

# Jian Shi

## List of Publications by Citations

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79  
papers

4,975  
citations

38  
h-index

70  
g-index

88  
ext. papers

5,588  
ext. citations

8.3  
avg, IF

5.64  
L-index

#	Paper	IF	Citations
79	Design of low-cost ionic liquids for lignocellulosic biomass pretreatment. <i>Green Chemistry</i> , <b>2015</b> , 17, 1728-1734	17.3	341
78	Production of renewable aromatic compounds by catalytic fast pyrolysis of lignocellulosic biomass with bifunctional Ga/ZSM-5 catalysts. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 1387-90	16.4	288
77	Process and technoeconomic analysis of leading pretreatment technologies for lignocellulosic ethanol production using switchgrass. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11105-14	11	251
76	Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, E3587-95	11.5	239
75	Comparison of solid-state to liquid anaerobic digestion of lignocellulosic feedstocks for biogas production. <i>Bioresource Technology</i> , <b>2012</b> , 124, 379-86	11	228
74	Effect of microbial pretreatment on enzymatic hydrolysis and fermentation of cotton stalks for ethanol production. <i>Biomass and Bioenergy</i> , <b>2009</b> , 33, 88-96	5.3	195
73	Methane production from solid-state anaerobic digestion of lignocellulosic biomass. <i>Biomass and Bioenergy</i> , <b>2012</b> , 46, 125-132	5.3	181
72	Microbial pretreatment of cotton stalks by solid state cultivation of <i>Phanerochaete chrysosporium</i> . <i>Bioresource Technology</i> , <b>2008</b> , 99, 6556-64	11	168
71	Transforming biomass conversion with ionic liquids: process intensification and the development of a high-gravity, one-pot process for the production of cellulosic ethanol. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 1042-1049	35.4	167
70	One-pot ionic liquid pretreatment and saccharification of switchgrass. <i>Green Chemistry</i> , <b>2013</b> , 15, 2579	10	154
69	Enhancing the solid-state anaerobic digestion of fallen leaves through simultaneous alkaline treatment. <i>Bioresource Technology</i> , <b>2011</b> , 102, 8828-34	11	141
68	Production of Renewable Aromatic Compounds by Catalytic Fast Pyrolysis of Lignocellulosic Biomass with Bifunctional Ga/ZSM-5 Catalysts. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 1416-1419	3.6	124
67	Understanding pretreatment efficacy of four cholinium and imidazolium ionic liquids by chemistry and computation. <i>Green Chemistry</i> , <b>2014</b> , 16, 2546-2557	10	117
66	Comparative data on effects of leading pretreatments and enzyme loadings and formulations on sugar yields from different switchgrass sources. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11052-62	11	114
65	Understanding the role of water during ionic liquid pretreatment of lignocellulose: co-solvent or anti-solvent?. <i>Green Chemistry</i> , <b>2014</b> , 16, 3830-3840	10	110
64	Reactor performance and microbial community dynamics during solid-state anaerobic digestion of corn stover at mesophilic and thermophilic conditions. <i>Bioresource Technology</i> , <b>2013</b> , 136, 574-81	11	108
63	Comparative material balances around pretreatment technologies for the conversion of switchgrass to soluble sugars. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11063-71	11	107

62	Renewable gasoline from aqueous phase hydrodeoxygenation of aqueous sugar solutions prepared by hydrolysis of maple wood. <i>Green Chemistry</i> , <b>2011</b> , 13, 91-101	10	105
61	Understanding cost drivers and economic potential of two variants of ionic liquid pretreatment for cellulosic biofuel production. <i>Biotechnology for Biofuels</i> , <b>2014</b> , 7, 86	7.8	101
60	Comparison of different liquid anaerobic digestion effluents as inocula and nitrogen sources for solid-state batch anaerobic digestion of corn stover. <i>Waste Management</i> , <b>2013</b> , 33, 26-32	8.6	90
59	Autohydrolysis pretreatment of coastal Bermuda grass for increased enzyme hydrolysis. <i>Bioresource Technology</i> , <b>2009</b> , 100, 6434-41	11	84
58	Comparative study on enzymatic digestibility of switchgrass varieties and harvests processed by leading pretreatment technologies. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11089-96	11	82
57	Solid-state anaerobic digestion of spent wheat straw from horse stall. <i>Bioresource Technology</i> , <b>2011</b> , 102, 9432-7	11	79
56	Impact of mixed feedstocks and feedstock densification on ionic liquid pretreatment efficiency. <i>Biofuels</i> , <b>2013</b> , 4, 63-72	2	69
55	Effects of microbial and non-microbial factors of liquid anaerobic digestion effluent as inoculum on solid-state anaerobic digestion of corn stover. <i>Bioresource Technology</i> , <b>2014</b> , 157, 188-96	11	62
54	Sugar yields from dilute sulfuric acid and sulfur dioxide pretreatments and subsequent enzymatic hydrolysis of switchgrass. <i>Bioresource Technology</i> , <b>2011</b> , 102, 8930-8	11	61
53	Impact of engineered lignin composition on biomass recalcitrance and ionic liquid pretreatment efficiency. <i>Green Chemistry</i> , <b>2016</b> , 18, 4884-4895	10	58
52	Rapid microwave-assisted biomass delignification and lignin depolymerization in deep eutectic solvents. <i>Energy Conversion and Management</i> , <b>2019</b> , 196, 1080-1088	10.6	56
51	Industrial hemp as a potential bioenergy crop in comparison with kenaf, switchgrass and biomass sorghum. <i>Bioresource Technology</i> , <b>2017</b> , 244, 641-649	11	56
50	Surface and ultrastructural characterization of raw and pretreated switchgrass. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11097-104	11	55
49	Efficient dehydration and recovery of ionic liquid after lignocellulosic processing using pervaporation. <i>Biotechnology for Biofuels</i> , <b>2017</b> , 10, 154	7.8	54
48	CO <sub>2</sub> enabled process integration for the production of cellulosic ethanol using bionic liquids. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2822-2834	35.4	52
47	Application of cellulase and hemicellulase to pure xylan, pure cellulose, and switchgrass solids from leading pretreatments. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11080-8	11	50
46	Comparison of microwaves to fluidized sand baths for heating tubular reactors for hydrothermal and dilute acid batch pretreatment of corn stover. <i>Bioresource Technology</i> , <b>2011</b> , 102, 5952-61	11	49
45	Understanding Lignin Fractionation and Characterization from Engineered Switchgrass Treated by an Aqueous Ionic Liquid. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 6612-6623	8.3	42

