

Franz Winter

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124
papers

2,876
citations

32
h-index

49
g-index

134
ext. papers

3,292
ext. citations

4.3
avg, IF

5.05
L-index

#	Paper	IF	Citations
124	NO and N ₂ O formation during the combustion of wood, straw, malt waste and peat. <i>Bioresource Technology</i> , 1999 , 70, 39-49	11	169
123	Heavy metal removal from MSW fly ash by means of chlorination and thermal treatment: Influence of the chloride type. <i>Chemical Engineering Journal</i> , 2012 , 179, 178-185	14.7	141
122	Heavy metal removal from municipal solid waste fly ash by chlorination and thermal treatment. <i>Journal of Hazardous Materials</i> , 2010 , 179, 323-31	12.8	111
121	Homogeneous formation of NO and N ₂ O from the oxidation of HCN and NH ₃ at 600–1000°C. <i>Combustion and Flame</i> , 2000 , 120, 465-478	5.3	98
120	Heavy metal removal from sewage sludge ash and municipal solid waste fly ash [A comparison. <i>Fuel Processing Technology</i> , 2013 , 105, 195-201	7.2	95
119	Pyrolysis of poly- γ -leucine under combustion-like conditions?. <i>Fuel</i> , 2003 , 82, 653-660	7.1	91
118	Laser ignition of methane/air mixtures at high pressures. <i>Experimental Thermal and Fluid Science</i> , 2003 , 27, 499-503	3	85
117	The NO and N ₂ O formation mechanism during devolatilization and char combustion under fluidized-bed conditions. <i>Proceedings of the Combustion Institute</i> , 1996 , 26, 3325-3334		78
116	Application of laser ignition to hydrogen/air mixtures at high pressures. <i>International Journal of Hydrogen Energy</i> , 2005 , 30, 319-326	6.7	62
115	Temperatures in a fuel particle burning in a fluidized bed: The effect of drying, devolatilization, and char combustion. <i>Combustion and Flame</i> , 1997 , 108, 302-314	5.3	59
114	Laser ignition of ultra-lean methane/hydrogen/air mixtures at high temperature and pressure. <i>Experimental Thermal and Fluid Science</i> , 2005 , 29, 569-577	3	58
113	Scale-up of fluidized-bed combustion [A review. <i>Fuel</i> , 2011 , 90, 2951-2964	7.1	53
112	Status, characterization, and potential utilization of municipal solid waste as renewable energy source: Lahore case study in Pakistan. <i>Environment International</i> , 2020 , 134, 105291	12.9	51
111	An Experimental Study on the Kinetics of Fluidized Bed Iron Ore Reduction.. <i>ISIJ International</i> , 2000 , 40, 935-942	1.7	48
110	Thermal and hydrometallurgical recovery methods of heavy metals from municipal solid waste fly ash. <i>Waste Management</i> , 2013 , 33, 2322-7	8.6	46
109	Pathways for conversion of char nitrogen to nitric oxide during pulverized coal combustion. <i>Combustion and Flame</i> , 2009 , 156, 574-587	5.3	45
108	Investigation of the early stages in laser-induced ignition by Schlieren photography and laser-induced fluorescence spectroscopy. <i>Optics Express</i> , 2004 , 12, 4546-57	3.3	45

