

# Gomez Barea, Alberto

## List of Publications by Citations

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72  
papers

3,283  
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33  
h-index

56  
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73  
ext. papers

3,729  
ext. citations

7.9  
avg, IF

5.63  
L-index

#	Paper	IF	Citations
72	Modeling of biomass gasification in fluidized bed. <i>Progress in Energy and Combustion Science</i> , <b>2010</b> , 36, 444-509	33.6	564
71	Characterization and prediction of biomass pyrolysis products. <i>Progress in Energy and Combustion Science</i> , <b>2011</b> , 37, 611-630	33.6	475
70	Air/Steam gasification of biomass in a fluidised bed: Process optimisation by enriched air. <i>Fuel Processing Technology</i> , <b>2009</b> , 90, 677-685	7.2	144
69	Decomposition kinetics of model tar compounds over chars with different internal structure to model hot tar removal in biomass gasification. <i>Chemical Engineering Journal</i> , <b>2013</b> , 228, 1223-1233	14.7	90
68	Optimization of char and tar conversion in fluidized bed biomass gasifiers. <i>Fuel</i> , <b>2013</b> , 103, 42-52	7.1	87
67	Diffusional Effects in CO <sub>2</sub> Gasification Experiments with Single Biomass Char Particles. 1. Experimental Investigation. <i>Energy &amp; Fuels</i> , <b>2006</b> , 20, 2202-2210	4.1	85
66	Application of biomass gasification fly ash for brick manufacturing. <i>Fuel</i> , <b>2011</b> , 90, 220-232	7.1	74
65	A model of biomass char gasification describing the change in catalytic activity of ash. <i>Chemical Engineering Journal</i> , <b>2012</b> , 207-208, 616-624	14.7	70
64	Devolatilization of wood and wastes in fluidized bed. <i>Fuel Processing Technology</i> , <b>2010</b> , 91, 1624-1633	7.2	70
63	Air/Steam Gasification of Biomass in a Fluidized Bed under Simulated Autothermal and Adiabatic Conditions. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2008</b> , 47, 5957-5965	3.9	67
62	Oxy-fuel combustion in circulating fluidized bed boilers. <i>Applied Energy</i> , <b>2014</b> , 125, 308-318	10.7	65
61	Gasification of wastes in a pilot fluidized bed gasifier. <i>Fuel Processing Technology</i> , <b>2014</b> , 121, 63-69	7.2	64
60	Improving the performance of fluidized bed biomass/waste gasifiers for distributed electricity: A new three-stage gasification system. <i>Applied Thermal Engineering</i> , <b>2013</b> , 50, 1453-1462	5.8	64
59	Gasification reactivity of char from dried sewage sludge in a fluidized bed. <i>Fuel</i> , <b>2012</b> , 92, 346-353	7.1	62
58	Technoeconomic assessment of ethanol production via thermochemical conversion of biomass by entrained flow gasification. <i>Energy</i> , <b>2011</b> , 36, 4097-4108	7.9	59
57	Pilot-Plant Gasification of Olive Stone: a Technical Assessment. <i>Energy &amp; Fuels</i> , <b>2005</b> , 19, 598-605	4.1	58
56	Gasification of biomass and waste in a staged fluidized bed gasifier: Modeling and comparison with one-stage units. <i>Fuel</i> , <b>2012</b> , 97, 730-740	7.1	57

