

Stephen R Decker

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

110
papers

4,870
citations

40
h-index

67
g-index

112
ext. papers

5,409
ext. citations

6.1
avg. IF

5.23
L-index

#	Paper	IF	Citations
110	Iron incorporation both intra- and extra-cellularly improves the yield and saccharification of switchgrass (<i>Panicum virgatum</i> L.) biomass. <i>Biotechnology for Biofuels</i> , 2021 , 14, 55	7.8	
109	Synthetic fungal multifunctional cellulases for enhanced biomass conversion. <i>Green Chemistry</i> , 2020 , 22, 478-489	10	15
108	Phylogenetics-based identification and characterization of a superior 2,3-butanediol dehydrogenase for <i>Zymomonas mobilis</i> expression. <i>Biotechnology for Biofuels</i> , 2020 , 13, 186	7.8	3
107	Genetic variation of biomass recalcitrance in a natural (L.) population. <i>Biotechnology for Biofuels</i> , 2019 , 12, 135	7.8	9
106	Nanomechanics of cellulose deformation reveal molecular defects that facilitate natural deconstruction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 9825-9830	11.5	25
105	Engineering enhanced cellobiohydrolase activity. <i>Nature Communications</i> , 2018 , 9, 1186	17.4	47
104	Working towards recalcitrance mechanisms: increased xylan and homogalacturonan production by overexpression of () causes increased recalcitrance and decreased growth in. <i>Biotechnology for Biofuels</i> , 2018 , 11, 9	7.8	19
103	Sugar release and growth of biofuel crops are improved by downregulation of pectin biosynthesis. <i>Nature Biotechnology</i> , 2018 , 36, 249-257	44.5	93
102	Ameliorating the Metabolic Burden of the Co-expression of Secreted Fungal Cellulases in a High Lipid-Accumulating Strain by Medium C/N Ratio and a Chemical Chaperone. <i>Frontiers in Microbiology</i> , 2018 , 9, 3276	5.7	5
101	Anaerobic microplate assay for direct microbial conversion of switchgrass and Avicel using <i>Clostridium thermocellum</i> . <i>Biotechnology Letters</i> , 2018 , 40, 303-308	3	2
100	High Throughput Screening Technologies in Biomass Characterization. <i>Frontiers in Energy Research</i> , 2018 , 6,	3.8	22
99	A New Calmodulin-Binding Protein Expresses in the Context of Secondary Cell Wall Biosynthesis and Impacts Biomass Properties in. <i>Frontiers in Plant Science</i> , 2018 , 9, 1669	6.2	11
98	Multifunctional Cellulolytic Enzymes Outperform Processive Fungal Cellulases for Coproduction of Nanocellulose and Biofuels. <i>ACS Nano</i> , 2017 , 11, 3101-3109	16.7	84
97	Predicting the ethanol potential of wheat straw using near-infrared spectroscopy and chemometrics: The challenge of inherently intercorrelated response functions. <i>Analytica Chimica Acta</i> , 2017 , 962, 15-23	6.6	11
96	A versatile 2A peptide-based bicistronic protein expressing platform for the industrial cellulase producing fungus,. <i>Biotechnology for Biofuels</i> , 2017 , 10, 34	7.8	26
95	Lignocellulose deconstruction in the biosphere. <i>Current Opinion in Chemical Biology</i> , 2017 , 41, 61-70	9.7	69
94	Expression and secretion of fungal endoglucanase II and chimeric cellobiohydrolase I in the oleaginous yeast <i>Lipomyces starkeyi</i> . <i>Microbial Cell Factories</i> , 2017 , 16, 126	6.4	12

