohydrate-binding module enhances cellulase penetration into cellulose substrates. Biotechnology for Biofuels, 2013, 6, 93.	6.2	63
96	CO2 enabled process integration for the production of cellulosic ethanol using bionic liquids. Energy and Environmental Science, 2016, 9, 2822-2834.	15.6	63
97	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
98	Production and extraction of sugars from switchgrass hydrolyzed in ionic liquids. Biotechnology for Biofuels, 2013, 6, 39.	6.2	62
99	Proteogenomic Analysis of a Thermophilic Bacterial Consortium Adapted to Deconstruct Switchgrass. PLoS ONE, 2013, 8, e68465.	1.1	62
100	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
101	Treatment of lignite and thermal coal with low cost amino acid based ionic liquid-water mixtures. Fuel, 2017, 202, 296-306.	3.4	62
102	Solubilization and Upgrading of High Polyethylene Terephthalate Loadings in a Lowâ€Costing Bifunctional Ionic Liquid. ChemSusChem, 2018, 11, 781-792.	3.6	62
103	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
104	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
105	Rapid determination of syringyl: Guaiacyl ratios using FTâ€Raman spectroscopy. Biotechnology and Bioengineering, 2012, 109, 647-656.	1.7	60
106	Rapid room temperature solubilization and depolymerization of polymeric lignin at high loadings. Green Chemistry, 2016, 18, 6012-6020.	4.6	60
107	Generation of a platform strain for ionic liquid tolerance using adaptive laboratory evolution. Microbial Cell Factories, 2017, 16, 204.	1.9	60
108	SbCOMT (Bmr12) is involved in the biosynthesis of tricin-lignin in sorghum. PLoS ONE, 2017, 12, e0178160.	1.1	59

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109	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
110	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
111	Understanding the impact of ionic liquid pretreatment on cellulose and lignin via thermochemical analysis. Biomass and Bioenergy, 2013, 54, 276-283.	2.9	55
112	Structural features affecting the enzymatic digestibility of pine wood pretreated with ionic liquids. Biotechnology and Bioengineering, 2016, 113, 540-549.	1.7	52
113	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
114	Short-chain ketone production by engineered polyketide synthases in Streptomyces albus. Nature Communications, 2018, 9, 4569.	5.8	52
115	Unveiling high-resolution, tissue specific dynamic changes in corn stover during ionic liquid pretreatment. RSC Advances, 2013, 3, 2017-2027.	1.7	51
116	Engineering Corynebacterium glutamicum to produce the biogasoline isopentenol from plant biomass hydrolysates. Biotechnology for Biofuels, 2019, 12, 41.	6.2	51
117	Vibrational Spectra of Methane Clathrate Hydrates from Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2006, 110, 6428-6431.	1.2	50
118	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
119	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
120	A toolset of constitutive promoters for metabolic engineering of Rhodosporidium toruloides. Microbial Cell Factories, 2019, 18, 117.	1.9	50
121	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
122	Discovery of Microorganisms and Enzymes Involved in High-Solids Decomposition of Rice Straw Using Metagenomic Analyses. PLoS ONE, 2013, 8, e77985.	1.1	50
123	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
124	Glycoside Hydrolases from a targeted Compost Metagenome, activity-screening and functional characterization. BMC Biotechnology, 2012, 12, 38.	1.7	48
125	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
126	Impact of lignin polymer backbone esters on ionic liquid pretreatment of poplar. Biotechnology for Biofuels, 2017, 10, 101.	6.2	48

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127	Performance impact of dynamic surface coatings on polymeric insulator-based dielectrophoretic particle separators. Analytical and Bioanalytical Chemistry, 2008, 390, 847-855.	1.9	47
128	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
129	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
130	Small Angle Neutron Scattering Study of Microstructural Transitions in a Surfactant-Based Gel Mesophase. Langmuir, 2002, 18, 624-632.	1.6	45
131	The Development of Polymeric Devices as Dielectrophoretic Separators and Concentrators. MRS Bulletin, 2006, 31, 120-124.	1.7	45
132	Addressing the Need for Alternative Transportation Fuels: The Joint BioEnergy Institute. ACS Chemical Biology, 2008, 3, 17-20.	1.6	44
133	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
134	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
135	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
136	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
137	Neutron Reflectometry and QCM-D Study of the Interaction of Cellulases with Films of Amorphous Cellulose. Biomacromolecules, 2011, 12, 2216-2224.	2.6	43
138	From Soil to Structure, a Novel Dimeric Î²-Glucosidase Belonging to Glycoside Hydrolase Family 3 Isolated from Compost Using Metagenomic Analysis. Journal of Biological Chemistry, 2013, 288, 14985-14992.	1.6	42
139	High-throughput prediction of eucalypt lignin syringyl/guaiacyl content using multivariate analysis: a comparison between mid-infrared, near-infrared, and Raman spectroscopies for model development. Biotechnology for Biofuels, 2014, 7, 93.	6.2	41
140	Ionic liquid-tolerant microorganisms and microbial communities for lignocellulose conversion to bioproducts. Applied Microbiology and Biotechnology, 2016, 100, 10237-10249.	1.7	41
141	Microbial Community Structure and Functional Potential Along a Hypersaline Gradient. Frontiers in Microbiology, 2018, 9, 1492.	1.5	41
142	Acid enhanced ionic liquid pretreatment of biomass. Green Chemistry, 2013, 15, 1264.	4.6	40
143	Metatranscriptomic analysis of lignocellulolytic microbial communities involved in high-solids decomposition of rice straw. Biotechnology for Biofuels, 2014, 7, 495.	6.2	40
144	Impact of Pretreatment Technologies on Saccharification and Isopentenol Fermentation of Mixed Lignocellulosic Feedstocks. Bioenergy Research, 2015, 8, 1004-1013.	2.2	40

