Martin C Schiemann

List of Publications by Year
in descending order

68 papers	1,451 citations	257101 24 h-index	344852 36 g-index
70 all docs	70 docs citations	70 times ranked	1012 citing authors

#	Article	IF	Citations
1	Adaptation of the Chemical Percolation Devolatilization Model for Low Temperature Pyrolysis in a Fluidized Bed Reactor. Combustion Science and Technology, 2022, 194, 417-434.	1.2	3
2	Catalytic effects for cellulose-based model fuels under low and high heating rate in air and oxy-fuel atmosphere. Fuel, 2022, 324, 124437.	3.4	6
3	Determination of size and porosity of chars during combustion of biomass particles. Combustion and Flame, 2022, 242, 112182.	2.8	8
4	Investigation on flow dynamics and temperatures of solid fuel particles in a gas-assisted oxy-fuel combustion chamber. Fuel, 2021, 286, 119424.	3.4	9
5	Catalytic influence of mineral compounds on the reactivity of cellulose-derived char in O2-, CO2-, and H2O-containing atmospheres. Fuel, 2021, 287, 119584.	3.4	7
6	Adjoint-based sensitivity analysis of char combustion surface reaction kinetics. Fuel, 2021, 287, 119503.	3.4	0
7	Experimental determination of walnut shell pyrolysis kinetics in N2 and CO2 via thermogravimetric analysis, fluidized bed and drop tube reactors. Fuel, 2021, 287, 119313.	3.4	14
8	3D CFD simulation of a 250ÂMWel oxy-fuel boiler with evaluation of heat radiation calculation. Renewable and Sustainable Energy Reviews, 2021, 137, 110601.	8.2	5
9	Calibration and validation of a comprehensive kinetic model of coal conversion in inert, air and oxy-fuel conditions using data from multiple test rigs. Fuel, 2021, 290, 119682.	3.4	7
10	Comparison of scattering phase functions of reacting and non-reacting pulverised fuel particles. Fuel, 2021, 287, 119415.	3.4	3
11	Experimental investigations of single particle and particle group combustion in a laminar flow reactor using simultaneous volumetric OH-LIF imaging and diffuse backlight-illumination. Renewable and Sustainable Energy Reviews, 2021, 136, 110377.	8.2	20
12	Investigation of the transition from single to group coal particle combustion using high-speed scanning OH-LIF and diffuse backlight-illumination. Proceedings of the Combustion Institute, 2021, 38, 4101-4109.	2.4	15
13	Impact of coating layers in rotary cement kilns: Numerical investigation with a blocked-off region approach for radiation and momentum. Thermal Science and Engineering Progress, 2020, 15, 100429.	1.3	4
14	Investigations on the emissivity of burning coal char particles: Influence of particle temperature and composition of reaction atmosphere. Fuel, 2020, 263, 116714.	3.4	14
15	Investigation of Pulverized Biomass and Coal Char Emissivity. Energies, 2020, 13, 4620.	1.6	3
16	Comprehensive Data Set of Single Particle Combustion under Oxy-fuel Conditions, Part I: Measurement Technique. Combustion Science and Technology, 2020, , 1-22.	1.2	7
17	Influence of the Mineral Content on the Emissivity of Hydrothermal Char. Chemical Engineering and Technology, 2020, 43, 1016-1020.	0.9	2
18	Extension of the Thermal Annealing Concepts Developed for Coal Combustion to Conversion of Lignocellulosic Biomass. Energy & Fuels, 2020, 34, 3661-3670.	2.5	10

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19	Comprehensive Data Set of Single Particle Combustion under Oxy-fuel Conditions, Part II: Data Set. Combustion Science and Technology, 2020, , 1-16.	1.2	2
20	Multi-parameter diagnostics for high-resolution in-situ measurements of single coal particle combustion. Proceedings of the Combustion Institute, 2019, 37, 2893-2900.	2.4	36
21	Combustion details of raw and torrefied biomass fuel particles with individually-observed size, shape and mass. Combustion and Flame, 2019, 207, 327-341.	2.8	37
22	Evolution of coal char porosity from CO2-pyrolysis experiments. Fuel, 2019, 253, 1457-1464.	3.4	16
23	A correlation between char emissivity and temperature. Fuel, 2019, 256, 115889.	3.4	11
24	Assessment of combustion rates of coal chars for oxy-combustion applications. Fuel, 2019, 238, 173-185.	3.4	28
25	Fragmentation of pulverized coal in a laminar drop tube reactor: Experiments and model. Proceedings of the Combustion Institute, 2019, 37, 2849-2855.	2.4	8
26	On the particle sizing of torrefied biomass for co-firing with pulverized coal. Combustion and Flame, 2018, 194, 72-84.	2.8	58
27	Lithium as energy carrier: CFD simulations of LI combustion in a 100 MW slag tap furnace. Applied Energy, 2018, 227, 506-515.	5.1	6
28	Pyrolysis and Thermal Annealing of Coal and Biomass in CO₂-Rich Atmospheres. Energy & Fuels, 2018, 32, 10701-10708.	2.5	25
29	Effects of CO2 enriched atmosphere on chars from walnut shells pyrolysis in a drop tube reactor. Fuel, 2018, 229, 235-240.	3.4	17
30	Emissivity Comparison between Chars and Demineralized Coal Chars under Oxycombustion Conditions. Chemical Engineering and Technology, 2018, 41, 1490-1496.	0.9	3
31	Combustion of Lithium Particles in N₂â€"Reaction Rates. Combustion Science and Technology, 2017, 189, 169-186.	1.2	5
32	Emissivity of burning bituminous coal char particles â€“ Burnout effects. Fuel, 2017, 196, 336-343.	3.4	24
33	Separation and characterization of carbonaceous particulate (soot and char) produced from fast pyrolysis of coal in inert and CO 2 atmospheres. Fuel, 2017, 201, 118-123.	3.4	37
34	Direct observations on the combustion characteristics of Miscanthus and Beechwood biomass including fusion and spherodization. Fuel Processing Technology, 2017, 166, 41-49.	3.7	56
35	Experimental investigations on the combustion of lithium particles in CO 2 and CO 2 -N 2 mixtures. Fuel, 2017, 199, 28-37.	3.4	5
36	Quantification of the influence of parameters determining radiative heat transfer in an oxy-fuel operated boiler. Fuel Processing Technology, 2017, 157, 76-89.	3.7	33

