Gregg Beckham

List of Publications by Year in Descending Order

232 papers	17,346 citations	69 h-index	126 g-index
257 ext. papers	21,552 ext. citations	10.8 avg, IF	7 L-index

#	Paper	IF	Citations
232	Debottlenecking 4-hydroxybenzoate hydroxylation in Pseudomonas putida KT2440 improves muconate productivity from p-coumarate.. *Metabolic Engineering*, **2022**, 70, 31-42	9.7	3
231	Identification and quantification of lignin monomers and oligomers from reductive catalytic fractionation of pine wood with GC □GC □FID/MS. *Green Chemistry*, **2022**, 24, 191-206	10	9
230	A flexible kinetic assay efficiently sorts prospective biocatalysts for PET plastic subunit hydrolysis.. *RSC Advances*, **2022**, 12, 8119-8130	3.7	0
229	Critical enzyme reactions in aromatic catabolism for microbial lignin conversion. *Nature Catalysis*, **2022**, 5, 86-98	36.5	3
228	Biochemical and structural characterization of an aromatic ring-hydroxylating dioxygenase for terephthalic acid catabolism.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2121426119	11.5	3
227	The Critical Role of Process Analysis in Chemical Recycling and Upcycling of Waste Plastics.. *Annual Review of Chemical and Biomolecular Engineering*, **2022**,	8.9	10
226	Corrigendum to "Engineering glucose metabolism for enhanced muconic acid production in Pseudomonas putida KT2440" [Metab. Eng. 59 (2020) 64-75].. *Metabolic Engineering*, **2022**, 72, 66-67	9.7	
225	Production of □ketoadipic acid from glucose in Pseudomonas putida KT2440 for use in performance-advantaged nylons. *Cell Reports Physical Science*, **2022**, 3, 100840	6.1	1
224	Machine-learning from Pseudomonas putida KT2440 transcriptomes reveals its transcriptional regulatory network.. *Metabolic Engineering*, **2022**, 72, 297-310	9.7	1
223	Quantification and evaluation of plastic waste in the United States. *Resources, Conservation and Recycling*, **2022**, 183, 106363	11.9	5
222	Design principles for intrinsically circular polymers with tunable properties. *CheM*, **2021**,	16.2	16
221	Process intensification for the biological production of the fuel precursor butyric acid from biomass. *Cell Reports Physical Science*, **2021**, 2, 100587	6.1	2
220	Manufacturing energy and greenhouse gas emissions associated with plastics consumption. *Joule*, **2021**, 5, 673-686	27.8	47
219	Characterization of aromatic acid/proton symporters in Pseudomonas putida KT2440 toward efficient microbial conversion of lignin-related aromatics. *Metabolic Engineering*, **2021**, 64, 167-179	9.7	10
218	Production of itaconic acid from alkali pretreated lignin by dynamic two stage bioconversion. *Nature Communications*, **2021**, 12, 2261	17.4	25
217	Metabolism of syringyl lignin-derived compounds in Pseudomonas putida enables convergent production of 2-pyrone-4,6-dicarboxylic acid. *Metabolic Engineering*, **2021**, 65, 111-122	9.7	13
216	Pathway discovery and engineering for cleavage of a □1 lignin-derived biaryl compound. *Metabolic Engineering*, **2021**, 65, 1-10	9.7	3

215	Hydrogenolysis of Polypropylene and Mixed Polyolefin Plastic Waste over Ru/C to Produce Liquid Alkanes. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 11661-11666	8.3	21
214	Chemical and biological catalysis for plastics recycling and upcycling. *Nature Catalysis*, **2021**, 4, 539-556	36.5	78
213	Guidelines for performing lignin-first biorefining. *Energy and Environmental Science*, **2021**, 14, 262-292	35.4	143
212	Conversion of Polyolefin Waste to Liquid Alkanes with Ru-Based Catalysts under Mild Conditions. *Jacs Au*, **2021**, 1, 8-12		46
211	Tandem Heterogeneous Catalysis for Polyethylene Depolymerization via an Olefin-Intermediate Process. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 623-628	8.3	20
