Gomez Barea, Alberto

List of Publications by Year
in descending order

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72 papers	4,123 citations	109264 35 h-index	114418 63 g-index
73 all docs	73 docs citations	73 times ranked	3340 citing authors

#	Article	IF	Citations
1	Facing the high share of variable renewable energy in the power system: Flexibility and stability requirements. Applied Energy, 2022, 310, 118561.	5.1	53
2	Data for the modelling of the future power system with a high share of variable renewable energy. Data in Brief, 2022, 42, 108095.	0.5	0
3	Solar gasification of biomass in a dual fluidized bed. Chemical Engineering Journal, 2021, 406, 126665.	6.6	22
4	Analysis of fluidized bed gasification of biomass assisted by solar-heated particles. Biomass Conversion and Biorefinery, 2021, 11, 143-158.	2.9	13
5	Distribution of Inorganics and Trace Elements during Waste Gasification in a Bench-Scale Fluidized Bed. Energy & Fuels, 2021, 35, 15802-15816.	2.5	4
6	Fluid dynamic analysis of dual fluidized bed gasifier for solar applications. Powder Technology, 2021, 390, 482-495.	2.1	11
7	Techno-economic and operational assessment of concentrated solar power plants with a dual supporting system. Applied Energy, 2021, 302, 117600.	5.1	14
8	Change of existing circulating fluidized bed boilers to oxy-firing conditions for CO2 capture. Applications in Energy and Combustion Science, 2021, 8, 100042.	0.9	0
9	Tar conversion of biomass syngas in a downstream char bed. Fuel Processing Technology, 2020, 199, 106271.	3.7	24
10	On the Measurement of the Main Inorganic Contaminants Derived from Cl, S and N in Simulated Waste-Derived Syngas. Waste and Biomass Valorization, 2020, 11, 6869-6884.	1.8	7
11	The effect of H2O on the oxy-fuel combustion of a bituminous coal char particle in a fluidized bed: Experiment and modeling. Combustion and Flame, 2020, 218, 42-56.	2.8	31
12	Modeling the transient response of a fluidized-bed biomass gasifier. Fuel, 2020, 274, 117226.	3.4	5
13	Comparison of Six Different Biomass Residues in a Pilot-Scale Fluidized Bed Gasifier. Energy & Fuels, 2019, 33, 10978-10988.	2.5	6
14	Elements partitioning during thermal conversion of sewage sludge. Fuel Processing Technology, 2019, 186, 156-166.	3.7	34
15	Tar yield and composition from poultry litter gasification in a fluidised bed reactor: effects of equivalence ratio, temperature and limestone addition. RSC Advances, 2019, 9, 13283-13296.	1.7	20
16	The influence of volatiles to carrier gas ratio on gas and tar yields during fluidized bed pyrolysis tests. Fuel, 2018, 226, 81-86.	3.4	11
17	Implementation of waste-to-energy options in landfill-dominated countries: Economic evaluation and GHG impact. Waste Management, 2018, 76, 443-456.	3.7	48
18	The influence of the char internal structure and composition on heterogeneous conversion of naphthalene. Fuel Processing Technology, 2018, 172, 125-132.	3.7	37

