Jian Shi

List of Publications by Year
in descending order

82 papers	6,096 citations	66343 42 h-index	69250 77 g-index
88 all docs	88 docs citations	88 times ranked	6460 citing authors

#	Article	IF	Citations
1	Design of low-cost ionic liquids for lignocellulosic biomass pretreatment. Green Chemistry, 2015, 17, 1728-1734.	9.0	384
2	Production of Renewable Aromatic Compounds by Catalytic Fast Pyrolysis of Lignocellulosic Biomass with Bifunctional Ga/ZSMâ€5 Catalysts. Angewandte Chemie - International Edition, 2012, 51, 1387-1390.	13.8	338
3	Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3587-95.	7.1	285
4	Comparison of solid-state to liquid anaerobic digestion of lignocellulosic feedstocks for biogas production. Bioresource Technology, 2012, 124, 379-386.	9.6	280
5	Process and technoeconomic analysis of leading pretreatment technologies for lignocellulosic ethanol production using switchgrass. Bioresource Technology, 2011, 102, 11105-11114.	9.6	274
6	Effect of microbial pretreatment on enzymatic hydrolysis and fermentation of cotton stalks for ethanol production. Biomass and Bioenergy, 2009, 33, 88-96.	5.7	227
7	Methane production from solid-state anaerobic digestion ofÂlignocellulosic biomass. Biomass and Bioenergy, 2012, 46, 125-132.	5.7	211
8	Transforming biomass conversion with ionic liquids: process intensification and the development of a high-gravity, one-pot process for the production of cellulosic ethanol. Energy and Environmental Science, 2016, 9, 1042-1049.	30.8	201
9	Microbial pretreatment of cotton stalks by solid state cultivation of Phanerochaete chrysosporium. Bioresource Technology, 2008, 99, 6556-6564.	9.6	194
10	One-pot ionic liquid pretreatment and saccharification of switchgrass. Green Chemistry, 2013, 15, 2579.	9.0	175
11	Enhancing the solid-state anaerobic digestion of fallen leaves through simultaneous alkaline treatment. Bioresource Technology, 2011, 102, 8828-8834.	9.6	163
12	Understanding pretreatment efficacy of four cholinium and imidazolium ionic liquids by chemistry and computation. Green Chemistry, 2014, 16, 2546-2557.	9.0	138
13	Understanding the role of water during ionic liquid pretreatment of lignocellulose: co-solvent or anti-solvent?. Green Chemistry, 2014, 16, 3830-3840.	9.0	129
14	Comparative data on effects of leading pretreatments and enzyme loadings and formulations on sugar yields from different switchgrass sources. Bioresource Technology, 2011, 102, 11052-11062.	9.6	121
15	Understanding cost drivers and economic potential of two variants of ionic liquid pretreatment for cellulosic biofuel production. Biotechnology for Biofuels, 2014, 7, 86.	6.2	120
16	Comparative material balances around pretreatment technologies for the conversion of switchgrass to soluble sugars. Bioresource Technology, 2011, 102, 11063-11071.	9.6	117
17	Rapid microwave-assisted biomass delignification and lignin depolymerization in deep eutectic solvents. Energy Conversion and Management, 2019, 196, 1080-1088.	9.2	117
18	Reactor performance and microbial community dynamics during solid-state anaerobic digestion of corn stover at mesophilic and thermophilic conditions. Bioresource Technology, 2013, 136, 574-581.	9.6	116

