Junmeng Cai

List of Publications by Year
in descending order

85 papers	4,340 citations	94415 37 h-index	114455 63 g-index
88 all docs	88 docs citations	88 times ranked	3478 citing authors

#	Article	IF	Citations
1	Review of physicochemical properties and analytical characterization of lignocellulosic biomass. Renewable and Sustainable Energy Reviews, 2017, 76, 309-322.	16.4	448
2	Catalytic fast pyrolysis of biomass over zeolites for high quality bio-oil â€" A review. Fuel Processing Technology, 2018, 180, 32-46.	7.2	286
3	An overview of distributed activation energy model and its application in the pyrolysis of lignocellulosic biomass. Renewable and Sustainable Energy Reviews, 2014, 36, 236-246.	16.4	261
4	Processing thermogravimetric analysis data for isoconversional kinetic analysis of lignocellulosic biomass pyrolysis: Case study of corn stalk. Renewable and Sustainable Energy Reviews, 2018, 82, 2705-2715.	16.4	254
5	A distributed activation energy model for the pyrolysis of lignocellulosic biomass. Green Chemistry, 2013, 15, 1331.	9.0	207
6	A review on the catalytic pyrolysis of biomass for the bio-oil production with ZSM-5: Focus on structure. Fuel Processing Technology, 2020, 199, 106301.	7.2	159
7	New distributed activation energy model: Numerical solution and application to pyrolysis kinetics of some types of biomass. Bioresource Technology, 2008, 99, 2795-2799.	9.6	123
8	Kinetics and reaction chemistry of pyrolysis and combustion of tobacco waste. Fuel, 2015, 156, 71-80.	6.4	121
9	New temperature integral approximation for nonisothermal kinetics. AICHE Journal, 2006, 52, 1554-1557.	3.6	88
10	A new iterative linear integral isoconversional method for the determination of the activation energy varying with the conversion degree. Journal of Computational Chemistry, 2009, 30, 1986-1991.	3.3	83
11	Effective Activation Energies of Lignocellulosic Biomass Pyrolysis. Energy & Fuels, 2014, 28, 3916-3923.	5.1	77
12	Insight into Pyrolysis Kinetics of Lignocellulosic Biomass: Isoconversional Kinetic Analysis by the Modified Friedman Method. Energy & Fuels, 2020, 34, 4874-4881.	5.1	70
13	Bio-oil production from fast pyrolysis of rice husk in a commercial-scale plant with a downdraft circulating fluidized bed reactor. Fuel Processing Technology, 2018, 171, 308-317.	7.2	68
14	Determination of Drying Kinetics for Biomass by Thermogravimetric Analysis under Nonisothermal Condition. Drying Technology, 2008, 26, 1464-1468.	3.1	67
15	Synergetic effects during co-pyrolysis of biomass and waste tire: A study on product distribution and reaction kinetics. Bioresource Technology, 2018, 268, 363-370.	9.6	67
16	An understanding for improved biomass pyrolysis: Toward a systematic comparison of different acid pretreatments. Chemical Engineering Journal, 2021, 411, 128513.	12.7	67
17	Applicability of Fraserâ€"Suzuki function in kinetic analysis of DAEM processes and lignocellulosic biomass pyrolysis processes. Journal of Thermal Analysis and Calorimetry, 2015, 119, 1429-1438.	3.6	66
18	Intermediate pyrolysis of organic fraction of municipal solid waste and rheological study of the pyrolysis oil for potential use as bio-bitumen. Journal of Cleaner Production, 2018, 187, 390-399.	9.3	64

