Frederik Ronsse

List of Publications by Year
in descending order

120 papers	4,686 citations	126708 33 h-index	114278 63 g-index
122 all docs	122 docs citations	122 times ranked	5474 citing authors

#	Article	IF	Citations
1	Production of solid hydrochar from waste seaweed by hydrothermal carbonization: effect of process variables. Biomass Conversion and Biorefinery, 2024, 14, 183-197.	2.9	8
2	Effects of demineralization on the composition of microalgae pyrolysis volatiles in py-GCâ€“MS. Energy Conversion and Management, 2022, 251, 114979.	4.4	24
3	Influence of sequential HTC pre-treatment and pyrolysis on wet food-industry wastes: Optimisation toward nitrogen-rich hierarchical carbonaceous materials intended for use in energy storage solutions. Science of the Total Environment, 2022, 816, 151648.	3.9	11
4	Biochar stability scores from analytical pyrolysis (Py-GC-MS). Journal of Analytical and Applied Pyrolysis, 2022, 161, 105412.	2.6	10
5	Fast torrefaction of large biomass particles by superheated steam: Enhanced solid products for multipurpose production. Renewable Energy, 2022, 185, 552-563.	4.3	17
6	Pretreatment of Sugarcane Residues for Combustion in Biomass Power Stations: A Review. Sugar Tech, 2022, 24, 732-745.	0.9	4
7	Progress in in-situ CO2-sorption for enhanced hydrogen production. Progress in Energy and Combustion Science, 2022, 91, 101008.	15.8	28
8	A meta-analysis of thermo-physical and chemical aspects in CFD modelling of pyrolysis of a single wood particle in the thermally thick regime. Chemical Engineering Journal, 2022, 446, 137088.	6.6	9
9	Biochar and activated carbon enhance ethanol conversion and selectivity to caproic acid by Clostridium kluyveri. Bioresource Technology, 2021, 319, 124236.	4.8	36
10	Chemical stabilization of Cd-contaminated soil using fresh and aged wheat straw biochar. Environmental Science and Pollution Research, 2021, 28, 10155-10166.	2.7	20
11	Catalytic Fast Pyrolysis of Biomass: Catalyst Characterization Reveals the Feed-Dependent Deactivation of a Technical ZSM-5-Based Catalyst. ACS Sustainable Chemistry and Engineering, 2021, 9, 291-304.	3.2	57
12	Biochar from sawmill residues: characterization and evaluation for its potential use in the horticultural growing media. Biochar, 2021, 3, 201-212.	6.2	8
13	Tailoring of the pore structures of wood pyrolysis chars for potential use in energy storage applications. Applied Energy, 2021, 286, 116431.	5.1	22
14	Investigation of biomass and agricultural plastic co-pyrolysis: Effect on biochar yield and properties. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105029.	2.6	50
15	Potential of Jackfruit Waste as Anaerobic Digestion and Slow Pyrolysis Feedstock. Journal of Biosystems Engineering, 2021, 46, 163-172.	1.2	6
16	Comparative study of different algae pyrolysis using photoionization mass spectrometry and gas chromatography/mass spectrometry. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105068.	2.6	19
17	Fast pyrolysis of raw and acid-leached sugarcane residues en route to producing chemicals and fuels: Economic and environmental assessments. Journal of Cleaner Production, 2021, 296, 126601.	4.6	5
18	Superheated steam as carrier gas and the sole heat source to enhance biomass torrefaction. Bioresource Technology, 2021, 331, 124955.	4.8	32

