Katia Gallucci

List of Publications by Year
in descending order

66 papers	1,757 citations	257450 24 h-index	289244 40 g-index
68 all docs	68 docs citations	68 times ranked	1500 citing authors

#	Article	IF	Citations
1	Gas cleaning, gas conditioning and tar abatement by means of a catalytic filter candle in a biomass fluidized-bed gasifier. Bioresource Technology, 2010, 101, 7123-7130.	9.6	100
2	Biomass to fuel cells state of the art: A review of the most innovative technology solutions. International Journal of Hydrogen Energy, 2014, 39, 21876-21895.	7.1	92
3	Sorption enhanced steam methane reforming based on nickel and calcium looping: a review. Chemical Engineering and Processing: Process Intensification, 2018, 130, 240-252.	3.6	89
4	Sorption enhanced steam methane reforming by Niâ€“CaO materials supported on mayenite. International Journal of Hydrogen Energy, 2017, 42, 13661-13680.	7.1	84
5	Separation of carbon dioxide for biogas upgrading to biomethane. Journal of Cleaner Production, 2017, 164, 1205-1218.	9.3	84
6	A techno-economic assessment of biogas upgrading in a developed market. Journal of Cleaner Production, 2019, 210, 945-957.	9.3	83
7	Fe/olivine catalyst for biomass steam gasification: Preparation, characterization and testing at real process conditions. Catalysis Today, 2011, 176, 163-168.	4.4	82
8	On the apparent viscosity of a fluidized bed. Chemical Engineering Science, 2007, 62, 294-300.	3.8	71
9	Catalytic biomass gasification: Simultaneous hydrocarbons steam reforming and CO2 capture in a fluidised bed reactor. Chemical Engineering Journal, 2009, 154, 375-383.	12.7	61
10	In Situ Catalytic Ceramic Candle Filtration for Tar Reforming and Particulate Abatement in a Fluidized-Bed Biomass Gasifier. Energy & Fuels, 2009, 23, 3804-3809.	5.1	58
11	CO2 capture by means of dolomite in hydrogen production from syn gas. International Journal of Hydrogen Energy, 2008, 33, 3049-3055.	7.1	54
12	Sorption enhanced catalytic Steam Methane Reforming: Experimental data and simulations describing the behaviour of bi-functional particles. Chemical Engineering Journal, 2017, 314, 570-582.	12.7	51
13	Development of a Ni-CaO-mayenite combined sorbent-catalyst material for multicycle sorption enhanced steam methane reforming. Fuel, 2018, 234, 687-699.	6.4	51
14	Olivine, dolomite and ceramic filters in one vessel to produce clean gas from biomass. Waste Management, 2018, 71, 792-800.	7.4	47
15	First Al2O3 based catalytic filter candles operating in the fluidized bed gasifier freeboard. Fuel, 2012, 97, 718-724.	6.4	46
16	Effect of Ni precursor salts on Ni-mayenite catalysts for steam methane reforming and on Ni-CaO-mayenite materials for sorption enhanced steam methane reforming. International Journal of Hydrogen Energy, 2019, 44, 6461-6480.	7.1	44
17	Gas conditioning in H2 rich syngas production by biomass steam gasification: Experimental comparison between three innovative ceramic filter candles. International Journal of Hydrogen Energy, 2015, 40, 7282-7290.	7.1	41
18	Characterization and performance analysis of an innovative Ni/Mayenite catalyst for the steam reforming of raw syngas. Fuel, 2017, 194, 348-356.	6.4	31

