Fabrizio Scala

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7774258/publications.pdf

Version: 2024-02-01

119 papers	3,613 citations	109137 35 h-index	174990 52 g-index
120 all docs	120 docs citations	120 times ranked	2023 citing authors

#	Article	IF	Citations
1	Performance of limestoneâ€based sorbent for sorptionâ€enhanced gasification in dual interconnected fluidized bed reactors. AIChE Journal, 2023, 69, e17588.	1.8	8
2	Pilot-scale combined pyrolysis and decoupling biomass gasification for energy and metal recovery from discarded printed circuit board and waste cable. Energy, 2022, 245, 123268.	4.5	15
3	Direct Dry Carbonation of Mining and Industrial Wastes in a Fluidized Bed for Offsetting Carbon Emissions. Processes, 2022, 10, 582.	1.3	5
4	Carbon capture and utilization via calcium looping, sorption enhanced methanation and green hydrogen: A techno-economic analysis and life cycle assessment study. Fuel, 2022, 328, 125255.	3.4	15
5	Evaluation of two sorbents for the sorption-enhanced methanation in a dual fluidized bed system. Biomass Conversion and Biorefinery, 2021, 11, 111-119.	2.9	11
6	Recent Advances in Fluidized Bed Hydrodynamics and Transport Phenomenaâ€"Progress and Understanding. Processes, 2021, 9, 639.	1.3	11
7	Environmental risks related to organic compounds from the combustion of paper briquettes in domestic boilers. Journal of Hazardous Materials, 2021, 418, 126291.	6.5	7
8	Chemical Looping for Combustion of Solid Biomass: A Review. Energy & Fuels, 2021, 35, 19248-19265.	2.5	32
9	A thermodynamic study of sorption-enhanced CO2 methanation at low pressure. Journal of CO2 Utilization, 2020, 35, 176-184.	3.3	26
10	A Preliminary Techno-Economic Analysis on the Calcium Looping Process with Simultaneous Capture of CO2 and SO2 from a Coal-Based Combustion Power Plant. Energies, 2020, 13, 2176.	1.6	15
11	Rotation-assisted Abrasive Fluidised Bed Machining of AlSi10Mg parts made through Selective Laser Melting Technology. Procedia Manufacturing, 2020, 47, 1043-1049.	1.9	34
12	Impact fragmentation of limestone-based sorbents for calcium looping: The effect of steam and sulphur dioxide. Fuel Processing Technology, 2020, 208, 106499.	3.7	12
13	Looping cycles for low carbon technologies: A survey of recent research activities in Naples. Fuel, 2020, 268, 117371.	3.4	12
14	The combined effect of H2O and SO2 on CO2 uptake and sorbent attrition during fluidised bed calcium looping. Proceedings of the Combustion Institute, 2019, 37, 4379-4387.	2.4	23
15	Fluidized bed CaO hydration-dehydration cycles for application to sorption-enhanced methanation. Combustion Science and Technology, 2019, 191, 1724-1733.	1.2	5
16	Influence of Abrasive Materials in Fluidised Bed Machining of AlSi10Mg Parts Made through Selective Laser Melting Technology. Key Engineering Materials, 2019, 813, 129-134.	0.4	13
17	Set-Up of an Experimental Procedure for the Surface Smoothing of FDM Parts through Acetone Vapor. Key Engineering Materials, 2019, 813, 447-452.	0.4	5
18	Effect of exposure to SO2 and H2O during the carbonation stage of fluidised bed calcium looping on the performance of sorbents of different nature. Chemical Engineering Journal, 2019, 377, 120626.	6.6	19

