Hanwu Lei

List of Publications by Year
in descending order

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Version: 2024-02-01

114 papers	6,778 citations	44069 48 h-index	66911 78 g-index
114 all docs	114 docs citations	114 times ranked	4871 citing authors

#	Article	IF	Citations
1	Catalytic co-pyrolysis of lignocellulosic biomass with polymers: a critical review. Green Chemistry, 2016, 18, 4145-4169.	9.0	362
2	Production of phenols and biofuels by catalytic microwave pyrolysis of lignocellulosic biomass. Bioresource Technology, 2012, 108, 274-279.	9.6	207
3	Jet fuel production from waste plastics via catalytic pyrolysis with activated carbons. Applied Energy, 2019, 251, 113337.	10.1	191
4	Gasoline-range hydrocarbons produced from microwave-induced pyrolysis of low-density polyethylene over ZSM-5. Fuel, 2015, 144, 33-42.	6.4	169
5	Effects of feedstock characteristics on microwave-assisted pyrolysis â€“ A review. Bioresource Technology, 2017, 230, 143-151.	9.6	169
6	Phenol and phenolics from lignocellulosic biomass by catalytic microwave pyrolysis. Bioresource Technology, 2011, 102, 7004-7007.	9.6	164
7	Bio-based phenols and fuel production from catalytic microwave pyrolysis of lignin by activated carbons. Bioresource Technology, 2014, 162, 142-147.	9.6	164
8	The Effects of Reaction Temperature and Time and Particle Size of Corn Stover on Microwave Pyrolysis. Energy & Fuels, 2009, 23, 3254-3261.	5.1	154
9	Thermal behavior and kinetic study for catalytic co-pyrolysis of biomass with plastics. Bioresource Technology, 2016, 220, 233-238.	9.6	149
10	A review of catalytic microwave pyrolysis of lignocellulosic biomass for value-added fuel and chemicals. Bioresource Technology, 2017, 230, 112-121.	9.6	149
11	Catalytic pyrolysis of plastic wastes in a continuous microwave assisted pyrolysis system for fuel production. Chemical Engineering Journal, 2021, 418, 129412.	12.7	148
12	Biofuel production and kinetics analysis for microwave pyrolysis of Douglas fir sawdust pellet. Journal of Analytical and Applied Pyrolysis, 2012, 94, 163-169.	5.5	141
13	Fast microwave-assisted pyrolysis of wastes for biofuels production â€“ A review. Bioresource Technology, 2020, 297, 122480.	9.6	137
14	Enhancement of jet fuel range alkanes from co-feeding of lignocellulosic biomass with plastics via tandem catalytic conversions. Applied Energy, 2016, 173, 418-430.	10.1	130
15	Ex-situ catalytic upgrading of vapors from microwave-assisted pyrolysis of low-density polyethylene with MgO. Energy Conversion and Management, 2017, 149, 432-441.	9.2	126
16	Hydrocarbon and hydrogen-rich syngas production by biomass catalytic pyrolysis and bio-oil upgrading over biochar catalysts. RSC Advances, 2014, 4, 10731-10737.	3.6	122
17	Renewable phenols production by catalytic microwave pyrolysis of Douglas fir sawdust pellets with activated carbon catalysts. Bioresource Technology, 2013, 142, 546-552.	9.6	116
18	Selective Adsorption of Gd³⁺ on a Magnetically Retrievable Imprinted Chitosan/Carbon Nanotube Composite with High Capacity. ACS Applied Materials & Interfaces, 2015, 7, 21047-21055.	8.0	114