210	Coupling of Flavonoid Initiation Sites with Monolignols Studied by Density Functional Theory. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 1518-1528	8.3	3
209	Structural and functional analysis of lignostilbene dioxygenases from Sphingobium sp. SYK-6. *Journal of Biological Chemistry*, **2021**, 296, 100758	5.4	2
208	Transition Path Sampling Study of the Feruloyl Esterase Mechanism. *Journal of Physical Chemistry B*, **2021**, 125, 2018-2030	3.4	4
207	Engineering a Cytochrome P450 for Demethylation of Lignin-Derived Aromatic Aldehydes. *Jacs Au*, **2021**, 1, 252-261		7
206	Machine learning reveals sequence-function relationships in family 7 glycoside hydrolases. *Journal of Biological Chemistry*, **2021**, 297, 100931	5.4	2
205	Tandem chemical deconstruction and biological upcycling of poly(ethylene terephthalate) to Ketoadipic acid by Pseudomonas putida KT2440. *Metabolic Engineering*, **2021**, 67, 250-261	9.7	15
204	Comparative Performance of PETase as a Function of Reaction Conditions, Substrate Properties, and Product Accumulation. *ChemSusChem*, **2021**,	8.3	9
203	Techno-economic, life-cycle, and socioeconomic impact analysis of enzymatic recycling of poly(ethylene terephthalate). *Joule*, **2021**, 5, 2479-2503	27.8	25
202	Biological upgrading of pyrolysis-derived wastewater: Engineering Pseudomonas putida for alkylphenol, furfural, and acetone catabolism and (methyl)muconic acid production. *Metabolic Engineering*, **2021**, 68, 14-25	9.7	3
201	Challenges and opportunities in biological funneling of heterogeneous and toxic substrates beyond lignin. *Current Opinion in Biotechnology*, **2021**, 73, 1-13	11.4	9
200	Energy and techno-economic analysis of bio-based carboxylic acid recovery by adsorption. *Green Chemistry*, **2021**, 23, 4386-4402	10	4
199	Flow-through solvolysis enables production of native-like lignin from biomass. *Green Chemistry*, **2021**, 23, 5437-5441	10	4
198	Electrochemical Activation of C-C Bonds via Mediated Hydrogen Atom Transfer Reactions.. *ChemSusChem*, **2021**,	8.3	2

197	Reply to Cosgrove: Non-enzymatic action of expansins. *Journal of Biological Chemistry*, **2020**, 295, 6783	5.4	
196	Outer membrane vesicles catabolize lignin-derived aromatic compounds in KT2440. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 9302-9310	11.5	43
195	The hydrolysis mechanism of a GH45 cellulase and its potential relation to lytic transglycosylase and expansin function. *Journal of Biological Chemistry*, **2020**, 295, 4477-4487	5.4	9
194	Mesoscale Reaction-Diffusion Phenomena Governing Lignin-First Biomass Fractionation. *ChemSusChem*, **2020**, 13, 4495-4509	8.3	15
193	Metabolic engineering of Pseudomonas putida for increased polyhydroxyalkanoate production from lignin. *Microbial Biotechnology*, **2020**, 13, 290-298	6.3	70
192	Molecular mechanism of the chitinolytic peroxygenase reaction. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 1504-1513	11.5	52
191	Engineering glucose metabolism for enhanced muconic acid production in Pseudomonas putida KT2440. *Metabolic Engineering*, **2020**, 59, 64-75	9.7	33
190	Technoeconomic and life-cycle analysis of single-step catalytic conversion of wet ethanol into fungible fuel blendstocks. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 12576-12583	11.5	17
189	Characterization and engineering of a two-enzyme system for plastics depolymerization. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 25476-25485	11.5	90
188	Engineered Pseudomonas putida simultaneously catabolizes five major components of corn stover lignocellulose: Glucose, xylose, arabinose, p-coumaric acid, and acetic acid. *Metabolic Engineering*, **2020**, 62, 62-71	9.7	25
187	Characterization of alkylguaiacol-degrading cytochromes P450 for the biocatalytic valorization of lignin. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 25771-25778	11.5	17
