

Rui Sun

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

1,913
citations

279701

23
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docs citations

90
times ranked

1438
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbon, sulfur and nitrogen oxide emissions from combustion of pulverized raw and torrefied biomass. <i>Fuel</i> , 2017, 188, 310-323.	3.4	163
2	Characterization of methane production and microbial community shifts during waste activated sludge degradation in microbial electrolysis cells. <i>Bioresource Technology</i> , 2015, 175, 68-74.	4.8	138
3	Ultra-high sensitive acetylene detection using quartz-enhanced photoacoustic spectroscopy with a fiber amplified diode laser and a 30.72 kHz quartz tuning fork. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	107
4	Experimental study on effects of moisture content on combustion characteristics of simulated municipal solid wastes in a fixed bed. <i>Bioresource Technology</i> , 2008, 99, 7238-7246.	4.8	67
5	Experimental study on NO _x reduction from staging combustion of high volatile pulverized coals. Part 1. Air staging. <i>Fuel Processing Technology</i> , 2014, 126, 266-275.	3.7	64
6	Combustion characteristics of different parts of corn straw and NO formation in a fixed bed. <i>Bioresource Technology</i> , 2008, 99, 2956-2963.	4.8	60
7	Characteristics of rumen microorganisms involved in anaerobic degradation of cellulose at various pH values. <i>RSC Advances</i> , 2017, 7, 40303-40310.	1.7	58
8	Hydrogen chloride emissions from combustion of raw and torrefied biomass. <i>Fuel</i> , 2017, 200, 37-46.	3.4	54
9	Synergistic Effects of Multifunctional Lanthanides Doped CsPbBrCl ₂ Quantum Dots for Efficient and Stable MAPbI ₃ Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	53
10	Numerical and experimental studies on effects of moisture content on combustion characteristics of simulated municipal solid wastes in a fixed bed. <i>Waste Management</i> , 2015, 39, 166-178.	3.7	50
11	Learning From Plants: Lycopene Additive Passivation toward Efficient and "Fresh" Perovskite Solar Cells with Oxygen and Ultraviolet Resistance. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	50
12	Quartz Enhanced Photoacoustic Spectroscopy Based Trace Gas Sensors Using Different Quartz Tuning Forks. <i>Sensors</i> , 2015, 15, 7596-7604.	2.1	33
13	Influence of simulated MSW sizes on the combustion process in a fixed bed: CFD and experimental approaches. <i>Waste Management</i> , 2016, 49, 272-286.	3.7	33
14	Experimental investigation on the evolution characteristics of anthracite-N and semi-coke reactivity under various O ₂ /H ₂ O pre-oxidation atmospheres. <i>Fuel Processing Technology</i> , 2021, 216, 106725.	3.7	31
15	Investigation of the NO Reduction Characteristics of Coal Char at Different Conversion Degrees under an NO Atmosphere. <i>Energy & Fuels</i> , 2017, 31, 8722-8732.	2.5	30
16	Gas-particle flow and combustion in the near-burner zone of the swirl-stabilized pulverized coal burner. <i>Combustion Science and Technology</i> , 2003, 175, 1979-2014.	1.2	29
17	Effect of reaction conditions on the evolution of surface functional groups in O ₂ /H ₂ O combustion process of demineralized coal char. <i>Fuel Processing Technology</i> , 2019, 195, 106144.	3.7	29
18	Reaction kinetics of char-O ₂ /H ₂ O combustion under high-temperature entrained flow conditions. <i>Fuel</i> , 2019, 243, 172-184.	3.4	28