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19	An overview of a novel concept in biomass pyrolysis: microwave irradiation. Sustainable Energy and Fuels, 2017, 1, 1664-1699.	4.9	107
20	Production of renewable alkyl-phenols from catalytic pyrolysis of Douglas fir sawdust over biomass-derived activated carbons. Applied Energy, 2018, 220, 426-436.	10.1	104
21	Biochar of corn stover: Microwave-assisted pyrolysis condition induced changes in surface functional groups and characteristics. Journal of Analytical and Applied Pyrolysis, 2015, 115, 149-156.	5.5	102
22	Aromatic hydrocarbons production from ex situ catalysis of pyrolysis vapor over Zinc modified ZSM-5 in a packed-bed catalysis coupled with microwave pyrolysis reactor. Fuel, 2014, 129, 78-85.	6.4	93
23	Renewable High-Purity Mono-Phenol Production from Catalytic Microwave-Induced Pyrolysis of Cellulose over Biomass-Derived Activated Carbon Catalyst. ACS Sustainable Chemistry and Engineering, 2018, 6, 5349-5357.	6.7	91
24	Microwave Torrefaction of Douglas Fir Sawdust Pellets. Energy & Fuels, 2012, 26, 5936-5943.	5.1	88
25	From glucose-based carbohydrates to phenol-rich bio-oils integrated with syngas production via catalytic pyrolysis over an activated carbon catalyst. Green Chemistry, 2018, 20, 3346-3358.	9.0	87
26	Liquidâ€“Liquid Extraction of Biomass Pyrolysis Bio-oil. Energy & Fuels, 2014, 28, 1207-1212.	5.1	84
27	Development of an effective acidogenically digested swine manure-based algal system for improved wastewater treatment and biofuel and feed production. Applied Energy, 2013, 107, 255-263.	10.1	82
28	Jet fuel and hydrogen produced from waste plastics catalytic pyrolysis with activated carbon and MgO. Science of the Total Environment, 2020, 727, 138411.	8.0	80
29	Biochar filled high-density polyethylene composites with excellent properties: Towards maximizing the utilization of agricultural wastes. Industrial Crops and Products, 2020, 146, 112185.	5.2	78
30	Synthesis and characterization of sulfonated activated carbon as a catalyst for bio-jet fuel production from biomass and waste plastics. Bioresource Technology, 2020, 297, 122411.	9.6	75
31	Influence of Exogenous CO2 on Biomass and Lipid Accumulation of Microalgae Auxenochlorella protothecoides Cultivated in Concentrated Municipal Wastewater. Applied Biochemistry and Biotechnology, 2012, 166, 1661-1673.	2.9	74
32	Temperature varied biochar as a reinforcing filler for high-density polyethylene composites. Composites Part B: Engineering, 2019, 175, 107151.	12.0	73
33	Microwave pyrolysis of distillers dried grain with solubles (DDGS) for biofuel production. Bioresource Technology, 2011, 102, 6208-6213.	9.6	70
34	Syngas production from biomass pyrolysis in a continuous microwave assisted pyrolysis system. Bioresource Technology, 2020, 314, 123756.	9.6	69
35	Aromatics and phenols from catalytic pyrolysis of Douglas fir pellets in microwave with ZSM-5 as a catalyst. Journal of Analytical and Applied Pyrolysis, 2012, 98, 194-200.	5.5	67
36	New Insight into the Mechanism of the Hydrogen Evolution Reaction on MoP(001) from First Principles. ACS Applied Materials & Interfaces, 2018, 10, 20429-20439.	8.0	67

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37	Improving hydrocarbon yield via catalytic fast co-pyrolysis of biomass and plastic over ceria and HZSM-5: An analytical pyrolyzer analysis. Bioresource Technology, 2018, 268, 1-8.	9.6	64
38	From lignocellulosic biomass to renewable cycloalkanes for jet fuels. Green Chemistry, 2015, 17, 4736-4747.	9.0	61
39	Renewable gasoline-range aromatics and hydrogen-enriched fuel gas from biomass via catalytic microwave-induced pyrolysis. Green Chemistry, 2015, 17, 4029-4036.	9.0	60
40	Renewable phenol production from lignin with acid pretreatment and ex-situ catalytic pyrolysis. Journal of Cleaner Production, 2019, 231, 331-340.	9.3	60
41	Optimizing Microwave-Assisted Pyrolysis of Phosphoric Acid-Activated Biomass: Impact of Concentration on Heating Rate and Carbonization Time. ACS Sustainable Chemistry and Engineering, 2018, 6, 1318-1326.	6.7	59
42	Recent advances in improving lignocellulosic biomass-based bio-oil production. Journal of Analytical and Applied Pyrolysis, 2020, 149, 104845.	5.5	59
43	Hydrothermal Pretreatment and Enzymatic Hydrolysis of Prairie Cord Grass. Energy & Fuels, 2010, 24, 718-727.	5.1	56
44	Enhancement of bio-oil yield and selectivity and kinetic study of catalytic pyrolysis of rice straw over transition metal modified ZSM-5 catalyst. Journal of Analytical and Applied Pyrolysis, 2017, 128, 324-334.	5.5	56
45	Improvement on the properties of microcrystalline cellulose/polylactic acid composites by using activated biochar. Journal of Cleaner Production, 2020, 252, 119898.	9.3	55
46	The integrated process of microwave torrefaction and pyrolysis of corn stover for biofuel production. Journal of Analytical and Applied Pyrolysis, 2014, 108, 248-253.	5.5	52
47	From plastics to jet fuel range alkanes via combined catalytic conversions. Fuel, 2017, 188, 28-38.	6.4	52
48	Hydrocarbon produced from upgrading rich phenolic compound bio-oil with low catalyst coking. Fuel, 2016, 178, 77-84.	6.4	51
49	Thermal decomposition behavior and kinetics for pyrolysis and catalytic pyrolysis of Douglas fir. RSC Advances, 2018, 8, 2196-2202.	3.6	50
50	Renewable jet-fuel range hydrocarbons production from co-pyrolysis of lignin and soapstock with the activated carbon catalyst. Waste Management, 2019, 88, 1-9.	7.4	49
51	Optimizing carbon efficiency of jet fuel range alkanes from cellulose co-fed with polyethylene via catalytically combined processes. Bioresource Technology, 2016, 214, 45-54.	9.6	48
52	Application of highly stable biochar catalysts for efficient pyrolysis of plastics: a readily accessible potential solution to a global waste crisis. Sustainable Energy and Fuels, 2020, 4, 4614-4624.	4.9	48
53	Enhancing jet fuel range hydrocarbons production from catalytic co-pyrolysis of Douglas fir and low-density polyethylene over bifunctional activated carbon catalysts. Energy Conversion and Management, 2020, 211, 112757.	9.2	47
54	Biofuel production from catalytic microwave pyrolysis of Douglas fir pellets over ferrum-modified activated carbon catalyst. Journal of Analytical and Applied Pyrolysis, 2015, 112, 74-79.	5.5	46