#	Article	IF	Citations
19	Characterization of calcium looping sorbents with a novel twin bed reactor. Fuel Processing Technology, 2018, 172, 49-54.	3.7	7
20	Combined mercury removal and low-temperature NH₃-SCR OF NO with MnO_x/TiO₂ sorbents/catalysts. Combustion Science and Technology, 2018, 190, 1488-1499.	1.2	9
21	Particle agglomeration during fluidized bed combustion: Mechanisms, early detection and possible countermeasures. Fuel Processing Technology, 2018, 171, 31-38.	3.7	72
22	Effect of steam on the performance of Ca-based sorbents in calcium looping processes. Powder Technology, 2017, 316, 578-584.	2.1	29
23	A twin-bed test reactor for characterization of calcium looping sorbents. Powder Technology, 2017, 316, 585-591.	2.1	16
24	The effect of steam on CO2 uptake and sorbent attrition in fluidised bed calcium looping: The influence of process conditions and sorbent properties. Separation and Purification Technology, 2017, 189, 101-107.	3.9	22
25	Fragmentation of biomass-templated CaO-based pellets. Fuel, 2017, 187, 388-397.	3.4	6
26	Relevance of structure, fragmentation and reactivity of coal to combustion and oxy-combustion. Fuel, 2017, 201, 65-80.	3.4	51
27	Performance of Ca-Based Sorbents for Calcium Looping Processes: Role of Steam. Advanced Science Letters, 2017, 23, 5920-5922.	0.2	2
28	An Innovative Lab-Scale Apparatus for the Characterization of Calcium Looping Sorbents. Advanced Science Letters, 2017, 23, 5923-5926.	0.2	0
29	Fluidized bed co-combustion of hydrothermally treated paper sludge with two coals of different rank. Fuel Processing Technology, 2016, 144, 230-238.	3.7	34
30	Removal of Elemental Mercury by MnO_x Catalysts Supported on TiO₂ or Al₂O₃. Industrial & Engineering Chemistry Research, 2016, 55, 5133-5138.	1.8	29
31	Attrition during steam gasification of lignite char in a fluidized bed reactor. Fuel Processing Technology, 2016, 141, 38-43.	3.7	18
32	The effect of hydrothermal treatment on attrition during the fluidized bed combustion of paper sludge. Fuel Processing Technology, 2015, 140, 57-66.	3.7	7
33	Reactivation by Steam Hydration of Sorbents for Fluidized-Bed Calcium Looping. Energy & Fuels, 2015, 29, 4436-4446.	2.5	35
34	Fluidized bed gasification of lignite char with CO2 and H2O: A kinetic study. Proceedings of the Combustion Institute, 2015, 35, 2839-2846.	2.4	28
35	Elemental mercury capture and oxidation by a regenerable manganese-based sorbent: The effect of gas composition. Chemical Engineering Journal, 2015, 278, 134-139.	6.6	52
36	Reactivation by water hydration of the CO2 capture capacity of a calcium looping sorbent. Fuel, 2014, 127, 109-115.	3.4	48

#	Article	IF	Citations
37	Hydration-induced reactivation of spent sorbents for fluidized bed calcium looping (double looping). Fuel Processing Technology, 2014, 120, 71-78.	3.7	34
38	Fluidized bed calcium looping cycles for CO2 capture under oxy-firing calcination conditions: Part 1. Assessment of six limestones. Chemical Engineering Journal, 2013, 231, 537-543.	6.6	54
39	The effect of pelletization on the attrition of wood under fluidized bed combustion and gasification conditions. Proceedings of the Combustion Institute, 2013, 34, 2735-2740.	2.4	9
40	Performance of Natural Sorbents during Calcium Looping Cycles: A Comparison between Fluidized Bed and Thermo-Gravimetric Tests. Energy & Fuels, 2013, 27, 6048-6054.	2.5	31
41	Fluidized bed calcium looping cycles for CO2 capture under oxy-firing calcination conditions: Part 2. Assessment of dolomite vs. limestone. Chemical Engineering Journal, 2013, 231, 544-549.	6.6	31
42	An experimental investigation on seawater SO₂ scrubbing for marine application. Environmental Progress and Sustainable Energy, 2013, 32, 1179-1186.	1.3	43
43	Characterization of a regenerable sorbent for high temperature elemental mercury capture from flue gas. Fuel, 2013, 108, 13-18.	3.4	56
44	Attrition of lignite char under fluidized bed gasification conditions: The effect of carbon conversion. Proceedings of the Combustion Institute, 2013, 34, 2741-2747.	2.4	11
45	A comparative characterization study of Ca-looping natural sorbents. Applied Energy, 2013, 108, 373-382.	5.1	38
46	Fluidized bed desulfurization using lime obtained after slow calcination of limestone particles. Fuel, 2013, 114, 99-105.	3.4	31
47	Particle-fluid mass transfer in multiparticle systems at low Reynolds numbers. Chemical Engineering Science, 2013, 91, 90-101.	1.9	21
48	Heat and mass transfer in fluidized bed combustion and gasification systems. , 2013, , 177-253.		4
49	Attrition phenomena relevant to fluidized bed combustion and gasification systems. , 2013, , 254-315.		15
50	Conversion of solid fuels and sorbents in fluidized bed combustion and gasification. , 2013, , 319-387.		5
51	Fluidized bed technologies for near-zero emission combustion and gasification. , 2013, , .		58
52	Attrition of Limestone During Fluidized Bed Calcium Looping Cycles for CO₂Capture. Combustion Science and Technology, 2012, 184, 929-941.	1.2	45
53	Fluidized bed calcium looping: The effect of SO 2 on sorbent attrition and CO 2 capture capacity. Chemical Engineering Journal, 2012, 207-208, 445-449.	6.6	58
54	Attrition of lignite char during fluidized bed gasification. Experimental Thermal and Fluid Science, 2012, 43, 9-12.	1.5	12