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19	Renewable gasoline from aqueous phase hydrodeoxygenation of aqueous sugar solutions prepared by hydrolysis of maple wood. Green Chemistry, 2011, 13, 91-101.	9.0	113
20	Comparison of different liquid anaerobic digestion effluents as inocula and nitrogen sources for solid-state batch anaerobic digestion of corn stover. Waste Management, 2013, 33, 26-32.	7.4	109
21	Autohydrolysis pretreatment of Coastal Bermuda grass for increased enzyme hydrolysis. Bioresource Technology, 2009, 100, 6434-6441.	9.6	98
22	Comparative study on enzymatic digestibility of switchgrass varieties and harvests processed by leading pretreatment technologies. Bioresource Technology, 2011, 102, 11089-11096.	9.6	93
23	Solid-state anaerobic digestion of spent wheat straw from horse stall. Bioresource Technology, 2011, 102, 9432-9437.	9.6	92
24	Industrial hemp as a potential bioenergy crop in comparison with kenaf, switchgrass and biomass sorghum. Bioresource Technology, 2017, 244, 641-649.	9.6	83
25	Impact of mixed feedstocks and feedstock densification on ionic liquid pretreatment efficiency. Biofuels, 2013, 4, 63-72.	2.4	80
26	Effects of microbial and non-microbial factors of liquid anaerobic digestion effluent as inoculum on solid-state anaerobic digestion of corn stover. Bioresource Technology, 2014, 157, 188-196.	9.6	72
27	Efficient dehydration and recovery of ionic liquid after lignocellulosic processing using pervaporation. Biotechnology for Biofuels, 2017, 10, 154.	6.2	72
28	Sugar yields from dilute sulfuric acid and sulfur dioxide pretreatments and subsequent enzymatic hydrolysis of switchgrass. Bioresource Technology, 2011, 102, 8930-8938.	9.6	65
29	Impact of engineered lignin composition on biomass recalcitrance and ionic liquid pretreatment efficiency. Green Chemistry, 2016, 18, 4884-4895.	9.0	64
30	CO2 enabled process integration for the production of cellulosic ethanol using bionic liquids. Energy and Environmental Science, 2016, 9, 2822-2834.	30.8	63
31	Fractionation and characterization of lignin streams from unique high-lignin content endocarp feedstocks. Biotechnology for Biofuels, 2018, 11, 304.	6.2	63
32	Surface and ultrastructural characterization of raw and pretreated switchgrass. Bioresource Technology, 2011, 102, 11097-11104.	9.6	62
33	Characterization and Catalytic Transfer Hydrogenolysis of Deep Eutectic Solvent Extracted Sorghum Lignin to Phenolic Compounds. ACS Sustainable Chemistry and Engineering, 2018, 6, 10408-10420.	6.7	62
34	Hydrogels derived from lignocellulosic compounds: Evaluation of the compositional, structural, mechanical and antimicrobial properties. Industrial Crops and Products, 2019, 128, 323-330.	5.2	60
35	Natural deep eutectic solvent mediated extrusion for continuous high-solid pretreatment of lignocellulosic biomass. Green Chemistry, 2020, 22, 6372-6383.	9.0	58
36	Understanding Lignin Fractionation and Characterization from Engineered Switchgrass Treated by an Aqueous Ionic Liquid. ACS Sustainable Chemistry and Engineering, 2018, 6, 6612-6623.	6.7	56

