David B Hodge

List of Publications by Year
in descending order

70 papers	2,957 citations	172443 29 h-index	168376 53 g-index
75 all docs	75 docs citations	75 times ranked	3351 citing authors

#	Article	IF	Citations
1	Soluble and insoluble solids contributions to high-solids enzymatic hydrolysis of lignocellulose. Bioresource Technology, 2008, 99, 8940-8948.	9.6	280
2	Model-Based Fed-Batch for High-Solids Enzymatic Cellulose Hydrolysis. Applied Biochemistry and Biotechnology, 2009, 152, 88-107.	2.9	196
3	Lignin-Based Polyurethanes: Opportunities for Bio-Based Foams, Elastomers, Coatings and Adhesives. Polymers, 2019, 11, 1202.	4.5	164
4	Alkaline peroxide pretreatment of corn stover: effects of biomass, peroxide, and enzyme loading and composition on yields of glucose and xylose. Biotechnology for Biofuels, 2011, 4, 16.	6.2	151
5	Isolation and Characterization of Organosolv and Alkaline Lignins from Hardwood and Softwood Biomass. ACS Sustainable Chemistry and Engineering, 2016, 4, 5181-5193.	6.7	113
6	Structural characterization of alkaline hydrogen peroxide pretreated grasses exhibiting diverse lignin phenotypes. Biotechnology for Biofuels, 2012, 5, 38.	6.2	106
7	Scaleâ€up and integration of alkaline hydrogen peroxide pretreatment, enzymatic hydrolysis, and ethanolic fermentation. Biotechnology and Bioengineering, 2012, 109, 922-931.	3.3	105
8	Effect of Different Carbon Sources on the Production of Succinic Acid Using Metabolically Engineered Escherichia coli. Biotechnology Progress, 2007, 23, 381-388.	2.6	104
9	Detoxification requirements for bioconversion of softwood dilute acid hydrolyzates to succinic acid. Enzyme and Microbial Technology, 2009, 44, 309-316.	3.2	95
10	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.	2.5	91
11	Impact of hemicellulose pre-extraction for bioconversion on birch Kraft pulp properties. Bioresource Technology, 2010, 101, 5996-6005.	9.6	88
12	Biobutanol production by Clostridium acetobutylicum using xylose recovered from birch Kraft black liquor. Bioresource Technology, 2015, 176, 71-79.	9.6	76
13	Predicting lignin depolymerization yields from quantifiable properties using fractionated biorefinery lignins. Green Chemistry, 2017, 19, 5131-5143.	9.0	74
14	Transforming biorefinery designs with â€˜Plug-In Processes of Ligninâ€™ to enable economic waste valorization. Nature Communications, 2021, 12, 3912.	12.8	71
15	Metabolism of Multiple Aromatic Compounds in Corn Stover Hydrolysate by <i>Rhodopseudomonas palustris</i>. Environmental Science & Technology, 2015, 49, 8914-8922.	10.0	51
16	Conversion of corn stover alkaline pre-treatment waste streams into biodiesel via Rhodococci. RSC Advances, 2017, 7, 4108-4115.	3.6	51
17	Lignin-Glyoxal: A Fully Biobased Formaldehyde-Free Wood Adhesive for Interior Engineered Wood Products. ACS Sustainable Chemistry and Engineering, 2022, 10, 3430-3441.	6.7	51
18	Correlating lignin structural features to phase partitioning behavior in a novel aqueous fractionation of softwood Kraft black liquor. Green Chemistry, 2013, 15, 2904.	9.0	50

