

# Frederik Ronsse

## List of Publications by Citations

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**Version:** 2024-04-19

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119  
papers

3,349  
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28  
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54  
g-index

122  
ext. papers

3,937  
ext. citations

6.6  
avg, IF

5.69  
L-index

#	Paper	IF	Citations
119	Hydrothermal liquefaction (HTL) of microalgae for biofuel production: State of the art review and future prospects. <i>Biomass and Bioenergy</i> , <b>2013</b> , 53, 113-127	5.3	488
118	Production and characterization of slow pyrolysis biochar: influence of feedstock type and pyrolysis conditions. <i>GCB Bioenergy</i> , <b>2013</b> , 5, 104-115	5.6	475
117	Effect of biomass ash in catalytic fast pyrolysis of pine wood. <i>Applied Catalysis B: Environmental</i> , <b>2015</b> , 168-169, 203-211	21.8	161
116	Challenges in the design and operation of processes for catalytic fast pyrolysis of woody biomass. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 57, 1596-1610	16.2	114
115	Influence of strain-specific parameters on hydrothermal liquefaction of microalgae. <i>Bioresource Technology</i> , <b>2013</b> , 146, 463-471	11	91
114	Sewage Sludge Carbonization for Biochar Applications. Fate of Heavy Metals. <i>Energy &amp; Fuels</i> , <b>2014</b> , 28, 5318-5326	4.1	90
113	Towards a carbon-negative sustainable bio-based economy. <i>Frontiers in Plant Science</i> , <b>2013</b> , 4, 174	6.2	88
112	Validation of a new set-up for continuous catalytic fast pyrolysis of biomass coupled with vapour phase upgrading. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2013</b> , 103, 343-351	6	81
111	The electron donating capacity of biochar is dramatically underestimated. <i>Scientific Reports</i> , <b>2016</b> , 6, 32870	4.9	75
110	Secondary reactions of levoglucosan and char in the fast pyrolysis of cellulose. <i>Environmental Progress and Sustainable Energy</i> , <b>2012</b> , 31, 256-260	2.5	68
109	Suitability of hydrothermal liquefaction as a conversion route to produce biofuels from macroalgae. <i>Algal Research</i> , <b>2015</b> , 11, 234-241	5	66
108	Heterogeneous catalytic upgrading of biocrude oil produced by hydrothermal liquefaction of microalgae: State of the art and own experiments. <i>Fuel Processing Technology</i> , <b>2016</b> , 148, 117-127	7.2	65
107	Modelling the thermal performance of a naturally ventilated greenhouse in Zimbabwe using a dynamic greenhouse climate model. <i>Solar Energy</i> , <b>2013</b> , 91, 381-393	6.8	54
106	Catalytic Fast Pyrolysis of Pine Wood: Effect of Successive Catalyst Regeneration. <i>Energy &amp; Fuels</i> , <b>2014</b> , 28, 4560-4572	4.1	53
105	Cost-benefit analysis of using biochar to improve cereals agriculture. <i>GCB Bioenergy</i> , <b>2015</b> , 7, 850-864	5.6	50
104	Effects of phytolith rice-straw biochar, soil buffering capacity and pH on silicon bioavailability. <i>Plant and Soil</i> , <b>2019</b> , 438, 187-203	4.2	48
103	Nitrogen cycling in Bioregenerative Life Support Systems: Challenges for waste refinery and food production processes. <i>Progress in Aerospace Sciences</i> , <b>2017</b> , 91, 87-98	8.8	41