55	Oxy-fuel combustion of a single fuel particle in a fluidized bed: Char combustion characteristics, an experimental study. <i>Chemical Engineering Journal</i> , <b>2016</b> , 287, 649-656	14.7	55
54	Devolatilization of a single fuel particle in a fluidized bed under oxy-combustion conditions. Part A: Experimental results. <i>Combustion and Flame</i> , <b>2015</b> , 162, 797-808	5.3	55
53	Plant optimisation and ash recycling in fluidised bed waste gasification. <i>Chemical Engineering Journal</i> , <b>2009</b> , 146, 227-236	14.7	55
52	Ignition behavior of single coal particle in a fluidized bed under O <sub>2</sub> /CO <sub>2</sub> and O <sub>2</sub> /N <sub>2</sub> atmospheres: A combination of visual image and particle temperature. <i>Applied Energy</i> , <b>2014</b> , 115, 301-308	10.7	50
51	Thermochemical biorefinery based on dimethyl ether as intermediate: Technoeconomic assessment. <i>Applied Energy</i> , <b>2013</b> , 102, 950-961	10.7	44
50	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. <i>Fuel</i> , <b>2013</b> , 108, 341-350	7.1	40
49	Estimation of gas composition and char conversion in a fluidized bed biomass gasifier. <i>Fuel</i> , <b>2013</b> , 107, 419-431	7.1	40
48	Gasification of char from dried sewage sludge in fluidized bed: Reaction rate in mixtures of CO <sub>2</sub> and H <sub>2</sub> O. <i>Fuel</i> , <b>2013</b> , 105, 764-768	7.1	40
47	Modeling biomass char gasification kinetics for improving prediction of carbon conversion in a fluidized bed gasifier. <i>Fuel</i> , <b>2014</b> , 132, 107-115	7.1	39
46	Techno-economic assessment of biomass-to-ethanol by indirect fluidized bed gasification: Impact of reforming technologies and comparison with entrained flow gasification. <i>Applied Energy</i> , <b>2013</b> , 109, 254-266	10.7	39
45	Devolatilization of a single fuel particle in a fluidized bed under oxy-combustion conditions. Part B: Modeling and comparison with measurements. <i>Combustion and Flame</i> , <b>2015</b> , 162, 809-818	5.3	38
44	Effect of CO <sub>2</sub> on oxy-fuel combustion of coal-char particles in a fluidized bed: Modeling and comparison with the conventional mode of combustion. <i>Applied Energy</i> , <b>2016</b> , 177, 247-259	10.7	37
43	Gasification kinetics of char from olive tree pruning in fluidized bed. <i>Fuel</i> , <b>2014</b> , 125, 192-199	7.1	37
42	Diffusional Effects in CO <sub>2</sub> Gasification Experiments with Single Biomass Char Particles. 2. Theoretical Predictions. <i>Energy &amp; Fuels</i> , <b>2006</b> , 20, 2211-2222	4.1	37
41	Poultry Litter Gasification in a Fluidized Bed Reactor: Effects of Gasifying Agent and Limestone Addition. <i>Energy &amp; Fuels</i> , <b>2016</b> , 30, 3085-3096	4.1	35
40	An approximate method for solving gas-solid non-catalytic reactions. <i>Chemical Engineering Science</i> , <b>2006</b> , 61, 3725-3735	4.4	35
39	Implementation of waste-to-energy options in landfill-dominated countries: Economic evaluation and GHG impact. <i>Waste Management</i> , <b>2018</b> , 76, 443-456	8.6	33
38	Tar Reduction by Primary Measures in an Autothermal Air-Blown Fluidized Bed Biomass Gasifier. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 11294-11301	3.9	31

37	Use of Biomass Gasification Fly Ash in Lightweight Plasterboard. <i>Energy &amp; Fuels</i> , <b>2007</b> , 21, 361-367	4.1	27
36	The effects of calcium and potassium on CO <sub>2</sub> gasification of birch wood in a fluidized bed. <i>Fuel</i> , <b>2017</b> , 196, 398-407	7.1	25
35	Measurement of char surface temperature in a fluidized bed combustor using pyrometry with digital camera. <i>Chemical Engineering Journal</i> , <b>2016</b> , 288, 441-450	14.7	24
34	Elements partitioning during thermal conversion of sewage sludge. <i>Fuel Processing Technology</i> , <b>2019</b> , 186, 156-166	7.2	22
33	Oxy-fuel conversion of sub-bituminous coal particles in fluidized bed and pulverized combustors. <i>Proceedings of the Combustion Institute</i> , <b>2017</b> , 36, 3331-3339	5.9	17
32	Gas-solid conversion in fluidised bed reactors. <i>Chemical Engineering Journal</i> , <b>2008</b> , 141, 151-168	14.7	17
31	The influence of the char internal structure and composition on heterogeneous conversion of naphthalene. <i>Fuel Processing Technology</i> , <b>2018</b> , 172, 125-132	7.2	16
30	Measurement and theoretical prediction of char temperature oscillation during fluidized bed combustion. <i>Combustion and Flame</i> , <b>2018</b> , 192, 190-204	5.3	16
29	Analytical solutions of sharp interface models with nth order kinetics. Application to char conversion. <i>Chemical Engineering Journal</i> , <b>2012</b> , 183, 408-421	14.7	16
28	Catalytic seawater flue gas desulfurization model. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 9393-9	10.3	16
27	Tar conversion of biomass syngas in a downstream char bed. <i>Fuel Processing Technology</i> , <b>2020</b> , 199, 1062-71	7.1	16
26	The effect of H <sub>2</sub> O on the oxy-fuel combustion of a bituminous coal char particle in a fluidized bed: Experiment and modeling. <i>Combustion and Flame</i> , <b>2020</b> , 218, 42-56	5.3	15
25	The effect of using thermocouples on the char particle combustion in a fluidized bed reactor. <i>Fuel</i> , <b>2017</b> , 207, 615-624	7.1	15
24	Downstream evolution of unconfined vortices: mechanical and thermal aspects. <i>Journal of Fluid Mechanics</i> , <b>2002</b> , 471, 51-70	3.7	15
23	Kinetic Modeling of Tar and Light Hydrocarbons during the Thermal Conversion of Biomass. <i>Energy &amp; Fuels</i> , <b>2016</b> , 30, 377-385	4.1	14
22	Mass transport effects during measurements of gas-solid reaction kinetics in a fluidised bed. <i>Chemical Engineering Science</i> , <b>2007</b> , 62, 1477-1493	4.4	14
21	Model Predictive Control of a Wet Limestone Flue Gas Desulfurization Pilot Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2009</b> , 48, 5399-5405	3.9	13
20	Gasification of Olive Tree Pruning in Fluidized Bed: Experiments in a Laboratory-Scale Plant and Scale-up to Industrial Operation. <i>Energy &amp; Fuels</i> , <b>2017</b> , 31, 542-554	4.1	10