107	CO and CO ₂ spectroscopy using a 60 nm broadband tunable MEMS-VCSEL at approximately 1.55 microm. <i>Optics Letters</i> , 2006 , 31, 3170-2	3	43
106	N ₂ O emission under fluidized bed combustion condition. <i>Fuel Processing Technology</i> , 2003 , 84, 13-21	7.2	43
105	Decomposition of nitrous oxide at medium temperatures. <i>Combustion and Flame</i> , 2000 , 120, 427-438	5.3	42
104	Mid-infrared external-cavity quantum-cascade laser. <i>Optics Letters</i> , 2002 , 27, 1788-90	3	41
103	Thermal co-treatment of combustible hazardous waste and waste incineration fly ash in a rotary kiln. <i>Waste Management</i> , 2016 , 58, 181-190	8.6	41
102	Demonstration of methane spectroscopy using a vertical-cavity surface-emitting laser at 1.68 μm with up to 5 MHz repetition rate. <i>Measurement Science and Technology</i> , 2003 , 14, 101-106	2	40
101	Limitations for heavy metal release during thermo-chemical treatment of sewage sludge ash. <i>Waste Management</i> , 2011 , 31, 1285-91	8.6	39
100	Catalytic effect of biomass ash on CO, CH ₄ and HCN oxidation under fluidised bed combustor conditions. <i>Fuel</i> , 2002 , 81, 711-717	7.1	39
99	Evaluation of resource recovery from waste incineration residues--the case of zinc. <i>Waste Management</i> , 2015 , 37, 95-103	8.6	38
98	. <i>IEEE Sensors Journal</i> , 2007 , 7, 1483-1489	4	38
97	High-speed vertical-cavity surface-emitting laser (VCSEL) absorption spectroscopy of ammonia (NH ₃) near 1.54 μm. <i>Applied Physics B: Lasers and Optics</i> , 2003 , 76, 603-608	1.9	38
96	Laser Ignition of Methane-Air Mixtures at High Pressures and Diagnostics. <i>Journal of Engineering for Gas Turbines and Power</i> , 2005 , 127, 213-219	1.7	37
95	Modeling and Simulation of Heat Front Propagation in the Iron Ore Sintering Process. <i>ISIJ International</i> , 2004 , 44, 11-20	1.7	37
94	Systematic search algorithm for potential thermochemical energy storage systems. <i>Applied Energy</i> , 2016 , 183, 113-120	10.7	35
93	High-Temperature Energy Storage: Kinetic Investigations of the CuO/Cu ₂ O Reaction Cycle. <i>Energy & Fuels</i> , 2017 , 31, 2324-2334	4.1	32
92	NO formation tendency characterization for solid fuels in fluidized beds. <i>Fuel</i> , 2013 , 108, 238-246	7.1	32
91	NO _x formation in natural gas combustion—new simplified reaction scheme for CFD calculations. <i>Fuel</i> , 2006 , 85, 513-523	7.1	32
90	Mass transfer limitation in thermogravimetry of biomass gasification. <i>Journal of Thermal Analysis and Calorimetry</i> , 2013 , 111, 183-192	4.1	31

89	Reduction Behavior of Hematite to Magnetite under Fluidized Bed Conditions. <i>ISIJ International</i> , 2004 , 44, 1125-1133	1.7	31
88	1.8 μm vertical-cavity surface-emitting laser absorption measurements of HCl, H ₂ O and CH ₄ . <i>Measurement Science and Technology</i> , 2003 , 14, 472-478	2	28
87	Possibilities of municipal solid waste incinerator fly ash utilisation. <i>Waste Management and Research</i> , 2015 , 33, 740-7	4	27
86	Structural and morphological changes during reduction of hematite to magnetite and wustite in hydrogen rich reduction gases under fluidised bed conditions. <i>Ironmaking and Steelmaking</i> , 2011 , 38, 65-73	1.3	27
85	The influence of SO ₂ level and operating conditions on NO _x and N ₂ O emissions during fluidised bed combustion of coals. <i>Fuel</i> , 2001 , 80, 1555-1566	7.1	26
84	Reducing N ₂ O Emission by Co-Combustion of Coal and Biomass. <i>Energy & Fuels</i> , 2002 , 16, 525-526	4.1	26
83	The NO and N ₂ O formation mechanism under circulating fluidized bed combustor conditions: From the single particle to the pilot-scale. <i>Canadian Journal of Chemical Engineering</i> , 1999 , 77, 275-283	2.3	26
82	Multiplexed continuous-wave diode-laser cavity ringdown measurements of multiple species. <i>Applied Optics</i> , 2000 , 39, 2009-16	1.7	25
81	2013 ,		25
80	Optical Diagnostics of Laser-Induced and Spark Plug-Assisted HCCI Combustion 2005 ,		24
79	Fly Ash from Municipal Solid Waste Incineration as a Potential Thermochemical Energy Storage Material. <i>Energy & Fuels</i> , 2019 , 33, 5810-5819	4.1	23
78	Characterization of laser-induced ignition of biogas/air mixtures. <i>Biomass and Bioenergy</i> , 2004 , 27, 299-313	2.3	21
77	NO _x and N ₂ O Formation Mechanisms: A Detailed Chemical Kinetic Modeling Study on a Single Fuel Particle in a Laboratory-Scale Fluidized Bed. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2001 , 123, 228-235	2.6	21
76	Comparison of the combustion characteristics and kinetic study of coal, municipal solid waste, and refuse-derived fuel: Model-fitting methods. <i>Energy Science and Engineering</i> , 2019 , 7, 2646-2657	3.4	20
75	Study on NO and N ₂ O Formation and Destruction Mechanisms in a Laboratory-Scale Fluidized Bed. <i>Energy & Fuels</i> , 2002 , 16, 1024-1032	4.1	20
74	Fluidized bed reactors for solid-gas thermochemical energy storage concepts - Modelling and process limitations. <i>Energy</i> , 2018 , 143, 615-623	7.9	20
73	Main drivers for integrating zinc recovery from fly ashes into the Viennese waste incineration cluster. <i>Fuel Processing Technology</i> , 2016 , 141, 243-248	7.2	17
72	A global combustion model for simulation of n-heptane and iso-octane self ignition. <i>Chemical Engineering Journal</i> , 2012 , 203, 357-369	14.7	17

