M Brennan Pecha

List of Publications by Year
in descending order

25	581	623734 14	677142 22
papers	citations	h-index	g-index

25	25	25	565
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multiscale CFD simulation of biomass fast pyrolysis with a machine learning derived intra-particle model and detailed pyrolysis kinetics. Chemical Engineering Journal, 2022, 431, 133853.	12.7	25
2	Mass Transport Limitations and Kinetic Consequences of Corn Stover Deacetylation. Frontiers in Energy Research, 2022, 10, .	2.3	5
3	Measurement of Transport Properties of Woody Biomass Feedstock Particles Before and After Pyrolysis by Numerical Analysis of X-Ray Tomographic Reconstructions. Frontiers in Energy Research, 2022, 10, .	2.3	3
4	CFDâ€“DEM modeling of autothermal pyrolysis of corn stover with a coupled particle- and reactor-scale framework. Chemical Engineering Journal, 2022, 446, 136920.	12.7	14
5	Ex situ upgrading of pyrolysis vapors over PtTiO₂: extraction of apparent kinetics via hierarchical transport modeling. Reaction Chemistry and Engineering, 2021, 6, 125-137.	3.7	11
6	Influence of Pelletization and Moisture Content of Oil Palm Empty Fruit Bunches (EFBs) on Dynamic Gasification Performance. Energy & Fuels, 2021, 35, 8807-8818.	5.1	1
7	Bridging Scales in Bioenergy and Catalysis: A Review of Mesoscale Modeling Applications, Methods, and Future Directions. Energy & Fuels, 2021, 35, 14382-14400.	5.1	12
8	Assessment of a detailed biomass pyrolysis kinetic scheme in multiscale simulations of a single-particle pyrolyzer and a pilot-scale entrained flow pyrolyzer. Chemical Engineering Journal, 2021, 418, 129347.	12.7	38
9	Predicting thermal excursions during in situ oxidative regeneration of packed bed catalytic fast pyrolysis catalyst. Reaction Chemistry and Engineering, 2021, 6, 888-904.	3.7	4
10	Impacts of Anisotropic Porosity on Heat Transfer and Off-Gassing during Biomass Pyrolysis. Energy & Fuels, 2021, 35, 20131-20141.	5.1	17
11	Beyond the effectiveness factor: Multi-step reactions with intraparticle diffusion limitations. Chemical Engineering Journal, 2020, 380, 122507.	12.7	31
12	Advances in Multiscale Modeling of Lignocellulosic Biomass. ACS Sustainable Chemistry and Engineering, 2020, 8, 3512-3531.	6.7	79
13	Mesoscale Reactionâ€“Diffusion Phenomena Governing Ligninâ€First Biomass Fractionation. ChemSusChem, 2020, 13, 4495-4509.	6.8	35
14	Surplus electricity production and LCOE estimation in Colombian palm oil mills using empty fresh bunches (EFB) as fuel. Energy, 2020, 202, 117713.	8.8	17
15	Pyrolysis of lignocellulosic biomass: oil, char, and gas. , 2020, , 581-619.		12
16	Multi-scale simulation of reaction, transport and deactivation in a SBA-16 supported catalyst for the conversion of ethanol to butadiene. Catalysis Today, 2019, 338, 141-151.	4.4	17
17	Progress in understanding the four dominant intra-particle phenomena of lignocellulose pyrolysis: chemical reactions, heat transfer, mass transfer, and phase change. Green Chemistry, 2019, 21, 2868-2898.	9.0	102
18	Gasification of coal, Chenopodium Album biomass, and co-gasification of a coal-biomass mixture by thermogravimetric-gas analysis. Revista Facultad De IngenierÃa, 2019, 28, 53-77.	0.2	0

#	Article	IF	Citations
19	Advancing catalytic fast pyrolysis through integrated multiscale modeling and experimentation: Challenges, progress, and perspectives. Wiley Interdisciplinary Reviews: Energy and Environment, 2018, 7, e297.	4.1	30
20	Integrated Particle- and Reactor-Scale Simulation of Pine Pyrolysis in a Fluidized Bed. Energy & Fuels, 2018, 32, 10683-10694.	5.1	39
21	Estimation of Heat Transfer Coefficients for Biomass Particles by Direct Numerical Simulation Using Microstructured Particle Models in the Laminar Regime. ACS Sustainable Chemistry and Engineering, 2017, 5, 1046-1053.	6.7	20
22	Modified Pyroprobe Captive Sample Reactor: Characterization of Reactor and Cellulose Pyrolysis at Vacuum and Atmospheric Pressures. Industrial & Engineering Chemistry Research, 2017, 56, 5185-5200.	3.7	16
23	Effect of a Vacuum on the Fast Pyrolysis of Cellulose: Nature of Secondary Reactions in a Liquid Intermediate. Industrial & Engineering Chemistry Research, 2017, 56, 4288-4301.	3.7	29
24	Effect of Pressure on Pyrolysis of Milled Wood Lignin and Acid-Washed Hybrid Poplar Wood. Industrial & Engineering Chemistry Research, 2017, 56, 9079-9089.	3.7	23
25	A simplified integrated framework for predicting the economic impacts of feedstock variations in a catalytic fast pyrolysis conversion process. Biofuels, Bioproducts and Biorefining, 0, , .	3.7	1