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19	Evolution characteristics of structural nitrogen and the microstructure of anthracite particles in the process of O ₂ /Ar and O ₂ /H ₂ O pre-oxidation. <i>Fuel</i> , 2021, 289, 119860.	3.4	28
20	Effects of corn ratio with pine on biomass co-combustion characteristics in a fixed bed. <i>Applied Thermal Engineering</i> , 2018, 142, 30-42.	3.0	27
21	Effect of H ₂ O on char-nitrogen conversion during char-O ₂ /H ₂ O combustion under high-temperature entrained flow conditions. <i>Combustion and Flame</i> , 2019, 207, 391-405.	2.8	26
22	Parametric studies on corn straw combustion characteristics in a fixed bed: Ash and moisture content. <i>Energy</i> , 2018, 158, 192-203.	4.5	25
23	Effect of steam concentration on demineralized coal char surface behaviors and structural characteristics during the oxy-steam combustion process. <i>Energy</i> , 2019, 174, 339-349.	4.5	25
24	Pore development and combustion behavior of gasified semi-char in a drop tube furnace. <i>Fuel Processing Technology</i> , 2013, 111, 42-54.	3.7	24
25	Torrefaction of corn straw in oxygen and carbon dioxide containing gases: Mass/energy yields and evolution of gaseous species. <i>Fuel</i> , 2021, 285, 119044.	3.4	24
26	Study on the combustion behaviours of two high-volatile coal particle streams with high-speed OH-PLIF. <i>Fuel</i> , 2020, 265, 116956.	3.4	23
27	Analysis of functionality distribution and microstructural characteristics of upgraded rice husk after undergoing non-oxidative and oxidative torrefaction. <i>Fuel</i> , 2022, 310, 122477.	3.4	23
28	Dual Modification Engineering via Lanthanide-Based Halide Quantum Dots and Black Phosphorus Enabled Efficient Perovskite Solar Cells with High Open-Circuit Voltage of 1.235 V. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	22
29	Cavity ignition of liquid kerosene in supersonic flow with a laser-induced plasma. <i>Optics Express</i> , 2016, 24, 25362.	1.7	21
30	Effect of ash content on the combustion process of simulated MSW in the fixed bed. <i>Waste Management</i> , 2016, 48, 236-249.	3.7	21
31	Characterization of coal char surface behavior after a heterogeneous oxidative treatment. <i>Fuel</i> , 2017, 210, 154-164.	3.4	21
32	Evolution of Chlorine-Bearing Gases During Corn Straw Torrefaction at Different Temperatures. <i>Energy & Fuels</i> , 2017, 31, 13713-13723.	2.5	20
33	Experimental investigation on the ignition and combustion characteristics of pyrolyzed char and bituminous coal blends. <i>Fuel</i> , 2020, 281, 118732.	3.4	20
34	Effect of Oxygen Concentration on NO Formation during Coal Char Combustion. <i>Energy & Fuels</i> , 2017, 31, 7502-7509.	2.5	19
35	Hydrogen Chloride Release From Combustion of Corn Straw in a Fixed Bed. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2018, 140, .	1.4	19
36	Parametric studies on corn combustion characteristics in a fixed bed: Primary air flow rate and different corn lengths. <i>Applied Thermal Engineering</i> , 2017, 126, 702-716.	3.0	17