71	Chemical kinetic modelling of the effect of NO on the oxidation of CH ₄ under fluidized bed combustor conditions. <i>Fuel</i> , 2002 , 81, 855-860	7.1	17
70	Industrial fluidised bed direct reduction kinetics of hematite ore fines in H ₂ rich gases at elevated pressure. <i>Chemical Engineering Science</i> , 2011 , 66, 703-708	4.4	16
69	Governing Processes of Gas and Oil Injection into the Blast Furnace. <i>ISIJ International</i> , 2006 , 46, 496-502	1.7	16
68	Laser-Stimulated Ignition in a Homogeneous Charge Compression Ignition Engine 2004 ,		15
67	Impact of Partial Pressure, Conversion, and Temperature on the Oxidation Reaction Kinetics of Cu ₂ O to CuO in Thermochemical Energy Storage. <i>Energies</i> , 2019 , 12, 508	3.1	14
66	Pollutants formation during single particle combustion of biomass under fluidized bed conditions: An experimental study. <i>Fuel</i> , 2020 , 278, 117958	7.1	14
65	Sewage sludge ash to phosphate fertilizer by chlorination and thermal treatment: residence time requirements for heavy metal removal. <i>Environmental Technology (United Kingdom)</i> , 2012 , 33, 2375-81	2.6	14
64	Boric Acid: A High Potential Candidate for Thermochemical Energy Storage. <i>Energies</i> , 2019 , 12, 1086	3.1	13
63	Laser Ignition of Methane-Air Mixtures at High Pressures and Diagnostics 2003 , 147		13
62	In situ laser measurements of CO and CH ₄ close to the surface of a burning single fuel particle. <i>Measurement Science and Technology</i> , 2002 , 13, 1545-1551	2	13
61	An extension of the NPK method to include the pressure dependency of solid state reactions. <i>Thermochimica Acta</i> , 2017 , 654, 168-178	2.9	12
60	Experimental and Morphological Investigations of the Reduction from Coarse Hematite to Magnetite and Wüstite under Fluidized Bed Conditions. <i>Steel Research International</i> , 2010 , 81, 93-99	1.6	12
59	Theoretical Analysis on the Injection of H ₂ , CO, CH ₄ Rich Gases into the Blast Furnace. <i>ISIJ International</i> , 2005 , 45, 166-174	1.7	12
58	Empirical reduction diagrams for reduction of iron ores with H ₂ and CO gas mixtures considering non-stoichiometries of oxide phases. <i>Ironmaking and Steelmaking</i> , 2009 , 36, 212-216	1.3	11
57	Reduction of Iron Ore Fines with CO-rich Gases under Pressurized Fluidized Bed Conditions. <i>ISIJ International</i> , 2007 , 47, 217-225	1.7	11
56	Laser cleaning of optical windows in internal combustion engines. <i>Optical Engineering</i> , 2007 , 46, 104301	1.1	11
55	Iron Ore Reduction in a Laboratory-scale Fluidized Bed Reactor-Effect of Pre-reduction on Final Reduction Degree. <i>ISIJ International</i> , 2005 , 45, 151-158	1.7	11
54	Understanding of Halogen Impacts in Fluidized Bed Combustion. <i>Energy & Fuels</i> , 2001 , 15, 533-540	4.1	11

