

Edward J Wolfrum

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

5,096
citations

201385

27
h-index

168136

53
g-index

64
all docs

64
docs citations

64
times ranked

6256
citing authors

#	ARTICLE	IF	CITATIONS
1	Bactericidal Activity of Photocatalytic TiO ₂ Reaction: toward an Understanding of Its Killing Mechanism. <i>Applied and Environmental Microbiology</i> , 1999, 65, 4094-4098.	1.4	1,295
2	Application of the Photocatalytic Chemistry of Titanium Dioxide to Disinfection and the Killing of Cancer Cells. <i>Separation and Purification Reviews</i> , 1999, 28, 1-50.	0.8	496
3	Bactericidal mode of titanium dioxide photocatalysis. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2000, 130, 163-170.	2.0	495
4	Photocatalytic Oxidation of Bacteria, Bacterial and Fungal Spores, and Model Biofilm Components to Carbon Dioxide on Titanium Dioxide-Coated Surfaces. <i>Environmental Science & Technology</i> , 2002, 36, 3412-3419.	4.6	222
5	Mineralization of Bacterial Cell Mass on a Photocatalytic Surface in Air. <i>Environmental Science & Technology</i> , 1998, 32, 2650-2653.	4.6	202
6	Algal Biomass Constituent Analysis: Method Uncertainties and Investigation of the Underlying Measuring Chemistries. <i>Analytical Chemistry</i> , 2012, 84, 1879-1887.	3.2	183
7	Accurate and reliable quantification of total microalgal fuel potential as fatty acid methyl esters by in situ transesterification. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 403, 167-178.	1.9	182
8	Gas-Phase Heterogeneous Photocatalytic Oxidation of Ethanol: Pathways and Kinetic Modeling. <i>Environmental Science & Technology</i> , 1996, 30, 3102-3110.	4.6	175
9	Compositional Analysis of Lignocellulosic Feedstocks. 2. Method Uncertainties. <i>Journal of Agricultural and Food Chemistry</i> , 2010, 58, 9054-9062.	2.4	159
10	Heterogeneous Photocatalytic Reduction of Cr(VI) in UV-Irradiated Titania Suspensions: Effect of Protons, Ammonium Ions, and Other Interfacial Aspects. <i>Langmuir</i> , 2000, 16, 2715-2721.	1.6	145
11	Life Cycle Environmental Impacts of Selected U.S. Ethanol Production and Use Pathways in 2022. <i>Environmental Science & Technology</i> , 2010, 44, 5289-5297.	4.6	145
12	Feasibility of Spectroscopic Characterization of Algal Lipids: Chemometric Correlation of NIR and FTIR Spectra with Exogenous Lipids in Algal Biomass. <i>Bioenergy Research</i> , 2011, 4, 22-35.	2.2	120
13	Metal oxide sensor arrays for the detection, differentiation, and quantification of volatile organic compounds at sub-parts-per-million concentration levels. <i>Sensors and Actuators B: Chemical</i> , 2006, 115, 322-329.	4.0	105
14	Solar photocatalytic processes for the purification of water: State of development and barriers to commercialization. <i>Solar Energy</i> , 1996, 56, 429-437.	2.9	80
15	Non-targeted Metabolomics in Diverse Sorghum Breeding Lines Indicates Primary and Secondary Metabolite Profiles Are Associated with Plant Biomass Accumulation and Photosynthesis. <i>Frontiers in Plant Science</i> , 2016, 7, 953.	1.7	80
16	Characterization, Genetic Variation, and Combining Ability of Maize Traits Relevant to the Production of Cellulosic Ethanol. <i>Crop Science</i> , 2009, 49, 85-98.	0.8	66
17	Improved multivariate calibration models for corn stover feedstock and dilute-acid pretreated corn stover. <i>Cellulose</i> , 2009, 16, 567-576.	2.4	60
18	Rapid analysis of composition and reactivity in cellulosic biomass feedstocks with near-infrared spectroscopy. <i>Biotechnology for Biofuels</i> , 2015, 8, 43.	6.2	58

