

Cheng-gong Sun

List of Publications by Year in descending order

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89
papers

3,001
citations

136885

32
h-index

175177

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all docs

90
docs citations

90
times ranked

3714
citing authors

#	ARTICLE	IF	CITATIONS
1	Capturing CO ₂ from ambient air using a polyethyleneimine-silica adsorbent in fluidized beds. <i>Chemical Engineering Science</i> , 2014, 116, 306-316.	1.9	136
2	Parametric study on the regeneration heat requirement of an amine-based solid adsorbent process for post-combustion carbon capture. <i>Applied Energy</i> , 2016, 168, 394-405.	5.1	136
3	Oxy-fuel combustion study of biomass fuels in a 20-kWth fluidized bed combustor. <i>Fuel</i> , 2018, 215, 778-786.	3.4	124
4	Indirect electrochemical reduction of carbon dioxide to carbon nanopowders in molten alkali carbonates: Process variables and product properties. <i>Carbon</i> , 2014, 73, 163-174.	5.4	122
5	Control of NO _x emissions of a domestic/small-scale biomass pellet boiler by air staging. <i>Fuel</i> , 2013, 103, 792-798.	3.4	98
6	Coking and deactivation of a mesoporous Ni-CaO-ZrO ₂ catalyst in dry reforming of methane: A study under different feeding compositions. <i>Fuel</i> , 2015, 143, 527-535.	3.4	90
7	An investigation of Cu ²⁺ and Fe ²⁺ ions as active materials for electrochemical redox supercapacitors. <i>Journal of Electroanalytical Chemistry</i> , 2007, 611, 43-50.	1.9	83
8	$\delta^{13}\text{C}$ values of coal-derived PAHs from different processes and their application to source apportionment. <i>Organic Geochemistry</i> , 1999, 30, 881-889.	0.9	82
9	Performance of polyethyleneimine-silica adsorbent for post-combustion CO ₂ capture in a bubbling fluidized bed. <i>Chemical Engineering Journal</i> , 2014, 251, 293-303.	6.6	79
10	Developing hierarchically ultra-micro/mesoporous biocarbons for highly selective carbon dioxide adsorption. <i>Chemical Engineering Journal</i> , 2019, 361, 199-208.	6.6	79
11	Experimental investigation of woody and non-woody biomass combustion in a bubbling fluidised bed combustor focusing on gaseous emissions and temperature profiles. <i>Energy</i> , 2017, 141, 2069-2080.	4.5	74
12	The Properties of Individual Carbon Residuals and Their Influence on The Deactivation of Ni-CaO-ZrO ₂ Catalysts in CH ₄ Dry Reforming. <i>ChemCatChem</i> , 2014, 6, 640-648.	1.8	69
13	CO ₂ Capture with Activated Carbon Grafted by Nitrogenous Functional Groups. <i>Energy & Fuels</i> , 2013, 27, 4818-4823.	2.5	67
14	Nitrogen-enriched and hierarchically porous carbon macro-spheres - ideal for large-scale CO ₂ capture. <i>Journal of Materials Chemistry A</i> , 2014, 2, 5481-5489.	5.2	66
15	A Review of State-of-the-Art Microfluidic Technologies for Environmental Applications: Detection and Remediation. <i>Global Challenges</i> , 2019, 3, 1800060.	1.8	66
16	Spherical potassium intercalated activated carbon beads for pulverised fuel CO ₂ post-combustion capture. <i>Carbon</i> , 2015, 94, 243-255.	5.4	65
17	Application of 1-ethyl-3-methylimidazolium thiocyanate to the electrolyte of electrochemical double layer capacitors. <i>Journal of Power Sources</i> , 2006, 162, 1444-1450.	4.0	63
18	Impact of biomass char on coal char burn-out under air and oxy-fuel conditions. <i>Fuel</i> , 2013, 114, 128-134.	3.4	62