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37	Application of cellulase and hemicellulase to pure xylan, pure cellulose, and switchgrass solids from leading pretreatments. Bioresource Technology, 2011, 102, 11080-11088.	9.6	54
38	Comparison of microwaves to fluidized sand baths for heating tubular reactors for hydrothermal and dilute acid batch pretreatment of corn stover. Bioresource Technology, 2011, 102, 5952-5961.	9.6	54
39	Effects of enzyme loading and Î²-glucosidase supplementation on enzymatic hydrolysis of switchgrass processed by leading pretreatment technologies. Bioresource Technology, 2011, 102, 11115-11120.	9.6	52
40	Impact of different ratios of feedstock to liquid anaerobic digestion effluent on the performance and microbiome of solid-state anaerobic digesters digesting corn stover. Bioresource Technology, 2016, 200, 744-752.	9.6	47
41	Theoretical Insights into the Role of Water in the Dissolution of Cellulose Using IL/Water Mixed Solvent Systems. Journal of Physical Chemistry B, 2015, 119, 14339-14349.	2.6	46
42	Understanding Laccaseâ€“Ionic Liquid Interactions toward Biocatalytic Lignin Conversion in Aqueous Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2019, 7, 15928-15938.	6.7	45
43	Principles and Development of Lignocellulosic Biomass Pretreatment for Biofuels. Advances in Bioenergy, 2017, , 1-68.	1.3	44
44	Microbial pretreatment of cotton stalks by submerged cultivation of Phanerochaete chrysosporium. Bioresource Technology, 2009, 100, 4388-4395.	9.6	42
45	Linking lignin source with structural and electrochemical properties of lignin-derived carbon materials. RSC Advances, 2018, 8, 38721-38732.	3.6	42
46	Comparison of alkaline- and fungi-assisted wet-storage of corn stover. Bioresource Technology, 2012, 109, 98-104.	9.6	40
47	Impact of Pretreatment Technologies on Saccharification and Isopentenol Fermentation of Mixed Lignocellulosic Feedstocks. Bioenergy Research, 2015, 8, 1004-1013.	3.9	40
48	Catalytic Oxidation and Depolymerization of Lignin in Aqueous Ionic Liquid. Frontiers in Energy Research, 2017, 5, .	2.3	40
49	Biodegradable Cellulose Film Prepared From Banana Pseudo-Stem Using an Ionic Liquid for Mango Preservation. Frontiers in Plant Science, 2021, 12, 625878.	3.6	39
50	Rapid Kinetic Characterization of Glycosyl Hydrolases Based on Oxime Derivatization and Nanostructure-Initiator Mass Spectrometry (NIMS). ACS Chemical Biology, 2014, 9, 1470-1479.	3.4	36
51	Biocatalysis in ionic liquids for lignin valorization: Opportunities and recent developments. Biotechnology Advances, 2019, 37, 107418.	11.7	36
52	Sophocarpine alleviates hepatocyte steatosis through activating AMPK signaling pathway. Toxicology in Vitro, 2013, 27, 1065-1071.	2.4	30
53	Dynamic changes of substrate reactivity and enzyme adsorption on partially hydrolyzed cellulose. Biotechnology and Bioengineering, 2017, 114, 503-515.	3.3	24
54	Comparative Evaluation of Industrial Hemp Cultivars: Agronomical Practices, Feedstock Characterization, and Potential for Biofuels and Bioproducts. ACS Sustainable Chemistry and Engineering, 2020, 8, 6200-6210.	6.7	22