93	Biomass Conversion 2017 , 285-419		4
92	Distinct roles of N- and O-glycans in cellulase activity and stability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 13667-13672	11.5	52
91	Study of traits and recalcitrance reduction of field-grown down-regulated switchgrass. <i>Biotechnology for Biofuels</i> , 2017 , 10, 12	7.8	18
90	The TcEG1 beetle () cellulase produced in transgenic switchgrass is active at alkaline pH and auto-hydrolyzes biomass for increased cellobiose release. <i>Biotechnology for Biofuels</i> , 2017 , 10, 230	7.8	5
89	Enzymes in Commercial Cellulase Preparations Bind Differently to Dioxane Extracted Lignins. <i>Current Biotechnology</i> , 2017 , 6, 128-138	0.6	3
88	Hybridization of downregulated-COMT transgenic switchgrass lines with field-selected switchgrass for improved biomass traits. <i>Euphytica</i> , 2016 , 209, 341-355	2.1	3
87	Cell Wall Composition and Underlying QTL in an F1 Pseudo-Testcross Population of Switchgrass. <i>Bioenergy Research</i> , 2016 , 9, 836-850	3.1	9
86	Investigating the Role of Extensin Proteins in Poplar Biomass Recalcitrance. <i>BioResources</i> , 2016 , 11,	1.3	5
85	Identification and Overexpression of a Knotted1-Like Transcription Factor in Switchgrass (<i>Panicum virgatum</i> L.) for Lignocellulosic Feedstock Improvement. <i>Frontiers in Plant Science</i> , 2016 , 7, 520	6.2	26
84	Downregulation of a UDP-Arabinomutase Gene in Switchgrass (L.) Results in Increased Cell Wall Lignin While Reducing Arabinose-Glycans. <i>Frontiers in Plant Science</i> , 2016 , 7, 1580	6.2	16
83	Effect of aging on lignin content, composition and enzymatic saccharification in <i>Corymbia</i> hybrids and parental taxa between years 9 and 12. <i>Biomass and Bioenergy</i> , 2016 , 93, 50-59	5.3	11
82	Dramatic performance of <i>Clostridium thermocellum</i> explained by its wide range of cellulase modalities. <i>Science Advances</i> , 2016 , 2, e1501254	14.3	81
81	In situ label-free imaging of hemicellulose in plant cell walls using stimulated Raman scattering microscopy. <i>Biotechnology for Biofuels</i> , 2016 , 9, 256	7.8	29
80	Biochemical and Structural Characterizations of Two <i>Dictyostelium</i> Cellobiohydrolases from the Amoebozoa Kingdom Reveal a High Level of Conservation between Distant Phylogenetic Trees of Life. <i>Applied and Environmental Microbiology</i> , 2016 , 82, 3395-409	4.8	10
79	Field Evaluation of Transgenic Switchgrass Plants Overexpressing PvMYB4 for Reduced Biomass Recalcitrance. <i>Bioenergy Research</i> , 2015 , 8, 910-921	3.1	44
78	A Novel Delivery System for the Root Symbiotic Fungus, <i>Sebacina vermifera</i> , and Consequent Biomass Enhancement of Low Lignin COMT Switchgrass Lines. <i>Bioenergy Research</i> , 2015 , 8, 922-933	3.1	22
77	Downregulation of GAUT12 in <i>Populus deltoides</i> by RNA silencing results in reduced recalcitrance, increased growth and reduced xylan and pectin in a woody biofuel feedstock. <i>Biotechnology for Biofuels</i> , 2015 , 8, 41	7.8	86
76	Transgenic switchgrass (<i>Panicum virgatum</i> L.) biomass is increased by overexpression of switchgrass sucrose synthase (PvSUS1). <i>Biotechnology Journal</i> , 2015 , 10, 552-63	5.6	36

