David K Johnson

List of Publications by Year
in descending order

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52 papers	10,066 citations	117625 34 h-index	182427 51 g-index
53 all docs	53 docs citations	53 times ranked	11603 citing authors

#	Article	IF	Citations
1	Prediction of Hydroxymethylfurfural Yield in Glucose Conversion through Investigation of Lewis Acid and Organic Solvent Effects. ACS Catalysis, 2020, 10, 14707-14721.	11.2	41
2	Direct Conversion of Biomass Carbohydrates to Platform Chemicals: 5-Hydroxymethylfurfural (HMF) and Furfural. Energy & Fuels, 2020, 34, 3284-3293.	5.1	62
3	Chemical and Structural Effects on the Rate of Xylan Hydrolysis during Dilute Acid Pretreatment of Poplar Wood. ACS Sustainable Chemistry and Engineering, 2019, 7, 4842-4850.	6.7	10
4	Simultaneous upgrading of biomass-derived sugars to HMF/furfural via enzymatically isomerized ketose intermediates. Biotechnology for Biofuels, 2019, 12, 253.	6.2	19
5	Production of Furfural from Process-Relevant Biomass-Derived Pentoses in a Biphasic Reaction System. ACS Sustainable Chemistry and Engineering, 2017, 5, 5694-5701.	6.7	133
6	An end of service life assessment of PMMA lenses from veteran concentrator photovoltaic systems. Solar Energy Materials and Solar Cells, 2017, 167, 7-21.	6.2	12
7	Downregulation of p-Coumaroyl Quinate/Shikimate 3â€²-Hydroxylase (C3â€²H) or Cinnamate-4-hydrolylase (C4H) in Eucalyptus urophyllaâ€‰Ã—â€‰Eucalyptus grandis Leads to Increased Extractability. Bioenergy Research, 2016, 9, 691-699.	3.9	12
8	Direct Production of Propene from the Thermolysis of Poly(Î²-hydroxybutyrate) (PHB). An Experimental and DFT Investigation. Journal of Physical Chemistry A, 2016, 120, 332-345.	2.5	15
9	In Situ and ex Situ Catalytic Pyrolysis of Pine in a Bench-Scale Fluidized Bed Reactor System. Energy & Fuels, 2016, 30, 2144-2157.	5.1	100
10	Base-Catalyzed Depolymerization of Biorefinery Lignins. ACS Sustainable Chemistry and Engineering, 2016, 4, 1474-1486.	6.7	172
11	Parameter determination and validation for a mechanistic model of the enzymatic saccharification of cellulose-I_{Î²}. Biotechnology Progress, 2015, 31, 1237-1248.	2.6	12
12	Effects of Delignification on Crystalline Cellulose in Lignocellulose Biomass Characterized by Vibrational Sum Frequency Generation Spectroscopy and X-ray Diffraction. Bioenergy Research, 2015, 8, 1750-1758.	3.9	33
13	Correlations of Apparent Cellulose Crystallinity Determined by XRD, NMR, IR, Raman, and SFG Methods. Advances in Polymer Science, 2015, , 115-131.	0.8	27
14	Investigation of the role of lignin in biphasic xylan hydrolysis during dilute acid and organosolv pretreatment of corn stover. Green Chemistry, 2015, 17, 1546-1558.	9.0	20
15	A thermodynamic investigation of the cellulose allomorphs: Cellulose(am), cellulose IÎ²(cr), cellulose II(cr), and cellulose III(cr). Journal of Chemical Thermodynamics, 2015, 81, 184-226.	2.0	50
16	Heterologous Expression of Xylanase Enzymes in Lipogenic Yeast Yarrowia lipolytica. PLoS ONE, 2014, 9, e111443.	2.5	32
17	Connecting lignin-degradation pathway with pre-treatment inhibitor sensitivity of Cupriavidus necator. Frontiers in Microbiology, 2014, 5, 247.	3.5	33
18	A highly efficient dilute alkali deacetylation and mechanical (disc) refining process for the conversion of renewable biomass to lower cost sugars. Biotechnology for Biofuels, 2014, 7, 98.	6.2	78