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37	Effect of Char Particle Size on NO Release during Coal Char Combustion. <i>Energy & Fuels</i> , 2017, 31, 13406-13415.	2.5	17
38	Assessment of primary air on corn straw in a fixed bed combustion using Eulerian-Eulerian approach. <i>Energy</i> , 2018, 151, 501-519.	4.5	17
39	Investigation of demineralized coal char surface behaviour and reducing characteristics after partial oxidative treatment under an O ₂ atmosphere. <i>Fuel</i> , 2018, 233, 658-668.	3.4	16
40	Numerical simulation of gas concentration and dioxin formation for MSW combustion in a fixed bed. <i>Journal of Environmental Management</i> , 2015, 157, 111-117.	3.8	15
41	Experimental Investigation for Co-Combustion Characteristics of Semi-Coke and Bituminous Coal in a 3 MWth Tangential Combustion Facility. <i>Journal of Thermal Science</i> , 2020, 29, 1655-1662.	0.9	14
42	Investigation of the CN and C2 emission characteristics and microstructural evolution of coal to char using laser-induced breakdown spectroscopy and Raman spectroscopy. <i>Energy</i> , 2022, 240, 122827.	4.5	14
43	Interaction of bacteria and archaea in a microbial fuel cell with ITO anode. <i>RSC Advances</i> , 2018, 8, 28487-28495.	1.7	13
44	Effects of reaction condition on NO emission characteristic, surface behavior and microstructure of demineralized char during O ₂ /H ₂ O combustion process. <i>Fuel</i> , 2019, 253, 1424-1435.	3.4	13
45	Experimental Study on Ignition and Combustion Characteristics of Pyrolyzed Char in an O ₂ -Enriched Atmosphere with Multiple Optical Diagnostic Techniques. <i>Energy & Fuels</i> , 2019, 33, 5682-5694.	2.5	13
46	Investigation of Heterogeneous NO Reduction by Biomass Char and Coal Char Blends in a Microfluidized Bed Reaction Analyzer. <i>Energy & Fuels</i> , 2020, 34, 6317-6325.	2.5	13
47	Enhancement of a laminar premixed methane/oxygen/nitrogen flame speed using femtosecond-laser-induced plasma. <i>Applied Physics Letters</i> , 2010, 97, 011503.	1.5	12
48	Effect of the COMBDry Dewatering Process on Combustion Reactivity and Oxygen-Containing Functional Groups of Dried Lignite. <i>Energy & Fuels</i> , 2017, 31, 4488-4498.	2.5	12
49	Emissions From Oxy-Combustion of Raw and Torrefied Biomass. <i>Journal of Energy Resources Technology</i> , Transactions of the ASME, 2020, 142, .	1.4	12
50	Planar Laser-Based QEPAS Trace Gas Sensor. <i>Sensors</i> , 2016, 16, 989.	2.1	11
51	Repetitive Laser-Induced Plasma Ignition and Assisted Combustion of Premixed Methane/Air Flame. <i>Combustion Science and Technology</i> , 2017, 189, 1681-1697.	1.2	11
52	Char structural evolution characteristics and its correlation with reactivity during the heterogeneous NO reduction in a micro fluidized bed reaction analyzer: The influence of reaction residence time. <i>Fuel</i> , 2021, 296, 120648.	3.4	11
53	Oscillation characterization of volatile combustion of single coal particles with multi-species optical diagnostic techniques. <i>Fuel</i> , 2020, 282, 118845.	3.4	10
54	Dynamic behaviors of the sodium, calcium and iron release during coal combustion using multi-point LIBS. <i>Combustion and Flame</i> , 2022, 244, 112237.	2.8	10

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55	Plasma-assisted combustion of methane using a femtosecond laser. <i>Optics Letters</i> , 2011, 36, 1930.	1.7	9
56	Effects of Upgrading Treatment on the Physicochemical Structure, Moisture Re-Adsorption Ability, and NO _x Emission Characteristic of Lignite Particles. <i>Energy & Fuels</i> , 2019, 33, 4070-4078.	2.5	9
57	Effects of pyrolyzed semi-char blend ratio on coal combustion and pollution emission in a 0.35 MW pulverized coal-fired furnace. <i>Frontiers in Energy</i> , 2021, 15, 78-90.	1.2	9
58	Effects of primary air velocity on co-combustion characteristics of bituminous coal and semicoke under reducing-to-oxidizing environment. <i>Fuel Processing Technology</i> , 2022, 233, 107293.	3.7	9
59	Stabilization of a premixed CH ₄ /O ₂ /N ₂ flame using femtosecond laser-induced plasma. <i>Optics Letters</i> , 2012, 37, 2106.	1.7	8
60	Anode biofilm communities and the performance of microbial fuel cells with different reactor configurations. <i>RSC Advances</i> , 2016, 6, 85149-85155.	1.7	8
61	Computer-Free Group-Addition Method for $\log K_{ow}$ Prediction of 73 Amines for CO ₂ Capture. <i>Journal of Chemical & Engineering Data</i> , 2017, 62, 111-122.	1.0	8
62	Stabilization of a premixed methane-air flame with a high repetition nanosecond laser-induced plasma. <i>Optics and Laser Technology</i> , 2017, 92, 24-31.	2.2	8
63	Effects of Air Flowrate on the Combustion and Emissions of Blended Corn Straw and Pinewood Wastes. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2019, 141, .	1.4	8
64	Influence of nozzle height to width ratio on ignition and NO _x emission characteristics of semicoke/bituminous coal blends in a 300 kW pulverized coal-fired furnace. <i>Frontiers in Energy</i> , 2021, 15, 431-448.	1.2	8
65	Investigation of mineral-element migration upon pyrolysis and quantitative prediction of volatiles in coal using laser-induced breakdown spectroscopy. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 1399-1409.	1.6	8
66	Effect of Stoichiometric Ratio on Char-Nitrogen Conversion under High-Temperature Entrained Flow Combustion Conditions. <i>Energy & Fuels</i> , 2018, 32, 6098-6110.	2.5	7
67	NO Reduction and Emission Characteristics of Coal/Char Mixtures in a Microfluidized Bed Reaction Analyzer. <i>Energy & Fuels</i> , 2019, 33, 276-286.	2.5	7
68	Release of Alkalis and Chlorine from Combustion of Waste Pinewood in a Fixed Bed. <i>Energy & Fuels</i> , 2019, 33, 1256-1266.	2.5	7
69	Determining the optimum fuel concentration for ignition and combustion of semi-coke and bituminous coal blends with rich/lean burner. <i>Journal of the Energy Institute</i> , 2022, 100, 225-236.	2.7	7
70	Mass transfer and reaction process of the wet desulfurization reactor with falling film by cross-flow scrubbing. <i>Korean Journal of Chemical Engineering</i> , 2007, 24, 481-488.	1.2	6
71	Statistical Analysis of Volatile Combustion Time-Characteristics of Single Coal Particles Using High-Speed OH-PLIF. <i>Energy & Fuels</i> , 2019, 33, 12742-12748.	2.5	6
72	Effects of Reaction Condition on the Emission Characteristics of Fuel-N during the O ₂ /H ₂ O Combustion Process of Demineralized Coal. <i>Energy & Fuels</i> , 2019, 33, 6187-6196.	2.5	6