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19	Pyrolysis of Rice Husk and Corn Stalk in Auger Reactor. 1. Characterization of Char and Gas at Various Temperatures. Energy & Fuels, 2016, 30, 10568-10574.	5.1	62
20	Weibull Mixture Model for Modeling Nonisothermal Kinetics of Thermally Stimulated Solid-State Reactions:â€‰ Application to Simulated and Real Kinetic Conversion Data. Journal of Physical Chemistry B, 2007, 111, 10681-10686.	2.6	61
21	Kinetic compensation effect in logistic distributed activation energy model for lignocellulosic biomass pyrolysis. Bioresource Technology, 2018, 265, 139-145.	9.6	61
22	Isoconversional Kinetic Analysis of Distributed Activation Energy Model Processes for Pyrolysis of Solid Fuels. Industrial & Engineering Chemistry Research, 2013, 52, 14376-14383.	3.7	58
23	Sensitivity analysis of three-parallel-DAEM-reaction model for describing rice straw pyrolysis. Bioresource Technology, 2013, 132, 423-426.	9.6	58
24	Hydrodeoxygenation of guaiacol as a model compound of lignin-derived pyrolysis bio-oil over zirconia-supported Rh catalyst: Process optimization and reaction kinetics. Fuel, 2019, 239, 1015-1027.	6.4	56
25	Co-pyrolysis of Miscanthus Sacchariflorus and coals: A systematic study on the synergies in thermal decomposition, kinetics and vapour phase products. Fuel, 2020, 262, 116603.	6.4	55
26	Bio/hydrochar Sorbents for Environmental Remediation. Energy and Environmental Materials, 2020, 3, 453-468.	12.8	50
27	Kinetic Analysis of Solid-State Reactions: A General Empirical Kinetic Model. Industrial & Engineering Chemistry Research, 2009, 48, 3249-3253.	3.7	47
28	Pattern Search Method for Determination of DAEM Kinetic Parameters from Nonisothermal TGA Data of Biomass. Journal of Mathematical Chemistry, 2007, 42, 547-553.	1.5	46
29	A critical study of the Miuraâ€“Maki integral method for the estimation of the kinetic parameters of the distributed activation energy model. Bioresource Technology, 2011, 102, 3894-3899.	9.6	42
30	Investigation of kinetic compensation effect in lignocellulosic biomass torrefaction: Kinetic and thermodynamic analyses. Energy, 2020, 207, 118290.	8.8	42
31	Precision of the Coats and Redfern Method for the Determination of the Activation Energy without Neglecting the Low-Temperature End of the Temperature Integral. Energy & Fuels, 2008, 22, 2172-2174.	5.1	41
32	Logistic distributed activation energy model â€“ Part 2: Application to cellulose pyrolysis. Bioresource Technology, 2011, 102, 3642-3644.	9.6	41
33	Insight into master plots method for kinetic analysis of lignocellulosic biomass pyrolysis. Energy, 2021, 233, 121194.	8.8	41
34	Research on Water Evaporation in the Process of Biomass Pyrolysis. Energy & Fuels, 2007, 21, 3695-3697.	5.1	39
35	Review on Aging of Bio-Oil from Biomass Pyrolysis and Strategy to Slowing Aging. Energy & Fuels, 2021, 35, 11665-11692.	5.1	39
36	Kinetic analysis of solid-state reactions: Evaluation of approximations to temperature integral and their applications. Solid State Sciences, 2009, 11, 1375-1379.	3.2	38