102	Biomass Pyrolysis. <i>Advances in Chemical Engineering</i> , <b>2013</b> , 42, 75-139	0.6	40
101	Residence time distributions of coarse biomass particles in a screw conveyor reactor. <i>Fuel Processing Technology</i> , <b>2015</b> , 130, 87-95	7.2	37
100	Short-Term Effect of Feedstock and Pyrolysis Temperature on Biochar Characteristics, Soil and Crop Response in Temperate Soils. <i>Agronomy</i> , <b>2014</b> , 4, 52-73	3.6	37
99	Torrefaction of pine in a bench-scale screw conveyor reactor. <i>Biomass and Bioenergy</i> , <b>2015</b> , 79, 96-104	5.3	37
98	Production and characterization of slow pyrolysis biochar from lignin-rich digested stillage from lignocellulosic ethanol production. <i>Biomass and Bioenergy</i> , <b>2019</b> , 122, 349-360	5.3	35
97	Combined population balance and thermodynamic modelling of the batch top-spray fluidised bed coating process. Part I Model development and validation. <i>Journal of Food Engineering</i> , <b>2007</b> , 78, 296-307 <sup>6</sup>		34
96	Coupling CFD and Diffusion Models for Analyzing the Convective Drying Behavior of a Single Rice Kernel. <i>Drying Technology</i> , <b>2014</b> , 32, 311-320	2.6	33
95	Detection of DNA during the refining of soybean oil. <i>JAOCs, Journal of the American Oil Chemists Society</i> , <b>2002</b> , 79, 171-174	1.8	33
94	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. <i>Journal of Chromatography A</i> , <b>2016</b> , 1460, 135-46	4.5	30
93	Influence of combined IR-grilling and hot air cooking conditions on moisture and fat content, texture and colour attributes of meat patties. <i>Journal of Food Engineering</i> , <b>2009</b> , 93, 437-443	6	29
92	CFD study of droplet atomisation using a binary nozzle in fluidised bed coating. <i>Chemical Engineering Science</i> , <b>2012</b> , 68, 555-566	4.4	28
91	The effects of whitening and dust accumulation on the microclimate and canopy behaviour of rose plants ( <i>Rosa hybrida</i> ) in a greenhouse in Zimbabwe. <i>Solar Energy</i> , <b>2010</b> , 84, 10-23	6.8	28
90	In situ performance of various metal doped catalysts in micro-pyrolysis and continuous fast pyrolysis. <i>Fuel Processing Technology</i> , <b>2016</b> , 144, 312-322	7.2	26
89	Effect of citric acid leaching on the demineralization and thermal degradation behavior of sugarcane trash and bagasse. <i>Biomass and Bioenergy</i> , <b>2018</b> , 108, 371-380	5.3	25
88	Modelling side-effect spray drying in top-spray fluidised bed coating processes. <i>Journal of Food Engineering</i> , <b>2008</b> , 86, 529-541	6	23
87	Mild hydrothermal conditioning prior to torrefaction and slow pyrolysis of low-value biomass. <i>Bioresource Technology</i> , <b>2016</b> , 217, 104-12	11	22
86	Integrating anaerobic digestion and slow pyrolysis improves the product portfolio of a cocoa waste biorefinery. <i>Sustainable Energy and Fuels</i> , <b>2020</b> , 4, 3712-3725	5.8	21
85	Potential of genetically engineered hybrid poplar for pyrolytic production of bio-based phenolic compounds. <i>Bioresource Technology</i> , <b>2016</b> , 207, 229-36	11	21

84	Carbonization of Biomass <b>2015</b> , 293-324		20
83	In situ catalytic fast pyrolysis of crude and torrefied Eucalyptus globulus using carbon aerogel-supported catalysts. <i>Energy</i> , <b>2017</b> , 128, 701-712	7.9	19
82	Legal constraints and opportunities for biochar: a case analysis of EU law. <i>GCB Bioenergy</i> , <b>2015</b> , 7, 14-24	5.6	19
81	Experimental studies on a two-step fast pyrolysis-catalytic hydrotreatment process for hydrocarbons from microalgae ( <i>Nannochloropsis gaditana</i> and <i>Scenedesmus almeriensis</i> ). <i>Fuel Processing Technology</i> , <b>2020</b> , 206, 106466	7.2	19
80	Optimization of platinum filament micropyrolyzer for studying primary decomposition in cellulose pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2012</b> , 95, 247-256	6	19
79	Investigation of biomass and agricultural plastic co-pyrolysis: Effect on biochar yield and properties. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2021</b> , 155, 105029	6	19
78	Catalytic Fast Pyrolysis of Biomass: Catalyst Characterization Reveals the Feed-Dependent Deactivation of a Technical ZSM-5-Based Catalyst. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2021</b> , 9, 291-304	8.3	19
77	Comparison and evaluation of interphase momentum exchange models for simulation of the solids volume fraction in tapered fluidised beds. <i>Chemical Engineering Science</i> , <b>2010</b> , 65, 3100-3112	4.4	18
76	Finite element modeling of intraparticle heterogeneous tar conversion during pyrolysis of woody biomass particles. <i>Fuel Processing Technology</i> , <b>2016</b> , 148, 302-316	7.2	18
75	Infrared Heating as a Disinfection Method Against <i>Sitophilus oryzae</i> and Its Effect on Textural and Cooking Properties of Milled Rice. <i>Food and Bioprocess Technology</i> , <b>2017</b> , 10, 284-295	5.1	17
74	Numerical Spray Model of the Fluidized Bed Coating Process. <i>Drying Technology</i> , <b>2007</b> , 25, 1491-1514	2.6	17
73	Catalytic upgrading of biomass-derived vapors on carbon aerogel-supported Ni: Effect of temperature, metal cluster size and catalyst-to-biomass ratio. <i>Fuel Processing Technology</i> , <b>2018</b> , 178, 251-261	7.2	16
72	Pyrolysis Kinetics of Hydrochars Produced from Brewer's Spent Grains. <i>Catalysts</i> , <b>2019</b> , 9, 625	4	16
71	Digestion of high rate activated sludge coupled to biochar formation for soil improvement in the tropics. <i>Water Research</i> , <b>2015</b> , 81, 216-22	12.5	16
70	Estimation of leaf wetness duration for greenhouse roses using a dynamic greenhouse climate model in Zimbabwe. <i>Computers and Electronics in Agriculture</i> , <b>2013</b> , 95, 70-81	6.5	16
69	Accelerated solid-phase dynamic extraction of toluene from air. <i>Journal of Chromatography A</i> , <b>2007</b> , 1175, 145-53	4.5	16
68	Combined population balance and thermodynamic modelling of the batch top-spray fluidised bed coating process. Part II Model and process analysis. <i>Journal of Food Engineering</i> , <b>2007</b> , 78, 308-322	6	16
67	Improving fast pyrolysis of lignin using three additives with different modes of action. <i>Green Chemistry</i> , <b>2020</b> , 22, 6471-6488	10	16