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19	Evaluation of Clean Fractionation Pretreatment for the Production of Renewable Fuels and Chemicals from Corn Stover. ACS Sustainable Chemistry and Engineering, 2014, 2, 1364-1376.	6.7	52
20	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. Biotechnology for Biofuels, 2014, 7, 47.	6.2	61
21	Effect of mechanical disruption on the effectiveness of three reactors used for dilute acid pretreatment of corn stover Part 1: chemical and physical substrate analysis. Biotechnology for Biofuels, 2014, 7, 57.	6.2	39
22	An investigation of the changes in poly(methyl methacrylate) specimens after exposure to ultra-violet light, heat, and humidity. Solar Energy Materials and Solar Cells, 2013, 111, 165-180.	6.2	28
23	Hydration and saccharification of cellulose Iî², II and IIII at increasing dry solids loadings. Biotechnology Letters, 2013, 35, 1599-1607.	2.2	21
24	Cellulose polymorphism study with sum-frequency-generation (SFG) vibration spectroscopy: identification of exocyclic CH2OH conformation and chain orientation. Cellulose, 2013, 20, 991-1000.	4.9	76
25	Investigation of Xylose Reversion Reactions That Can Occur during Dilute Acid Pretreatment. Energy & Fuels, 2013, 27, 7389-7397.	5.1	5
26	Improved ethanol yield and reduced minimum ethanol selling price (MESP) by modifying low severity Biotechnology for Biofuels, 2012, 5, 69.	6.2	42
27	Challenges for Assessing the Performance of Biomass Degrading Biocatalysts. Methods in Molecular Biology, 2012, 908, 1-8.	0.9	2
28	The impacts of deacetylation prior to dilute acid pretreatment on the bioethanol process. Biotechnology for Biofuels, 2012, 5, 8.	6.2	131
29	Elucidating the role of ferrous ion cocatalyst in enhancing dilute acid pretreatment of lignocellulosic biomass. Biotechnology for Biofuels, 2011, 4, 48.	6.2	47
30	Effects of alkaline or liquid-ammonia treatment on crystalline cellulose: changes in crystalline structure and effects on enzymatic digestibility. Biotechnology for Biofuels, 2011, 4, 41.	6.2	229
31	The role of hydrogen-bonding interactions in acidic sugar reaction pathways. Carbohydrate Research, 2010, 345, 1945-1951.	2.3	32
32	Cellulose crystallinity index: measurement techniques and their impact on interpreting cellulase performance. Biotechnology for Biofuels, 2010, 3, 10.	6.2	2,335
33	Free Energy Landscape for Glucose Condensation Reactions. Journal of Physical Chemistry A, 2010, 114, 12936-12944.	2.5	46
34	Glucose Reversion Reaction Kinetics. Journal of Agricultural and Food Chemistry, 2010, 58, 6131-6140.	5.2	84
35	Redistribution of xylan in maize cell walls during dilute acid pretreatment. Biotechnology and Bioengineering, 2009, 102, 1537-1543.	3.3	53
36	Can delignification decrease cellulose digestibility in acid pretreated corn stover?. Cellulose, 2009, 16, 677-686.	4.9	129

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37	Measuring the crystallinity index of cellulose by solid state 13C nuclear magnetic resonance. Cellulose, 2009, 16, 641-647.	4.9	207
38	The Effects of Water on Î²-d-Xylose Condensation Reactions. Journal of Physical Chemistry A, 2009, 113, 8577-8585.	2.5	46
39	Porosity and Its Effect on the Digestibility of Dilute Sulfuric Acid Pretreated Corn Stover. Journal of Agricultural and Food Chemistry, 2007, 55, 2575-2581.	5.2	126
40	Biomass Recalcitrance: Engineering Plants and Enzymes for Biofuels Production. Science, 2007, 315, 804-807.	12.6	3,749
41	Cellulase digestibility of pretreated biomass is limited by cellulose accessibility. Biotechnology and Bioengineering, 2007, 98, 112-122.	3.3	457
42	Baseâ€Catalyzed Depolymerization of Lignin: Separation of Monomers. Canadian Journal of Chemical Engineering, 2007, 85, 906-916.	1.7	69
43	Energetics of Xylose Decomposition as Determined Using Quantum Mechanics Modeling. Journal of Physical Chemistry A, 2006, 110, 11824-11838.	2.5	140
44	Mechanisms of Glycerol Dehydration. Journal of Physical Chemistry A, 2006, 110, 6145-6156.	2.5	239
45	Ab initio molecular dynamics simulations of Î²-d-glucose and Î²-d-xylose degradation mechanisms in acidic aqueous solution. Carbohydrate Research, 2005, 340, 2319-2327.	2.3	142
46	Acidic Sugar Degradation Pathways: An Ab Initio Molecular Dynamics Study. Applied Biochemistry and Biotechnology, 2005, 124, 0989-0998.	2.9	54
47	Atomic and Electronic Structures of Molecular Crystalline Cellulose IÎ²:â€‰ A First-Principles Investigation. Macromolecules, 2005, 38, 10580-10589.	4.8	69
48	Compositional analysis of biomass feedstocks by near infrared reflectance spectroscopy. Biomass and Bioenergy, 1996, 11, 365-370.	5.7	99
49	Stability of wood fast pyrolysis oil. Biomass and Bioenergy, 1994, 7, 187-192.	5.7	212
50	Dilute sulfuric acid pretreatment of corn stover at high solids concentrations. Applied Biochemistry and Biotechnology, 1992, 34-35, 659-665.	2.9	36
51	Organosolv pretreatment for enzymic hydrolysis of poplars. 2. Catalyst effects and the combined severity parameter. Industrial & Engineering Chemistry Research, 1990, 29, 156-162.	3.7	132
52	Pretreatments for Enhanced Digestibility of Feedstocks. , 0, , 436-453.		14