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19	Correlating detergent fiber analysis and dietary fiber analysis data for corn stover collected by NIRS. <i>Cellulose</i> , 2009, 16, 577-585.	2.4	44
20	Variation in Biomass Composition Components among Forage, Biomass, Sorghum and Sudangrass, and Sweet Sorghum Types. <i>Crop Science</i> , 2012, 52, 1949-1954.	0.8	42
21	Uncertainty in techno-economic estimates of cellulosic ethanol production due to experimental measurement uncertainty. <i>Biotechnology for Biofuels</i> , 2012, 5, 23.	6.2	41
22	The Algae Testbed Public-Private Partnership (ATP3) framework; establishment of a national network of testbed sites to support sustainable algae production. <i>Algal Research</i> , 2017, 25, 168-177.	2.4	39
23	High-Throughput Quantitative Biochemical Characterization of Algal Biomass by NIR Spectroscopy; Multiple Linear Regression and Multivariate Linear Regression Analysis. <i>Journal of Agricultural and Food Chemistry</i> , 2013, 61, 12307-12314.	2.4	38
24	Switchgrass and Giant Miscanthus Biomass and Theoretical Ethanol Production from Reclaimed Mine Lands. <i>Bioenergy Research</i> , 2018, 11, 562-573.	2.2	36
25	Compositional Analysis of Biomass Reference Materials: Results from an Interlaboratory Study. <i>Bioenergy Research</i> , 2016, 9, 303-314.	2.2	33
26	Comments on "reactor dynamics in the evaluation of photocatalytic oxidation kinetics". <i>Journal of Catalysis</i> , 1992, 136, 626-628.	3.1	31
27	Robust phenotyping strategies for evaluation of stem non-structural carbohydrates (NSC) in rice. <i>Journal of Experimental Botany</i> , 2016, 67, 6125-6138.	2.4	31
28	The buffering capacity of stems: genetic architecture of nonstructural carbohydrates in cultivated Asian rice, <i>Oryza sativa</i> . <i>New Phytologist</i> , 2017, 215, 658-671.	3.5	31
29	A laboratory-scale pretreatment and hydrolysis assay for determination of reactivity in cellulosic biomass feedstocks. <i>Biotechnology for Biofuels</i> , 2013, 6, 162.	6.2	29
30	High Throughput Screening Technologies in Biomass Characterization. <i>Frontiers in Energy Research</i> , 2018, 6, .	1.2	28
31	Multiscale Characterization of Lignocellulosic Biomass Variability and Its Implications to Preprocessing and Conversion: a Case Study for Corn Stover. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 3218-3230.	3.2	28
32	The Effect of Biomass Densification on Structural Sugar Release and Yield in Biofuel Feedstock and Feedstock Blends. <i>Bioenergy Research</i> , 2017, 10, 478-487.	2.2	26
33	A New Method for the Rapid Determination of Volatile Organic Compound Breakthrough Times for a Sorbent at Concentrations Relevant to Indoor Air Quality. <i>Journal of the Air and Waste Management Association</i> , 2004, 54, 105-110.	0.9	25
34	Online residence time distribution measurement of thermochemical biomass pretreatment reactors. <i>Chemical Engineering Science</i> , 2016, 140, 330-336.	1.9	25
35	Reliability metrics and their management implications for open pond algae cultivation. <i>Algal Research</i> , 2021, 55, 102249.	2.4	24
36	Calibration Transfer Among Sensor Arrays Designed for Monitoring Volatile Organic Compounds in Indoor Air Quality. <i>IEEE Sensors Journal</i> , 2006, 6, 1638-1643.	2.4	23