53	Reducing Ability of CO and H ₂ of Gases Formed in the Lower Part of the Blast Furnace by Gas and Oil Injection. <i>ISIJ International</i> , 2006 , 46, 1006-1013	1.7	11
52	Reduction and validation of a chemical kinetic mechanism including necessity analysis and investigation of CH ₄ /C ₃ H ₈ oxidation at pressures up to 120 bar using a rapid compression machine. <i>Fuel</i> , 2016 , 172, 139-145	7.1	10
51	Experimental Investigation and Benchmark Study of Oxidation of Methane-Propane-Heptane Mixtures at Pressures up to 100 bar. <i>Energies</i> , 2019 , 12, 3410	3.1	9
50	Comparison of the Characteristics of Fly Ash Generated from Bio and Municipal Waste: Fluidized Bed Incinerators. <i>Materials</i> , 2019 , 12,	3.5	9
49	NO Formation Tendency Characterization for Biomass Fuels 2005 , 225		9
48	The multistep decomposition of boric acid. <i>Energy Science and Engineering</i> , 2020 , 8, 1650-1666	3.4	8
47	Carbon conversion of solid fuels in the freeboard of a laboratory-scale fluidized bed combustor—application of in situ laser spectroscopy. <i>Fuel</i> , 2004 , 83, 1289-1298	7.1	8
46	The Trade-Off Between N ₂ , NO, and N ₂ O Under Fluidized Bed Combustor Conditions. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2000 , 122, 94-100	2.6	8
45	In-situ laser spectroscopy of CO, CH ₄ , and H ₂ O in a particle laden laboratory-scale fluidized bed combustor. <i>Thermal Science</i> , 2002 , 6, 13-27	1.2	8
44	Iron ore reduction in a continuously operated multistage lab-scale fluidized bed reactor—mathematical modeling and experimental results. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2006 , 37, 665-673	2.5	7
43	Spektroskopischer Einsatz neuer langwelliger (bis 2 μ m) Diodenlaser (VCSEL) fñ schwierige Bedingungen (Spectroscopic Application of Long-Wavelength (TM Technisches Messen, 2003 , 70, 294-305)	0.7	7
42	NPK 2.0: Introducing tensor decompositions to the kinetic analysis of gas-solid reactions. <i>International Journal of Chemical Kinetics</i> , 2019 , 51, 280-290	1.4	6
41	Isoconversional nonisothermal kinetic analysis of municipal solid waste, refuse-derived fuel, and coal. <i>Energy Science and Engineering</i> , 2020 , 8, 3728-3739	3.4	6
40	Evaluation of the Limiting Regime in Iron Ore Fines Reduction with H ₂ -Rich Gases in Fluidized Beds: Fe ₂ O ₃ to Fe ₃ O ₄ . <i>Chemical Engineering and Technology</i> , 2009 , 32, 392-397	2	6
39	Potential of Alternative Sorbents for Desulphurization: From Laboratory Tests to the Full-Scale Combustion Unit. <i>Energy & Fuels</i> , 2008 , 22, 3080-3088	4.1	6
38	In situ investigation of laser-induced ignition and the early stages of methane-air combustion at high pressures using a rapidly tuned diode laser at 2.55 microm. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2003 , 59, 2997-3018	4.4	6
37	Analysis of the Heat Transfer Mechanism in High-Temperature Circulating Fluidized Beds by a Numerical Model. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2002 , 124, 34-39	2.6	6
36	Formation and Reduction of Pollutants in CFBC: From Heavy Metals, Particulates, Alkali, NO _x , N ₂ O, SO _x , HCl 2009 , 43-48		6

