Rene Prieler

List of Publications by Year
in descending order

49 papers	891 citations	471509 17 h-index	501196 28 g-index
49 all docs	49 docs citations	49 times ranked	362 citing authors

#	Article	IF	Citations
1	Prediction of the heating characteristic of billets in a walking hearth type reheating furnace using CFD. International Journal of Heat and Mass Transfer, 2016, 92, 675-688.	4.8	80
2	CFD analysis of a pusher type reheating furnace and the billet heating characteristic. Applied Thermal Engineering, 2017, 115, 986-994.	6.0	60
3	Numerical investigation of the steady flamelet approach under different combustion environments. Fuel, 2015, 140, 731-743.	6.4	58
4	Evaluation of a steady flamelet approach for use in oxy-fuel combustion. Fuel, 2014, 118, 55-68.	6.4	54
5	Assessment of natural gas/hydrogen blends as an alternative fuel for industrial heat treatment furnaces. International Journal of Hydrogen Energy, 2021, 46, 21672-21686.	7.1	46
6	Numerical analysis of the transient heating of steel billets and the combustion process under air-fired and oxygen enriched conditions. Applied Thermal Engineering, 2016, 103, 252-263.	6.0	44
7	CFD and experimental analysis of a 115kW natural gas fired lab-scale furnace under oxy-fuel and airâ€“fuel conditions. Fuel, 2015, 159, 864-875.	6.4	43
8	An experimental study of a thermochemical regeneration waste heat recovery process using a reformer unit. Energy, 2018, 155, 381-391.	8.8	40
9	Application of the steady flamelet model on a lab-scale and an industrial furnace for different oxygen concentrations. Energy, 2015, 91, 451-464.	8.8	30
10	The usability and limits of the steady flamelet approach in oxy-fuel combustions. Energy, 2015, 90, 1478-1489.	8.8	27
11	Characterization of the temperature distribution on steel tubes for different operating conditions in a reheating furnace using CFD and three different measuring methods. Applied Thermal Engineering, 2018, 133, 39-48.	6.0	27
12	Experimental investigation of thermochemical regeneration using oxy-fuel exhaust gases. Applied Energy, 2019, 236, 1115-1124.	10.1	26
13	CFD modelling and performance increase of a pusher type reheating furnace using oxy-fuel burners. Energy Procedia, 2017, 120, 462-468.	1.8	24
14	Modelling of high temperature furnaces under air-fuel and oxygen enriched conditions. Applied Thermal Engineering, 2018, 136, 492-503.	6.0	23
15	Prediction of the fluid flow, heat transfer and inactivation of microorganism at medical devices in modern steam sterilizers using computational fluid dynamics. Applied Thermal Engineering, 2017, 127, 1391-1403.	6.0	21
16	Computational analysis of a semi-industrial furnace fired by a flat flame burner under different O2/N2 ratios using the steady laminar flamelet approach. Journal of the Energy Institute, 2017, 90, 602-612.	5.3	18
17	CFD-based optimization of a transient heating process in a natural gas fired furnace using neural networks and genetic algorithms. Applied Thermal Engineering, 2018, 138, 217-234.	6.0	17
18	Development and application of a numerically efficient model describing a rotary hearth furnace using CFD. Energy, 2019, 180, 79-89.	8.8	17

