Bin Hu

List of Publications by Year in Descending Order

52 papers	705 citations	15 h-index	24 g-index
55 ext. papers	1,004 ext. citations	5.9 avg, IF	4.65 L-index

#	Paper	IF	Citations
52	A sustainable strategy for the production of 1,4:3,6-dianhydro-□d-glucopyranose through oxalic acid-assisted fast pyrolysis of cellulose. *Chemical Engineering Journal*, **2022**, 436, 135200	14.7	2
51	Role of glycosidic bond in initial cellulose pyrolysis: Investigation by machine learning simulation. *Applications in Energy and Combustion Science*, **2022**, 9, 100055	0.8	
50	Mechanism insights into CO oxidation on a low-cost N doped pyrite: A molecular simulation study. *Applied Surface Science*, **2022**, 575, 151657	6.7	
49	Mechanism insights into CO oxidation over transition metal modified VO/TiO catalysts: A theoretical study.. *Chemosphere*, **2022**, 297, 134168	8.4	0
48	Fast pyrolysis of bagasse catalyzed by mixed alkaline-earth metal oxides for the selective production of 4-vinylphenol. *Journal of Analytical and Applied Pyrolysis*, **2022**, 105531	6	0
47	The oxalic acid-assisted fast pyrolysis of biomass for the sustainable production of furfural. *Fuel*, **2022**, 322, 124279	7.1	0
46	Enhanced production of levoglucosenone from pretreatment assisted catalytic pyrolysis of waste paper. *Journal of Analytical and Applied Pyrolysis*, **2022**, 165, 105567	6	0
45	Formation mechanism of CH4 during lignin pyrolysis: A theoretical study. *Journal of the Energy Institute*, **2021**, 100, 237-237	5.7	1
44	A theoretical investigation on the thermal decomposition of pyridine and the effect of H2O on the formation of NOx precursors. *Frontiers of Chemical Science and Engineering*, **2021**, 15, 1217-1228	4.5	2
43	Catalytic fast pyrolysis of cellulose for selective production of 1-hydroxy-3,6-dioxabicyclo[3.2.1]octan-2-one using nickel-tin layered double oxides. *Industrial Crops and Products*, **2021**, 162, 113269	5.9	8
42	Theoretical insights into the roles of active oxygen species in heterogeneous oxidation of CO over Mn/TiO2 catalyst. *Applied Catalysis A: General*, **2021**, 616, 118104	5.1	5
41	Selective preparation of 5-hydroxymethylfurfural by catalytic fast pyrolysis of cellulose over zirconium-tin mixed metal oxides. *Journal of Analytical and Applied Pyrolysis*, **2021**, 155, 105103	6	8
40	Migration and transformation of lead species over CaO surface in municipal solid waste incineration fly Ash: A DFT study. *Waste Management*, **2021**, 120, 59-67	8.6	10
39	Effect of WO3 and MoO3 doping on the interaction mechanism between arsenic oxide and V2O5-based SCR catalyst: A theoretical account. *Molecular Catalysis*, **2021**, 499, 111317	3.3	4
38	A novel interaction mechanism in lignin pyrolysis: Phenolics-assisted hydrogen transfer for the decomposition of the □O-4 linkage. *Combustion and Flame*, **2021**, 225, 395-405	5.3	19
37	On the mechanism of xylan pyrolysis by combined experimental and computational approaches. *Proceedings of the Combustion Institute*, **2021**, 38, 4215-4223	5.9	10
36	Novel design strategies for perovskite materials with improved stability and suitable band gaps. *Physical Chemistry Chemical Physics*, **2021**, 23, 20288-20297	3.6	0