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19	Use of Compound-Specific Stable Isotope Analysis to Source Anthropogenic Natural Gas-Derived Polycyclic Aromatic Hydrocarbons in a Lagoon Sediment. <i>Environmental Science & Technology</i> , 2000, 34, 4684-4686.	4.6	61
20	Microwave-based preparation and characterization of Fe-cored carbon nanocapsules with novel stability and super electromagnetic wave absorption performance. <i>Carbon</i> , 2018, 135, 1-11.	5.4	60
21	Electrochemical performance of electrochemical capacitors using Cu(II)-containing ionic liquid as the electrolyte. <i>Microporous and Mesoporous Materials</i> , 2010, 128, 56-61.	2.2	59
22	Adsorption performance and kinetic study of hierarchical porous Fe-based MOFs for toluene removal. <i>Science of the Total Environment</i> , 2021, 793, 148622.	3.9	58
23	Impact of CO ₂ on biomass pyrolysis, nitrogen partitioning, and char combustion in a drop tube furnace. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 113, 323-331.	2.6	55
24	Source apportionment of polycyclic aromatic hydrocarbons in a coastal lagoon by molecular and isotopic characterisation. <i>Marine Chemistry</i> , 2003, 84, 123-135.	0.9	49
25	Synthesis, characterization and evaluation of activated spherical carbon materials for CO ₂ capture. <i>Fuel</i> , 2013, 113, 854-862.	3.4	47
26	Surface-modified spherical activated carbon materials for pre-combustion carbon dioxide capture. <i>RSC Advances</i> , 2015, 5, 33681-33690.	1.7	41
27	Use of compound-specific ¹³ C and ¹⁵ N stable isotope measurements as an aid in the source apportionment of polyaromatic hydrocarbons. <i>Rapid Communications in Mass Spectrometry</i> , 2003, 17, 2611-2613.	0.7	40
28	Structural transformation of fluid phase extracted from coal matrix during thermoplastic stage of coal pyrolysis. <i>Fuel</i> , 2018, 232, 374-383.	3.4	40
29	High capacity co-precipitated manganese oxides sorbents for oxidative mercury capture. <i>Fuel</i> , 2013, 109, 559-562.	3.4	39
30	Ultrasonic and hydrothermal mediated synthesis routes for functionalized Mg-Al LDH: Comparison study on surface morphology, basic site strength, cyclic sorption efficiency and effectiveness. <i>Ultrasonics Sonochemistry</i> , 2018, 40, 341-352.	3.8	38
31	Development of Low-Cost Functional Adsorbents for Control of Mercury (Hg) Emissions from Coal Combustion. <i>Energy & Fuels</i> , 2013, 27, 3875-3882.	2.5	37
32	Potassium and Zeolitic Structure Modified Ultra-microporous Adsorbent Materials from a Renewable Feedstock with Favorable Surface Chemistry for CO ₂ Capture. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26826-26839.	4.0	36
33	Process simulations of post-combustion CO ₂ capture for coal and natural gas-fired power plants using a polyethyleneimine/silica adsorbent. <i>International Journal of Greenhouse Gas Control</i> , 2017, 58, 276-289.	2.3	34
34	Resolving coal and petroleum-derived polycyclic aromatic hydrocarbons (PAHs) in some contaminated land samples using compound-specific stable carbon isotope ratio measurements in conjunction with molecular fingerprints†. <i>Fuel</i> , 2003, 82, 2017-2023.	3.4	33
35	Synthesis and functionalisation of spherical meso-, hybrid meso/macro- and macro-porous cellular silica foam materials with regulated pore sizes for CO ₂ capture. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23587-23601.	5.2	32
36	A novel approach to CO ₂ capture in Fluid Catalytic Cracking—Chemical Looping Combustion. <i>Fuel</i> , 2019, 244, 140-150.	3.4	32

