

Ajay K Dalai

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

5,479
citations

87843

38
h-index

155592

55
g-index

58
all docs

58
docs citations

58
times ranked

4163
citing authors

#	ARTICLE	IF	CITATIONS
1	Supercritical water gasification of biomass for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 6912-6926.	3.8	399
2	Characterization of North American Lignocellulosic Biomass and Biochars in Terms of their Candidacy for Alternate Renewable Fuels. <i>Bioenergy Research</i> , 2013, 6, 663-677.	2.2	295
3	Pathways of lignocellulosic biomass conversion to renewable fuels. <i>Biomass Conversion and Biorefinery</i> , 2014, 4, 157-191.	2.9	290
4	Biochar as an Exceptional Bioresource for Energy, Agronomy, Carbon Sequestration, Activated Carbon and Specialty Materials. <i>Waste and Biomass Valorization</i> , 2016, 7, 201-235.	1.8	272
5	Effects of temperature on the physicochemical characteristics of fast pyrolysis bio-chars derived from Canadian waste biomass. <i>Fuel</i> , 2014, 125, 90-100.	3.4	266
6	An assessment on the sustainability of lignocellulosic biomass for biorefining. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 50, 925-941.	8.2	223
7	Evaluation of the physicochemical development of biochars obtained from pyrolysis of wheat straw, timothy grass and pinewood: Effects of heating rate. <i>Journal of Analytical and Applied Pyrolysis</i> , 2013, 104, 485-493.	2.6	212
8	Supercritical water gasification of biomass: a state-of-the-art review of process parameters, reaction mechanisms and catalysis. <i>Sustainable Energy and Fuels</i> , 2019, 3, 578-598.	2.5	210
9	Review of post-combustion carbon dioxide capture technologies using activated carbon. <i>Journal of Environmental Sciences</i> , 2019, 83, 46-63.	3.2	210
10	Gasification of fruit wastes and agro-food residues in supercritical water. <i>Energy Conversion and Management</i> , 2016, 110, 296-306.	4.4	190
11	Futuristic applications of hydrogen in energy, biorefining, aerospace, pharmaceuticals and metallurgy. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 8885-8905.	3.8	190
12	A review on subcritical and supercritical water gasification of biogenic, polymeric and petroleum wastes to hydrogen-rich synthesis gas. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 119, 109546.	8.2	184
13	Chemistry and Specialty Industrial Applications of Lignocellulosic Biomass. <i>Waste and Biomass Valorization</i> , 2021, 12, 2145-2169.	1.8	166
14	Hydrothermal pretreatment technologies for lignocellulosic biomass: A review of steam explosion and subcritical water hydrolysis. <i>Chemosphere</i> , 2021, 284, 131372.	4.2	160
15	Innovations in applications and prospects of bioplastics and biopolymers: a review. <i>Environmental Chemistry Letters</i> , 2022, 20, 379-395.	8.3	134
16	Hydrothermal catalytic processing of waste cooking oil for hydrogen-rich syngas production. <i>Chemical Engineering Science</i> , 2019, 195, 935-945.	1.9	112
17	Fermentative production of butanol: Perspectives on synthetic biology. <i>New Biotechnology</i> , 2017, 37, 210-221.	2.4	107
18	Valorization of horse manure through catalytic supercritical water gasification. <i>Waste Management</i> , 2016, 52, 147-158.	3.7	104

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19	Breakthrough CO ₂ adsorption in bio-based activated carbons. <i>Journal of Environmental Sciences</i> , 2015, 34, 68-76.	3.2	103
20	Butanol and ethanol production from lignocellulosic feedstock: biomass pretreatment and bioconversion. <i>Energy Science and Engineering</i> , 2014, 2, 138-148.	1.9	94
21	Hydrothermal gasification of soybean straw and flax straw for hydrogen-rich syngas production: Experimental and thermodynamic modeling. <i>Energy Conversion and Management</i> , 2020, 208, 112545.	4.4	92
22	Supercritical water gasification of fructose as a model compound for waste fruits and vegetables. <i>Journal of Supercritical Fluids</i> , 2015, 104, 112-121.	1.6	87
23	An assessment of pinecone gasification in subcritical, near-critical and supercritical water. <i>Fuel Processing Technology</i> , 2017, 168, 84-96.	3.7	87
24	A Review of Torrefaction Technology for Upgrading Lignocellulosic Biomass to Solid Biofuels. <i>Bioenergy Research</i> , 2021, 14, 645-669.	2.2	81
25	Biochar production, activation and adsorptive applications: a review. <i>Environmental Chemistry Letters</i> , 2021, 19, 2237-2259.	8.3	80
26	Next-generation biofuels and platform biochemicals from lignocellulosic biomass. <i>International Journal of Energy Research</i> , 2021, 45, 14145-14169.	2.2	79
27	Optimization and modeling of process parameters during hydrothermal gasification of biomass model compounds to generate hydrogen-rich gas products. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 18275-18288.	3.8	70
28	Taguchi-based process optimization for activation of agro-food waste biochar and performance test for dye adsorption. <i>Chemosphere</i> , 2021, 285, 131531.	4.2	68
29	Characteristic Studies on the Pyrolysis Products from Hydrolyzed Canadian Lignocellulosic Feedstocks. <i>Bioenergy Research</i> , 2014, 7, 174-191.	2.2	64
30	Metal-organic framework-based functional catalytic materials for biodiesel production: a review. <i>Green Chemistry</i> , 2021, 23, 2595-2618.	4.6	60
31	Modeling and process optimization of hydrothermal gasification for hydrogen production: A comprehensive review. <i>Journal of Supercritical Fluids</i> , 2021, 173, 105199.	1.6	60
32	Effects of bio-additives on the physicochemical properties and mechanical behavior of canola hull fuel pellets. <i>Renewable Energy</i> , 2019, 132, 296-307.	4.3	59
33	Slow pyrolysis of agro-food wastes and physicochemical characterization of biofuel products. <i>Chemosphere</i> , 2021, 285, 131431.	4.2	56
34	Techno-economic evaluation and sensitivity analysis of a conceptual design for supercritical water gasification of soybean straw to produce hydrogen. <i>Bioresource Technology</i> , 2021, 331, 125005.	4.8	52
35	Slow Pyrolysis of Deoiled Canola Meal: Product Yields and Characterization. <i>Energy & Fuels</i> , 2013, 27, 5268-5279.	2.5	50
36	Physico-chemistry of biochars produced through steam gasification and hydro-thermal gasification of canola hull and canola meal pellets. <i>Biomass and Bioenergy</i> , 2019, 120, 458-470.	2.9	50