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73	A Numerical and Experimental Study on the Effects of CO ₂ on Laminar Diffusion Methane/Air Flames. Journal of Energy Resources Technology, Transactions of the ASME, 2020, 142, .	1.4	6
74	Effects of bias combustion on volatile nitrogen transformation. Asia-Pacific Journal of Chemical Engineering, 2009, 5, 473-478.	0.8	5
75	Assessment of Chopped Corn Straw Lengths for Combustion in a Fixed Bed Using a Numerical Model. Energy & Fuels, 2018, 32, 5187-5198.	2.5	5
76	Effects of lignite dewatering treatment on the surface behaviour and NO emission characteristics during the combustion process. Canadian Journal of Chemical Engineering, 2019, 97, 1418-1428.	0.9	5
77	Effects of preheating primary air and fuel size on the combustion characteristics of blended pinewood and corn straw in a fixed bed. Energy, 2020, 210, 118481.	4.5	5
78	Numerical study of preheating primary air on pinewood and corn straw co-combustion in a fixed bed using Eulerian-Eulerian approach. Fuel, 2021, 289, 119455.	3.4	5
79	Char structural evolution characteristics and its correlation with reactivity during the heterogeneous NO reduction in a micro fluidized bed reaction analyzer: The influence of reaction atmosphere. Fuel, 2021, 303, 121173.	3.4	5
80	Laser ablation plasma-assisted stabilization of premixed methane/air flame. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	4
81	Numerical and Experimental Assessment of a Novel Multinozzle Burner with CO ₂ Diluent to Improve the Emissions from a Swirling Flame in a Combustion Chamber. Energy & Fuels, 2019, 33, 7869-7885.	2.5	4
82	Interfacial Modification Engineering with Cs ₃ Cu ₂ I ₅ Nanocrystals for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	4
83	Experimental and density functional theory investigation of the NO reduction mechanism by semichars preheated in Ar and CO ₂ /Ar atmospheres. Fuel, 2022, 326, 125080.	3.4	3
84	Comparison between tape casting YAG/Nd:YAG/YAG and Nd:YAG ceramic lasers. , 2017, , .		2
85	Investigation of combustion reactivity and NO emission characteristics of chars obtained from the devolatilization of raw and partially dried lignite. Canadian Journal of Chemical Engineering, 2020, 98, 453-464.	0.9	2
86	Stabilization of Premixed High Flow Speed Methane/air Flames Using a Nanosecond Laser Induced Plasma. , 2015, , .		2
87	Laser Spark Ignition of LOX/LCH ₄ Propellant on an Optically-Accessible Combustor. , 2015, , .		1
88	Ignition and Stabilization of a Premixed Methane/air Flame with Repetitive Laser-Induced Plasmas. , 2017, , .		1
89	Combustion gas and NO emission characteristics of hazardous waste mixture particles in a fixed bed. Korean Journal of Chemical Engineering, 2011, 28, 778-787.	1.2	0
90	Numerical Simulation of Simultaneous NO and SO ₂ Reduction by Reburning. , 2012, , .		0