186	Adaptive laboratory evolution of KT2440 improves -coumaric and ferulic acid catabolism and tolerance. *Metabolic Engineering Communications*, **2020**, 11, e00143	6.5	40
185	Gene amplification, laboratory evolution, and biosensor screening reveal MucK as a terephthalic acid transporter in Acinetobacter baylyi ADP1. *Metabolic Engineering*, **2020**, 62, 260-274	9.7	19
184	Coupling and Reactions of Lignols and New Lignin Monomers: A Density Functional Theory Study. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 11033-11045	8.3	9
183	Molecular Lignin Solubility and Structure in Organic Solvents. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 17839-17850	8.3	16
182	Repeated gain and loss of a single gene modulates the evolution of vascular plant pathogen lifestyles. *Science Advances*, **2020**, 6,	14.3	14
181	Improving Enzyme Optimum Temperature Prediction with Resampling Strategies and Ensemble Learning. *Journal of Chemical Information and Modeling*, **2020**, 60, 4098-4107	6.1	7
180	Carbohydrate-binding module -mannosylation alters binding selectivity to cellulose and lignin. *Chemical Science*, **2020**, 11, 9262-9271	9.4	5

179	High-Throughput Large-Scale Targeted Proteomics Assays for Quantifying Pathway Proteins in KT2440. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 603488	5.8	3
178	Tailoring diesel bioblendstock from integrated catalytic upgrading of carboxylic acids: a fuel property first approach. *Green Chemistry*, **2019**, 21, 5813-5827	10	18
177	In situ product recovery of bio-based ethyl esters via hybrid extraction-distillation. *Green Chemistry*, **2019**, 21, 5306-5315	10	2
176	Enhanced Catalyst Durability for Bio-Based Adipic Acid Production by Atomic Layer Deposition. *Joule*, **2019**, 3, 2219-2240	27.8	7
175	Systematic parameterization of lignin for the CHARMM force field. *Green Chemistry*, **2019**, 21, 109-122	10	27
174	Enabling microbial syringol conversion through structure-guided protein engineering. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 13970-13976	11.5	22
173	Laboratory evolution reveals the metabolic and regulatory basis of ethylene glycol metabolism by Pseudomonas putida KT2440. *Environmental Microbiology*, **2019**, 21, 3669-3682	5.2	43
172	Reaction: Proteins from Chemocatalysis; It's What's for Dinner. *CheM*, **2019**, 5, 1353-1354	16.2	
171	Innovative Chemicals and Materials from Bacterial Aromatic Catabolic Pathways. *Joule*, **2019**, 3, 1523-1537	27.8	66
170	Nanomechanics of cellulose deformation reveal molecular defects that facilitate natural deconstruction. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 9825-9830	11.5	25
169	Differences in S/G ratio in natural poplar variants do not predict catalytic depolymerization monomer yields. *Nature Communications*, **2019**, 10, 2033	17.4	66
168	Radical coupling reactions of piceatannol and monolignols: A density functional theory study. *Phytochemistry*, **2019**, 164, 12-23	4	11
167	Sensor-Enabled Alleviation of Product Inhibition in Chorismate Pyruvate-Lyase. *ACS Synthetic Biology*, **2019**, 8, 775-786	5.7	12
166	Valorization of aqueous waste streams from thermochemical biorefineries. *Green Chemistry*, **2019**, 21, 4217-4230	10	20
165	Computational Evidence for Kinetically Controlled Radical Coupling during Lignification. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 13270-13277	8.3	9
164	Promoting microbial utilization of phenolic substrates from bio-oil. *Journal of Industrial Microbiology and Biotechnology*, **2019**, 46, 1531-1545	4.2	12
163	Inverse Bimetallic RuSn Catalyst for Selective Carboxylic Acid Reduction. *ACS Catalysis*, **2019**, 9, 11350-11359	13.1	6