66	Optimal strategy for clean and efficient biomass combustion based on ash deposition tendency and kinetic analysis. <i>Journal of Cleaner Production</i> , <b>2020</b> , 271, 122529	10.3	15
65	Particle surface moisture content estimation using population balance modelling in fluidised bed agglomeration. <i>Journal of Food Engineering</i> , <b>2012</b> , 109, 347-357	6	15
64	Fast pyrolysis with fractional condensation of lignin-rich digested stillage from second-generation bioethanol production. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2020</b> , 145, 104756	6	15
63	3D Eulerian-Eulerian modeling of a screw reactor for biomass thermochemical conversion. Part 2: Slow pyrolysis for char production. <i>Renewable Energy</i> , <b>2019</b> , 143, 1477-1487	8.1	14
62	Valorization of the poultry litter through wet torrefaction and different activation treatments. <i>Science of the Total Environment</i> , <b>2020</b> , 732, 139288	10.2	14
61	Hydrotreatment of pyrolysis liquids derived from second-generation bioethanol production residues over NiMo and CoMo catalysts. <i>Biomass and Bioenergy</i> , <b>2019</b> , 126, 84-93	5.3	13
60	Do you BET on routine? The reliability of N <sub>2</sub> physisorption for the quantitative assessment of biochar surface area. <i>Chemical Engineering Journal</i> , <b>2021</b> , 418, 129234	14.7	13
59	Numerical study of air humidity and temperature distribution in a top-spray fluidised bed coating process. <i>Journal of Food Engineering</i> , <b>2015</b> , 146, 81-91	6	12
58	Sub- and supercritical water oxidation of anaerobic fermentation sludge for carbon and nitrogen recovery in a regenerative life support system. <i>Waste Management</i> , <b>2018</b> , 77, 268-275	8.6	12
57	Modelling heat and mass transfer in batch, top-spray fluidised bed coating processes. <i>Powder Technology</i> , <b>2009</b> , 190, 170-175	5.2	12
56	Effect of foam on temperature prediction and heat recovery potential from biological wastewater treatment. <i>Water Research</i> , <b>2016</b> , 95, 340-7	12.5	12
55	Metal sorption by biochars: A trade-off between phosphate and carbonate concentration as governed by pyrolysis conditions. <i>Journal of Environmental Management</i> , <b>2019</b> , 246, 496-504	7.9	11
54	Fast pyrolysis of mannan-rich ivory nut ( <i>Phytelephas aequatorialis</i> ) to valuable biorefinery products. <i>Chemical Engineering Journal</i> , <b>2019</b> , 373, 446-457	14.7	11
53	Py-GC/MS based analysis of the influence of citric acid leaching of sugarcane residues as a pretreatment to fast pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2018</b> , 134, 465-475	6	11
52	Biochar and activated carbon enhance ethanol conversion and selectivity to caproic acid by <i>Clostridium kluyveri</i> . <i>Bioresource Technology</i> , <b>2021</b> , 319, 124236	11	11
51	CFD study of solids concentration in a fluidised-bed coater with variation of atomisation air pressure. <i>Powder Technology</i> , <b>2011</b> , 212, 103-114	5.2	10
50	Assessment of biomass demineralization on gasification: From experimental investigation, mechanism to potential application. <i>Science of the Total Environment</i> , <b>2020</b> , 726, 138634	10.2	10
49	Tailoring of the pore structures of wood pyrolysis chars for potential use in energy storage applications. <i>Applied Energy</i> , <b>2021</b> , 286, 116431	10.7	10