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37	High Density and Super Ultra-Microporous Activated Carbon Macrospheres with High Volumetric Capacity for CO ₂ Capture. <i>Advanced Sustainable Systems</i> , 2018, 2, 1700115.	2.7	30
38	Hydropyrolysis: A new technique for the analysis of macromolecular material in meteorites. <i>Planetary and Space Science</i> , 2005, 53, 1280-1286.	0.9	27
39	Carbon Dioxide Separation from Nitrogen/Hydrogen Mixtures over Activated Carbon Beads: Adsorption Isotherms and Breakthrough Studies. <i>Energy & Fuels</i> , 2015, 29, 3796-3807.	2.5	27
40	Sourcing of Fossil Fuel-Derived PAH in the Environment. <i>Polycyclic Aromatic Compounds</i> , 2000, 20, 97-109.	1.4	25
41	Microwave-induced activation of additional active edge sites on the MoS ₂ surface for enhanced Hg ⁰ capture. <i>Applied Surface Science</i> , 2017, 420, 439-445.	3.1	25
42	An investigation of lime addition to fuel as a countermeasure to bed agglomeration for the combustion of non-woody biomass fuels in a 20kWth bubbling fluidised bed combustor. <i>Fuel</i> , 2019, 240, 349-361.	3.4	25
43	Development of cost-effective PCM-carbon foam composites for thermal energy storage. <i>Energy Reports</i> , 2022, 8, 1696-1703.	2.5	24
44	Mesocellular silica foam supported polyamine adsorbents for dry CO ₂ scrubbing: Performance of single versus blended polyamines for impregnation. <i>Applied Energy</i> , 2019, 255, 113643.	5.1	23
45	Selective low temperature chemical looping combustion of higher alkanes with Cu- and Mn- oxides. <i>Energy</i> , 2019, 173, 658-666.	4.5	22
46	Synthesis of functionalized 3D microporous carbon foams for selective CO ₂ capture. <i>Chemical Engineering Journal</i> , 2020, 402, 125459.	6.6	20
47	Comparative study of the inherent combustion reactivity of sawdust chars produced by TGA and in the drop tube furnace. <i>Fuel Processing Technology</i> , 2020, 201, 106361.	3.7	20
48	Sonochemical surface functionalization of exfoliated LDH: Effect on textural properties, CO ₂ adsorption, cyclic regeneration capacities and subsequent gas uptake for simultaneous methanol synthesis. <i>Ultrasonics Sonochemistry</i> , 2017, 39, 330-343.	3.8	19
49	Exergetic, economic and carbon emission studies of bio-olefin production via indirect steam gasification process. <i>Energy</i> , 2019, 187, 115933.	4.5	19
50	Continuous testing of silica-PEI adsorbents in a lab.-scale twin bubbling fluidized-bed system. <i>International Journal of Greenhouse Gas Control</i> , 2019, 82, 184-191.	2.3	19
51	Demonstrating the applicability of chemical looping combustion for the regeneration of fluid catalytic cracking catalysts. <i>Chemical Engineering Journal</i> , 2020, 389, 124492.	6.6	19
52	Hydropyrolysis as a preparative method for the compound-specific carbon isotope analysis of fatty acids. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 323-325.	0.7	18
53	Coupling detailed radiation model with process simulation in Aspen Plus: A case study on fluidized bed combustor. <i>Applied Energy</i> , 2018, 227, 168-179.	5.1	18
54	Mechanisms of Toluene Removal in Relation to the Main Components of Biosyngas in a Catalytic Nonthermal Plasma Process. <i>Energy & Fuels</i> , 2019, 33, 4287-4301.	2.5	18