#	Article	IF	Citations
55	Seawater scrubbing desulfurization: A model for SO₂ absorption in fallâ€down droplets. Environmental Progress and Sustainable Energy, 2012, 31, 277-287.	1.3	42
56	The attrition behaviour of oxygen-carriers under inert and reacting conditions. Chemical Engineering Science, 2012, 71, 449-467.	1.9	49
57	A case study on suspended particles in a natural gas urban transmission and distribution network. Fuel Processing Technology, 2012, 93, 65-72.	3.7	14
58	A Population Balance Model on Sorbent in CFB Combustors: The Influence of Particle Attrition. Industrial & Engineering Chemistry Research, 2011, 50, 9704-9711.	1.8	21
59	Devolatilization and Attrition Behavior of Fuel Pellets during Fluidized-Bed Gasification. Energy & Fuels, 2011, 25, 1260-1266.	2.5	26
60	Fluidized-Bed Combustion of Single Coal Char Particles: An Analysis of the Burning Rate and of the Primary CO/CO2Ratio. Energy & Fuels, 2011, 25, 1051-1059.	2.5	19
61	Experimental study of filtration system performance of natural gas in urban transmission and distribution network: A case study on the city of Kerman, Iran. Fuel, 2011, 90, 1166-1171.	3.4	16
62	Elemental mercury vapor capture by powdered activated carbon in a fluidized bed reactor. Fuel, 2011, 90, 2077-2082.	3.4	39
63	Primary fragmentation of limestone under oxy-firing conditions in a bubbling fluidized bed. Fuel Processing Technology, 2011, 92, 1449-1456.	3.7	31
64	Flue gas desulfurization under simulated oxyfiring fluidized bed combustion conditions: The influence of limestone attrition and fragmentation. Chemical Engineering Science, 2010, 65, 556-561.	1.9	37
65	Limestone fragmentation and attrition during fluidized bed oxyfiring. Fuel, 2010, 89, 827-832.	3.4	27
66	Attrition of limestones by impact loading in fluidized beds: The influence of reaction conditions. Fuel Processing Technology, 2010, 91, 1022-1027.	3.7	22
67	The influence of temperature on limestone sulfation and attrition under fluidized bed combustion conditions. Experimental Thermal and Fluid Science, 2010, 34, 352-358.	1.5	50
68	The influence of reactivation by hydration of spent SO2 sorbents on their impact fragmentation in fluidized bed combustors. Chemical Engineering Journal, 2010, 162, 1067-1074.	6.6	9
69	Calculation of the mass transfer coefficient for the combustion of a carbon particle. Combustion and Flame, 2010, 157, 137-142.	2.8	12
70	Combustion of Single Coal Char Particles under Fluidized Bed Oxyfiring Conditions. Industrial & Engineering Chemistry Research, 2010, 49, 11029-11036.	1.8	40
71	Fluidized bed combustion of single coal char particles at high CO2 concentration. Chemical Engineering Journal, 2010, 165, 902-906.	6.6	49
72	Limestone Attrition under Simulated Oxyfiring Fluidized-Bed Combustion Conditions. Chemical Engineering and Technology, 2009, 32, 380-385.	0.9	4