75	Rapid estimation of sugar release from winter wheat straw during bioethanol production using FTIR-photoacoustic spectroscopy. <i>Biotechnology for Biofuels</i> , 2015 , 8, 85	7.8	38
74	Down-regulation of p-coumaroyl quinate/shikimate 3Hydroxylase (C3H) and cinnamate 4-hydroxylase (C4H) genes in the lignin biosynthetic pathway of <i>Eucalyptus urophylla</i> L. leads to improved sugar release. <i>Biotechnology for Biofuels</i> , 2015 , 8, 128	7.8	55
73	Heterologous protein expression in <i>Hypocrea jecorina</i> : a historical perspective and new developments. <i>Biotechnology Advances</i> , 2015 , 33, 142-154	17.8	43
72	A thermodynamic investigation of the cellulose allomorphs: Cellulose(am), cellulose I(cr), cellulose II(cr), and cellulose III(cr). <i>Journal of Chemical Thermodynamics</i> , 2015 , 81, 184-226	2.9	39
71	High-throughput Screening of Recalcitrance Variations in Lignocellulosic Biomass: Total Lignin, Lignin Monomers, and Enzymatic Sugar Release. <i>Journal of Visualized Experiments</i> , 2015 ,	1.6	10
70	New perspective on glycoside hydrolase binding to lignin from pretreated corn stover. <i>Biotechnology for Biofuels</i> , 2015 , 8, 214	7.8	57
69	Identification and Molecular Characterization of the Switchgrass AP2/ERF Transcription Factor Superfamily, and Overexpression of PvERF001 for Improvement of Biomass Characteristics for Biofuel. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 101	5.8	40
68	A constitutive expression system for glycosyl hydrolase family 7 cellobiohydrolases in <i>Hypocrea jecorina</i> . <i>Biotechnology for Biofuels</i> , 2015 , 8, 45	7.8	27
67	Efficient Extraction of Xylan from Delignified Corn Stover Using Dimethyl Sulfide 2015 , 9-20		
66	Evaluation of high throughput screening methods in picking up differences between cultivars of lignocellulosic biomass for ethanol production. <i>Biomass and Bioenergy</i> , 2014 , 66, 261-267	5.3	17
65	Predicting enzyme adsorption to lignin films by calculating enzyme surface hydrophobicity. <i>Journal of Biological Chemistry</i> , 2014 , 289, 20960-9	5.4	91
64	Effect of mechanical disruption on the effectiveness of three reactors used for dilute acid pretreatment of corn stover Part 2: morphological and structural substrate analysis. <i>Biotechnology for Biofuels</i> , 2014 , 7, 47	7.8	48
63	Cellulose-inducible xylanase Xyl10A from <i>Acremonium cellulolyticus</i> : Purification, cloning and homologous expression. <i>Protein Expression and Purification</i> , 2014 , 94, 40-5	2	16
62	Identification and characterization of core cellulolytic enzymes from <i>Talaromyces cellulolyticus</i> (formerly <i>Acremonium cellulolyticus</i>) critical for hydrolysis of lignocellulosic biomass. <i>Biotechnology for Biofuels</i> , 2014 , 7, 151	7.8	52
61	Genetic Determinants for Enzymatic Digestion of Lignocellulosic Biomass Are Independent of Those for Lignin Abundance in a Maize Recombinant Inbred Population. <i>Plant Physiology</i> , 2014 , 165, 1475-1487 ³⁹	6.6	39
60	Engineering towards a complete heterologous cellulase secretome in <i>Yarrowia lipolytica</i> reveals its potential for consolidated bioprocessing. <i>Biotechnology for Biofuels</i> , 2014 , 7, 148	7.8	42
59	High temperature pre-digestion of corn stover biomass for improved product yields. <i>Biotechnology for Biofuels</i> , 2014 , 7, 170	7.8	8
58	Construction of a starch-inducible homologous expression system to produce cellulolytic enzymes from <i>Acremonium cellulolyticus</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2013 , 40, 823-30	4.2	32

57	Efficient extraction of xylan from delignified corn stover using dimethyl sulfoxide. <i>3 Biotech</i> , 2013 , 3, 433-438	2.8	21
56	Impact of alg3 gene deletion on growth, development, pigment production, protein secretion, and functions of recombinant <i>Trichoderma reesei</i> cellobiohydrolases in <i>Aspergillus niger</i> . <i>Fungal Genetics and Biology</i> , 2013 , 61, 120-32	3.9	20
55	Isolation and characterization of lignin-degrading bacteria from rainforest soils. <i>Biotechnology and Bioengineering</i> , 2013 , 110, 1616-26	4.9	100
54	Fungal cellulases and complexed cellulosomal enzymes exhibit synergistic mechanisms in cellulose deconstruction. <i>Energy and Environmental Science</i> , 2013 , 6, 1858	35.4	118
53	High-yield secretion of multiple client proteins in <i>Aspergillus</i> . <i>Enzyme and Microbial Technology</i> , 2012 , 51, 100-6	3.8	63
52	Saturation molalities and standard molar enthalpies of solution of D-xylose(cr) in H ₂ O(l); standard molar enthalpies of solution of 1,4-D-xylobiose(am), and 1,4-D-xylotriose(am) in H ₂ O(l). <i>Journal of Chemical Thermodynamics</i> , 2012 , 52, 2-10	2.9	7
51	Response to P.K. et al.: Bacterial laccases still have a case. <i>Trends in Biotechnology</i> , 2012 , 30, 362-363	15.1	1
50	Reducing the effect of variable starch levels in biomass recalcitrance screening. <i>Methods in Molecular Biology</i> , 2012 , 908, 181-95	1.4	26
49	Considering water availability and the effect of solute concentration on high solids saccharification of lignocellulosic biomass. <i>Biotechnology Progress</i> , 2012 , 28, 1478-90	2.8	44
48	Challenges for assessing the performance of biomass degrading biocatalysts. <i>Methods in Molecular Biology</i> , 2012 , 908, 1-8	1.4	2
47	Enzymatic conversion of xylan residues from dilute acid-pretreated corn stover. <i>Applied Biochemistry and Biotechnology</i> , 2012 , 168, 421-33	3.2	24
46	Analysis of transgenic glycoside hydrolases expressed in plants: <i>T. reesei</i> CBH I and <i>A. cellulolyticus</i> EI. <i>Methods in Molecular Biology</i> , 2012 , 908, 197-211	1.4	3
45	Biomass Conversion 2012 , 1249-1322		3
44	Expression of industrially relevant laccases: prokaryotic style. <i>Trends in Biotechnology</i> , 2011 , 29, 480-9	15.1	141
43	High throughput determination of glucan and xylan fractions in lignocelluloses. <i>Biotechnology Letters</i> , 2011 , 33, 961-7	3	27
42	In planta expression of <i>A. cellulolyticus</i> Cel5A endocellulase reduces cell wall recalcitrance in tobacco and maize. <i>Biotechnology for Biofuels</i> , 2011 , 4, 1	7.8	163
41	A calorimetric and equilibrium investigation of the reaction {methyl ferulate(aq) + H ₂ O(l) = methanol(aq) + ferulic acid(aq)}. <i>Journal of Chemical Thermodynamics</i> , 2011 , 43, 235-239	2.9	4
40	Antisense down-regulation of 4CL expression alters lignification, tree growth, and saccharification potential of field-grown poplar. <i>Plant Physiology</i> , 2010 , 154, 874-86	6.6	160