44	Effects of enzyme loading and $\beta$ -glucosidase supplementation on enzymatic hydrolysis of switchgrass processed by leading pretreatment technologies. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11115-20	11	41
43	Characterization and Catalytic Transfer Hydrogenolysis of Deep Eutectic Solvent Extracted Sorghum Lignin to Phenolic Compounds. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 10408-10420	8.3	39
42	Microbial pretreatment of cotton stalks by submerged cultivation of <i>Phanerochaete chrysosporium</i> . <i>Bioresource Technology</i> , <b>2009</b> , 100, 4388-95	11	39
41	Theoretical Insights into the Role of Water in the Dissolution of Cellulose Using IL/Water Mixed Solvent Systems. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 14339-49	3-4	38
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. <i>Bioresource Technology</i> , <b>2016</b> , 200, 744-52	11	38
39	Comparison of alkaline- and fungi-assisted wet-storage of corn stover. <i>Bioresource Technology</i> , <b>2012</b> , 109, 98-104	11	35
38	Impact of Pretreatment Technologies on Saccharification and Isopentenol Fermentation of Mixed Lignocellulosic Feedstocks. <i>Bioenergy Research</i> , <b>2015</b> , 8, 1004-1013	3-1	34
37	Fractionation and characterization of lignin streams from unique high-lignin content endocarp feedstocks. <i>Biotechnology for Biofuels</i> , <b>2018</b> , 11, 304	7.8	33
36	Principles and Development of Lignocellulosic Biomass Pretreatment for Biofuels. <i>Advances in Bioenergy</i> , <b>2017</b> , 1-68	3-9	32
35	Catalytic Oxidation and Depolymerization of Lignin in Aqueous Ionic Liquid. <i>Frontiers in Energy Research</i> , <b>2017</b> , 5,	3.8	32
34	Understanding Laccase-Ionic Liquid Interactions toward Biocatalytic Lignin Conversion in Aqueous Ionic Liquids. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 15928-15938	8.3	30
33	Rapid kinetic characterization of glycosyl hydrolases based on oxime derivatization and nanostructure-initiator mass spectrometry (NIMS). <i>ACS Chemical Biology</i> , <b>2014</b> , 9, 1470-9	4-9	30
32	Hydrogels derived from lignocellulosic compounds: Evaluation of the compositional, structural, mechanical and antimicrobial properties. <i>Industrial Crops and Products</i> , <b>2019</b> , 128, 323-330	5-9	30
31	Natural deep eutectic solvent mediated extrusion for continuous high-solid pretreatment of lignocellulosic biomass. <i>Green Chemistry</i> , <b>2020</b> , 22, 6372-6383	10	27
30	Sophocarpine alleviates hepatocyte steatosis through activating AMPK signaling pathway. <i>Toxicology in Vitro</i> , <b>2013</b> , 27, 1065-71	3.6	26
29	Biocatalysis in ionic liquids for lignin valorization: Opportunities and recent developments. <i>Biotechnology Advances</i> , <b>2019</b> , 37, 107418	17.8	22
28	Investigation of enzyme formulation on pretreated switchgrass. <i>Bioresource Technology</i> , <b>2011</b> , 102, 11072-9	12	21
27	Dynamic changes of substrate reactivity and enzyme adsorption on partially hydrolyzed cellulose. <i>Biotechnology and Bioengineering</i> , <b>2017</b> , 114, 503-515	4-9	20

