Wenqiang Liu

List of Publications by Year
in descending order

63 papers	3,690 citations	117625 34 h-index	128289 60 g-index
63 all docs	63 docs citations	63 times ranked	1544 citing authors

#	Article	IF	Citations
1	Performance Enhancement of Calcium Oxide Sorbents for Cyclic CO₂ Captureâ€"A Review. Energy & Fuels, 2012, 26, 2751-2767.	5.1	280
2	Calcium Precursors for the Production of CaO Sorbents for Multicycle CO₂ Capture. Environmental Science & Technology, 2010, 44, 841-847.	10.0	234
3	Synthesis of Sintering-Resistant Sorbents for CO₂ Capture. Environmental Science & Technology, 2010, 44, 3093-3097.	10.0	213
4	Enhanced performance of extrudedâ€"spheronized carbide slag pellets for high temperature CO 2 capture. Chemical Engineering Journal, 2016, 285, 293-303.	12.7	169
5	CO2 capture by Li4SiO4 sorbents and their applications: Current developments and new trends. Chemical Engineering Journal, 2019, 359, 604-625.	12.7	142
6	Progress in MgO sorbents for cyclic CO₂capture: a comprehensive review. Journal of Materials Chemistry A, 2019, 7, 20103-20120.	10.3	132
7	Screening of inert solid supports for CaO-based sorbents for high temperature CO2 capture. Fuel, 2016, 181, 199-206.	6.4	127
8	One-step synthesis of porous Li4SiO4-based adsorbent pellets via graphite moulding method for cyclic CO2 capture. Chemical Engineering Journal, 2018, 353, 92-99.	12.7	120
9	Plastic/rubber waste-templated carbide slag pellets for regenerable CO2 capture at elevated temperature. Applied Energy, 2019, 242, 919-930.	10.1	115
10	Structurally improved CaO-based sorbent by organic acids for high temperature CO2 capture. Fuel, 2016, 167, 17-24.	6.4	114
11	Performance of Extruded Particles from Calcium Hydroxide and Cement for CO₂ Capture. Energy & Fuels, 2012, 26, 154-161.	5.1	111
12	Overcoming the Problem of Loss-in-Capacity of Calcium Oxide in CO2Capture. Energy & Fuels, 2006, 20, 2417-2420.	5.1	108
13	Incorporation of CaO into novel Nd2O3 inert solid support for high temperature CO2 capture. Chemical Engineering Journal, 2015, 273, 333-343.	12.7	92
14	Incorporation of CaO into inert supports for enhanced CO2 capture: A review. Chemical Engineering Journal, 2020, 396, 125253.	12.7	92
15	Fabrication of CaO-Based Sorbents for CO₂ Capture by a Mixing Method. Environmental Science & Technology, 2012, 46, 1932-1939.	10.0	84
16	Potassium catalytic hydrogen production in sorption enhanced gasification of biomass with steam. International Journal of Hydrogen Energy, 2014, 39, 4234-4243.	7.1	82
17	Alkaliâ€Doped Lithium Orthosilicate Sorbents for Carbon Dioxide Capture. ChemSusChem, 2016, 9, 2480-2487.	6.8	71
18	Structurally Improved, Core-in-Shell, CaO-Based Sorbent Pellets for CO₂ Capture. Energy & Fuels, 2015, 29, 6636-6644.	5.1	65