162	The dissociation mechanism of processive cellulases. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 23061-23067	11.5	21

161	Lignin-KMC: A Toolkit for Simulating Lignin Biosynthesis. *ACS Sustainable Chemistry and Engineering* , **2019**, 7, 18313-18322	8.3	17
160	Passive membrane transport of lignin-related compounds. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 23117-23123	11.5	49
159	Combining Reclaimed PET with Bio-based Monomers Enables Plastics Upcycling. *Joule*, **2019**, 3, 1006-1027	27.8	84
158	Catalytic Mechanism of Aryl-Ether Bond Cleavage in Lignin by LigF and LigG. *Journal of Physical Chemistry B*, **2019**, 123, 10142-10151	3.4	1
157	A Quantitative Molecular Atlas for Interactions Between Lignin and Cellulose. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 19570-19583	8.3	9
156	Automated Transformation of Lignin Topologies into Atomic Structures with LigninBuilder. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 3443-3453	8.3	21
155	Activity and Thermostability of GH5 Endoglucanase Chimeras from Mesophilic and Thermophilic Parents. *Applied and Environmental Microbiology*, **2019**, 85,	4.8	16
154	Kinetic Studies of Lignin Solvolysis and Reduction by Reductive Catalytic Fractionation Decoupled in Flow-Through Reactors. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 7951-7959	8.3	71
153	Engineering enhanced cellobiohydrolase activity. *Nature Communications*, **2018**, 9, 1186	17.4	47
152	Characterization and engineering of a plastic-degrading aromatic polyesterase. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E4350-E4357	11.5	369
151	Thermochemical wastewater valorization via enhanced microbial toxicity tolerance. *Energy and Environmental Science*, **2018**, 11, 1625-1638	35.4	51
150	Directed combinatorial mutagenesis of Escherichia coli for complex phenotype engineering. *Metabolic Engineering*, **2018**, 47, 10-20	9.7	22
149	Recovery of Fuel-Precursor Lipids from Oleaginous Yeast. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 2921-2931	8.3	17
148	Chemicals from lignin: an interplay of lignocellulose fractionation, depolymerisation, and upgrading. *Chemical Society Reviews*, **2018**, 47, 852-908	58.5	1125
147	Iodine-Catalyzed Isomerization of Dimethyl Muconate. *ChemSusChem*, **2018**, 11, 1768-1780	8.3	11
146	Catalytic amino acid production from biomass-derived intermediates. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 5093-5098	11.5	107
145	The impact of -glycan chemistry on the stability of intrinsically disordered proteins. *Chemical Science*, **2018**, 9, 3710-3715	9.4	12
144	In situ recovery of bio-based carboxylic acids. *Green Chemistry*, **2018**, 20, 1791-1804	10	44

143	A protocatechuate biosensor for KT2440 via promoter and protein evolution. *Metabolic Engineering Communications*, **2018**, 6, 33-38	6.5	18
142	Revisiting alkaline aerobic lignin oxidation. *Green Chemistry*, **2018**, 20, 3828-3844	10	67
141	Life cycle assessment of adipic acid production from lignin. *Green Chemistry*, **2018**, 20, 3857-3866	10	79
140	Integrated conversion of 1-butanol to 1,3-butadiene.. *RSC Advances*, **2018**, 8, 24068-24074	3.7	3
139	Reductive Catalytic Fractionation of C-Lignin. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 11211-11218	8.3	47
138	Integrated diesel production from lignocellulosic sugars via oleaginous yeast. *Green Chemistry*, **2018**, 20, 4349-4365	10	32
137	Engineering Pseudomonas putida KT2440 for efficient ethylene glycol utilization. *Metabolic Engineering*, **2018**, 48, 197-207	9.7	60
136	Accelerating pathway evolution by increasing the gene dosage of chromosomal segments. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 7105-7110	11.5	35
135	Emulsion polymerization of acrylonitrile in aqueous methanol. *Green Chemistry*, **2018**, 20, 5299-5310	10	5