#	Article	IF	Citations
19	Development of a numerically efficient CFD model to predict transient temperature distribution of mother tubes moving translative and rotative through a gas fired furnace. Applied Thermal Engineering, 2017, 123, 290-300.	6.0	16
20	CFD-model to predict the local and time-dependent scale formation of steels in air- and oxygen enriched combustion atmospheres. Applied Thermal Engineering, 2018, 143, 822-835.	6.0	16
21	Numerical and experimental investigation of scale formation on steel tubes in a real-size reheating furnace. International Journal of Heat and Mass Transfer, 2019, 129, 460-467.	4.8	16
22	Particle classification and drag coefficients of irregularly-shaped combustion residues with various size and shape. Powder Technology, 2019, 345, 405-414.	4.2	15
23	Modelling convective heat transfer to non-spherical particles. Powder Technology, 2019, 343, 245-254.	4.2	15
24	Evaluation of drag models for particles and powders with non-uniform size and shape. Powder Technology, 2018, 330, 152-163.	4.2	14
25	Sensitivity analysis of skeletal reaction mechanisms for use in CFD simulation of oxygen enhanced combustion systems. Journal of the Energy Institute, 2018, 91, 369-388.	5.3	13
26	Evaluation of flamelet-based combustion models for the use in a flameless burner under different operating conditions. Applied Thermal Engineering, 2021, 183, 116190.	6.0	13
27	Comparison between solid body and gas radiation in high temperature furnaces under different oxygen enrichments. Applied Thermal Engineering, 2017, 127, 679-688.	6.0	11
28	MILD combustion of hydrogen and air â€“ An efficient modelling approach in CFD validated by experimental data. International Journal of Hydrogen Energy, 2022, 47, 6349-6364.	7.1	11
29	Modelling approach to predict the fire-related heat transfer in porous gypsum based on multi-phase simulations including water vapour transport, phase change and radiative heat transfer. Applied Thermal Engineering, 2022, 206, 118013.	6.0	10
30	CFD Investigation of Nonâ€Condensable Gases inÂVacuum and Nonâ€Vacuum Steam Sterilizers. Chemie-Ingenieur-Technik, 2019, 91, 502-513.	0.8	8
31	Validation of a coupled 3D CFD simulation model for an oxy-fuel cross-fired glass melting furnace with electric boosting. Applied Thermal Engineering, 2021, 195, 117166.	6.0	8
32	CFD investigation of a vertical annealing furnace for stainless steel and non-ferrous alloys strips â€“ A comparative study on air-staged & MILD combustion. Thermal Science and Engineering Progress, 2022, 28, 101056.	2.7	8
33	Development of a numerical approach based on coupled CFD/FEM analysis for virtual fire resistance testsâ€”Part A: Thermal analysis of the gas phase combustion and different test specimens. Fire and Materials, 2019, 43, 34-50.	2.0	7
34	Determining the heating characteristics of non-spherical particles in combusting flows. Applied Thermal Engineering, 2019, 151, 124-133.	6.0	7
35	Validation of Turbulence/Chemistry Interaction Models for use in Oxygen Enhanced Combustion. Energy Procedia, 2017, 120, 548-555.	1.8	6
36	Assessment of a novel numerical model for combustion and in-flight heating of particles in an industrial furnace. Journal of the Energy Institute, 2018, 91, 817-827.	5.3	6

#	Article	IF	Citations
37	Experimental analysis of moisture transfer and phase change in porous insulation exposed to fire and its effect on heat transfer. International Journal of Heat and Mass Transfer, 2020, 160, 120207.	4.8	6
38	Application and comparison of multiple machine learning techniques for the calculation of laminar burning velocity for hydrogen-methane mixtures. Thermal Science and Engineering Progress, 2022, 32, 101306.	2.7	6
39	Machine learning techniques to predict the flame state, temperature and species concentrations in counter-flow diffusion flames operated with CH4/CO/H2-air mixtures. Fuel, 2022, 326, 124915.	6.4	6
40	Development of an artificial neural network (ANN) model to predict the temperature of hot-rolled steel pipes. Advances in Industrial and Manufacturing Engineering, 2022, 5, 100090.	2.1	5
41	Development of a numerically efficient approach based on coupled <scp>CFD</scp>/<scp>FEM</scp> analysis for virtual fire resistance testsâ€”Part B: Deformation process of a steel structure. Fire and Materials, 2020, 44, 704-723.	2.0	4
42	Investigation of the temperature distribution in seamless low-alloy steel pipes during the hot rolling process. Advances in Industrial and Manufacturing Engineering, 2021, 2, 100038.	2.1	3
43	In-flame spheroid formation from non-spherical slag particles â€“ A numerical and experimental study. International Journal of Heat and Mass Transfer, 2020, 151, 119412.	4.8	2
44	Effects on numerical calculations of in-flight particle trajectories and temperatures considering multiple particle size and shape. International Journal of Thermofluids, 2020, 7-8, 100021.	7.8	2
45	Characterization and evaluation of a novel semi-industrial scale vertical shaft furnace for particle spheroidization. Journal of the Energy Institute, 2020, 93, 1110-1124.	5.3	1
46	Investigating the advantages of Laval blasting nozzles in combination with injector-type sandblasters using efficient numerical methods. Surface and Coatings Technology, 2022, 445, 128699.	4.8	1
47	Numerical and experimental investigation of post-oxidation of a four-stroke SI engine under fuel-rich conditions. Fuel, 2018, 225, 411-418.	6.4	0
48	Numerical Investigation of Transport Processes in Porous Media Under Laminar, Transitional and Turbulent Flow Conditions with the Lattice-Boltzmann Method. Lecture Notes in Computer Science, 2021, , 244-257.	1.3	0
49	CFD simulation aided glass quality and energy efficiency analysis of an oxy-fuel glass melting furnace with electric boosting. Energy Conversion and Management: X, 2022, 15, 100252.	1.6	0