39	Heat and Mass Transport in Processing of Lignocellulosic Biomass for Fuels and Chemicals 2010 , 1-18		12
38	The O-glycosylated linker from the <i>Trichoderma reesei</i> Family 7 cellulase is a flexible, disordered protein. <i>Biophysical Journal</i> , 2010 , 99, 3773-81	2.9	89
37	Thermodynamics of the hydrolysis reactions of 1-naphthyl acetate, 4-nitrophenyl acetate, and 4-nitrophenyl β -D-arabinofuranoside. <i>Journal of Physical Chemistry B</i> , 2010 , 114, 16060-7	3.4	2
36	ORIGINAL RESEARCH: Lignocellulose recalcitrance screening by integrated high-throughput hydrothermal pretreatment and enzymatic saccharification. <i>Industrial Biotechnology</i> , 2010 , 6, 104-111	1.3	73
35	The impact of cell wall acetylation on corn stover hydrolysis by cellulolytic and xylanolytic enzymes. <i>Cellulose</i> , 2009 , 16, 711-722	5.5	117
34	Extraction and characterization of native heteroxylans from delignified corn stover and aspen. <i>Cellulose</i> , 2009 , 16, 661-675	5.5	67
33	The effect of lignin removal by alkaline peroxide pretreatment on the susceptibility of corn stover to purified cellulolytic and xylanolytic enzymes. <i>Applied Biochemistry and Biotechnology</i> , 2009 , 155, 397-406	3.2	101
32	High-Throughput Screening Techniques for Biomass Conversion. <i>Bioenergy Research</i> , 2009 , 2, 179-192	3.1	79
31	Xylan decomposition by <i>Aspergillus clavatus</i> endo-xylanase. <i>Protein Expression and Purification</i> , 2009 , 68, 65-71	2	29
30	Heterologous expression of glycosyl hydrolases in planta: a new departure for biofuels. <i>Trends in Biotechnology</i> , 2008 , 26, 413-24	15.1	108
29	Immobilization of fungal beta-glucosidase on silica gel and kaolin carriers. <i>Applied Biochemistry and Biotechnology</i> , 2008 , 146, 39-47	3.2	33
28	Heterologous expression of <i>Aspergillus niger</i> beta-D-xylosidase (XlnD): characterization on lignocellulosic substrates. <i>Applied Biochemistry and Biotechnology</i> , 2008 , 146, 57-68	3.2	42
27	Heterologous expression of two ferulic acid esterases from <i>Penicillium funiculosum</i> . <i>Applied Biochemistry and Biotechnology</i> , 2008 , 146, 79-87	3.2	17
26	Introduction to session 2: enzyme catalysis and engineering. <i>Applied Biochemistry and Biotechnology</i> , 2008 , 146, 1-2	3.2	
25	Implications of cellobiohydrolase glycosylation for use in biomass conversion. <i>Biotechnology for Biofuels</i> , 2008 , 1, 10	7.8	106
24	Visualizing lignin coalescence and migration through maize cell walls following thermochemical pretreatment. <i>Biotechnology and Bioengineering</i> , 2008 , 101, 913-25	4.9	528
23	Thermodynamics of the hydrolysis reactions of 1,4- β -D-xylobiose, 1,4- β -D-xylotriose, d-cellobiose, and d-maltose. <i>Journal of Chemical Thermodynamics</i> , 2008 , 40, 1517-1526	2.9	18
22	Synergistic enhancement of cellobiohydrolase performance on pretreated corn stover by addition of xylanase and esterase activities. <i>Bioresource Technology</i> , 2008 , 99, 4997-5005	11	202