19	The influence of volatiles to carrier gas ratio on gas and tar yields during fluidized bed pyrolysis tests. <i>Fuel</i> , <b>2018</b> , 226, 81-86	7.1	10
18	Tar yield and composition from poultry litter gasification in a fluidised bed reactor: effects of equivalence ratio, temperature and limestone addition.. <i>RSC Advances</i> , <b>2019</b> , 9, 13283-13296	3.7	9
17	The influence of CO2 gas concentration on the char temperature and conversion during oxy-fuel combustion in a fluidized bed. <i>Applied Energy</i> , <b>2018</b> , 215, 116-130	10.7	8
16	Solar gasification of biomass in a dual fluidized bed. <i>Chemical Engineering Journal</i> , <b>2021</b> , 406, 126665	14.7	8
15	Analysis of fluidized bed gasification of biomass assisted by solar-heated particles. <i>Biomass Conversion and Biorefinery</i> , <b>2021</b> , 11, 143-158	2.3	7
14	Techno-economic and operational assessment of concentrated solar power plants with a dual supporting system. <i>Applied Energy</i> , <b>2021</b> , 302, 117600	10.7	7
13	Comparison of Six Different Biomass Residues in a Pilot-Scale Fluidized Bed Gasifier. <i>Energy &amp; Fuels</i> , <b>2019</b> , 33, 10978-10988	4.1	5
12	Modeling the transient response of a fluidized-bed biomass gasifier. <i>Fuel</i> , <b>2020</b> , 274, 117226	7.1	4
11	Generation and Secondary Conversion of Volatiles during Devolatilization of Dried Sewage Sludge in a Fluidized Bed. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2013</b> , 52, 1234-1243	3.9	4
10	Reduction of Physical Effects during Reactivity Tests in Fluidized Bed. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2006</b> , 45, 7344-7350	3.9	4
9	Facing the high share of variable renewable energy in the power system: Flexibility and stability requirements. <i>Applied Energy</i> , <b>2022</b> , 310, 118561	10.7	4
8	Modelling of fluidized bed gasification processes <b>2013</b> , 579-619		2
7	Gasification of Biomass and Waste <b>2010</b> , 365		2
6	Gasification of Biomass in Fluidised Bed: Review of Modelling <b>2009</b> , 13-26		2
5	On the Measurement of the Main Inorganic Contaminants Derived from Cl, S and N in Simulated Waste-Derived Syngas. <i>Waste and Biomass Valorization</i> , <b>2020</b> , 11, 6869-6884	3.2	2
4	Distribution of Inorganics and Trace Elements during Waste Gasification in a Bench-Scale Fluidized Bed. <i>Energy &amp; Fuels</i> ,	4.1	1
3	Fluid dynamic analysis of dual fluidized bed gasifier for solar applications. <i>Powder Technology</i> , <b>2021</b> , 390, 482-495	5.2	1
2	Change of existing circulating fluidized bed boilers to oxy-firing conditions for CO2 capture. <i>Applications in Energy and Combustion Science</i> , <b>2021</b> , 8, 100042	0.8	

- 1 Data for the modelling of the future power system with a high share of variable renewable energy.. 1.2  
*Data in Brief*, **2022**, 42, 108095