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37	Improved sugar yields from biomass sorghum feedstocks: comparing low-lignin mutants and pretreatment chemistries. <i>Biotechnology for Biofuels</i> , 2016, 9, 251.	6.2	20
38	Compositional and Agronomic Evaluation of Sorghum Biomass as a Potential Feedstock for Renewable Fuels. <i>Journal of Biobased Materials and Bioenergy</i> , 2011, 5, 507-513.	0.1	20
39	Bioreactor Design Studies for a Hydrogen-Producing Bacterium. <i>Applied Biochemistry and Biotechnology</i> , 2002, 98-100, 611-626.	1.4	18
40	Heat Conduction of Inert Gas-Hydrogen Mixtures in Parabolic Trough Receivers. , 2008, , .		18
41	Unified field studies of the algae testbed public-private partnership as the benchmark for algae agronomics. <i>Scientific Data</i> , 2018, 5, 180267.	2.4	18
42	Assessing pretreatment reactor scaling through empirical analysis. <i>Biotechnology for Biofuels</i> , 2016, 9, 213.	6.2	16
43	Throughput, Reliability, and Yields of a Pilot-Scale Conversion Process for Production of Fermentable Sugars from Lignocellulosic Biomass: A Study on Feedstock Ash and Moisture. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2008-2015.	3.2	16
44	Near Infrared Calibration Models for Pretreated Corn Stover Slurry Solids, Isolated and in situ. <i>Journal of Near Infrared Spectroscopy</i> , 2013, 21, 249-257.	0.8	14
45	Direct determination of cellulosic glucan content in starch-containing samples. <i>Cellulose</i> , 2021, 28, 1989-2002.	2.4	12
46	Pilot-Scale Demonstration of an Innovative Treatment for Vapor Emissions. <i>Journal of the Air and Waste Management Association</i> , 1999, 49, 1368-1373.	0.9	10
47	Parabolic Trough Receiver Thermal Testing. , 2007, , 961.		10
48	A Performance Comparison of Low-Cost Near-Infrared (NIR) Spectrometers to a Conventional Laboratory Spectrometer for Rapid Biomass Compositional Analysis. <i>Bioenergy Research</i> , 2020, 13, 1121-1129.	2.2	10
49	The Volatile Organic Compound (VOC) Removal Performance of Desiccant-Based Dehumidification Systems: Testing at Sub-ppm VOC Concentrations. <i>HVAC and R Research</i> , 2008, 14, 129-140.	0.9	8
50	Chemical and Structural Changes in Corn Stover After Ensiling: Influence on Bioconversion. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 739.	2.0	8
51	The UV _i -H ₂ O ₂ process: quantitative EPR determination of radical concentrations. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1994, 78, 259-265.	2.0	7
52	Evaluation of Fifteen Cultivars of Cool-Season Perennial Grasses as Biofuel Feedstocks Using Near-Infrared. <i>Agronomy Journal</i> , 2017, 109, 1923-1934.	0.9	5
53	Bioreactor Design Studies for a Hydrogen-Producing Bacterium. , 2002, , 611-625.		5
54	Improved methods for the determination of drying conditions and fraction insoluble solids (FIS) in biomass pretreatment slurry. <i>Biomass and Bioenergy</i> , 2016, 91, 234-242.	2.9	4

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55	Rapid Compositional Analysis of Microalgae by NIR Spectroscopy. NIR News, 2012, 23, 9-11.	1.6	3
56	<title>Materials issues in solar detoxification of air and water</title>. , 1997, , .		1
57	Selection of Promising Biomass Feedstock Lines Using High-Throughput Spectrometric and Enzymatic Assays. , 2008, , 143-160.		1
58	Long-term variability in sugarcane bagasse feedstock compositional methods: sources and magnitude of analytical variability. Biotechnology for Biofuels, 2016, 9, 223.	6.2	1
59	Comparing Calibration Algorithms for the Rapid Characterization of Pretreated Corn Stover Using Near-Infrared Spectroscopy. Frontiers in Energy Research, 0, 10, .	1.2	1
60	Influence of Particle Size on Direct Microbial Conversion of Hot Water-Pretreated Poplar by Clostridium thermocellum. , 2015, , 307-319.		0