134	Bioprocess development for muconic acid production from aromatic compounds and lignin. *Green Chemistry*, **2018**, 20, 5007-5019	10	84
133	Membrane Permeability of Terpenoids Explored with Molecular Simulation. *Journal of Physical Chemistry B*, **2018**, 122, 10349-10361	3.4	14
132	Post-Fermentation Recovery of Biobased Carboxylic Acids. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 15273-15283	8.3	16
131	Engineering β-oxidation in Yarrowia lipolytica for methyl ketone production. *Metabolic Engineering*, **2018**, 48, 52-62	9.7	23
130	A promiscuous cytochrome P450 aromatic O-demethylase for lignin bioconversion. *Nature Communications*, **2018**, 9, 2487	17.4	77
129	Conversion and assimilation of furfural and 5-(hydroxymethyl)furfural by KT2440. *Metabolic Engineering Communications*, **2017**, 4, 22-28	6.5	52
128	CRISPR EnAbled Trackable genome Engineering for isopropanol production in Escherichia coli. *Metabolic Engineering*, **2017**, 41, 1-10	9.7	60
127	Ammonia Pretreatment of Corn Stover Enables Facile Lignin Extraction. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 2544-2561	8.3	57
126	Metabolic Engineering of Actinobacillus succinogenes Provides Insights into Succinic Acid Biosynthesis. *Applied and Environmental Microbiology*, **2017**, 83,	4.8	27

125	Heterogeneous Diels–Alder catalysis for biomass-derived aromatic compounds. *Green Chemistry*, **2017**, 19, 3468-3492	10	145
124	Alkaline Peroxide Delignification of Corn Stover. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 6310-6321	8.3	40
123	Eliminating a global regulator of carbon catabolite repression enhances the conversion of aromatic lignin monomers to muconate in KT2440. *Metabolic Engineering Communications*, **2017**, 5, 19-25	6.5	70
122	Biomass-derived monomers for performance-differentiated fiber reinforced polymer composites. *Green Chemistry*, **2017**, 19, 2812-2825	10	36
121	Thinking big: towards ideal strains and processes for large-scale aerobic biofuels production. *Microbial Biotechnology*, **2017**, 10, 40-42	6.3	13
120	Characterization and Catalytic Upgrading of Aqueous Stream Carbon from Catalytic Fast Pyrolysis of Biomass. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 11761-11769	8.3	22
119	Membrane Permeability of Fatty Acyl Compounds Studied via Molecular Simulation. *Journal of Physical Chemistry B*, **2017**, 121, 11311-11324	3.4	15
118	Flowthrough Reductive Catalytic Fractionation of Biomass. *Joule*, **2017**, 1, 613-622	27.8	141
117	Propionic acid production from corn stover hydrolysate by. *Biotechnology for Biofuels*, **2017**, 10, 200	7.8	18
116	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 8171-8180	8.3	87
115	Ru-Sn/AC for the Aqueous-Phase Reduction of Succinic Acid to 1,4-Butanediol under Continuous Process Conditions. *ACS Catalysis*, **2017**, 7, 6207-6219	13.1	33
114	Distinct roles of N- and O-glycans in cellulase activity and stability. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 13667-13672	11.5	52
113	Renewable acrylonitrile production. *Science*, **2017**, 358, 1307-1310	33.3	82
112	Density Functional Theory Study of Spirodienone Stereoisomers in Lignin. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 7188-7194	8.3	12
111	Mixed Carboxylic Acid Production by Megasphaera elsdenii from Glucose and Lignocellulosic Hydrolysate. *Fermentation*, **2017**, 3, 10	4.7	40
110	Lignin depolymerization by fungal secretomes and a microbial sink. *Green Chemistry*, **2016**, 18, 6046-6062	10	62
109	Ab Initio Surface Phase Diagrams for Coadsorption of Aromatics and Hydrogen on the Pt(111) Surface. *Journal of Physical Chemistry C*, **2016**, 120, 26249-26258	3.8	19
108	Gradient Elution Moving Boundary Electrophoresis Enables Rapid Analysis of Acids in Complex Biomass-Derived Streams. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 7175-7185	8.3	8