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37	Comparative study of fast pyrolysis, hydropyrolysis and catalytic hydropyrolysis of poplar sawdust and rice husk in a modified Py-GC/MS microreactor system: Insights into product distribution, quantum description and reaction mechanism. Renewable and Sustainable Energy Reviews, 2020, 119, 109604.	16.4	38
38	Kinetic Analysis of Wheat Straw Oxidative Pyrolysis Using Thermogravimetric Analysis: Statistical Description and Isoconversional Kinetic Analysis. Industrial & Engineering Chemistry Research, 2009, 48, 619-624.	3.7	37
39	Logistic distributed activation energy model â€“ Part 1: Derivation and numerical parametric study. Bioresource Technology, 2011, 102, 1556-1561.	9.6	37
40	Sustainable and scalable in-situ synthesis of hydrochar-wrapped Ti3AlC2-derived nanofibers as adsorbents to remove heavy metals. Bioresource Technology, 2019, 282, 222-227.	9.6	35
41	Catalytic pyrolysis of microcrystalline cellulose extracted from rice straw for high yield of hydrocarbon over alkali modified ZSM-5. Fuel, 2021, 285, 119038.	6.4	34
42	Investigation of product selectivity and kinetics of poplar sawdust catalytic pyrolysis over bi-metallic Iron-Nickel/ZSM-5 catalyst. Bioresource Technology, 2022, 349, 126838.	9.6	34
43	An assessment of biomass resources availability in Shanghai: 2005 analysis. Renewable and Sustainable Energy Reviews, 2008, 12, 1997-2004.	16.4	33
44	Potentiality of combined catalyst for high quality bio-oil production from catalytic pyrolysis of pinewood using an analytical Py-GC/MS and fixed bed reactor. Journal of the Energy Institute, 2020, 93, 1737-1746.	5.3	32
45	Insight into torrefaction of woody biomass: Kinetic modeling using pattern search method. Energy, 2020, 201, 117648.	8.8	30
46	Isoconversional Kinetic Analysis of Complex Solid-State Processes: Parallel and Successive Reactions. Industrial & Engineering Chemistry Research, 2012, 51, 16157-16161.	3.7	29
47	Iterative linear integral isoconversional method: Theory and application. Bioresource Technology, 2012, 103, 309-312.	9.6	29
48	Application of the golden section search algorithm in the nonlinear isoconversional calculations to the determination of the activation energy from nonisothermal kinetic conversion data. Solid State Sciences, 2010, 12, 829-833.	3.2	27
49	Nonisothermal nth-order DAEM equation and its parametric study â€“ use in the kinetic analysis of biomass pyrolysis. Journal of Mathematical Chemistry, 2007, 42, 949-956.	1.5	26
50	Understanding pyrolysis mechanisms of pinewood sawdust and sugarcane bagasse from kinetics and thermodynamics. Industrial Crops and Products, 2022, 177, 114378.	5.2	26
51	Poplar wood torrefaction: Kinetics, thermochemistry and implications. Renewable and Sustainable Energy Reviews, 2021, 143, 110962.	16.4	24
52	Balancing the Aromatic and Ketone Content of Bio-oils as Rejuvenators to Enhance Their Efficacy in Restoring Properties of Aged Bitumen. ACS Sustainable Chemistry and Engineering, 2021, 9, 6912-6922.	6.7	23
53	Application of Weibull 2-Mixture Model To Describe Biomass Pyrolysis Kinetics. Energy & Fuels, 2008, 22, 675-678.	5.1	22
54	Combustion kinetics of pine sawdust biochar. Journal of Thermal Analysis and Calorimetry, 2016, 124, 1641-1649.	3.6	22