#	Article	IF	Citations
73	A new technique for the measurement of the product CO/CO2 ratio at the surface of char particles burning in a fluidized bed. Proceedings of the Combustion Institute, 2009, 32, 2021-2027.	2.4	23
74	Combustion of Coal Char Particles under Fluidized Bed Oxyfiring Conditions. , 2009, , 624-629.		2
75	The Influence of Sorbent Properties and Reaction Conditions on Attrition of Limestone by Impact Loading in Fluidized Beds. , 2009, , 486-491.		0
76	Sorbent Inventory and Particle Size Distribution in Air-Blown Circulating Fluidized Bed Combustors: The Influence of Particle Attrition and Fragmentation. , 2009, , 966-971.		2
77	Sulphation of limestones in a fluidized bed combustor: The relationship between particle attrition and microstructure. Canadian Journal of Chemical Engineering, 2008, 86, 347-355.	0.9	33
78	An assessment of water and steam reactivation of a fluidized bed spent sorbent for enhanced SO2 capture. Powder Technology, 2008, 180, 129-134.	2.1	31
79	Mercury emissions from coal combustion: Modeling and comparison of Hg capture in a fabric filter versus an electrostatic precipitator. Journal of Hazardous Materials, 2008, 152, 616-623.	6.5	47
80	An SEM/EDX study of bed agglomerates formed during fluidized bed combustion of three biomass fuels. Biomass and Bioenergy, 2008, 32, 252-266.	2.9	103
81	Fluidized bed combustion of pelletized biomass and waste-derived fuels. Combustion and Flame, 2008, 155, 21-36.	2.8	69
82	In-duct Removal of Mercury from Coal-Fired Power Plant Flue Gas by Activated Carbon: Assessment of Entrained Flow Versus Wall Surface Contributions. Environmental Engineering Science, 2008, 25, 1423-1428.	0.8	6
83	Attrition of Limestone by Impact Loading in Fluidized Beds. Energy & Fuels, 2007, 21, 2566-2572.	2.5	84
84	A single particle model of the fluidized bed combustion of a char particle with a coherent ash skeleton: Application to granulated sewage sludge. Fuel Processing Technology, 2007, 88, 577-584.	3.7	24
85	Mass transfer around freely moving active particles in the dense phase of a gas fluidized bed of inert particles. Chemical Engineering Science, 2007, 62, 4159-4176.	1.9	67
86	Characterization and Early Detection of Bed Agglomeration during the Fluidized Bed Combustion of Olive Husk. Energy & Fuels, 2006, 20, 120-132.	2.5	86
87	Mechanism and prediction of bed agglomeration during fluidized bed combustion of a biomass fuel: Effect of the reactor scale. Chemical Engineering Journal, 2006, 123, 71-80.	6.6	131
88	Steam reactivation of a spent sorbent for enhanced SO2 capture in FBC. AICHE Journal, 2006, 52, 4090-4098.	1.8	15
89	Assessment of Sorbent Reactivation by Water Hydration for Fluidized Bed Combustion Application. Journal of Energy Resources Technology, Transactions of the ASME, 2006, 128, 90-98.	1.4	13
90	Combustion and Attrition of Biomass Chars in a Fluidized Bed. Energy & Fuels, 2006, 20, 91-102.	2.5	87