107	Who's on base? Revealing the catalytic mechanism of inverting family 6 glycoside hydrolases. *Chemical Science*, **2016**, 7, 5955-5968	9.4	20
106	Enhancing muconic acid production from glucose and lignin-derived aromatic compounds via increased protocatechuate decarboxylase activity. *Metabolic Engineering Communications*, **2016**, 3, 111-119	6.5	149
105	Coupling and Reactions of 5-Hydroxyconiferyl Alcohol in Lignin Formation. *Journal of Agricultural and Food Chemistry*, **2016**, 64, 4742-50	5.7	10
104	Succinic acid production on xylose-enriched biorefinery streams by Actinobacillus succinogenes in batch fermentation. *Biotechnology for Biofuels*, **2016**, 9, 28	7.8	99
103	Enhanced Hydrodeoxygenation ofm-Cresol over Bimetallic Pt–Mo Catalysts through an Oxophilic Metal-Induced Tautomerization Pathway. *ACS Catalysis*, **2016**, 6, 4356-4368	13.1	98
102	Simulations of cellulose translocation in the bacterial cellulose synthase suggest a regulatory mechanism for the dimeric structure of cellulose. *Chemical Science*, **2016**, 7, 3108-3116	9.4	11
101	Role of the Support and Reaction Conditions on the Vapor-Phase Deoxygenation of m-Cresol over Pt/C and Pt/TiO2 Catalysts. *ACS Catalysis*, **2016**, 6, 2715-2727	13.1	95
100	Base-Catalyzed Depolymerization of Biorefinery Lignins. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 1474-1486	8.3	125
99	Aromatic-Mediated Carbohydrate Recognition in Processive Serratia marcescens Chitinases. *Journal of Physical Chemistry B*, **2016**, 120, 1236-49	3.4	21
98	Lignin Depolymerization with Nitrate-Intercalated Hydrotalcite Catalysts. *ACS Catalysis*, **2016**, 6, 1316-1328	13.1	65
97	cis,cis-Muconic acid: separation and catalysis to bio-adipic acid for nylon-6,6 polymerization. *Green Chemistry*, **2016**, 18, 3397-3413	10	109
96	Opportunities and challenges in biological lignin valorization. *Current Opinion in Biotechnology*, **2016**, 42, 40-53	11.4	384
95	Pyrolysis reaction networks for lignin model compounds: unraveling thermal deconstruction of β-O-4 and α-O-4 compounds. *Green Chemistry*, **2016**, 18, 1762-1773	10	76
94	Succinic acid production from lignocellulosic hydrolysate by Basfia succiniciproducens. *Bioresource Technology*, **2016**, 214, 558-566	11	52
93	Radical Nature of C-Lignin. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 5327-5335	8.3	34
92	Furan Production from Glycoaldehyde over HZSM-5. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 2615-2623	8.3	14
91	Biochemical and Structural Characterizations of Two Dictyostelium Cellobiohydrolases from the Amoebozoa Kingdom Reveal a High Level of Conservation between Distant Phylogenetic Trees of Life. *Applied and Environmental Microbiology*, **2016**, 82, 3395-409	4.8	10
90	Conversion of levoglucosan and cellobiosan by KT2440. *Metabolic Engineering Communications*, **2016**, 3, 24-29	6.5	37

89	The Techno-Economic Basis for Coproduct Manufacturing To Enable Hydrocarbon Fuel Production from Lignocellulosic Biomass. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 3196-3211	8.3	101
88	Quantification of acidic compounds in complex biomass-derived streams. *Green Chemistry*, **2016**, 18, 4750-4760	10	31
87	Reductive Catalytic Fractionation of Corn Stover Lignin. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 6940-6950	8.3	169
86	Aqueous Stream Characterization from Biomass Fast Pyrolysis and Catalytic Fast Pyrolysis. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 6815-6827	8.3	39
85	Renewable Unsaturated Polyesters from Muconic Acid. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 6867-6876	8.3	56
84	Alkaline Pretreatment of Switchgrass. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 1479-1491	8.3	83