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19	Catalytic and sorbent materials based on mayenite for sorption enhanced steam methane reforming with different packed-bed configurations. International Journal of Hydrogen Energy, 2018, 43, 21279-21289.	7.1	31
20	Multicycle sorption enhanced steam methane reforming with different sorbent regeneration conditions: Experimental and modelling study. Chemical Engineering Journal, 2019, 377, 119874.	12.7	29
21	Catalytic steam methane reforming enhanced by CO2 capture on CaO based bi-functional compounds. Journal of Energy Chemistry, 2017, 26, 1014-1025.	12.9	28
22	Development of Ni- and CaO-based mono- and bi-functional catalyst and sorbent materials for Sorption Enhanced Steam Methane Reforming: Performance over 200â€¯cycles and attrition tests. Fuel Processing Technology, 2019, 195, 106160.	7.2	27
23	Syngas conditioning by ceramic filter candles filled with catalyst pellets and placed inside the freeboard of a fluidized bed steam gasifier. Fuel Processing Technology, 2019, 191, 44-53.	7.2	26
24	Characterizing gasâ€“solid fluidization by nonlinear tools: Chaotic invariants and dynamic moments. Chemical Engineering Science, 2012, 71, 252-263.	3.8	25
25	Selective Catalytic Hydrogenation of Vegetable Oils on Lindlar Catalyst. ACS Omega, 2020, 5, 22901-22913.	3.5	25
26	Synthesis of zeolites from spent fluid catalytic cracking catalyst. Journal of Cleaner Production, 2019, 230, 910-926.	9.3	24
27	Sorption enhanced steam methane reforming by <scp>Ni</scp>/<scp>CaO</scp>/mayenite combined systems: Overview of experimental results from <scp>E</scp>uropean research project <scp>ASCENT</scp>. Canadian Journal of Chemical Engineering, 2020, 98, 1907-1923.	1.7	21
28	CO2 capture with calcined dolomite: the effect of sorbent particle size. Biomass Conversion and Biorefinery, 2011, 1, 149-161.	4.6	20
29	Novel Application of Pretreatment and Diagnostic Method Using Dynamic Pressure Fluctuations to Resolve and Detect Issues Related to Biogenic Residue Ash in Chemical Looping Gasification. Processes, 2020, 8, 1137.	2.8	20
30	Experimental evaluation of Mg- and Ca-based synthetic sorbents for CO2 capture. Chemical Engineering Research and Design, 2014, 92, 727-740.	5.6	19
31	New DeTar catalytic filter with integrated catalytic ceramic foam: Catalytic activity under model and real bio syngas conditions. Fuel Processing Technology, 2015, 134, 98-106.	7.2	18
32	Steam gasification of lignite and solid recovered fuel (SRF) in a bench scale fluidized bed gasifier. Waste Management, 2020, 114, 341-350.	7.4	16
33	Green Diesel Production by Catalytic Hydrodeoxygenation of Vegetables Oils. International Journal of Environmental Research and Public Health, 2021, 18, 13041.	2.6	16
34	Determination of Kinetic and Diffusion Parameters Needed to Predict the Behavior of CaO-Based CO₂ Sorbent and Sorbent-Catalyst Materials. Industrial & Engineering Chemistry Research, 2020, 59, 6840-6854.	3.7	15
35	Steam - oxygen gasification of refuse derived fuel in fluidized beds: Modelling and pilot plant testing. Fuel Processing Technology, 2021, 216, 106783.	7.2	15
36	Cold model characterisation of a fluidised bed catalytic reactor by means of instantaneous pressure measurements. Chemical Engineering Journal, 2002, 87, 61-71.	12.7	13