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145	Structural Basis of Stereospecificity in the Bacterial Enzymatic Cleavage of Î²-Aryl Ether Bonds in Lignin. Journal of Biological Chemistry, 2016, 291, 5234-5246.	1.6	40
146	Technoâ€economic and greenhouse gas analyses of lignin valorization to eugenol and phenolic products in integrated ethanol biorefineries. Biofuels, Bioproducts and Biorefining, 2019, 13, 978-993.	1.9	40
147	A new approach to Cas9-based genome editing in Aspergillus niger that is precise, efficient and selectable. PLoS ONE, 2019, 14, e0210243.	1.1	40
148	High-Efficiency Conversion of Ionic Liquid-Pretreated Woody Biomass to Ethanol at the Pilot Scale. ACS Sustainable Chemistry and Engineering, 2021, 9, 4042-4053.	3.2	40
149	Tracing Determinants of Dual Substrate Specificity in Glycoside Hydrolase Family 5. Journal of Biological Chemistry, 2012, 287, 25335-25343.	1.6	39
150	A bacterial pioneer produces cellulase complexes that persist through community succession. Nature Microbiology, 2018, 3, 99-107.	5.9	38
151	Characterization of bacterial communities in solarized soil amended with lignocellulosic organic matter. Applied Soil Ecology, 2014, 73, 97-104.	2.1	37
152	Use of ensiled biomass sorghum increases ionic liquid pretreatment efficiency and reduces biofuel production cost and carbon footprint. Green Chemistry, 2021, 23, 3127-3140.	4.6	37
153	Silica Particle Formation in Confined Environments via Bioinspired Polyamine Catalysis at Near-Neutral pH. Small, 2007, 3, 58-62.	5.2	36
154	Yeast tolerance to the ionic liquid 1-ethyl-3-methylimidazolium acetate. FEMS Yeast Research, 2014, 14, 1286-1294.	1.1	36
155	Rapid Kinetic Characterization of Glycosyl Hydrolases Based on Oxime Derivatization and Nanostructure-Initiator Mass Spectrometry (NIMS). ACS Chemical Biology, 2014, 9, 1470-1479.	1.6	36
156	Efficient conversion of lignin into a water-soluble polymer by a chelator-mediated Fenton reaction: optimization of H₂O₂use and performance as a dispersant. Green Chemistry, 2018, 20, 3024-3037.	4.6	36
157	Scale-up of biomass conversion using 1-ethyl-3-methylimidazolium acetateÂas the solvent. Green Energy and Environment, 2019, 4, 432-438.	4.7	36
158	Parametric study for the optimization of ionic liquid pretreatment of corn stover. Bioresource Technology, 2017, 241, 627-637.	4.8	35
159	One-pot bio-derived ionic liquid conversion followed by hydrogenolysis reaction for biomass valorization: A promising approach affecting the morphology and quality of lignin of switchgrass and poplar. Bioresource Technology, 2019, 294, 122214.	4.8	34
160	Deconstruction of Woody Biomass via Protic and Aprotic Ionic Liquid Pretreatment for Ethanol Production. ACS Sustainable Chemistry and Engineering, 2021, 9, 4422-4432.	3.2	34
161	Engineering Saccharomyces cerevisiae for isoprenol production. Metabolic Engineering, 2021, 64, 154-166.	3.6	34
162	Enzymatic hydrolysis of cellulose by the cellobiohydrolase domain of CelB from the hyperthermophilic bacterium Caldicellulosiruptor saccharolyticus. Bioresource Technology, 2011, 102, 5988-5994.	4.8	33

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163	Lignocellulosic ethanol production without enzymes â€“ Technoeconomic analysis of ionic liquid pretreatment followed by acidolysis. Bioresource Technology, 2014, 158, 294-299.	4.8	33
164	Scale-Up of Ionic Liquid-Based Fractionation of Single and Mixed Feedstocks. Bioenergy Research, 2015, 8, 982-991.	2.2	33
165	<i>In silico</i> COSMO-RS predictive screening of ionic liquids for the dissolution of plastic. Green Chemistry, 2022, 24, 4140-4152.	4.6	33
166	Structural and Chemical Characterization of Hardwood from Tree Species with Applications as Bioenergy Feedstocks. PLoS ONE, 2012, 7, e52820.	1.1	32
167	Dimethyl Sulfoxide Assisted Ionic Liquid Pretreatment of Switchgrass for Isoprenol Production. ACS Sustainable Chemistry and Engineering, 2018, 6, 4354-4361.	3.2	32
168	Generation of <i>Pseudomonas putida</i> KT2440 Strains with Efficient Utilization of Xylose and Galactose via Adaptive Laboratory Evolution. ACS Sustainable Chemistry and Engineering, 2021, 9, 11512-11523.	3.2	32
169	Development of a Native Escherichia coli Induction System for Ionic Liquid Tolerance. PLoS ONE, 2014, 9, e101115.	1.1	31
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