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19	Measurement and theoretical prediction of char temperature oscillation during fluidized bed combustion. Combustion and Flame, 2018, 192, 190-204.	2.8	22
20	The influence of CO2 gas concentration on the char temperature and conversion during oxy-fuel combustion in a fluidized bed. Applied Energy, 2018, 215, 116-130.	5.1	13
21	The effects of calcium and potassium on CO2 gasification of birch wood in a fluidized bed. Fuel, 2017, 196, 398-407.	3.4	27
22	Gasification of Olive Tree Pruning in Fluidized Bed: Experiments in a Laboratory-Scale Plant and Scale-up to Industrial Operation. Energy & Fuels, 2017, 31, 542-554.	2.5	14
23	The effect of using thermocouples on the char particle combustion in a fluidized bed reactor. Fuel, 2017, 207, 615-624.	3.4	17
24	Oxy-fuel conversion of sub-bituminous coal particles in fluidized bed and pulverized combustors. Proceedings of the Combustion Institute, 2017, 36, 3331-3339.	2.4	21
25	THE ROLE OF ADVANCED WASTE-TO-ENERGY TECHNOLOGIES IN LANDFILL MINING. , 2017, , .		0
26	Effect of CO2 on oxy-fuel combustion of coal-char particles in a fluidized bed: Modeling and comparison with the conventional mode of combustion. Applied Energy, 2016, 177, 247-259.	5.1	50
27	Poultry Litter Gasification in a Fluidized Bed Reactor: Effects of Gasifying Agent and Limestone Addition. Energy & Fuels, 2016, 30, 3085-3096.	2.5	43
28	Oxy-fuel combustion of a single fuel particle in a fluidized bed: Char combustion characteristics, an experimental study. Chemical Engineering Journal, 2016, 287, 649-656.	6.6	69
29	Kinetic Modeling of Tar and Light Hydrocarbons during the Thermal Conversion of Biomass. Energy & Fuels, 2016, 30, 377-385.	2.5	20
30	Measurement of char surface temperature in a fluidized bed combustor using pyrometry with digital camera. Chemical Engineering Journal, 2016, 288, 441-450.	6.6	27
31	Devolatilization of a single fuel particle in a fluidized bed under oxy-combustion conditions. Part A: Experimental results. Combustion and Flame, 2015, 162, 797-808.	2.8	66
32	Devolatilization of a single fuel particle in a fluidized bed under oxy-combustion conditions. Part B: Modeling and comparison with measurements. Combustion and Flame, 2015, 162, 809-818.	2.8	43
33	Oxy-fuel combustion in circulating fluidized bed boilers. Applied Energy, 2014, 125, 308-318.	5.1	79
34	Modeling biomass char gasification kinetics for improving prediction of carbon conversion in a fluidized bed gasifier. Fuel, 2014, 132, 107-115.	3.4	48
35	Gasification of wastes in a pilot fluidized bed gasifier. Fuel Processing Technology, 2014, 121, 63-69.	3.7	79
36	Gasification kinetics of char from olive tree pruning in fluidized bed. Fuel, 2014, 125, 192-199.	3.4	39

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37	Ignition behavior of single coal particle in a fluidized bed under O2/CO2 and O2/N2 atmospheres: A combination of visual image and particle temperature. Applied Energy, 2014, 115, 301-308.	5.1	63
38	The influence of temperature and steam on the yields of tar and light hydrocarbon compounds during devolatilization of dried sewage sludge in a fluidized bed. Fuel, 2013, 108, 341-350.	3.4	44
39	Estimation of gas composition and char conversion in a fluidized bed biomass gasifier. Fuel, 2013, 107, 419-431.	3.4	48
40	Generation and Secondary Conversion of Volatiles during Devolatilization of Dried Sewage Sludge in a Fluidized Bed. Industrial & Engineering Chemistry Research, 2013, 52, 1234-1243.	1.8	6
41	Decomposition kinetics of model tar compounds over chars with different internal structure to model hot tar removal in biomass gasification. Chemical Engineering Journal, 2013, 228, 1223-1233.	6.6	117
42	Techno-economic assessment of biomass-to-ethanol by indirect fluidized bed gasification: Impact of reforming technologies and comparison with entrained flow gasification. Applied Energy, 2013, 109, 254-266.	5.1	46
43	Optimization of char and tar conversion in fluidized bed biomass gasifiers. Fuel, 2013, 103, 42-52.	3.4	99
44	Gasification of char from dried sewage sludge in fluidized bed: Reaction rate in mixtures of CO2 and H2O. Fuel, 2013, 105, 764-768.	3.4	49
45	Thermochemical biorefinery based on dimethyl ether as intermediate: Technoeconomic assessment. Applied Energy, 2013, 102, 950-961.	5.1	56
46	Improving the performance of fluidized bed biomass/waste gasifiers for distributed electricity: A new three-stage gasification system. Applied Thermal Engineering, 2013, 50, 1453-1462.	3.0	73
47	Modelling of fluidized bed gasification processes. , 2013, , 579-619.		3
48	A model of biomass char gasification describing the change in catalytic activity of ash. Chemical Engineering Journal, 2012, 207-208, 616-624.	6.6	89
49	Analytical solutions of sharp interface models with nth order kinetics. Application to char conversion. Chemical Engineering Journal, 2012, 183, 408-421.	6.6	17
50	Gasification reactivity of char from dried sewage sludge in a fluidized bed. Fuel, 2012, 92, 346-353.	3.4	70
51	Gasification of biomass and waste in a staged fluidized bed gasifier: Modeling and comparison with one-stage units. Fuel, 2012, 97, 730-740.	3.4	61
52	Technoeconomic assessment of ethanol production via thermochemical conversion of biomass by entrained flow gasification. Energy, 2011, 36, 4097-4108.	4.5	69
53	Application of biomass gasification fly ash for brick manufacturing. Fuel, 2011, 90, 220-232.	3.4	91
54	Characterization and prediction of biomass pyrolysis products. Progress in Energy and Combustion Science, 2011, 37, 611-630.	15.8	609