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55	Green-composites produced from waste residue in pulp and paper industry: A sustainable way to manage industrial wastes. Journal of Cleaner Production, 2020, 262, 121251.	9.3	46
56	Activated carbon from lignocellulosic biomass as catalyst: A review of the applications in fast pyrolysis process. Journal of Analytical and Applied Pyrolysis, 2021, 158, 105246.	5.5	46
57	Production of hydrocarbons from biomass-derived biochar assisted microwave catalytic pyrolysis. Sustainable Energy and Fuels, 2018, 2, 1781-1790.	4.9	45
58	Optimization of transesterification conditions for the production of fatty acid methyl ester (FAME) from Chinese tallow kernel oil with surfactant-coated lipase. Biomass and Bioenergy, 2009, 33, 277-282.	5.7	43
59	Enhanced production of renewable aromatic hydrocarbons for jet-fuel from softwood biomass and plastic waste using hierarchical ZSM-5 modified with lignin-assisted re-assembly. Energy Conversion and Management, 2021, 236, 114020.	9.2	42
60	Production of renewable jet fuel range alkanes and aromatics via integrated catalytic processes of intact biomass. Fuel, 2015, 160, 375-385.	6.4	41
61	Production of high-density polyethylene biocomposites from rice husk biochar: Effects of varying pyrolysis temperature. Science of the Total Environment, 2020, 738, 139910.	8.0	41
62	Integrated harvest of phenolic monomers and hydrogen through catalytic pyrolysis of biomass over nanocellulose derived biochar catalyst. Bioresource Technology, 2021, 320, 124352.	9.6	41
63	A thermal behavior and kinetics study of the catalytic pyrolysis of lignin. RSC Advances, 2016, 6, 100700-100707.	3.6	40
64	Carbon dioxide capture using ammonium sulfate surface modified activated biomass carbon. Biomass and Bioenergy, 2017, 98, 53-60.	5.7	40
65	Process design and economics for the conversion of lignocellulosic biomass into jet fuel range cycloalkanes. Energy, 2018, 154, 289-297.	8.8	38
66	A techno-economic evaluation of anaerobic biogas producing systems in developing countries. Bioresource Technology, 2018, 250, 910-921.	9.6	38
67	The effects of pyrolytic conditions on microwave pyrolysis of prairie cordgrass and kinetics. Journal of Analytical and Applied Pyrolysis, 2013, 101, 172-176.	5.5	37
68	Pyrolysis-catalysis for waste polyolefin conversion into low aromatic naphtha. Energy Conversion and Management, 2021, 245, 114578.	9.2	37
69	Microwave-Assisted Activation of Waste Cocoa Pod Husk by H₃PO₄ and KOHâ€"Comparative Insight into Textural Properties and Pore Development. ACS Omega, 2019, 4, 7088-7095.	3.5	36
70	Catalytic co-pyrolysis of torrefied poplar wood and high-density polyethylene over hierarchical HZSM-5 for mono-aromatics production. Renewable Energy, 2021, 164, 87-95.	8.9	36
71	Synthesis of high-density jet fuel from plastics via catalytically integral processes. RSC Advances, 2016, 6, 6154-6163.	3.6	35
72	Phenols production form Douglas fir catalytic pyrolysis with MgO and biomass-derived activated carbon catalysts. Energy, 2020, 199, 117459.	8.8	35