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19	Inhibition of succinic acid production in metabolically engineered <i>Escherichia coli</i> by neutralizing agent, organic acids, and osmolarity. Biotechnology Progress, 2009, 25, 116-123.	2.6	49
20	Impacts of delignification and hot water pretreatment on the water induced cell wall swelling behavior of grasses and its relation to cellulolytic enzyme hydrolysis and binding. Cellulose, 2014, 21, 221-235.	4.9	49
21	Production of single cell protein from agro-waste using <i>Rhodococcus opacus</i>. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 795-801.	3.0	47
22	Extraction, Recovery, and Characterization of Hardwood and Grass Hemicelluloses for Integration into Biorefining Processes. Industrial & Engineering Chemistry Research, 2012, 51, 11045-11053.	3.7	45
23	Coupling alkaline pre-extraction with alkaline-oxidative post-treatment of corn stover to enhance enzymatic hydrolysis and fermentability. Biotechnology for Biofuels, 2014, 7, 48.	6.2	45
24	Harnessing Genetic Diversity in Saccharomyces cerevisiae for Fermentation of Xylose in Hydrolysates of Alkaline Hydrogen Peroxide-Pretreated Biomass. Applied and Environmental Microbiology, 2014, 80, 540-554.	3.1	44
25	Catalysis with Cu^{II}(bpy) improves alkaline hydrogen peroxide pretreatment. Biotechnology and Bioengineering, 2013, 110, 1078-1086.	3.3	37
26	Effective alkaline metal-catalyzed oxidative delignification of hybrid poplar. Biotechnology for Biofuels, 2016, 9, 34.	6.2	36
27	Fractionation and Improved Enzymatic Deconstruction of Hardwoods with Alkaline Delignification. Bioenergy Research, 2015, 8, 1224-1234.	3.9	33
28	Techno-economic comparison of centralized versus decentralized biorefineries for two alkaline pretreatment processes. Bioresource Technology, 2017, 226, 9-17.	9.6	33
29	Engineered Lignin in Poplar Biomass Facilitates Cu-Catalyzed Alkaline-Oxidative Pretreatment. ACS Sustainable Chemistry and Engineering, 2018, 6, 2932-2941.	6.7	31
30	Production of the Bioactive Compound Eritadenine by Submerged Cultivation of Shiitake (Lentinus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	5.2	30
31	Data-Based Modeling and Analysis of Bioprocesses: Some Real Experiences. Biotechnology Progress, 2003, 19, 1591-1605.	2.6	29
32	Cell-wall properties contributing to improved deconstruction by alkaline pre-treatment and enzymatic hydrolysis in diverse maize (Zea maysL.) lines. Journal of Experimental Botany, 2015, 66, 4305-4315.	4.8	28
33	Identification of developmental stage and anatomical fraction contributions to cell wall recalcitrance in switchgrass. Biotechnology for Biofuels, 2017, 10, 184.	6.2	28
34	Performance of three delignifying pretreatments on hardwoods: hydrolysis yields, comprehensive mass balances, and lignin properties. Biotechnology for Biofuels, 2019, 12, 213.	6.2	27
35	Rapid and effective oxidative pretreatment of woody biomass at mild reaction conditions and low oxidant loadings. Biotechnology for Biofuels, 2013, 6, 119.	6.2	26
36	Identification of features associated with plant cell wall recalcitrance to pretreatment by alkaline hydrogen peroxide in diverse bioenergy feedstocks using glycome profiling. RSC Advances, 2014, 4, 17282-17292.	3.6	25

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37	Relating Nanoscale Accessibility within Plant Cell Walls to Improved Enzyme Hydrolysis Yields in Corn Stover Subjected to Diverse Pretreatments. Journal of Agricultural and Food Chemistry, 2017, 65, 8652-8662.	5.2	25
38	Linking Plant Biology and Pretreatment: Understanding the Structure and Organization of the Plant Cell Wall and Interactions with Cellulosic Biofuel Production. , 2014, , 231-253.		25
39	Modeling and Advanced Control of Recombinant Zymomonas mobilis Fed-Batch Fermentation. Biotechnology Progress, 2002, 18, 572-579.	2.6	24
40	Water sorption in pretreated grasses as a predictor of enzymatic hydrolysis yields. Bioresource Technology, 2017, 245, 242-249.	9.6	24
41	Deconstruction of hybrid poplar to monomeric sugars and aromatics using ethanol organosolv fractionation. Biomass Conversion and Biorefinery, 2018, 8, 813-824.	4.6	23
42	Physical fractionation of sweet sorghum and forage/energy sorghum for optimal processing in a biorefinery. Industrial Crops and Products, 2018, 124, 607-616.	5.2	22
43	Integrated Two-Stage Alkaline-Oxidative Pretreatment of Hybrid Poplar. Part 1: Impact of Alkaline Pre-Extraction Conditions on Process Performance and Lignin Properties. Industrial & Engineering Chemistry Research, 2019, 58, 15989-15999.	3.7	19
44	Integrated experimental and technoeconomic evaluation of two-stage Cu-catalyzed alkalineâ€“oxidative pretreatment of hybrid poplar. Biotechnology for Biofuels, 2018, 11, 143.	6.2	18
45	Cell wall-associated transition metals improve alkaline-oxidative pretreatment in diverse hardwoods. Green Chemistry, 2016, 18, 1405-1415.	9.0	17
46	Chemical and structural changes associated with Cu-catalyzed alkaline-oxidative delignification of hybrid poplar. Biotechnology for Biofuels, 2015, 8, 123.	6.2	16
47	Removal and upgrading of lignocellulosic fermentation inhibitors by in situ biocatalysis and liquidâ€liquid extraction. Biotechnology and Bioengineering, 2015, 112, 627-632.	3.3	15
48	Xylan Is Critical for Proper Bundling and Alignment of Cellulose Microfibrils in Plant Secondary Cell Walls. Frontiers in Plant Science, 2021, 12, 737690.	3.6	15
49	Effective Biomass Fractionation through Oxygen-Enhanced Alkalineâ€“Oxidative Pretreatment. ACS Sustainable Chemistry and Engineering, 2021, 9, 1118-1127.	6.7	13
50	Integration of (Hemi)-Cellulosic Biofuels Technologies with Chemical Pulp Production. , 2014, , 73-100.		12
51	Adsorption of Lignin Î²-O-4 Dimers on Metal Surfaces in Vacuum and Solvated Environments. ACS Sustainable Chemistry and Engineering, 2019, 7, 2667-2678.	6.7	11
52	Benign Fractionation of Lignin with CO₂-Expanded Solvents of Acetic Acid + Water. Industrial & Engineering Chemistry Research, 2017, 56, 9778-9782.	3.7	10
53	Effect of catalyst and reaction conditions on aromatic monomer yields, product distribution, and sugar yields during lignin hydrogenolysis of silver birch wood. Bioresource Technology, 2020, 316, 123907.	9.6	10
54	Development of an ammonia pretreatment that creates synergies between biorefineries and advanced biomass logistics models. Green Chemistry, 2022, 24, 4443-4462.	9.0	10