#	Article	IF	Citations
91	A model of the dynamics of a fluidized bed combustor burning biomass. Combustion and Flame, 2005, 140, 371-384.	2.8	24
92	Fluidized Bed Combustion of a Biomass Fuel: Comparison Between Pilot Scale Experiments and Model Simulations. Journal of Heat Transfer, 2005, 127, 117-122.	1.2	9
93	Spray-Dry Desulfurization of Flue Gas from Heavy Oil Combustion. Journal of the Air and Waste Management Association, 2005, 55, 20-29.	0.9	17
94	Steam Reactivation of FB Spent Sorbent for Enhanced SO2 Capture: The Relationship Between Microstructural Properties and Sulphur Uptake. , 2005, , .		2
95	Bed Agglomeration During the Fluidized Bed Combustion of Olive Husk. , 2005, , .		0
96	Modeling flue gas desulfurization by spray-dry absorption. Separation and Purification Technology, 2004, 34, 143-153.	3.9	53
97	Fluidized bed combustion of alternative solid fuels. Experimental Thermal and Fluid Science, 2004, 28, 691-699.	1.5	79
98	Reactivation by Water Hydration of Spent Sorbent for Fluidized-Bed Combustion Application:â€‰ Influence of Hydration Time. Industrial & Engineering Chemistry Research, 2004, 43, 5692-5701.	1.8	22
99	On the Relevance of Axial and Transversal Fuel Segregation during the FB Combustion of a Biomass. Energy & Fuels, 2004, 18, 1108-1117.	2.5	46
100	Modeling Mercury Capture in Coal-Fired Power Plant Flue Gas. Industrial & Engineering Chemistry Research, 2004, 43, 2575-2589.	1.8	26
101	Assessment of ettringite from hydrated FBC residues as a sorbent for fluidized bed desulphurizationâ˜†. Fuel, 2003, 82, 2299-2307.	3.4	24
102	Fluidized bed combustion of tyre derived fuel. Experimental Thermal and Fluid Science, 2003, 27, 465-471.	1.5	18
103	The influence of fine char particles burnout on bed agglomeration during the fluidized bed combustion of a biomass fuel. Fuel Processing Technology, 2003, 84, 229-241.	3.7	36
104	Dolomite attrition during fluidized-bed calcination and sulfation. Combustion Science and Technology, 2003, 175, 2201-2216.	1.2	28
105	Assessment of Sorbent Reactivation by Water Hydration for Fluidized Bed Combustion Application. , 2003, , 429.		1
106	FB Combustion of a Biomass Fuel: Comparison Between Pilot Scale Experiments and Model Simulations. , 2003, , .		1
107	The influence of sorbent properties and reaction temperature on sorbent attrition, sulfur uptake, and particle sulfation pattern during fluidized-bed desulfurization. Combustion Science and Technology, 2002, 174, 151-169.	1.2	29
108	Absorption with instantaneous reaction in a droplet with sparingly soluble fines. AICHE Journal, 2002, 48, 1719-1726.	1.8	14

#	Article	IF	Citations
109	Modelling fluidized bed combustion of high-volatile solid fuels. Chemical Engineering Science, 2002, 57, 1175-1196.	1.9	87
110	Simulation of Mercury Capture by Activated Carbon Injection in Incinerator Flue Gas. 1. In-Duct Removal. Environmental Science & Technology, 2001, 35, 4367-4372.	4.6	48
111	Simulation of Mercury Capture by Activated Carbon Injection in Incinerator Flue Gas. 2. Fabric Filter Removal. Environmental Science & Technology, 2001, 35, 4373-4378.	4.6	34
112	Enhancement of Sulfur Uptake by Hydration of Spent Limestone for Fluidized-Bed Combustion Application. Industrial & Engineering Chemistry Research, 2001, 40, 2495-2501.	1.8	37
113	The relevance of attrition to the fate of ashes during fluidized-bed combustion of a biomass. Proceedings of the Combustion Institute, 2000, 28, 2279-2286.	2.4	42
114	Attrition of sorbents during fluidized bed calcination and sulphation. Powder Technology, 2000, 107, 153-167.	2.1	116
115	Sound-Assisted Fluidized Bed Combustion of Fine Particles. Combustion Science and Technology, 2000, 153, 83-93.	1.2	6
116	Fluidized Bed Combustion of a Biomass Char (Robinia pseudoacacia). Energy & Fuels, 2000, 14, 781-790.	2.5	57
117	Fluidized-bed combustion of a biomass char: The influence of carbon attrition and fines postocombustion on fixed carbon conversion. Proceedings of the Combustion Institute, 1998, 27, 3103-3110.	0.3	24
118	Comminution of limestone during batch fluidized-bed calcination and sulfation. AICHE Journal, 1997, 43, 363-373.	1.8	107
119	Mass Transfer around Active Particles in Fluidized Beds. , 0, , .		7