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55	Mechanistic Insight into Lignin Slow Pyrolysis by Linking Pyrolysis Chemistry and Carbon Material Properties. ACS Sustainable Chemistry and Engineering, 2020, 8, 15843-15854.	6.7	22
56	Investigation of enzyme formulation on pretreated switchgrass. Bioresource Technology, 2011, 102, 11072-11079.	9.6	21
57	Impact of Dilute Sulfuric Acid, Ammonium Hydroxide, and Ionic Liquid Pretreatments on the Fractionation and Characterization of Engineered Switchgrass. Bioenergy Research, 2017, 10, 1079-1093.	3.9	21
58	Antimicrobial Properties of Corn Stover Lignin Fractions Derived from Catalytic Transfer Hydrogenolysis in Supercritical Ethanol with a Ru/C Catalyst. ACS Sustainable Chemistry and Engineering, 2020, 8, 18455-18467.	6.7	20
59	How Alkyl Chain Length of Alcohols Affects Lignin Fractionation and Ionic Liquid Recycle During Lignocellulose Pretreatment. Bioenergy Research, 2015, 8, 973-981.	3.9	17
60	Molecular dynamics simulations of heterogeneous hydrogen bond environment in hydrophobic deep eutectic solvents. AIChE Journal, 2022, 68, e17382.	3.6	17
61	Enzymatic Digestibility of Corn Stover Fractions in Response to Fungal Pretreatment. Industrial & Engineering Chemistry Research, 2012, 51, 7153-7159.	3.7	16
62	Interactions between fungal growth, substrate utilization and enzyme production during shallow stationary cultivation of Phanerochaete chrysosporium on cotton stalks. Enzyme and Microbial Technology, 2012, 51, 1-8.	3.2	16
63	Modulating Mechanical Properties of Collagenâ€“Lignin Composites. ACS Applied Bio Materials, 2019, 2, 3562-3572.	4.6	15
64	Sequential Extraction and Characterization of Lignin-Derived Compounds from Thermochemically Processed Biorefinery Lignins. Energy & Fuels, 2019, 33, 4322-4330.	5.1	14
65	CHAPTER 3. Ionic Liquid Pretreatment of Lignocellulosic Biomass for Biofuels and Chemicals. RSC Green Chemistry, 2015, , 65-94.	0.1	14
66	Interactions between fungal growth, substrate utilization, and enzyme production during solid substrate cultivation of Phanerochaete chrysosporium on cotton stalks. Bioprocess and Biosystems Engineering, 2014, 37, 2463-2473.	3.4	12
67	Characterization and Enzyme Engineering of a Hyperthermophilic Laccase Toward Improving Its Activity in Ionic Liquid. Frontiers in Energy Research, 2020, 8, .	2.3	12
68	Structure and hydrogen bonds of hydrophobic deep eutectic <scp>solventâ€aqueous liquidâ€“liquid</scp> interfaces. AIChE Journal, 2021, 67, e17427.	3.6	12
69	Effects of water on the solvation and structure of lipase in deep eutectic solvents containing a protein destabilizer and stabilizer. Physical Chemistry Chemical Physics, 2021, 23, 23372-23379.	2.8	8
70	Controlling bacterial contamination during fuel ethanol fermentation using thermochemically depolymerized lignin bio-oils. Green Chemistry, 2021, 23, 6477-6489.	9.0	5
71	Densification and Pyrolysis of Lignocellulosic Biomass for Renewable Energy. Current Organic Chemistry, 2016, 20, 2480-2488.	1.6	5
72	The multiscale solvation effect on the reactivity of Î²-O-4 of lignin dimers in deep eutectic solvents. Physical Chemistry Chemical Physics, 2021, 23, 25699-25705.	2.8	5

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73	Engineering Lignin-Derived Carbonâ€“Silicon Nanocomposite Electrodes: Insight into the Copyrolysis Mechanism and Processâ€“Structureâ€“Propertyâ€“Performance Relationships. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	5
74	Modifying Surface Charges of a Thermophilic Laccase Toward Improving Activity and Stability in Ionic Liquid. Frontiers in Bioengineering and Biotechnology, 0, 10, .	4.1	5
75	A Novel Platform for Bioupgrading of Lignin to Valuable Nutraceuticals and Pharmaceuticals. , 2018, , .		3
76	Effect of Substrate Characteristics on the Growth and Sporulation of Two Biocontrol Microorganisms during Solid State Cultivation. Fermentation, 2020, 6, 69.	3.0	3
77	Heterogeneous and Homogeneous Components in Gas-Phase Pyrolysis of Hydrolytic Lignin. ACS Sustainable Chemistry and Engineering, 2020, 8, 12891-12901.	6.7	3
78	Biofuels from cellulosic biomass via aqueous processing. , 0, , 336-348.		2
79	Challenges in Quantification of Ligninolytic Enzymes from Phanerochaete chrysosporium Cultivation for Pretreatment of Cotton Stalks. Transactions of the ASABE, 2007, 50, 2347-2354.	1.1	1
80	<i>Effect of Substrate Characteristics on Bacterial Growth and Sporulation of Two Biocontrol Microorganisms during Solid State Cultivation</i>. , 2018, , .		0
81	Fractionation, Characterization, and Valorization of Lignin Derived from Engineered Plants. , 2021, , 245-288.		0
82	Characterization of the Composition, Structure, and Mechanical Properties of Endocarp Biomass. , 2022, 65, 67-74.		0