48	Measurement and Simulation of the Ventilation Rates in a Naturally Ventilated Azrom-Type Greenhouse in Zimbabwe. <i>Applied Engineering in Agriculture</i> , <b>2010</b> , 26, 475-488	0.8	9
47	Comparative study of different algae pyrolysis using photoionization mass spectrometry and gas chromatography/mass spectrometry. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2021</b> , 155, 105068	6	8
46	3D Eulerian-Eulerian modeling of a screw reactor for biomass thermochemical conversion. Part 1: Solids flow dynamics and back-mixing. <i>Renewable Energy</i> , <b>2019</b> , 143, 1465-1476	8.1	7
45	Application of Py-GC/MS coupled with PARAFAC2 and PLS-DA to study fast pyrolysis of genetically engineered poplars. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2018</b> , 129, 101-111	6	7
44	Charcoal Mines in the Norwegian Woods. <i>Energy &amp; Fuels</i> , <b>2016</b> , 30, 7959-7970	4.1	7
43	Attrition strength of water-soluble cellulose derivatives coatings. <i>Powder Technology</i> , <b>2010</b> , 198, 298-309.	2	7
42	Superheated steam as carrier gas and the sole heat source to enhance biomass torrefaction. <i>Bioresource Technology</i> , <b>2021</b> , 331, 124955	11	7
41	Complete oxidation of organic waste under mild supercritical water oxidation by combining effluent recirculation and membrane filtration. <i>Science of the Total Environment</i> , <b>2020</b> , 736, 139731	10.2	6
40	Water-Soluble Cellulose Derivatives as Coating Agents in Fluidized Bed Processing. <i>Particulate Science and Technology</i> , <b>2009</b> , 27, 389-403	2	6
39	Modelling coating quality in fluidised bed coating: Spray sub-model. <i>Journal of Food Engineering</i> , <b>2011</b> , 106, 220-227	6	6
38	Biosorption of residual cisplatin, carboplatin and oxaliplatin antineoplastic drugs in urine after chemotherapy treatment. <i>Environmental Chemistry</i> , <b>2018</b> , 15, 506	3.2	6
37	Application of biochars and solid fraction of digestate to decrease soil solution Cd, Pb and Zn concentrations in contaminated sandy soils. <i>Environmental Geochemistry and Health</i> , <b>2020</b> , 42, 1589-1600.	4.7	6
36	How to trace back an unknown production temperature of biochar from chemical characterization methods in a feedstock independent way. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2020</b> , 151, 104926	6	6
35	Biochar Production	199-226	6
34	On the environmental and economic issues associated with the forestry residues-to-heat and electricity route in Chile: Sawdust gasification as a case study. <i>Energy</i> , <b>2019</b> , 170, 763-776	7.9	6
33	Chemical stabilization of Cd-contaminated soil using fresh and aged wheat straw biochar. <i>Environmental Science and Pollution Research</i> , <b>2021</b> , 28, 10155-10166	5.1	6
32	Modelling the bed characteristics in fluidised-beds for top-spray coating processes. <i>Particuology</i> , <b>2012</b> , 10, 649-662	2.8	5
31	Effects of demineralization on the composition of microalgae pyrolysis volatiles in py-GCMS. <i>Energy Conversion and Management</i> , <b>2021</b> , 251, 114979	10.6	5