26	Linking lignin source with structural and electrochemical properties of lignin-derived carbon materials.. <i>RSC Advances</i> , <b>2018</b> , 8, 38721-38732	3.7	18
25	Comparative Evaluation of Industrial Hemp Cultivars: Agronomical Practices, Feedstock Characterization, and Potential for Biofuels and Bioproducts. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 6200-6210	8.3	16
24	Impact of Dilute Sulfuric Acid, Ammonium Hydroxide, and Ionic Liquid Pretreatments on the Fractionation and Characterization of Engineered Switchgrass. <i>Bioenergy Research</i> , <b>2017</b> , 10, 1079-1093	3.1	16
23	How Alkyl Chain Length of Alcohols Affects Lignin Fractionation and Ionic Liquid Recycle During Lignocellulose Pretreatment. <i>Bioenergy Research</i> , <b>2015</b> , 8, 973-981	3.1	13
22	Interactions between fungal growth, substrate utilization and enzyme production during shallow stationary cultivation of Phanerochaete chrysosporium on cotton stalks. <i>Enzyme and Microbial Technology</i> , <b>2012</b> , 51, 1-8	3.8	13
21	CHAPTER 3:Ionic Liquid Pretreatment of Lignocellulosic Biomass for Biofuels and Chemicals. <i>RSC Green Chemistry</i> , <b>2015</b> , 65-94	0.9	13
20	Enzymatic Digestibility of Corn Stover Fractions in Response to Fungal Pretreatment. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2012</b> , 51, 7153-7159	3.9	12
19	Sequential Extraction and Characterization of Lignin-Derived Compounds from Thermochemically Processed Biorefinery Lignins. <i>Energy &amp; Fuels</i> , <b>2019</b> , 33, 4322-4330	4.1	11
18	Interactions between fungal growth, substrate utilization, and enzyme production during solid substrate cultivation of Phanerochaete chrysosporium on cotton stalks. <i>Bioprocess and Biosystems Engineering</i> , <b>2014</b> , 37, 2463-73	3.7	10
17	Biodegradable Cellulose Film Prepared From Banana Pseudo-Stem Using an Ionic Liquid for Mango Preservation. <i>Frontiers in Plant Science</i> , <b>2021</b> , 12, 625878	6.2	10
16	Mechanistic Insight into Lignin Slow Pyrolysis by Linking Pyrolysis Chemistry and Carbon Material Properties. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 15843-15854	8.3	7
15	Modulating Mechanical Properties of Collagen-Lignin Composites.. <i>ACS Applied Bio Materials</i> , <b>2019</b> , 2, 3562-3572	4.1	6
14	Characterization and Enzyme Engineering of a Hyperthermophilic Laccase Toward Improving Its Activity in Ionic Liquid. <i>Frontiers in Energy Research</i> , <b>2020</b> , 8,	3.8	6
13	Densification and Pyrolysis of Lignocellulosic Biomass for Renewable Energy. <i>Current Organic Chemistry</i> , <b>2016</b> , 20, 1-1	1.7	4
12	Antimicrobial Properties of Corn Stover Lignin Fractions Derived from Catalytic Transfer Hydrogenolysis in Supercritical Ethanol with a Ru/C Catalyst. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 18455-18467	8.3	3
11	A Novel Platform for Bioupgrading of Lignin to Valuable Nutraceuticals and Pharmaceuticals <b>2018</b> ,		3
10	Molecular dynamics simulations of heterogeneous hydrogen bond environment in hydrophobic deep eutectic solvents. <i>AIChE Journal</i> ,e17382	3.6	2
9	Structure and hydrogen bonds of hydrophobic deep eutectic solvent-aqueous liquid-liquid interfaces. <i>AIChE Journal</i> ,e17427	3.6	2

8	Challenges in Quantification of Ligninolytic Enzymes from <i>Phanerochaete chrysosporium</i> Cultivation for Pretreatment of Cotton Stalks. <i>Transactions of the ASABE</i> , <b>2007</b> , 50, 2347-2354	0.9	1
7	The multiscale solvation effect on the reactivity of ED-4 of lignin dimers in deep eutectic solvents. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 25699-25705	3.6	1
6	Effect of Substrate Characteristics on the Growth and Sporulation of Two Biocontrol Microorganisms during Solid State Cultivation. <i>Fermentation</i> , <b>2020</b> , 6, 69	4.7	1
5	Heterogeneous and Homogeneous Components in Gas-Phase Pyrolysis of Hydrolytic Lignin. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 12891-12901	8.3	1
4	Controlling bacterial contamination during fuel ethanol fermentation using thermochemically depolymerized lignin bio-oils. <i>Green Chemistry</i> , <b>2021</b> , 23, 6477-6489	10	0
3	Effects of water on the solvation and structure of lipase in deep eutectic solvents containing a protein destabilizer and stabilizer. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 23372-23379	3.6	0
2	Biofuels from cellulosic biomass via aqueous processing 336-348		
1	Fractionation, Characterization, and Valorization of Lignin Derived from Engineered Plants <b>2021</b> , 245-288		