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37	Non-Energy Valorization of Residual Biomasses via HTC: CO2 Capture onto Activated Hydrochars. Applied Sciences (Switzerland), 2020, 10, 1879.	2.5	13
38	Devolatilization of Residual Biomasses for Chemical Looping Gasification in Fluidized Beds Made Up of Oxygen-Carriers. Energies, 2021, 14, 311.	3.1	13
39	Catalytic combustion of methane on BaZr(1â^'x)MexO3 perovskites synthesised by a modified citrate method. Catalysis Today, 2012, 197, 236-242.	4.4	12
40	Oxygen transport by ionic membranes: Correlation of permeation data and prediction of char burning in a membrane-assisted biomass gasification process. Chemical Engineering and Processing: Process Intensification, 2015, 94, 39-52.	3.6	12
41	HPTLC and UV spectroscopy as innovative methods for biomass gasification tars analysis. Fuel, 2014, 116, 94-102.	6.4	11
42	Steam Gasification of Lignite in a Bench-Scale Fluidized-Bed Gasifier Using Olivine as Bed Material. Applied Sciences (Switzerland), 2020, 10, 2931.	2.5	11
43	Pretreated residual biomasses in fluidized beds for chemical looping Gasification: Experimental devolatilizations and characterization of ashes behavior. Bioresource Technology, 2022, 345, 126514.	9.6	10
44	Simulation of an industrial turbulent fluidized bed reactor for n-butane partial oxidation to maleic anhydride. Chemical Engineering Research and Design, 2016, 114, 79-88.	5.6	9
45	Kinetic Characterization of Tar Reforming on Commercial Ni-Catalyst Pellets Used for In Situ Syngas Cleaning in Biomass Gasification: Experiments and Simulations under Process Conditions. Industrial & Engineering Chemistry Research, 2021, 60, 6421-6434.	3.7	9
46	Influences of the Pretreatments of Residual Biomass on Gasification Processes: Experimental Devolatilizations Study in a Fluidized Bed. Applied Sciences (Switzerland), 2021, 11, 5722.	2.5	9
47	Dimensional Cold-Modeling Criteria for Fluidization Quality. Industrial & Engineering Chemistry Research, 2005, 44, 5152-5158.	3.7	8
48	Gas cleaning for waste applications (syngas cleaning for catalytic synthetic natural gas synthesis). , 2019, , 161-220.		8
49	Fluidized bed reactor assisted by Oxygen Transport Membranes: Numerical simulation and experimental hydrodynamic study. Chemical Engineering Journal, 2019, 377, 120323.	12.7	7
50	3D-CFD simulation of catalytic filter candles for particulate abatement and tar and methane steam reforming inside the freeboard of a gasifier. Chemical Engineering Journal, 2019, 377, 120290.	12.7	7
51	Experimental Study of Absorbent Hygiene Product Devolatilization in a Bubbling Fluidized Bed. Energies, 2021, 14, 2399.	3.1	7
52	Experimental Characterization and Energy Performance Assessment of a Sorption-Enhanced Steamâ€“Methane Reforming System. Processes, 2021, 9, 1440.	2.8	7
53	Steam O2-enriched air gasification of lignite and solid recovered fuel in fluidized bed. Fuel, 2021, 303, 121271.	6.4	7
54	Characterisation of Tar produced in the Gasification of Biomass with in situ Catalytic Reforming. International Journal of Chemical Reactor Engineering, 2010, 8, .	1.1	6

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55	CO2 Sorption by Hydrotalcite-Like Compounds in Dry and Wet Conditions. International Journal of Chemical Reactor Engineering, 2015, 13, 335-349.	1.1	5
56	Bi-Functional Catalyst/Sorbent for a H2-Rich Gas from Biomass Gasification. Processes, 2021, 9, 1249.	2.8	5
57	Pretreated residual biomasses in fluidized beds for chemical looping gasification: Analysis of devolatilization data by statistical tools. Bioresource Technology Reports, 2022, 17, 100926.	2.7	5
58	Study of Energy Valorization of Disposable Masks via Thermochemical Processes: Devolatilization Tests and Simulation Approach. Energies, 2022, 15, 2103.	3.1	5
59	Hydrotalcite-supported palladium nanoparticles as catalysts for the hydroarylation of carbonâ€“carbon multiple bonds. New Journal of Chemistry, 2018, 42, 1952-1957.	2.8	4
60	Influence of temperature on oxygen permeation through ion transport membrane to feed a biomass gasifier. Journal of Physics: Conference Series, 2015, 655, 012034.	0.4	3
61	Development of a High Temperature CO2 Sorbent Based on Hydrotalcite for a H2-Rich Syngas Production. Waste and Biomass Valorization, 2022, 13, 117-133.	3.4	2
62	Digesters, Gasifiers and Biorefineries: Plants and Field Demonstration. Green Energy and Technology, 2012, , 81-94.	0.6	1
63	Biomass and Waste Gasification. Green Energy and Technology, 2012, , 65-79.	0.6	1
64	CO2 Sorption-Enhanced Processes by Hydrotalcite-Like Compounds at Different Temperature Levels. International Journal of Chemical Reactor Engineering, 2015, 13, 143-152.	1.1	1
65	Fuel Gas Clean-up and Conditioning. Green Energy and Technology, 2012, , 123-143.	0.6	0
66	Upgrading of Biogas to Biomethane: Experimental and Process Analysis Applied to an Industrial Plant. , 0, , .		0