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19	One-step synthesis of spherical CaO pellets via novel graphite-casting method for cyclic CO2 capture. Chemical Engineering Journal, 2019, 374, 619-625.	12.7	65
20	Thermochemical energy storage performances of Ca-based natural and waste materials under high pressure during CaO/CaCO3 cycles. Energy Conversion and Management, 2019, 197, 111885.	9.2	59
21	Structurally improved, TiO2-incorporated, CaO-based pellets for thermochemical energy storage in concentrated solar power plants. Solar Energy Materials and Solar Cells, 2021, 226, 111076.	6.2	58
22	Preparation of Novel Li₄SiO₄ Sorbents with Superior Performance at Low CO₂ Concentration. ChemSusChem, 2016, 9, 1607-1613.	6.8	55
23	Porous extruded-spheronized Li4SiO4 pellets for cyclic CO2 capture. Fuel, 2019, 236, 1043-1049.	6.4	54
24	Synthesis of highly efficient, structurally improved Li4SiO4 sorbents for high-temperature CO2 capture. Ceramics International, 2018, 44, 16668-16677.	4.8	52
25	Reactivation of calcium-based sorbent by water hydration for CO2 capture. Chemical Engineering Journal, 2012, 198-199, 38-44.	12.7	51
26	One-step synthesis of highly efficient CaO-based CO2 sorbent pellets via gel-casting technique. Fuel Processing Technology, 2017, 160, 70-77.	7.2	50
27	Pelletization of MgO-based sorbents for intermediate temperature CO 2 capture. Fuel, 2017, 187, 328-337.	6.4	50
28	Stabilized CO2 capture performance of extrudedâ€“spheronized CaO-based pellets by microalgae templating. Proceedings of the Combustion Institute, 2017, 36, 3977-3984.	3.9	47
29	Synthesis of CaO-Based Sorbents for CO2 Capture by a Spray-Drying Technique. Environmental Science & Technology, 2012, 46, 11267-11272.	10.0	46
30	Calcium Looping for CO₂ Capture at a Constant High Temperature. Energy & Fuels, 2014, 28, 307-318.	5.1	43
31	CO₂ Sorption Enhancement of Extruded-Spheronized CaO-Based Pellets by Sacrificial Biomass Templating Technique. Energy & Fuels, 2016, 30, 9605-9612.	5.1	43
32	Mode investigation of CO2 sorption enhancement for titanium dioxide-decorated CaO-based pellets. Fuel, 2019, 256, 116009.	6.4	43
33	Stabilized CO2 capture performance of wet mechanically activated dolomite. Fuel, 2018, 222, 334-342.	6.4	41
34	Mechanical Modification of Naturally Occurring Limestone for High-Temperature CO₂ Capture. Energy & Fuels, 2016, 30, 6597-6605.	5.1	38
35	Performance of synthetic CaO-based sorbent pellets for CO2 capture and kinetic analysis. Fuel, 2018, 232, 205-214.	6.4	35
36	Investigation of novel naturally occurring manganocalcite for CO2 capture under oxy-fuel calcination. Chemical Engineering Journal, 2016, 296, 412-419.	12.7	34