35	Mechanism insight into the formation of H2S from thiophene pyrolysis: A theoretical study. *Frontiers of Environmental Science and Engineering*, **2021**, 15, 1	5.8	2
34	Mechanism study on the formation of furfural during zinc chloride-catalyzed pyrolysis of xylose. *Fuel*, **2021**, 295, 120656	7.1	6
33	Hydroxyl-Assisted Hydrogen Transfer Interaction in Lignin Pyrolysis: An Extended Concerted Interaction Mechanism. *Energy & Fuels*, **2021**, 35, 13170-13180	4.1	2
32	Mechanical insight into the formation of HS from thiophene pyrolysis: The influence of HO. *Chemosphere*, **2021**, 279, 130628	8.4	0
31	Sensing Mechanism of HO, NH, and O on the Stability-Improved CsPb(SCN)Br Surface: A Quantum Dynamics Investigation. *ACS Omega*, **2021**, 6, 24244-24255	3.9	
30	Formation mechanism of NO precursors during the pyrolysis of 2,5-diketopiperazine based on experimental and theoretical study. *Science of the Total Environment*, **2021**, 801, 149663	10.2	7
29	Reaction characteristics and mechanisms of sorbitol fast pyrolysis. *Journal of Fuel Chemistry and Technology*, **2021**, 49, 1821-1831	1.8	1
28	Calcium formate assisted catalytic pyrolysis of pine for enhanced production of monocyclic aromatic hydrocarbons over bimetal-modified HZSM-5. *Bioresource Technology*, **2020**, 315, 123805	11	12
27	Selective preparation of 1-hydroxy-3,6-dioxabicyclo[3.2.1]octan-2-one by fast pyrolysis of cellulose catalyzed with metal-loaded nitrided HZSM-5. *Bioresource Technology*, **2020**, 309, 123370	11	9
26	Recent Progress in Quantum Chemistry Modeling on the Pyrolysis Mechanisms of Lignocellulosic Biomass. *Energy & Fuels*, **2020**, 34, 10384-10440	4.1	37
25	Insight into the formation mechanism of levoglucosenone in phosphoric acid-catalyzed fast pyrolysis of cellulose. *Journal of Energy Chemistry*, **2020**, 43, 78-89	12	28
24	Formation mechanism of HCN and NH3 during indole pyrolysis: A theoretical DFT study. *Journal of the Energy Institute*, **2020**, 93, 649-657	5.7	39
23	Catalytic Mechanism of Calcium on the Formation of HCN during Pyrolysis of Pyrrole and Indole: A Theoretical Study. *Energy & Fuels*, **2019**, 33, 11516-11523	4.1	7
22	Insight into the mechanism of secondary reactions in cellulose pyrolysis: interactions between levoglucosan and acetic acid. *Cellulose*, **2019**, 26, 8279-8290	5.5	9
21	Mechanism insight into the fast pyrolysis of xylose, xylobiose and xylan by combined theoretical and experimental approaches. *Combustion and Flame*, **2019**, 206, 177-188	5.3	29
20	Formation mechanism of hydroxyacetone in glucose pyrolysis: A combined experimental and theoretical study. *Proceedings of the Combustion Institute*, **2019**, 37, 2741-2748	5.9	13
19	Direct conversion of cellulose and raw biomass to acetonitrile by catalytic fast pyrolysis in ammonia. *Green Chemistry*, **2019**, 21, 812-820	10	35
18	Interaction between Acetic Acid and Glycerol: A Model for Secondary Reactions during Holocellulose Pyrolysis. *Journal of Physical Chemistry A*, **2019**, 123, 674-681	2.8	7

17	Influence of inherent alkali metal chlorides on pyrolysis mechanism of a lignin model dimer based on DFT study. *Journal of Thermal Analysis and Calorimetry*, **2019**, 137, 151-160	4.1	13
16	Mechanism study on the effect of alkali metal ions on the formation of HCN as NOx precursor during coal pyrolysis. *Journal of the Energy Institute*, **2019**, 92, 604-612	5.7	18
15	Intermolecular interaction mechanism of lignin pyrolysis: A joint theoretical and experimental study. *Fuel*, **2018**, 215, 386-394	7.1	36
14	Pyrolysis mechanism of glucose and mannose: The formation of 5-hydroxymethyl furfural and furfural. *Journal of Energy Chemistry*, **2018**, 27, 486-501	12	39
13	Theoretical Investigation of the Formation Mechanism of NH□and HCN during Pyrrole Pyrolysis: The Effect of H□O. *Molecules*, **2018**, 23,	4.8	11
12	Catalytic mechanism of sulfuric acid in cellulose pyrolysis: A combined experimental and computational investigation. *Journal of Analytical and Applied Pyrolysis*, **2018**, 134, 183-194	6	27
11	Mechanism of cellulose fast pyrolysis: The role of characteristic chain ends and dehydrated units. *Combustion and Flame*, **2018**, 198, 267-277	5.3	44
10	Selective production of 4-ethyl guaiacol from catalytic fast pyrolysis of softwood biomass using Pd/SBA-15 catalyst. *Journal of Analytical and Applied Pyrolysis*, **2017**, 123, 237-243	6	13
9	Interaction characteristics and mechanism in the fast co-pyrolysis of cellulose and lignin model compounds. *Journal of Thermal Analysis and Calorimetry*, **2017**, 130, 975-984	4.1	12
8	Insight into the Formation of Anhydrosugars in Glucose Pyrolysis: A Joint Computational and Experimental Investigation. *Energy & Fuels*, **2017**, 31, 8291-8299	4.1	17
7	A Comprehensive Study on Pyrolysis Mechanism of Substituted □O-4 Type Lignin Dimers. *International Journal of Molecular Sciences*, **2017**, 18,	6.3	24
6	Pyrolysis mechanism of holocellulose-based monosaccharides: The formation of hydroxyacetaldehyde. *Journal of Analytical and Applied Pyrolysis*, **2016**, 120, 15-26	6	47
5	Selective production of nicotyrine from catalytic fast pyrolysis of tobacco biomass with Pd/C catalyst. *Journal of Analytical and Applied Pyrolysis*, **2016**, 117, 88-93	6	14
4	Experimental and Theoretical Studies on the Pyrolysis Mechanism of □1-Type Lignin Dimer Model Compound. *BioResources*, **2016**, 11,	1.3	7
3	Theoretical study on the effect of the substituent groups on the homolysis of the ether bond in lignin trimer model compounds. *Journal of Fuel Chemistry and Technology*, **2016**, 44, 335-341	1.8	6
2	Production of phenolic-rich bio-oil from catalytic fast pyrolysis of biomass using magnetic solid base catalyst. *Energy Conversion and Management*, **2015**, 106, 1309-1317	10.6	57
1	Selective Analytical Production of 1-Hydroxy-3,6-dioxabicyclo[3.2.1]octan-2-one from Catalytic Fast Pyrolysis of Cellulose with Zinc-Aluminium Layered Double Oxide Catalyst. *BioResources*, **2015**, 10,	1.3	8