

Andr s Anca-Couce

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

2,418
citations

279798

23
h-index

206112

48
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56
all docs

56
docs citations

56
times ranked

2543
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation and extension of the load and fuel flexibility limits of a stratified downdraft gasifier. <i>Energy</i> , 2022, 239, 122279.	8.8	8
2	Solid oxide fuel cell operation with biomass gasification product gases: Performance- and carbon deposition risk evaluation via a CFD modelling approach. <i>Energy</i> , 2022, 244, 123085.	8.8	12
3	Real coupling of solid oxide fuel cells with a biomass steam gasifier: Operating boundaries considering performance, tar and carbon deposition analyses. <i>Fuel</i> , 2022, 316, 123310.	6.4	10
4	Minimization of inorganic particulate matter emissions with a novel multi-fuel combustion technology that enhances inorganic retention in a compact updraft fixed-bed. <i>Fuel</i> , 2022, 318, 123611.	6.4	4
5	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> , 2022, 446, 137088.	12.7	9
6	Multi-scale modelling of fluidized bed biomass gasification using a 1D particle model coupled to CFD. <i>Fuel</i> , 2022, 324, 124677.	6.4	15
7	Investigation of solid oxide fuel cell operation with synthetic biomass gasification product gases as a basis for enhancing its performance. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 121-139.	4.6	15
8	Bioenergy technologies, uses, market and future trends with Austria as a case study. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 135, 110237.	16.4	73
9	Analysis of H ₂ S-related short-term degradation and regeneration of anode- and electrolyte supported solid oxide fuel cells fueled with biomass steam gasifier product gas. <i>Energy</i> , 2021, 218, 119556.	8.8	16
10	Flame ionization detection as a simple real-time tar monitoring device for biomass downdraft gasification. <i>Fuel</i> , 2021, 289, 119950.	6.4	10
11	Experimental evaluation of primary measures for NO _x and dust emission reduction in a novel 200 kW multi-fuel biomass boiler. <i>Renewable Energy</i> , 2021, 170, 1186-1196.	8.9	16
12	Modelling fuel flexibility in fixed-bed biomass conversion with a low primary air ratio in an updraft configuration. <i>Fuel</i> , 2021, 296, 120687.	6.4	9
13	Detailed NO _x precursor measurements within the reduction zone of a novel small-scale fuel flexible biomass combustion technology. <i>Fuel</i> , 2021, 302, 121073.	6.4	6
14	Shifting of the flame front in a small-scale commercial downdraft gasifier by water injection and exhaust gas recirculation. <i>Fuel</i> , 2021, 303, 121297.	6.4	11
15	Emission minimization of a top-lit updraft gasifier cookstove based on experiments and detailed CFD analyses. <i>Energy Conversion and Management</i> , 2021, 247, 114755.	9.2	15
16	Correlations between tar content and permanent gases as well as reactor temperature in a lab-scale fluidized bed biomass gasifier applying different feedstock and operating conditions. <i>Fuel</i> , 2021, 305, 121531.	6.4	17
17	Transient CFD simulation of wood log combustion in stoves. <i>Renewable Energy</i> , 2020, 145, 651-662.	8.9	26
18	Tar conversion of biomass syngas in a downstream char bed. <i>Fuel Processing Technology</i> , 2020, 199, 106271.	7.2	24

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19	Multi-stage model for the release of potassium in single particle biomass combustion. <i>Fuel</i> , 2020, 280, 118569.	6.4	9
20	Understanding the torrefaction of woody and agricultural biomasses through their extracted macromolecular components. Part 2: Torrefaction model. <i>Energy</i> , 2020, 210, 118451.	8.8	5
21	Evaluation of heat transfer models at various fluidization velocities for biomass pyrolysis conducted in a bubbling fluidized bed. <i>International Journal of Heat and Mass Transfer</i> , 2020, 160, 120175.	4.8	18
22	Detailed experimental investigation of the spatially distributed gas release and bed temperatures in fixed-bed biomass combustion with low oxygen concentration. <i>Biomass and Bioenergy</i> , 2020, 141, 105725.	5.7	10
23	Biomass pyrolysis TGA assessment with an international round robin. <i>Fuel</i> , 2020, 276, 118002.	6.4	85
24	Review on Modelling Approaches Based on Computational Fluid Dynamics for Biomass Pyrolysis Systems. <i>Biofuels and Biorefineries</i> , 2020, , 373-438.	0.5	2
25	Condensable and Liquid Compounds from Biomass and Waste Thermal Degradation. , 2020, , 1173-1210.		0
26	Effect of bed material density on the performance of steam gasification of biomass in bubbling fluidized beds. <i>Fuel</i> , 2019, 257, 116118.	6.4	20
27	Optimization of an integrated biomass gasifier-fuel cell system: An experimental study on the cell response to process variations. <i>Energy Procedia</i> , 2019, 158, 2052-2057.	1.8	7
28	Applicability of the SOFC technology for coupling with biomass-gasifier systems: Short- and long-term experimental study on SOFC performance and degradation behaviour. <i>Applied Energy</i> , 2019, 256, 113904.	10.1	72
29	Single large wood log conversion in a stove: Experiments and modelling. <i>Renewable Energy</i> , 2019, 143, 890-897.	8.9	21
30	Application of laser-based diagnostics for characterization of the influence of inorganics on the slow pyrolysis of woody biomass. <i>Journal of Analytical and Applied Pyrolysis</i> , 2019, 140, 125-136.	5.5	9
31	Experimental investigation on biomass shrinking and swelling behaviour: Particles pyrolysis and wood logs combustion. <i>Biomass and Bioenergy</i> , 2019, 123, 1-13.	5.7	25
32	Pyrogenic carbon capture and storage. <i>GCB Bioenergy</i> , 2019, 11, 573-591.	5.6	95
33	Designing biochar properties through the blending of biomass feedstock with metals: Impact on oxyanions adsorption behavior. <i>Chemosphere</i> , 2019, 214, 743-753.	8.2	44
34	Experiments and modelling of NOx precursors release (NH3 and HCN) in fixed-bed biomass combustion conditions. <i>Fuel</i> , 2018, 222, 529-537.	6.4	61
35	Towards Biochar and Hydrochar Engineering—Influence of Process Conditions on Surface Physical and Chemical Properties, Thermal Stability, Nutrient Availability, Toxicity and Wettability. <i>Energies</i> , 2018, 11, 496.	3.1	84
36	Influence of Heterogeneous Secondary Reactions during Slow Pyrolysis on Char Oxidation Reactivity of Woody Biomass. <i>Energy & Fuels</i> , 2017, 31, 2335-2344.	5.1	33