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19	Do you BET on routine? The reliability of N2 physisorption for the quantitative assessment of biocharâ€™s surface area. Chemical Engineering Journal, 2021, 418, 129234.	6.6	49
20	Assessment of carbon recovery from solid organic wastes by supercritical water oxidation for a regenerative life support system. Environmental Science and Pollution Research, 2020, 27, 8260-8270.	2.7	5
21	Fast pyrolysis with fractional condensation of lignin-rich digested stillage from second-generation bioethanol production. Journal of Analytical and Applied Pyrolysis, 2020, 145, 104756.	2.6	25
22	Application of biochars and solid fraction of digestate to decrease soil solution Cd, Pb and Zn concentrations in contaminated sandy soils. Environmental Geochemistry and Health, 2020, 42, 1589-1600.	1.8	11
23	Ex Situ Catalytic Fast Pyrolysis of Lignin-Rich Digested Stillage over Na/ZSM-5, H/ZSM-5, and Fe/ZSM-5. Energy & Fuels, 2020, 34, 12710-12723.	2.5	6
24	Assessment of biomass demineralization on gasification: From experimental investigation, mechanism to potential application. Science of the Total Environment, 2020, 726, 138634.	3.9	28
25	Exploring catalytic pyrolysis of Palm Shell over HZSM-5 by gas Chromatography/mass spectrometry and photoionization mass spectrometry. Journal of Analytical and Applied Pyrolysis, 2020, 152, 104946.	2.6	8
26	How to trace back an unknown production temperature of biochar from chemical characterization methods in a feedstock independent way. Journal of Analytical and Applied Pyrolysis, 2020, 151, 104926.	2.6	8
27	Improving fast pyrolysis of lignin using three additives with different modes of action. Green Chemistry, 2020, 22, 6471-6488.	4.6	31
28	Integrating anaerobic digestion and slow pyrolysis improves the product portfolio of a cocoa waste biorefinery. Sustainable Energy and Fuels, 2020, 4, 3712-3725.	2.5	35
29	Complete oxidation of organic waste under mild supercritical water oxidation by combining effluent recirculation and membrane filtration. Science of the Total Environment, 2020, 736, 139731.	3.9	9
30	Valorization of the poultry litter through wet torrefaction and different activation treatments. Science of the Total Environment, 2020, 732, 139288.	3.9	23
31	Experimental studies on a two-step fast pyrolysis-catalytic hydrotreatment process for hydrocarbons from microalgae (Nannochloropsis gaditana and Scenedesmus almeriensis). Fuel Processing Technology, 2020, 206, 106466.	3.7	31
32	Optimal strategy for clean and efficient biomass combustion based on ash deposition tendency and kinetic analysis. Journal of Cleaner Production, 2020, 271, 122529.	4.6	23
33	Recycling of product gas does not affect fast pyrolysis oil yield and composition. Journal of Analytical and Applied Pyrolysis, 2020, 148, 104794.	2.6	7
34	Effluent recirculation enables near-complete oxidation of organics during supercritical water oxidation at mild conditions: A proof of principle. Chemosphere, 2020, 250, 126213.	4.2	5
35	Review on Modelling Approaches Based on Computational Fluid Dynamics for Biomass Pyrolysis Systems. Biofuels and Biorefineries, 2020, , 373-438.	0.5	2
36	Biochar Production via Pyrolysis. , 2020, , 35-59.		0

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37	Pyrolysis Kinetics of Hydrochars Produced from Brewerâ€™s Spent Grains. Catalysts, 2019, 9, 625.	1.6	25
38	Metal sorption by biochars: A trade-off between phosphate and carbonate concentration as governed by pyrolysis conditions. Journal of Environmental Management, 2019, 246, 496-504.	3.8	13
39	Hydrotreatment of pyrolysis liquids derived from second-generation bioethanol production residues over NiMo and CoMo catalysts. Biomass and Bioenergy, 2019, 126, 84-93.	2.9	21
40	3D Eulerian-Eulerian modeling of a screw reactor for biomass thermochemical conversion. Part 2: Slow pyrolysis for char production. Renewable Energy, 2019, 143, 1477-1487.	4.3	24
41	3D Eulerian-Eulerian modeling of a screw reactor for biomass thermochemical conversion. Part 1: Solids flow dynamics and back-mixing. Renewable Energy, 2019, 143, 1465-1476.	4.3	17
42	Fast pyrolysis of mannan-rich ivory nut (Phytelephas aequatorialis) to valuable biorefinery products. Chemical Engineering Journal, 2019, 373, 446-457.	6.6	25
43	Analytical Py-GC/MS of Genetically Modified Poplar for the Increased Production of Bio-aromatics. Computational and Structural Biotechnology Journal, 2019, 17, 599-610.	1.9	10
44	Effects of phytolithic rice-straw biochar, soil buffering capacity and pH on silicon bioavailability. Plant and Soil, 2019, 438, 187-203.	1.8	73
45	Production and characterization of slow pyrolysis biochar from lignin-rich digested stillage from lignocellulosic ethanol production. Biomass and Bioenergy, 2019, 122, 349-360.	2.9	46
46	On the environmental and economic issues associated with the forestry residues-to-heat and electricity route in Chile: Sawdust gasification as a case study. Energy, 2019, 170, 763-776.	4.5	12
47	Influence of citric acid leaching on the yield and quality of pyrolytic bio-oils from sugarcane residues. Journal of Analytical and Applied Pyrolysis, 2019, 137, 43-53.	2.6	7
48	Mild temperature hydrothermal oxidation of anaerobic fermentation filtrate for carbon and nitrogen recovery in a regenerative life support system. Journal of Supercritical Fluids, 2019, 145, 39-47.	1.6	6
49	Heat transfer from an immersed fixed silver sphere to a gas fluidised bed of very small particles. Thermal Science, 2019, 23, 1425-1433.	0.5	1
50	Effect of citric acid leaching on the demineralization and thermal degradation behavior of sugarcane trash and bagasse. Biomass and Bioenergy, 2018, 108, 371-380.	2.9	36
51	Application of Py-GC/MS coupled with PARAFAC2 and PLS-DA to study fast pyrolysis of genetically engineered poplars. Journal of Analytical and Applied Pyrolysis, 2018, 129, 101-111.	2.6	13
52	Comment on â€œRedox-Active Oxygen-Containing Functional Groups in Activated Carbon Facilitate Microbial Reduction of Ferrihydriteâ€• Environmental Science & Technology, 2018, 52, 4485-4486.	4.6	4
53	Heat recovery during treatment of highly concentrated wastewater: economic evaluation and influencing factors. Water Science and Technology, 2018, 78, 2270-2278.	1.2	6
54	Py-GC/MS based analysis of the influence of citric acid leaching of sugarcane residues as a pretreatment to fast pyrolysis. Journal of Analytical and Applied Pyrolysis, 2018, 134, 465-475.	2.6	16