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73	Catalytic fast pyrolysis of low density polyethylene into naphtha with high selectivity by dual-catalyst tandem catalysis. Science of the Total Environment, 2021, 771, 144995.	8.0	35
74	Production of renewable jet fuel and gasoline range hydrocarbons from catalytic pyrolysis of soapstock over corn cob-derived activated carbons. Energy, 2020, 209, 118454.	8.8	32
75	A structured catalyst of ZSM-5/SiC foam for chemical recycling of waste plastics via catalytic pyrolysis. Chemical Engineering Journal, 2022, 440, 135836.	12.7	29
76	Aromatic hydrocarbons production from packed-bed catalysis coupled with microwave pyrolysis of Douglas fir sawdust pellets. RSC Advances, 2013, 3, 14609.	3.6	28
77	Development of a catalytically green route from diverse lignocellulosic biomasses to high-density cycloalkanes for jet fuels. Catalysis Science and Technology, 2016, 6, 4210-4220.	4.1	28
78	Microwave-assisted co-pyrolysis of pretreated lignin and soapstock for upgrading liquid oil: Effect of pretreatment parameters on pyrolysis behavior. Bioresource Technology, 2018, 258, 98-104.	9.6	28
79	One-step synthesis of biomass-based sulfonated carbon catalyst by direct carbonization-sulfonation for organosolv delignification. Bioresource Technology, 2021, 319, 124194.	9.6	27
80	Properties evaluation of biochar/high-density polyethylene composites: Emphasizing the porous structure of biochar by activation. Science of the Total Environment, 2020, 737, 139770.	8.0	26
81	Biochar-advanced thermocatalytic salvaging of the waste disposable mask with the production of hydrogen and mono-aromatic hydrocarbons. Journal of Hazardous Materials, 2022, 426, 128080.	12.4	25
82	A novel process for low-sulfur biodiesel production from scum waste. Bioresource Technology, 2016, 214, 826-835.	9.6	23
83	Renewable bio-phenols fromin situandex situcatalytic pyrolysis ofDouglas firpellet over biobased activated carbons. Sustainable Energy and Fuels, 2018, 2, 894-904.	4.9	23
84	Development of metal-doping mesoporous biochar catalyst for co-valorizing biomass and plastic waste into valuable hydrocarbons, syngas, and carbons. Fuel Processing Technology, 2022, 227, 107127.	7.2	23
85	Catalytic upcycling of waste plastics over nanocellulose derived biochar catalyst for the coupling harvest of hydrogen and liquid fuels. Science of the Total Environment, 2021, 779, 146463.	8.0	22
86	Furfural production from microwave catalytic torrefaction of Douglas fir sawdust. Journal of Analytical and Applied Pyrolysis, 2019, 138, 188-195.	5.5	21
87	Biocomposites from Organic Solid Wastes Derived Biochars: A Review. Materials, 2020, 13, 3923.	2.9	21
88	A novel production of phase-divided jet-fuel-range hydrocarbons and phenol-enriched chemicals from catalytic co-pyrolysis of lignocellulosic biomass with low-density polyethylene over carbon catalysts. Sustainable Energy and Fuels, 2020, 4, 3687-3700.	4.9	20
89	Production of liquid fuel intermediates from furfural via aldol condensation over La2O2CO3-ZnO-Al2O3 catalyst. Catalysis Communications, 2021, 149, 106207.	3.3	20
90	Renewable production of nitrogen-containing compounds and hydrocarbons from catalytic microwave-assisted pyrolysis of chlorella over metal-doped HZSM-5 catalysts. Journal of Analytical and Applied Pyrolysis, 2020, 151, 104902.	5.5	19

