David B Hodge

List of Publications by Year in Descending Order

68 papers	2,297 citations	26 h-index	46 g-index
75 ext. papers	2,615 ext. citations	6.4 avg, IF	5.01 L-index

#	Paper	IF	Citations
68	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	5.9	1
67	Lignin-Glyoxal: A Fully Biobased Formaldehyde-Free Wood Adhesive for Interior Engineered Wood Products. *ACS Sustainable Chemistry and Engineering*, **2022**, 10, 3430-3441	8.3	3
66	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		0
65	Transforming biorefinery designs with Plug-In Processes of Lignin to enable economic waste valorization. *Nature Communications*, **2021**, 12, 3912	17.4	23
64	Ultraclean hybrid poplar lignins via liquid–liquid fractionation using ethanol–water solutions. *MRS Communications*, **2021**, 11, 692	2.7	1
63	Xylan Is Critical for Proper Bundling and Alignment of Cellulose Microfibrils in Plant Secondary Cell Walls. *Frontiers in Plant Science*, **2021**, 12, 737690	6.2	5
62	Effective Biomass Fractionation through Oxygen-Enhanced Alkaline–Oxidative Pretreatment. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 1118-1127	8.3	8
61	Impact of dilute acid pretreatment conditions on p-coumarate removal in diverse maize lines. *Bioresource Technology*, **2020**, 314, 123750	11	6
60	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	11	6
59	Performance of three delignifying pretreatments on hardwoods: hydrolysis yields, comprehensive mass balances, and lignin properties. *Biotechnology for Biofuels*, **2019**, 12, 213	7.8	17
58	Alkaline and Alkaline-Oxidative Pretreatment and Hydrolysis of Herbaceous Biomass for Growth of Oleaginous Microbes. *Methods in Molecular Biology*, **2019**, 1995, 173-182	1.4	1
57	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	3.9	14
56	Integration of Pretreatment With Simultaneous Counter-Current Extraction of Energy Sorghum for High-Titer Mixed Sugar Production. *Frontiers in Energy Research*, **2019**, 6,	3.8	4
55	Integrated Two-Stage Alkaline–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	3.9	8
54	Lignin-Based Polyurethanes: Opportunities for Bio-Based Foams, Elastomers, Coatings and Adhesives. *Polymers*, **2019**, 11,	4.5	92
53	Adsorption of Lignin β-O-4 Dimers on Metal Surfaces in Vacuum and Solvated Environments. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 2667-2678	8.3	7
52	Engineered Lignin in Poplar Biomass Facilitates Cu-Catalyzed Alkaline-Oxidative Pretreatment. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 2932-2941	8.3	21

51	Integrated experimental and technoeconomic evaluation of two-stage Cu-catalyzed alkaline-oxidative pretreatment of hybrid poplar. *Biotechnology for Biofuels*, **2018**, 11, 143	7.8	14
50	Physical fractionation of sweet sorghum and forage/energy sorghum for optimal processing in a biorefinery. *Industrial Crops and Products*, **2018**, 124, 607-616	5.9	14
49	Deconstruction of hybrid poplar to monomeric sugars and aromatics using ethanol organosolv fractionation. *Biomass Conversion and Biorefinery*, **2018**, 8, 813-824	2.3	19
48	Production of single cell protein from agro-waste using Rhodococcus opacus. *Journal of Industrial Microbiology and Biotechnology*, **2018**, 45, 795-801	4.2	26
47	Conversion of corn stover alkaline pre-treatment waste streams into biodiesel via Rhodococci. *RSC Advances*, **2017**, 7, 4108-4115	3.7	46
46	Techno-economic comparison of centralized versus decentralized biorefineries for two alkaline pretreatment processes. *Bioresource Technology*, **2017**, 226, 9-17	11	26
45	Predicting lignin depolymerization yields from quantifiable properties using fractionated biorefinery lignins. *Green Chemistry*, **2017**, 19, 5131-5143	10	51
44	Identification of developmental stage and anatomical fraction contributions to cell wall recalcitrance in switchgrass. *Biotechnology for Biofuels*, **2017**, 10, 184	7.8	20
43	Water sorption in pretreated grasses as a predictor of enzymatic hydrolysis yields. *Bioresource Technology*, **2017**, 245, 242-249	11	19
42	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	5.7	16
41	Benign Fractionation of Lignin with CO2-Expanded Solvents of Acetic Acid + Water. *Industrial & Engineering Chemistry Research*, **2017**, 56, 9778-9782	3.9	8
40	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	3.1	5
39	Cell wall-associated transition metals improve alkaline-oxidative pretreatment in diverse hardwoods. *Green Chemistry*, **2016**, 18, 1405-1415	10	16
38	Isolation and Characterization of Organosolv and Alkaline Lignins from Hardwood and Softwood Biomass. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 5181-5193	8.3	86
37	Effective alkaline metal-catalyzed oxidative delignification of hybrid poplar. *Biotechnology for Biofuels*, **2016**, 9, 34	7.8	35
36	Fractionation and Improved Enzymatic Deconstruction of Hardwoods with Alkaline Delignification. *Bioenergy Research*, **2015**, 8, 1224-1234	3.1	29
35	Metabolism of Multiple Aromatic Compounds in Corn Stover Hydrolysate by Rhodopseudomonas palustris. *Environmental Science & Technology*, **2015**, 49, 8914-22	10.3	36
34	Chemical and structural changes associated with Cu-catalyzed alkaline-oxidative delignification of hybrid poplar. *Biotechnology for Biofuels*, **2015**, 8, 123	7.8	13