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55	Sub- and supercritical water oxidation of anaerobic fermentation sludge for carbon and nitrogen recovery in a regenerative life support system. Waste Management, 2018, 77, 268-275.	3.7	16
56	Catalytic upgrading of biomass-derived vapors on carbon aerogel-supported Ni: Effect of temperature, metal cluster size and catalyst-to-biomass ratio. Fuel Processing Technology, 2018, 178, 251-261.	3.7	19
57	Biosorption of residual cisplatin, carboplatin and oxaliplatin antineoplastic drugs in urine after chemotherapy treatment. Environmental Chemistry, 2018, 15, 506.	0.7	14
58	In situ catalytic fast pyrolysis of crude and torrefied Eucalyptus globulus using carbon aerogel-supported catalysts. Energy, 2017, 128, 701-712.	4.5	28
59	Nitrogen cycling in Bioregenerative Life Support Systems: Challenges for waste refinery and food production processes. Progress in Aerospace Sciences, 2017, 91, 87-98.	6.3	65
60	Space-time integral method for simplifying the modeling of torrefaction of a centimeter-sized biomass particle. Journal of Analytical and Applied Pyrolysis, 2017, 124, 486-498.	2.6	5
61	Infrared Heating as a Disinfestation Method Against Sitophilus oryzae and Its Effect on Textural and Cooking Properties of Milled Rice. Food and Bioprocess Technology, 2017, 10, 284-295.	2.6	26
62	Biochar Production. , 2016, , 199-226.		7
63	Effect of foam on temperature prediction and heat recovery potential from biological wastewater treatment. Water Research, 2016, 95, 340-347.	5.3	14
64	Finite element modeling of intraparticle heterogeneous tar conversion during pyrolysis of woody biomass particles. Fuel Processing Technology, 2016, 148, 302-316.	3.7	34
65	Micropyrolysis of natural poplar mutants with altered p-hydroxyphenyl lignin content. Journal of Analytical and Applied Pyrolysis, 2016, 122, 377-386.	2.6	1
66	The electron donating capacity of biochar is dramatically underestimated. Scientific Reports, 2016, 6, 32870.	1.6	106
67	Quantitative analysis of nitrogen containing compounds in microalgae based bio-oils using comprehensive two-dimensional gas-chromatography coupled to nitrogen chemiluminescence detector and time of flight mass spectrometer. Journal of Chromatography A, 2016, 1460, 135-146.	1.8	40
68	Charcoal â€œMinesâ€•in the Norwegian Woods. Energy & Fuels, 2016, 30, 7959-7970.	2.5	9
69	Mild hydrothermal conditioning prior to torrefaction and slow pyrolysis of low-value biomass. Bioresource Technology, 2016, 217, 104-112.	4.8	25
70	Challenges in the design and operation of processes for catalytic fast pyrolysis of woody biomass. Renewable and Sustainable Energy Reviews, 2016, 57, 1596-1610.	8.2	134
71	Potential of genetically engineered hybrid poplar for pyrolytic production of bio-based phenolic compounds. Bioresource Technology, 2016, 207, 229-236.	4.8	26
72	In situ performance of various metal doped catalysts in micro-pyrolysis and continuous fast pyrolysis. Fuel Processing Technology, 2016, 144, 312-322.	3.7	36