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55	Corn stover semi-mechanistic enzymatic hydrolysis model with tight parameter confidence intervals for model-based process design and optimization. Bioresource Technology, 2015, 177, 255-265.	9.6	9
56	Integrated Two-Stage Alkalineâ€“Oxidative Pretreatment of Hybrid Poplar. Part 2: Impact of Cu-Catalyzed Alkaline Hydrogen Peroxide Pretreatment Conditions on Process Performance and Economics. Industrial & Engineering Chemistry Research, 2019, 58, 16000-16008.	3.7	9
57	Prediction of Cell Wall Properties and Response to Deconstruction Using Alkaline Pretreatment in Diverse Maize Genotypes Using Py-MBMS and NIR. Bioenergy Research, 2017, 10, 329-343.	3.9	8
58	Impact of dilute acid pretreatment conditions on p-coumarate removal in diverse maize lines. Bioresource Technology, 2020, 314, 123750.	9.6	8
59	Growth promotive conditions for enhanced eritadenine production during submerged cultivation of <i>Lentinus edodes</i>. Journal of Chemical Technology and Biotechnology, 2012, 87, 903-907.	3.2	7
60	Integration of Pretreatment With Simultaneous Counter-Current Extraction of Energy Sorghum for High-Titer Mixed Sugar Production. Frontiers in Energy Research, 2019, 6, .	2.3	7
61	Ultraclean hybrid poplar lignins via liquidâ€“liquid fractionation using ethanolâ€“water solutions. MRS Communications, 2021, 11, 692.	1.8	7
62	Integrated Farm-Based Biorefinery. , 2014, , 255-270.		6
63	Novel twoâ€stage fermentation process for bioethanol production using <i>Saccharomyces pastorianus</i>. Biotechnology Progress, 2014, 30, 300-310.	2.6	6
64	Integration of Ethanol Fermentation with Second Generation Biofuels Technologies. , 2014, , 161-187.		5
65	Liquefying Lignins: Determining Phase-Transition Temperatures in the Presence of Aqueous Organic Solvents. Industrial & Engineering Chemistry Research, 2021, 60, 17278-17282.	3.7	4
66	Near-Infrared Spectroscopy can Predict Anatomical Abundance in Corn Stover. Frontiers in Energy Research, 2022, 10, .	2.3	4
67	Lignin properties and cell wall response to deconstruction by alkaline pretreatment and enzymatic hydrolysis in brown midrib sorghums. Industrial Crops and Products, 2022, 178, 114566.	5.2	3
68	Technoeconomic evaluation of recent process improvements in production of sugar and high-value lignin co-products via two-stage Cu-catalyzed alkaline-oxidative pretreatment. , 2022, 15, 45.		3
69	Alkaline and Alkaline-Oxidative Pretreatment and Hydrolysis of Herbaceous Biomass for Growth of Oleaginous Microbes. Methods in Molecular Biology, 2019, 1995, 173-182.	0.9	1
70	NONLINEAR MPC FOR RECOMBINANT ZYMOMONAS MOBILIS FED-BATCH ETHANOL FERMENTATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 383-388.	0.4	0