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91	Chemical upcycling of waste polyolefinic plastics to low-carbon synthetic naphtha for closing the plastic use loop. Science of the Total Environment, 2021, 782, 146897.	8.0	19
92	Fast hydrothermal co-liquefaction of corn stover and cow manure for biocrude and hydrochar production. Bioresource Technology, 2021, 340, 125630.	9.6	19
93	Lignin-Mediated Preparation of Hierarchical ZSM-5 Catalysts and Their Effects in the Catalytic Co-pyrolysis of Softwood Biomass and Low-Density Polyethylene Mixtures. ACS Sustainable Chemistry and Engineering, 2021, 9, 12602-12613.	6.7	18
94	Biochar-driven simplification of the compositions of cellulose-pyrolysis-derived biocrude oil coupled with the promotion of hydrogen generation. Bioresource Technology, 2021, 334, 125251.	9.6	17
95	Improvement of the carbon yield from biomass carbonization through sulfuric acid pre-dehydration at room temperature. Bioresource Technology, 2022, 355, 127251.	9.6	17
96	Catalytic co-pyrolysis of waste corn stover and high-density polyethylene for hydrocarbon production: The coupling effect of potassium and HZSM-5 zeolite. Journal of Analytical and Applied Pyrolysis, 2020, 150, 104895.	5.5	16
97	ANTIMICROBIAL ACTIVITIES OF A NEW FORMULA OF SPICE WATER EXTRACTS AGAINST FOODBORNE BACTERIA. Journal of Food Processing and Preservation, 2012, 36, 374-381.	2.0	13
98	Microwave-assisted synthesis of bifunctional magnetic solid acid for hydrolyzing cellulose to prepare nanocellulose. Science of the Total Environment, 2020, 731, 138751.	8.0	12
99	Optimization of delignification from Douglas fir sawdust by alkaline pretreatment with sodium hydroxide and its effect on structural and chemical properties of lignin and pyrolysis products. Bioresource Technology Reports, 2019, 8, 100339.	2.7	11
100	Ozone-Aided Corn Steeping Process. Cereal Chemistry, 2004, 81, 182-187.	2.2	10
101	Empirical Modeling of Die Pressure, Shaft Torque, SME, and Product Temperature of Rice Flour in a Corotating Twin-Screw Extruder. Cereal Chemistry, 2005, 82, 582-587.	2.2	10
102	SME-Arrhenius Model for WSI of Rice Flour in a Twin-Screw Extruder. Cereal Chemistry, 2005, 82, 574-581.	2.2	9
103	Catalyzed modified clean fractionation of prairie cordgrass integrated with hydrothermal post-treatment. Biomass and Bioenergy, 2012, 46, 389-401.	5.7	9
104	Optimization of Combined Clean Fractionation and Hydrothermal Treatment of Prairie Cord Grass. Energy & Fuels, 2012, 26, 2303-2309.	5.1	9
105	Jet fuel range hydrocarbon production by co-pyrolysis of low density polyethylene and wheat straw over an activated carbon catalyst. Sustainable Energy and Fuels, 2021, 5, 6145-6156.	4.9	9
106	Oxygen-Containing Fuels from High Acid Water Phase Pyrolysis Bio-Oils by ZSMâˆ'5 Catalysis: Kinetic and Mechanism Studies. Energies, 2015, 8, 5898-5915.	3.1	8
107	In VitroAntioxidant Effects of Flavonoids of Sweet Potato Vines. International Journal of Food Properties, 2010, 13, 360-368.	3.0	7
108	Production of renewable phenols from corn cob using catalytic pyrolysis over self-derived activated carbons prepared with torrefaction pretreatment and chemical activation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 623, 126507.	4.7	7

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109	Enhancing the activity of Zn, Fe, and Ni-embedded microporous biocarbon: Towards efficiently catalytic fast co-pyrolysis/gasification of lignocellulosic and plastic wastes. Energy Conversion and Management: X, 2022, 13, 100176.	1.6	5
110	Optimization and Evaluation of Microencapsulation of Star Anise Oleoresin. Journal of Food Processing and Preservation, 2014, 38, 2129-2136.	2.0	4
111	From Douglas fir to renewable H₂-enriched syngas via ex situ catalytic pyrolysis over metal nanoparticlesâ€“nanocellulose derived carbon catalysts. Sustainable Energy and Fuels, 2020, 4, 1084-1087.	4.9	4
112	Empirical Modeling of Mean Residence Time in a Coâ€Rotating Twinâ€Screw Extruder with Rice Flour. Cereal Chemistry, 2008, 85, 230-237.	2.2	1
113	Isomerization of hexoses from enzymatic hydrolysate of poplar sawdust using low leaching K₂MgSiO₄ catalysts for one-pot synthesis of HMF. RSC Advances, 2015, 5, 96990-96996.	3.6	1
114	Microwave-Assisted Pyrolysis of Lignocellulosic Biomass. , 2010, , 1-4.		0