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73	Heterogeneous catalytic upgrading of biocrude oil produced by hydrothermal liquefaction of microalgae: State of the art and own experiments. Fuel Processing Technology, 2016, 148, 117-127.	3.7	80
74	Torrefaction of pine in a bench-scale screw conveyor reactor. Biomass and Bioenergy, 2015, 79, 96-104.	2.9	47
75	Digestion of high rate activated sludge coupled to biochar formation for soil improvement in the tropics. Water Research, 2015, 81, 216-222.	5.3	22
76	Effect of biomass ash in catalytic fast pyrolysis of pine wood. Applied Catalysis B: Environmental, 2015, 168-169, 203-211.	10.8	223
77	Carbonization of Biomass. , 2015, , 293-324.		34
78	Suitability of hydrothermal liquefaction as a conversion route to produce biofuels from macroalgae. Algal Research, 2015, 11, 234-241.	2.4	84
79	Legal constraints and opportunities for biochar: a case analysis of <scp>EU</scp> law. GCB Bioenergy, 2015, 7, 14-24.	2.5	23
80	Costâ€benefit analysis of using biochar to improve cereals agriculture. GCB Bioenergy, 2015, 7, 850-864.	2.5	77
81	Residence time distributions of coarse biomass particles in a screw conveyor reactor. Fuel Processing Technology, 2015, 130, 87-95.	3.7	50
82	Numerical study of air humidity and temperature distribution in a top-spray fluidised bed coating process. Journal of Food Engineering, 2015, 146, 81-91.	2.7	15
83	Coupling CFD and Diffusion Models for Analyzing the Convective Drying Behavior of a Single Rice Kernel. Drying Technology, 2014, 32, 311-320.	1.7	42
84	Catalytic Fast Pyrolysis of Pine Wood: Effect of Successive Catalyst Regeneration. Energy & Fuels, 2014, 28, 4560-4572.	2.5	60
85	Sewage Sludge Carbonization for Biochar Applications. Fate of Heavy Metals. Energy & Fuels, 2014, 28, 5318-5326.	2.5	111
86	Short-Term Effect of Feedstock and Pyrolysis Temperature on Biochar Characteristics, Soil and Crop Response in Temperate Soils. Agronomy, 2014, 4, 52-73.	1.3	41
87	Hydrothermal liquefaction (HTL) of microalgae for biofuel production: State of the art review and future prospects. Biomass and Bioenergy, 2013, 53, 113-127.	2.9	572
88	Modelling overall particle motion in fluidised beds for top-spray coating processes. Particuology, 2013, 11, 490-505.	2.0	4
89	Validation of a new set-up for continuous catalytic fast pyrolysis of biomass coupled with vapour phase upgrading. Journal of Analytical and Applied Pyrolysis, 2013, 103, 343-351.	2.6	97
90	Modelling the thermal performance of a naturally ventilated greenhouse in Zimbabwe using a dynamic greenhouse climate model. Solar Energy, 2013, 91, 381-393.	2.9	76