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37	Resolved simulations of single char particle combustion in a laminar flow field. Fuel, 2017, 201, 15-28.	3.4	43
38	Pulverized coal ignition testing under air-fired conditions using the Zelkowski method: comparison of coals of different rank and provenience. Energy Procedia, 2017, 120, 173-180.	1.8	1
39	Particle shape and Stefan flow effects on the burning rate of torrefied biomass. Fuel, 2017, 210, 107-120.	3.4	33
40	CFD Simulation of a 100 MWth Lithium Combustion Slag Tap Furnace as a basis for an Energy Storage Process. Energy Procedia, 2017, 105, 3978-3983.	1.8	2
41	Comparative ignition tests of coal under oxy-fuel conditions in a standardized laboratory test rig. Fuel, 2017, 208, 127-136.	3.4	5
42	Comparison of pyrolysis test rigs for oxy-fuel conditions. Fuel Processing Technology, 2017, 156, 461-472.	3.7	26
43	Carbon, sulfur and nitrogen oxide emissions from combustion of pulverized raw and torrefied biomass. Fuel, 2017, 188, 310-323.	3.4	163
44	Einfluss der PartikelgrÃ¶ÃŸe auf den Partikelemissionsgrad eines Steinkohlekokses. , 2017, , 85-96.		1
45	Char particle emissivity of two coal chars in oxy-fuel atmospheres. Fuel, 2016, 183, 405-413.	3.4	29
46	Oxidation characteristics of a cellulose-derived hydrochar in thermogravimetric and laminar flow burner experiments. Fuel Processing Technology, 2016, 148, 85-90.	3.7	12
47	Devolatilization and volatiles reaction of individual coal particles in the context of FGM tabulated chemistry. Combustion and Flame, 2016, 169, 72-84.	2.8	43
48	Sorption measurements for determining surface effects and structure of solid fuels. Fuel Processing Technology, 2016, 153, 81-86.	3.7	10
49	Effects of CO2 on submicronic carbon particulate (soot) formed during coal pyrolysis in a drop tube reactor. Combustion and Flame, 2016, 172, 302-308.	2.8	34
50	Experimentation for char combustion kinetics measurements: Bias from char preparation. Fuel Processing Technology, 2016, 151, 155-165.	3.7	38
51	Effects of oxy-fuel conditions on the products of pyrolysis in a drop tube reactor. Fuel Processing Technology, 2016, 150, 41-49.	3.7	72
52	Numerical investigation on particle swelling in spray roasting reactors. International Journal of Multiphase Flow, 2016, 85, 38-47.	1.6	1
53	Development and verification of a resolved 3D inner particle heat transfer model for the Discrete Element Method (DEM). Powder Technology, 2016, 291, 392-407.	2.1	42
54	A review on lithium combustion. Applied Energy, 2016, 162, 948-965.	5.1	66

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55	Characterization of single coal particle combustion within oxygen-enriched environments using high-speed OH-PLIF. Applied Physics B: Lasers and Optics, 2015, 121, 459-464.	1.1	45
56	Drying of Iron Chloride Solutions: Laser Heating of Levitated Single Particles. Chemical Engineering and Technology, 2015, 38, 947-951.	0.9	1
57	Experimental characterization of the combustion of single lithium particles with CO2. Fuel, 2015, 153, 90-101.	3.4	21
58	Stereoscopic pyrometer for char combustion characterization. Applied Optics, 2015, 54, 1097.	0.9	41
59	A numerical model of the combustion of single lithium particles with CO2. Fuel, 2015, 160, 87-99.	3.4	9
60	Determination of char combustion kinetics parameters: Comparison of point detector and imaging-based particle-sizing pyrometry. Review of Scientific Instruments, 2014, 85, 075114.	0.6	29
61	Combustion of Lithium Particles: Optical Measurement Methodology and Initial Results. Chemical Engineering and Technology, 2014, 37, 1600-1605.	0.9	12
62	Reaction Products in the Combustion of the High Energy Density Storage Material Lithium with Carbon Dioxide and Nitrogen. Materials Research Society Symposia Proceedings, 2014, 1644, 1.	0.1	10
63	Char burning kinetics from imaging pyrometry: Particle shape effects. Fuel, 2014, 134, 53-62.	3.4	34
64	Influence of chemical composition and physical structure on normal radiant emittance characteristics of ash deposits. Fuel, 2014, 134, 307-314.	3.4	22
65	Spray roasting of iron chloride FeCl2: Numerical modelling of industrial scale reactors. Powder Technology, 2013, 245, 70-79.	2.1	7
66	Spray roasting of iron chloride FeCl2: laboratory scale experiments and a model for numerical simulation. Powder Technology, 2012, 228, 301-308.	2.1	14
67	Optical Coal Particle Temperature Measurement under Oxyâ€Fuel Conditions: Measurement Methodology and Initial Results. Chemical Engineering and Technology, 2009, 32, 2000-2004.	0.9	28
68	Recent Progress in the Dynamic Nuclear Polarization of Solid Deuterated Butanol Targets. Applied Magnetic Resonance, 2008, 34, 461-473.	0.6	3