21	Biomass Conversion 2007 , 1449-1548		10
20	Deposition of lignin droplets produced during dilute acid pretreatment of maize stems retards enzymatic hydrolysis of cellulose. <i>Biotechnology Progress</i> , 2007 , 23, 1333-9	2.8	341
19	FUNGAL-INDUCED REDISTRIBUTION OF KRAFT LIGNIN MOLECULAR WEIGHT BY MULTI-ANGLE LASER LIGHT SCATTERING. <i>Chemical Engineering Communications</i> , 2006 , 193, 1546-1561	2.2	4
18	Characterization of lignin using multi-angle laser light scattering and atomic force microscopy. <i>Analytica Chimica Acta</i> , 2006 , 555, 250-258	6.6	46
17	Determination of lignin by size exclusion chromatography using multi angle laser light scattering. <i>Journal of Chromatography A</i> , 2006 , 1114, 102-10	4.5	65
16	Catalyst transport in corn stover internodes: elucidating transport mechanisms using Direct Blue-I. <i>Applied Biochemistry and Biotechnology</i> , 2006 , 129-132, 509-27	3.2	15
15	Catalytically enhanced endocellulase cel5a from <i>Acidothermus cellulolyticus</i> . <i>Applied Biochemistry and Biotechnology</i> , 2005 , 121, 0129-0148	3.2	42
14	Electrochemical oxidation of water by a cellobiose dehydrogenase from <i>Phanerochaete chrysosporium</i> . <i>Biotechnology Letters</i> , 2005 , 27, 555-60	3	2
13	Catalytically enhanced endocellulase Cel5A from <i>Acidothermus cellulolyticus</i> . <i>Applied Biochemistry and Biotechnology</i> , 2005 , 121-124, 129-48	3.2	11
12	Cloning and Heterologous Expression of the Gene Encoding a Family 7 Glycosyl Hydrolase from <i>Penicillium funiculosum</i> . <i>ACS Symposium Series</i> , 2004 , 170-193	0.4	4
11	Automated filter paper assay for determination of cellulase activity. <i>Applied Biochemistry and Biotechnology</i> , 2003 , 105 -108, 689-703	3.2	66
10	Glycoside Hydrolase Gene Cluster of <i>Acidothermus cellulolyticus</i> . <i>ACS Symposium Series</i> , 2003 , 332-360	0.4	8
9	Heterologous Expression of <i>Trichoderma reesei</i> 1,4-ED-Glucan Cellobiohydrolase (Cel 7A). <i>ACS Symposium Series</i> , 2003 , 403-437	0.4	11
8	Exploration of cellulose surface-binding properties of <i>acidothermus cellulolyticus</i> Cel5A by site-specific mutagenesis. <i>Applied Biochemistry and Biotechnology</i> , 2002 , 98-100, 273-87	3.2	21
7	Effect of single active-site cleft mutation on product specificity in a thermostable bacterial cellulase. <i>Applied Biochemistry and Biotechnology</i> , 2002 , 98-100, 383-94	3.2	19
6	Effect of Single Active-Site Cleft Mutation on Product Specificity in a Thermostable Bacterial Cellulase 2002 , 383-394		1
5	Two Novel Alkalotolerant Dextranases from <i>Streptomyces anulatus</i> . <i>ACS Symposium Series</i> , 2000 , 222-235		4
4	Cloning and expression of <i>Trichoderma reesei</i> cellobiohydrolase I in <i>Pichia pastoris</i> . <i>Biotechnology Progress</i> , 1999 , 15, 828-33	2.8	47

3	Purification and characterization of an acetyl esterase from <i>Aspergillus niger</i> . <i>Applied Biochemistry and Biotechnology</i> , 1994 , 45-46, 383-93	3.2	23
2	Enzymatic Depolymerization of Plant Cell Wall Hemicelluloses352-373		4
1	Cellulases, Hemicellulases, and Pectinases596-610		1