83	Effects of lytic polysaccharide monooxygenase oxidation on cellulose structure and binding of oxidized cellulose oligomers to cellulases. *Journal of Physical Chemistry B*, **2015**, 119, 6129-43	3.4	72
82	Acidolysis of □O-4 Aryl-Ether Bonds in Lignin Model Compounds: A Modeling and Experimental Study. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 1339-1347	8.3	33
81	Ethanol dehydration in HZSM-5 studied by density functional theory: evidence for a concerted process. *Journal of Physical Chemistry A*, **2015**, 119, 3604-14	2.8	35
80	Molecular-scale features that govern the effects of -glycosylation on a carbohydrate-binding module. *Chemical Science*, **2015**, 6, 7185-7189	9.4	23
79	Carbocation Stability in H-ZSM5 at High Temperature. *Journal of Physical Chemistry A*, **2015**, 119, 11397-405	2.8	11
78	Adipic acid production from lignin. *Energy and Environmental Science*, **2015**, 8, 617-628	35.4	389
77	The AlphaBet(a) of Salty Glucose Pyrolysis: Computational Investigations Reveal Carbohydrate Pyrolysis Catalytic Action by Sodium Ions. *ACS Catalysis*, **2015**, 5, 192-202	13.1	45
76	Electronic coupling through natural amino acids. *Journal of Chemical Physics*, **2015**, 143, 225102	3.9	12
75	Continuous succinic acid production by Actinobacillus succinogenes on xylose-enriched hydrolysate. *Biotechnology for Biofuels*, **2015**, 8, 181	7.8	72
74	O-glycosylation effects on family 1 carbohydrate-binding module solution structures. *FEBS Journal*, **2015**, 282, 4341-56	5.7	15
73	Towards lignin consolidated bioprocessing: simultaneous lignin depolymerization and product generation by bacteria. *Green Chemistry*, **2015**, 17, 4951-4967	10	235
72	Glycosylation of Cellulases: Engineering Better Enzymes for Biofuels. *Advances in Carbohydrate Chemistry and Biochemistry*, **2015**, 72, 63-112	3.7	33

71	Lignocellulose degradation mechanisms across the Tree of Life. *Current Opinion in Chemical Biology*, **2015**, 29, 108-19	9.7	317
70	Aromatic catabolic pathway selection for optimal production of pyruvate and lactate from lignin. *Metabolic Engineering*, **2015**, 28, 240-247	9.7	155
69	Fungal cellulases. *Chemical Reviews*, **2015**, 115, 1308-448	68.1	513
68	Alkaline Pretreatment of Corn Stover: Bench-Scale Fractionation and Stream Characterization. *ACS Sustainable Chemistry and Engineering*, **2014**, 2, 1481-1491	8.3	92
67	Clean Fractionation Pretreatment Reduces Enzyme Loadings for Biomass Saccharification and Reveals the Mechanism of Free and Cellulosomal Enzyme Synergy. *ACS Sustainable Chemistry and Engineering*, **2014**, 2, 1377-1387	8.3	31
66	Lignin valorization: improving lignin processing in the biorefinery. *Science*, **2014**, 344, 1246843	33.3	2274
65	Specificity of O-glycosylation in enhancing the stability and cellulose binding affinity of Family 1 carbohydrate-binding modules. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 7612-7	11.5	66
64	Two-component order parameter for quantifying clathrate hydrate nucleation and growth. *Journal of Chemical Physics*, **2014**, 140, 164506	3.9	41
63	Lignin valorization through integrated biological funneling and chemical catalysis. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12013-8	11.5	494
62	Lignin depolymerisation by nickel supported layered-double hydroxide catalysts. *Green Chemistry*, **2014**, 16, 824-835	10	134
61	Charge engineering of cellulases improves ionic liquid tolerance and reduces lignin inhibition. *Biotechnology and Bioengineering*, **2014**, 111, 1541-9	4.9	72
60	The mechanism of cellulose hydrolysis by a two-step, retaining cellobiohydrolase elucidated by structural and transition path sampling studies. *Journal of the American Chemical Society*, **2014**, 136, 321-9	16.4	134
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