35	Profitability Analysis and Capital Cost Estimation of a Thermochemical Energy Storage System Utilizing Fluidized Bed Reactors and the Reaction System MgO/Mg(OH) ₂ . <i>Energies</i> , 2019 , 12, 4788	3.1	6
34	An Unreacted Shrinking Core Model Serves for Predicting Combustion Rates of Organic Additives in Clay Bricks. <i>Energy & Fuels</i> , 2020 , 34, 16679-16692	4.1	5
33	Simulation of optical breakdown in nitrogen by focused short laser pulses of 1064 nm wavelength. <i>Laser and Particle Beams</i> , 2008 , 26, 567-573	0.9	4
32	Investigation of biomass steam gasification gas using a GaAs based quantum cascade laser emitting at 11 μ m. <i>Optics Communications</i> , 2003 , 216, 357-360	2	4
31	Modeling the Pilot Injection and the Ignition Process of a Dual Fuel Injector with Experimental Data from a Combustion Chamber Using Detailed Reaction Kinetics		4
30	A Novel Dual Fuel Reaction Mechanism for Ignition in Natural Gas/Diesel Combustion. <i>Energies</i> , 2019 , 12, 4396	3.1	4
29	Modeling of Jet A1-H ₂ O ₂ Autoignition in a Microrocket Combustion Chamber. <i>Journal of Propulsion and Power</i> , 2013 , 29, 385-395	1.8	3
28	Micromachined tunable vertical-cavity surface-emitting lasers with narrow linewidth for near infrared gas detection 2008 ,		3
27	Chemie im Motor: Verbrennungsmotoren versus Brennstoffzelle und Elektromotor. <i>Chemie in Unserer Zeit</i> , 2005 , 39, 246-254	0.2	3
26	The Relative Importance of Radicals on the N ₂ O and NO Formation and Destruction Paths in a Quartz CFBC. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 1999 , 121, 131-136	2.6	3
25	Comparing Fly Ash Samples from Different Types of Incinerators for Their Potential as Storage Materials for Thermochemical Energy and CO. <i>Materials</i> , 2019 , 12,	3.5	2
24	Applications of fluidized bed technology in processes other than combustion and gasification 2013 , 1005-1033		2
23	Development of an Optical Spark Plug for Stationary Engines - A Theoretical Approach 2006 ,		2
22	The Potential Use of Fly Ash from the Pulp and Paper Industry as Thermochemical Energy and CO ₂ Storage Material. <i>Energies</i> , 2021 , 14, 3348	3.1	2
21	Power-to-Green Methanol via CO ₂ Hydrogenation: A Concept Study Including Oxyfuel Fluidized Bed Combustion of Biomass. <i>Energies</i> , 2021 , 14, 4638	3.1	2
20	External bed materials for the oxy-fuel combustion of biomass in a bubbling fluidized bed. <i>Journal of Cleaner Production</i> , 2021 , 321, 128882	10.3	2
19	Simulation of a Pilot Scale Power-to-Liquid Plant Producing Synthetic Fuel and Wax by Combining Fischer-Tropsch Synthesis and SOEC. <i>Energies</i> , 2022 , 15, 4134	3.1	2
18	Dual Fuel Reaction Mechanism 2.0 including NO _x Formation and Laminar Flame Speed Calculations Using Methane/Propane/n-Heptane Fuel Blends. <i>Energies</i> , 2020 , 13, 778	3.1	1

17	Attrition Behavior of Coal Ash Under Circulating Fluidized Bed Combustion Conditions 2003 , 517		1
16	Optical Diagnostics of Laser Ignition for Future Advanced Engines 2004 , 35		1
15	Environmental Impacts 2013 , 97-135		1
14	Co-Combustion Studies of Low-Rank Coal and Refuse-Derived Fuel: Performance and Reaction Kinetics. <i>Energies</i> , 2021 , 14, 3796	3.1	1
13	Salt Hydrates for Thermochemical Storage of Solar Energy: Modeling the Case Study of Calcium Oxalate Monohydrate Dehydration/Rehydration under Suspension Reactor Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2021 , 60, 11357-11372	3.9	1
12	Considerations on Temperature Dependent Effective Diffusion and Permeability of Natural Clays. <i>Materials</i> , 2021 , 14,	3.5	1
11	A Study on the Reaction Kinetics of Anaerobic Microbes Using Batch Anaerobic Sludge Technique for Beverage Industrial Wastewater. <i>Separations</i> , 2021 , 8, 43	3.1	0
10	Numerical and experimental study of heterogeneous reactions involving carbonaceous compounds in clay brick firing. <i>Construction and Building Materials</i> , 2022 , 327, 126744	6.7	0
9	Wirbelschichtverbrennungsanlagen in Österreich und ihre Rauchgasreinigungsanlagen. <i>Chemie-Ingenieur-Technik</i> , 2013 , 85, 303-307	0.8	
8	The Effect of Coal Type on Thermal Balance in a Dense Phase of a Circulating Fluidized Bed Combustor 2003 , 417		
7	Laser-induced ignition characteristics of methane- and hydrogen-air mixtures at high pressures 2004 , 5506, 117		
6	Combustion Principles 2013 , 43-96		
5	Fuels 2013 , 19-42		
4	Measurement Methods 2013 , 137-183		
3	Safety Issues 2013 , 241-260		
2	History of Combustion 2013 , 1-17		
1	Design and simulation of gas burner ejectors. <i>Carbon Resources Conversion</i> , 2021 , 4, 28-35	4.7	