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37	Novel low cost Li4SiO4-based sorbent with naturally occurring wollastonite as Si-source for cyclic CO2 capture. Chemical Engineering Journal, 2019, 374, 328-337.	12.7	34
38	High Temperature CO₂ Capture on Novel Yb₂O₃-Supported CaO-Based Sorbents. Energy & Fuels, 2016, 30, 6606-6613.	5.1	33
39	Screening of Naturally Al/Si-Based Mineral Binders to Modify CaO-Based Pellets for CO₂ Capture. Energy & Fuels, 2017, 31, 14070-14078.	5.1	33
40	Preparation of Li₄SiO₄ Sorbents for Carbon Dioxide Capture via a Spray-Drying Technique. Energy & Fuels, 2018, 32, 4521-4527.	5.1	33
41	Conversion of Biomass into High-Quality Bio-oils by Degradative Solvent Extraction Combined with Subsequent Pyrolysis. Energy & Fuels, 2017, 31, 3987-3994.	5.1	28
42	Reactivation mode investigation of spent CaO-based sorbent subjected to CO2 looping cycles or sulfation. Fuel, 2020, 266, 117056.	6.4	28
43	Routine Investigation of CO₂ Sorption Enhancement for Extrudedâ€"Spheronized CaO-Based Pellets. Energy & Fuels, 2017, 31, 9660-9667.	5.1	22
44	Eutectic doped Li₄SiO₄ adsorbents using the optimal dopants for highly efficient CO₂ removal. Journal of Materials Chemistry A, 2021, 9, 14309-14318.	10.3	22
45	A semi-industrial preparation procedure of CaO-based pellets with high CO2 uptake performance. Fuel Processing Technology, 2019, 193, 149-158.	7.2	21
46	High-temperature CO2 adsorption by one-step fabricated Nd-doped Li4SiO4 pellets. Chemical Engineering Journal, 2021, 410, 128346.	12.7	21
47	Stabilized Performance of Alâ€Decorated and Al/Mg Coâ€Decorated Sprayâ€Dried CaOâ€Based CO₂ Sorbents. Chemical Engineering and Technology, 2019, 42, 1283-1292.	1.5	18
48	CaO/Ca(OH)2 heat storage performance of hollow nanostructured CaO-based material from Ca-looping cycles for CO2 capture. Fuel Processing Technology, 2021, 217, 106834.	7.2	16
49	Structurally improved Li4SiO4 sorbents derived from lithium salicylate precursor for enhanced CO2 capture. Fuel Processing Technology, 2021, 224, 107027.	7.2	14
50	Lithium-based ceramics in nonsilicates for CO₂capture: current status and new trends. Journal of Materials Chemistry A, 2022, 10, 1706-1725.	10.3	14
51	Effect of addition of weak acids on CO2 desorption from rich amine solvents. Korean Journal of Chemical Engineering, 2012, 29, 362-368.	2.7	13
52	Incorporation of CaO in inert solid matrix by spray drying sol mixture of precursors. RSC Advances, 2016, 6, 57658-57666.	3.6	13
53	Limestone Decomposition in an O₂/CO₂/Steam Atmosphere Integrated with Coal Combustion. Energy & Fuels, 2016, 30, 5092-5100.	5.1	13
54	CaO/H₂O Thermochemical Heat Storage Capacity of a CaO/CeO₂ Composite from CO₂ Capture Cycles. Industrial & Engineering Chemistry Research, 2020, 59, 16741-16750.	3.7	13

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55	Mechanochemically activated Li4SiO4-based adsorbent with enhanced CO2 capture performance and its modification mechanisms. Fuel, 2020, 273, 117749.	6.4	13
56	Acidification Optimization and Granulation of a Steelâ€•Slagâ€•Derived Sorbent for CO₂ Capture. Chemical Engineering and Technology, 2018, 41, 2077-2086.	1.5	12
57	Optimizing Synergy between Phosphogypsum Disposal and Cement Plant CO₂Capture by the Calcium Looping Process. Energy & Fuels, 0, , .	5.1	10
58	A review on granulation of CaO-based sorbent for carbon dioxide capture. Chemical Engineering Journal, 2022, 446, 136880.	12.7	10
59	Enhancement of CO₂ Absorption in Li₄SiO₄ by Acidification and Eutectic Doping. Energy & Fuels, 2018, 32, 12758-12765.	5.1	9
60	Mineral-derived Li4SiO4-based adsorbent for post-combustion CO2 capture: An experimental and kinetic investigation. Proceedings of the Combustion Institute, 2021, 38, 5339-5346.	3.9	9
61	Novel synthesis of tailored Li4SiO4-based microspheres for ultrafast CO2 adsorption. Fuel Processing Technology, 2021, 213, 106675.	7.2	9
62	Synthesis of waste bagasse-derived Li4SiO4-based ceramics for cyclic CO2 capture: Investigation on the effects of different pretreatment approaches. Ceramics International, 2021, 47, 28744-28753.	4.8	8
63	Reactivation of CaO-based sorbents via multi-acidification under N2 or oxy-fuel (with and without) Tj ETQq1 1 0.784314 rgBT /Overlock	6.4	6