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55	Theoretical Analysis of Double Logistic Distributed Activation Energy Model for Thermal Decomposition Kinetics of Solid Fuels. Industrial & Engineering Chemistry Research, 2018, 57, 7817-7825.	3.7	22
56	Understanding pyrolysis mechanisms of corn and cotton stalks via kinetics and thermodynamics. Journal of Analytical and Applied Pyrolysis, 2022, 164, 105521.	5.5	22
57	Isothermal kinetic predictions from nonisothermal data by using the iterative linear integral isoconversional method. Journal of the Energy Institute, 2014, 87, 183-187.	5.3	21
58	Exploring kinetic mechanisms of biomass pyrolysis using generalized logistic mixture model. Energy Conversion and Management, 2022, 258, 115522.	9.2	20
59	Kinetic analysis of solid-state reactions: Precision of the activation energy obtained from one type of integral methods without neglecting the low temperature end of the temperature integral. Solid State Sciences, 2008, 10, 659-663.	3.2	19
60	Logistic Regression Model for Isoconversional Kinetic Analysis of Cellulose Pyrolysis. Energy & Fuels, 2008, 22, 867-870.	5.1	18
61	Determination of the pseudocomponents and kinetic analysis of selected combustible solid wastes pyrolysis based on Weibull model. Journal of Thermal Analysis and Calorimetry, 2016, 126, 1899-1909.	3.6	18
62	Viscosity of Aged Bio-oils from Fast Pyrolysis of Beech Wood and <i>Miscanthus</i>: Shear Rate and Temperature Dependence. Energy & Fuels, 2016, 30, 4999-5004.	5.1	17
63	Optimization of a Mixed Additive and its Effect on Physicochemical Properties of Bioâ€Oil. Chemical Engineering and Technology, 2014, 37, 1181-1190.	1.5	16
64	Physicochemical characterization and pyrolysis kinetic analysis of Moutai-flavored dried distillerâ€™s grains towards its thermochemical conversion for potential applications. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105046.	5.5	16
65	Distributed activation energy model for lignocellulosic biomass torrefaction kinetics with combined heating program. Energy, 2022, 239, 122228.	8.8	16
66	Prediction of concentration profiles and theoretical yields in lignocellulosic biomass pyrolysis. Journal of Thermal Analysis and Calorimetry, 2015, 120, 1473-1482.	3.6	14
67	Drying Kinetic Analysis of Municipal Solid Waste Using Modified Page Model and Pattern Search Method. Waste and Biomass Valorization, 2017, 8, 301-312.	3.4	12
68	Kinetic Analysis of Bio-Oil Aging by Using Pattern Search Method. Industrial & Engineering Chemistry Research, 2020, 59, 1487-1494.	3.7	12
69	Kinetics and thermodynamics of microalgae residue oxidative pyrolysis based on double distributed activation energy model with simulated annealing method. Journal of Analytical and Applied Pyrolysis, 2021, 154, 104997.	5.5	12
70	Isoconversional kinetic analysis of sweet sorghum bagasse pyrolysis by modified logistic mixture model. Journal of the Energy Institute, 2018, 91, 513-518.	5.3	11
71	Reaction chemistry and kinetics of corn stalk pyrolysis without and with Ga/HZSM-5. Journal of Thermal Analysis and Calorimetry, 2019, 137, 491-500.	3.6	10
72	Dependence of the frequency factor on the temperature: a new integral method of nonisothermal kinetic analysis. Journal of Mathematical Chemistry, 2008, 43, 637-646.	1.5	9

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73	Characteristics of Smoldering on Moist Rice Husk for Silica Production. Sustainability, 2022, 14, 317.	3.2	9
74	A predictive PBM-DEAM model for lignocellulosic biomass pyrolysis. Journal of Analytical and Applied Pyrolysis, 2021, 157, 105231.	5.5	6
75	An improved version of Junmengâ€"Fangâ€"Weimingâ€"Fusheng approximation for the temperature integral. Journal of Mathematical Chemistry, 2008, 43, 1193-1198.	1.5	5
76	Improved version of Doyle integral method for nonisothermal kinetics of solid-state reactions. Journal of Mathematical Chemistry, 2008, 43, 1127-1133.	1.5	5
77	Local Sensitivity Analysis of Kinetic Models for Cellulose Pyrolysis. Waste and Biomass Valorization, 2019, 10, 975-984.	3.4	5
78	Insight into biomass pyrolysis kinetics: New integral methods for nonisothermal kinetics with exponential temperature program. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105080.	5.5	5
79	Kinetic analysis of solid-state reactions: errors involved in the determination of the kinetic parameters calculated by one type of integral methods. Journal of Mathematical Chemistry, 2008, 43, 914-920.	1.5	4
80	Kinetic analysis of nonisothermal solid-state reactions: determination of the kinetic parameters by means of a nonlinear regression method. Journal of Mathematical Chemistry, 2008, 44, 551-558.	1.5	4
81	Evaluation of realistic 95% confidence intervals for the activation energy calculated by the iterative linear integral isoconversional method. Chemical Engineering Science, 2011, 66, 2879-2882.	3.8	3
82	Steric Effects of Mesoporous Silica Supported Bimetallic Au-Pt Catalysts on the Selective Aerobic Oxidation of Aromatic Alcohols. Catalysts, 2020, 10, 1192.	3.5	3
83	Stainless steel membranes for harvesting cyanobacteria: Performance, fouling and cleaning. Bioresource Technology, 2021, 319, 124143.	9.6	3
84	Aqueous-Phase Cellulose Hydrolysis over Zeolite HY Nanocrystals Grafted on Anatase Titania Nanofibers. Catalysis Letters, 2021, 151, 1467-1476.	2.6	2
85	Oxidation kinetics of maize stover char at low temperature based on surface area and temperature correction. Energy, 2022, 241, 122928.	8.8	1