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91	Production and characterization of slow pyrolysis biochar: influence of feedstock type and pyrolysis conditions. GCB Bioenergy, 2013, 5, 104-115.	2.5	629
92	Influence of strain-specific parameters on hydrothermal liquefaction of microalgae. Bioresource Technology, 2013, 146, 463-471.	4.8	106
93	Biomass Pyrolysis. Advances in Chemical Engineering, 2013, 42, 75-139.	0.5	58
94	Estimation of leaf wetness duration for greenhouse roses using a dynamic greenhouse climate model in Zimbabwe. Computers and Electronics in Agriculture, 2013, 95, 70-81.	3.7	21
95	Towards a carbon-negative sustainable bio-based economy. Frontiers in Plant Science, 2013, 4, 174.	1.7	114
96	Particle surface moisture content estimation using population balance modelling in fluidised bed agglomeration. Journal of Food Engineering, 2012, 109, 347-357.	2.7	18
97	Modelling the bed characteristics in fluidised-beds for top-spray coating processes. Particuology, 2012, 10, 649-662.	2.0	6
98	Secondary reactions of levoglucosan and char in the fast pyrolysis of cellulose. Environmental Progress and Sustainable Energy, 2012, 31, 256-260.	1.3	79
99	CFD study of droplet atomisation using a binary nozzle in fluidised bed coating. Chemical Engineering Science, 2012, 68, 555-566.	1.9	33
100	Optimization of platinum filament micropyrolyzer for studying primary decomposition in cellulose pyrolysis. Journal of Analytical and Applied Pyrolysis, 2012, 95, 247-256.	2.6	20
101	Modelling particle random walk in a confined environment for inclusion in fluidised bed applications. Powder Technology, 2012, 221, 155-163.	2.1	2
102	Attrition strength of water-soluble cellulose derivative coatings applied on different core materials. Powder Technology, 2012, 222, 71-79.	2.1	3
103	Modelling coating quality in fluidised bed coating: Spray sub-model. Journal of Food Engineering, 2011, 106, 220-227.	2.7	6
104	CFD study of solids concentration in a fluidised-bed coater with variation of atomisation air pressure. Powder Technology, 2011, 212, 103-114.	2.1	10
105	Comparison and evaluation of interphase momentum exchange models for simulation of the solids volume fraction in tapered fluidised beds. Chemical Engineering Science, 2010, 65, 3100-3112.	1.9	23
106	Attrition strength of water-soluble cellulose derivatives coatings. Powder Technology, 2010, 198, 298-309.	2.1	7
107	The effects of whitening and dust accumulation on the microclimate and canopy behaviour of rose plants (Rosa hybrida) in a greenhouse in Zimbabwe. Solar Energy, 2010, 84, 10-23.	2.9	37
108	Measurement and Simulation of the Ventilation Rates in a Naturally Ventilated Azrom-Type Greenhouse in Zimbabwe. Applied Engineering in Agriculture, 2010, 26, 475-488.	0.3	12

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109	Application of a Tracer Aerosol Technique Using Atomized Sodium Chloride Particles for Measuring Ventilation Rates in a Naturally Ventilated Azrom-Type Greenhouse in Zimbabwe. Applied Engineering in Agriculture, 2010, 26, 275-286.	0.3	2
110	Water-Soluble Cellulose Derivatives as Coating Agents in Fluidized Bed Processing. Particulate Science and Technology, 2009, 27, 389-403.	1.1	6
111	Influence of combined IR-grilling and hot air cooking conditions on moisture and fat content, texture and colour attributes of meat patties. Journal of Food Engineering, 2009, 93, 437-443.	2.7	34
112	Modelling heat and mass transfer in batch, top-spray fluidised bed coating processes. Powder Technology, 2009, 190, 170-175.	2.1	14
113	Modelling side-effect spray drying in top-spray fluidised bed coating processes. Journal of Food Engineering, 2008, 86, 529-541.	2.7	25
114	COMPUTATIONAL STUDY OF THE MULTIPHASE FLOW IN THE FLUIDISED BED EQUIPMENT. Acta Horticulturae, 2008, , 67-72.	0.1	0
115	Numerical Spray Model of the Fluidized Bed Coating Process. Drying Technology, 2007, 25, 1491-1514.	1.7	18
116	Accelerated solid-phase dynamic extraction of toluene from air. Journal of Chromatography A, 2007, 1175, 145-153.	1.8	17
117	Combined population balance and thermodynamic modelling of the batch top-spray fluidised bed coating process. Part Iâ€"Model and process analysis. Journal of Food Engineering, 2007, 78, 308-322.	2.7	17
118	Combined population balance and thermodynamic modelling of the batch top-spray fluidised bed coating process. Part Iâ€"Model development and validation. Journal of Food Engineering, 2007, 78, 296-307.	2.7	38
119	Integrated numerical spray model and event-driven Monte Carlo model of the fluidised bed coating process. Communications in Agricultural and Applied Biological Sciences, 2004, 69, 235-8.	0.0	0
120	Detection of DNA during the refining of soybean oil. JAOCS, Journal of the American Oil Chemists' Society, 2002, 79, 171-174.	0.8	41