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37	Cannabis: Chemistry, extraction and therapeutic applications. <i>Chemosphere</i> , 2022, 289, 133012.	4.2	45
38	Catalytic conversion of lignocellulosic polysaccharides to commodity biochemicals: a review. <i>Environmental Chemistry Letters</i> , 2021, 19, 4119-4136.	8.3	43
39	A Review of Biomass Resources and Thermochemical Conversion Technologies. <i>Chemical Engineering and Technology</i> , 2022, 45, 791-799.	0.9	39
40	Subcritical water hydrolysis of Phragmites for sugar extraction and catalytic conversion to platform chemicals. <i>Biomass and Bioenergy</i> , 2021, 145, 105965.	2.9	36
41	Techno-economic and life-cycle assessment of integrated Fischer-Tropsch process in ethanol industry for bio-diesel and bio-gasoline production. <i>Energy</i> , 2020, 195, 116985.	4.5	34
42	Catalytic Supercritical Water Gasification of Soybean Straw: Effects of Catalyst Supports and Promoters. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 5770-5782.	1.8	31
43	Physicochemical and Fuel Characteristics of Torrefied Agricultural Residues for Sustainable Fuel Production. <i>Energy & Fuels</i> , 2020, 34, 14169-14181.	2.5	27
44	Isolation of cellulose fibers from wetland reed grass through an integrated subcritical water hydrolysis-pulping-bleaching process. <i>Fuel</i> , 2022, 311, 122618.	3.4	27
45	Physico-Chemical Evolution in Lignocellulosic Feedstocks During Hydrothermal Pretreatment and Delignification. <i>Journal of Biobased Materials and Bioenergy</i> , 2015, 9, 295-308.	0.1	25
46	Process optimization and investigating the effects of torrefaction and pelletization on steam gasification of canola residue. <i>Fuel</i> , 2022, 323, 124239.	3.4	25
47	Comparative study on fuel characteristics and pyrolysis kinetics of corn residue-based hydrochar produced via microwave hydrothermal carbonization. <i>Chemosphere</i> , 2022, 291, 132787.	4.2	19
48	Catalytic hydrothermal co-gasification of canola meal and low-density polyethylene using mixed metal oxides for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 42084-42098.	3.8	18
49	Synthesis of Biochar From Lignocellulosic Biomass for Diverse Industrial Applications and Energy Harvesting: Effects of Pyrolysis Conditions on the Physicochemical Properties of Biochar. <i>Frontiers in Materials</i> , 2022, 9, .	1.2	18
50	A review of thermocatalytic conversion of biogenic wastes into crude biofuels and biochemical precursors. <i>Fuel</i> , 2022, 320, 123857.	3.4	16
51	Optimization studies for hydrothermal gasification of partially burnt wood from forest fires for hydrogen-rich syngas production using Taguchi experimental design. <i>Environmental Pollution</i> , 2021, 283, 117040.	3.7	15
52	Experimental and Modeling Studies of Torrefaction of Spent Coffee Grounds and Coffee Husk: Effects on Surface Chemistry and Carbon Dioxide Capture Performance. <i>ACS Omega</i> , 2022, 7, 638-653.	1.6	15
53	Hydrothermal flames for subaquatic, terrestrial and extraterrestrial applications. <i>Journal of Hazardous Materials</i> , 2022, 424, 127520.	6.5	9
54	Extraction of Sugars and Cellulose Fibers from Cannabis Stems by Hydrolysis, Pulping, and Bleaching. <i>Chemical Engineering and Technology</i> , 2022, 45, 962-970.	0.9	9

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55	Techno-economic analysis of activated carbon production from spent coffee grounds: Comparative evaluation of different production routes. <i>Energy Conversion and Management</i> : X, 2022, 14, 100218.	0.9	6
56	Thermochemical conversion of organic waste: New horizons for production of green energy. , 2022, , 1-21.		2