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37	Modelling heat of reaction in biomass pyrolysis with detailed reaction schemes. <i>Fuel</i> , 2017, 206, 572-579.	6.4	73
38	Pyrolysis of pellets made with biomass and glycerol: Kinetic analysis and evolved gas analysis. <i>Biomass and Bioenergy</i> , 2017, 97, 11-19.	5.7	49
39	CO/CO ₂ ratio in biomass char oxidation. <i>Energy Procedia</i> , 2017, 120, 238-245.	1.8	15
40	Online experiments and modelling with a detailed reaction scheme of single particle biomass pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , 2017, 127, 411-425.	5.5	67
41	Characterization and condensation behaviour of gravimetric tars produced during spruce torrefaction. <i>Journal of Analytical and Applied Pyrolysis</i> , 2016, 119, 173-179.	5.5	16
42	Reaction mechanisms and multi-scale modelling of lignocellulosic biomass pyrolysis. <i>Progress in Energy and Combustion Science</i> , 2016, 53, 41-79.	31.2	462
43	Application of a detailed biomass pyrolysis kinetic scheme to hardwood and softwood torrefaction. <i>Fuel</i> , 2016, 167, 158-167.	6.4	86
44	Influence of intraparticle secondary heterogeneous reactions on the reaction enthalpy of wood pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 116, 281-286.	5.5	26
45	New insights in growth of phenylketonuric patients. <i>European Journal of Pediatrics</i> , 2015, 174, 651-659.	2.7	14
46	Understanding the primary and secondary slow pyrolysis mechanisms of holocellulose, lignin and wood with laser-induced fluorescence. <i>Fuel</i> , 2015, 153, 102-109.	6.4	38
47	Kinetic scheme of biomass pyrolysis considering secondary charring reactions. <i>Energy Conversion and Management</i> , 2014, 87, 687-696.	9.2	96
48	How to determine consistent biomass pyrolysis kinetics in a parallel reaction scheme. <i>Fuel</i> , 2014, 123, 230-240.	6.4	177
49	Surface Properties and Chemical Composition of Corncob and Miscanthus Biochars: Effects of Production Temperature and Method. <i>Journal of Agricultural and Food Chemistry</i> , 2014, 62, 3791-3799.	5.2	129
50	On-line tar characterization from pyrolysis of wood particles in a technical-scale fixed-bed reactor by applying Laser-Induced Fluorescence (LIF). <i>Journal of Analytical and Applied Pyrolysis</i> , 2013, 102, 33-46.	5.5	26
51	Slow pyrolysis of wood particles: Characterization of volatiles by Laser-Induced Fluorescence. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 2355-2362.	3.9	23
52	Multi-scale modeling of fixed-bed thermo-chemical processes of biomass with the representative particle model: Application to pyrolysis. <i>Fuel</i> , 2013, 103, 773-782.	6.4	36
53	On the Uncertainty of a Mathematical Model for Drying of a Wood Particle. <i>Energy & Fuels</i> , 2013, 27, 6705-6717.	5.1	12
54	Numerical analysis of a biomass pyrolysis particle model: Solution method optimized for the coupling to reactor models. <i>Fuel</i> , 2012, 97, 80-88.	6.4	52

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55	Smouldering of pine wood: Kinetics and reaction heats. Combustion and Flame, 2012, 159, 1708-1719.	5.2	124