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55	Devolatilization of wood and wastes in fluidized bed. Fuel Processing Technology, 2010, 91, 1624-1633.	3.7	75
56	Modeling of biomass gasification in fluidized bed. Progress in Energy and Combustion Science, 2010, 36, 444-509.	15.8	696
57	Tar Reduction by Primary Measures in an Autothermal Air-Blown Fluidized Bed Biomass Gasifier. Industrial & Engineering Chemistry Research, 2010, 49, 11294-11301.	1.8	34
58	Plant optimisation and ash recycling in fluidised bed waste gasification. Chemical Engineering Journal, 2009, 146, 227-236.	6.6	63
59	Airâ€"steam gasification of biomass in a fluidised bed: Process optimisation by enriched air. Fuel Processing Technology, 2009, 90, 677-685.	3.7	167
60	Model Predictive Control of a Wet Limestone Flue Gas Desulfurization Pilot Plant. Industrial & Engineering Chemistry Research, 2009, 48, 5399-5405.	1.8	23
61	Catalytic Seawater Flue Gas Desulfurization Model. Environmental Science & Technology, 2009, 43, 9393-9399.	4.6	17
62	Gasification of Biomass in Fluidised Bed: Review of Modelling. , 2009, , 13-26.		2
63	Gasâ€"solid conversion in fluidised bed reactors. Chemical Engineering Journal, 2008, 141, 151-168.	6.6	18
64	Airâˆ'Steam Gasification of Biomass in a Fluidized Bed under Simulated Autothermal and Adiabatic Conditions. Industrial & Engineering Chemistry Research, 2008, 47, 5957-5965.	1.8	81
65	Use of Biomass Gasification Fly Ash in Lightweight Plasterboard. Energy & Fuels, 2007, 21, 361-367.	2.5	31
66	Mass transport effects during measurements of gasâ€"solid reaction kinetics in a fluidised bed. Chemical Engineering Science, 2007, 62, 1477-1493.	1.9	15
67	Reduction of Physical Effects during Reactivity Tests in Fluidized Bed. Industrial & Engineering Chemistry Research, 2006, 45, 7344-7350.	1.8	4
68	Diffusional Effects in CO2Gasification Experiments with Single Biomass Char Particles. 2. Theoretical Predictions. Energy & Fuels, 2006, 20, 2211-2222.	2.5	45
69	Diffusional Effects in CO2Gasification Experiments with Single Biomass Char Particles. 1. Experimental Investigation. Energy & Fuels, 2006, 20, 2202-2210.	2.5	95
70	An approximate method for solving gasâ€"solid non-catalytic reactions. Chemical Engineering Science, 2006, 61, 3725-3735.	1.9	42
71	Pilot-Plant Gasification of Olive Stone: a Technical Assessment. Energy & Fuels, 2005, 19, 598-605.	2.5	68
72	Downstream evolution of unconfined vortices: mechanical and thermal aspects. Journal of Fluid Mechanics, 2002, 471, 51-70.	1.4	15