33	Corn stover semi-mechanistic enzymatic hydrolysis model with tight parameter confidence intervals for model-based process design and optimization. *Bioresource Technology*, **2015**, 177, 255-65	11	8
32	Removal and upgrading of lignocellulosic fermentation inhibitors by in situ biocatalysis and liquid-liquid extraction. *Biotechnology and Bioengineering*, **2015**, 112, 627-32	4.9	11
31	Biobutanol production by Clostridium acetobutylicum using xylose recovered from birch Kraft black liquor. *Bioresource Technology*, **2015**, 176, 71-9	11	63
30	Cell-wall properties contributing to improved deconstruction by alkaline pre-treatment and enzymatic hydrolysis in diverse maize (Zea mays L.) lines. *Journal of Experimental Botany*, **2015**, 66, 4305-15	7	24
29	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	5.5	43
28	Harnessing genetic diversity in Saccharomyces cerevisiae for fermentation of xylose in hydrolysates of alkaline hydrogen peroxide-pretreated biomass. *Applied and Environmental Microbiology*, **2014**, 80, 540-54	4.8	40
27	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	3.7	22
26	Coupling alkaline pre-extraction with alkaline-oxidative post-treatment of corn stover to enhance enzymatic hydrolysis and fermentability. *Biotechnology for Biofuels*, **2014**, 7, 48	7.8	38
25	Integration of Ethanol Fermentation with Second Generation Biofuels Technologies **2014**, 161-187		4
24	Novel two-stage fermentation process for bioethanol production using Saccharomyces pastorianus. *Biotechnology Progress*, **2014**, 30, 300-10	2.8	5
23	Integrated Farm-Based Biorefinery **2014**, 255-270		5
22	Integration of (Hemi)-Cellulosic Biofuels Technologies with Chemical Pulp Production **2014**, 73-100		11
21	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	3.7	64
20	Linking Plant Biology and Pretreatment: Understanding the Structure and Organization of the Plant Cell Wall and Interactions with Cellulosic Biofuel Production **2014**, 231-253		20
19	Correlating lignin structural features to phase partitioning behavior in a novel aqueous fractionation of softwood Kraft black liquor. *Green Chemistry*, **2013**, 15, 2904	10	44
18	Rapid and effective oxidative pretreatment of woody biomass at mild reaction conditions and low oxidant loadings. *Biotechnology for Biofuels*, **2013**, 6, 119	7.8	24
17	Catalysis with Cu(II) (bpy) improves alkaline hydrogen peroxide pretreatment. *Biotechnology and Bioengineering*, **2013**, 110, 1078-86	4.9	31
16	Growth promotive conditions for enhanced eritadenine production during submerged cultivation of Lentinus edodes. *Journal of Chemical Technology and Biotechnology*, **2012**, 87, 903-907	3.5	7

15	Scale-up and integration of alkaline hydrogen peroxide pretreatment, enzymatic hydrolysis, and ethanolic fermentation. *Biotechnology and Bioengineering*, **2012**, 109, 922-31	4.9	93
14	Extraction, Recovery, and Characterization of Hardwood and Grass Hemicelluloses for Integration into Biorefining Processes. *Industrial & Engineering Chemistry Research*, **2012**, 51, 11045-11053	3.9	37
13	Structural characterization of alkaline hydrogen peroxide pretreated grasses exhibiting diverse lignin phenotypes. *Biotechnology for Biofuels*, **2012**, 5, 38	7.8	95
12	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	7.8	131
11	Impact of hemicellulose pre-extraction for bioconversion on birch Kraft pulp properties. *Bioresource Technology*, **2010**, 101, 5996-6005	11	78
10	Inhibition of succinic acid production in metabolically engineered Escherichia coli by neutralizing agent, organic acids, and osmolarity. *Biotechnology Progress*, **2009**, 25, 116-23	2.8	45
9	Model-based fed-batch for high-solids enzymatic cellulose hydrolysis. *Applied Biochemistry and Biotechnology*, **2009**, 152, 88-107	3.2	170
8	Detoxification requirements for bioconversion of softwood dilute acid hydrolyzates to succinic acid. *Enzyme and Microbial Technology*, **2009**, 44, 309-316	3.8	84
7	Production of the bioactive compound eritadenine by submerged cultivation of shiitake (Lentinus edodes) mycelia. *Journal of Agricultural and Food Chemistry*, **2008**, 56, 2609-12	5.7	25
6	Soluble and insoluble solids contributions to high-solids enzymatic hydrolysis of lignocellulose. *Bioresource Technology*, **2008**, 99, 8940-8	11	246
5	Effect of different carbon sources on the production of succinic acid using metabolically engineered Escherichia coli. *Biotechnology Progress*, **2007**, 23, 381-8	2.8	89
4	Data-based modeling and analysis of bioprocesses: some real experiences. *Biotechnology Progress*, **2003**, 19, 1591-605	2.8	23
3	Modeling and advanced control of recombinant Zymomonas mobilis fed-batch fermentation. *Biotechnology Progress*, **2002**, 18, 572-9	2.8	21
2	NONLINEAR MPC FOR RECOMBINANT ZYMOMONAS MOBILIS FED-BATCH ETHANOL FERMENTATION. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 383-388		
1	Fermentation-Based Building Blocks for Renewable Resource-Based Surfactants127-141		