30	Assessment of carbon recovery from solid organic wastes by supercritical water oxidation for a regenerative life support system. <i>Environmental Science and Pollution Research</i> , <b>2020</b> , 27, 8260-8270	5.1	4
29	Influence of citric acid leaching on the yield and quality of pyrolytic bio-oils from sugarcane residues. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2019</b> , 137, 43-53	6	4
28	Space-time integral method for simplifying the modeling of torrefaction of a centimeter-sized biomass particle. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2017</b> , 124, 486-498	6	3
27	Analytical Py-GC/MS of Genetically Modified Poplar for the Increased Production of Bio-aromatics. <i>Computational and Structural Biotechnology Journal</i> , <b>2019</b> , 17, 599-610	6.8	3
26	Effluent recirculation enables near-complete oxidation of organics during supercritical water oxidation at mild conditions: A proof of principle. <i>Chemosphere</i> , <b>2020</b> , 250, 126213	8.4	3
25	Comment on "Redox-Active Oxygen-Containing Functional Groups in Activated Carbon Facilitate Microbial Reduction of Ferrihydrite". <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 4485-4486	10.3	3
24	Modelling overall particle motion in fluidised beds for top-spray coating processes. <i>Particuology</i> , <b>2013</b> , 11, 490-505	2.8	3
23	Exploring catalytic pyrolysis of Palm Shell over HZSM-5 by gas Chromatography/mass spectrometry and photoionization mass spectrometry. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2020</b> , 152, 104946	6	3
22	Mild temperature hydrothermal oxidation of anaerobic fermentation filtrate for carbon and nitrogen recovery in a regenerative life support system. <i>Journal of Supercritical Fluids</i> , <b>2019</b> , 145, 39-47	4.2	3
21	Recycling of product gas does not affect fast pyrolysis oil yield and composition. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2020</b> , 148, 104794	6	2
20	Modelling particle random walk in a confined environment for inclusion in fluidised bed applications. <i>Powder Technology</i> , <b>2012</b> , 221, 155-163	5.2	2
19	Attrition strength of water-soluble cellulose derivative coatings applied on different core materials. <i>Powder Technology</i> , <b>2012</b> , 222, 71-79	5.2	2
18	Application of a Tracer Aerosol Technique Using Atomized Sodium Chloride Particles for Measuring Ventilation Rates in a Naturally Ventilated Azrom-Type Greenhouse in Zimbabwe. <i>Applied Engineering in Agriculture</i> , <b>2010</b> , 26, 275-286	0.8	2
17	Fast torrefaction of large biomass particles by superheated steam: Enhanced solid products for multipurpose production. <i>Renewable Energy</i> , <b>2022</b> , 185, 552-563	8.1	2
16	Ex Situ Catalytic Fast Pyrolysis of Lignin-Rich Digested Stillage over Na/ZSM-5, H/ZSM-5, and Fe/ZSM-5. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 12710-12723	4.1	2
15	Heat recovery during treatment of highly concentrated wastewater: economic evaluation and influencing factors. <i>Water Science and Technology</i> , <b>2018</b> , 78, 2270-2278	2.2	2
14	Pretreatment of Sugarcane Residues for Combustion in Biomass Power Stations: A Review. <i>Sugar Tech</i> , <b>1</b>	1.9	1
13	Production of solid hydrochar from waste seaweed by hydrothermal carbonization: effect of process variables. <i>Biomass Conversion and Biorefinery</i> , <b>1</b>	2.3	1

12	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. <i>Science of the Total Environment</i> , <b>2021</b> , 151648	10.2	1
11	Fast pyrolysis of raw and acid-leached sugarcane residues en route to producing chemicals and fuels: Economic and environmental assessments. <i>Journal of Cleaner Production</i> , <b>2021</b> , 296, 126601	10.3	1
10	Micropyrolysis of natural poplar mutants with altered p-hydroxyphenyl lignin content. <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2016</b> , 122, 377-386	6	1
9	A meta-analysis of thermo-physical and chemical aspects in CFD modelling of pyrolysis of a single wood particle in the thermally thick regime. <i>Chemical Engineering Journal</i> , <b>2022</b> , 446, 137088	14.7	1
8	Biochar stability scores from analytical pyrolysis (Py-GC-MS). <i>Journal of Analytical and Applied Pyrolysis</i> , <b>2022</b> , 161, 105412	6	0
7	Review on Modelling Approaches Based on Computational Fluid Dynamics for Biomass Pyrolysis Systems. <i>Biofuels and Biorefineries</i> , <b>2020</b> , 373-438	0.3	0
6	Biochar from sawmill residues: characterization and evaluation for its potential use in the horticultural growing media. <i>Biochar</i> , <b>2021</b> , 3, 201-212	10	0
5	Potential of Jackfruit Waste as Anaerobic Digestion and Slow Pyrolysis Feedstock. <i>Journal of Biosystems Engineering</i> , <b>2021</b> , 46, 163-172	1.1	0
4	Progress in in-situ CO <sub>2</sub> -sorption for enhanced hydrogen production. <i>Progress in Energy and Combustion Science</i> , <b>2022</b> , 91, 101008	33.6	0
3	Heat transfer from an immersed fixed silver sphere to a gas fluidised bed of very small particles. <i>Thermal Science</i> , <b>2019</b> , 23, 1425-1433	1.2	
2	Biochar Production via Pyrolysis <b>2020</b> , 35-59		
1	Integrated numerical spray model and event-driven Monte Carlo model of the fluidised bed coating process. <i>Communications in Agricultural and Applied Biological Sciences</i> , <b>2004</b> , 69, 235-8		