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55	Design and development of 3D hierarchical ultra-microporous CO ₂ -sieving carbon architectures for potential flow-through CO ₂ capture at typical practical flue gas temperatures. <i>Journal of Materials Chemistry A</i> , 2020, 8, 17025-17035.	5.2	17
56	Comprehensive evaluation of ionic liquid [Bmim][PF ₆] for absorbing toluene and acetone. <i>Environmental Pollution</i> , 2021, 285, 117675.	3.7	17
57	Influence of co-processing of coal and oil shale on combustion characteristics, kinetics and ash fusion behaviour. <i>Energy</i> , 2021, 216, 119229.	4.5	16
58	Microwave-triggered low temperature thermal reduction of Zr-modified high entropy oxides with extraordinary thermochemical H ₂ production performance. <i>Energy Conversion and Management</i> , 2022, 252, 115125.	4.4	15
59	Physical and electrochemical characterization of CuO-doped activated carbon in ionic liquid. <i>Electrochimica Acta</i> , 2010, 55, 2667-2672.	2.6	14
60	Experimental investigations on the chlorine-induced corrosion of HVOF thermal sprayed Stellite-6 and NiAl coatings with fluidised bed biomass/antracite combustion systems. <i>Fuel</i> , 2021, 288, 119607.	3.4	13
61	Hydropyrolysis of steroids: a preparative step for compound-specific carbon isotope ratio analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 3339-3342.	0.7	12
62	Preparation of spherical activated carbon with hierarchical porous texture. <i>Journal of Materials Science</i> , 2009, 44, 4750-4753.	1.7	12
63	From polyvinyl chloride waste to activated carbons: the role of occurring additives on porosity development and gas adsorption properties. <i>Science of the Total Environment</i> , 2022, 833, 154894.	3.9	12
64	Experimental Evaluation of a Chinese Sulfur-Containing Lean Iron Ore as the Oxygen Carrier for Chemical-Looping Combustion. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 428-435.	1.8	11
65	Preparation of 3D network CNTs-modified nickel foam with enhanced microwave absorptivity and application potential in wastewater treatment. <i>Science of the Total Environment</i> , 2020, 702, 135006.	3.9	10
66	Dynamic Experimental Investigation on the Volatilization Behavior of Lead and Cadmium in the Simulated Municipal Solid Waste (MSW) Influenced by Sulfur Compounds during Incineration. <i>Energy & Fuels</i> , 2017, 31, 847-853.	2.5	8
67	Synthesis of microcapsules for carbon capture via needle-based droplet microfluidics. <i>Energy Procedia</i> , 2019, 160, 443-450.	1.8	8
68	Amine functionalized mesocellular silica foam as highly efficient sorbents for CO ₂ capture. <i>Separation and Purification Technology</i> , 2022, 299, 121539.	3.9	8
69	Use of Nitrogen Stable Isotope Analysis To Understand Char Nitrogen Evolution during the Fluidized-Bed Co-combustion of Coal and Sewage Sludge. <i>Energy & Fuels</i> , 2005, 19, 485-488.	2.5	7
70	A facile route to bespoke macro- and mesoporous block copolymer microparticles. <i>Polymer Chemistry</i> , 2018, 9, 3808-3819.	1.9	7
71	Performance of a silica-polyethyleneimine adsorbent for post-combustion CO ₂ capture on a 100 kg scale in a fluidized bed continuous unit. <i>Chemical Engineering Journal</i> , 2021, 407, 127209.	6.6	7
72	Development of MgSO ₄ mesoporous silica composites for thermochemical energy storage: the role of porous structure on water adsorption. <i>Energy Reports</i> , 2022, 8, 4913-4921.	2.5	7

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73	Microwave steam gasification of semi-coke derived from co-pyrolysis of fungus chaff and lignite. <i>International Journal of Coal Preparation and Utilization</i> , 2021, 41, 830-843.	1.2	6
74	Cyclic performance evaluation of a polyethylenimine/silica adsorbent with steam regeneration using simulated NGCC flue gas and actual flue gas of a gas-fired boiler in a bubbling fluidized bed reactor. <i>International Journal of Greenhouse Gas Control</i> , 2020, 95, 102975.	2.3	6
75	Effect of mineral matters on the properties of coal water slurry. <i>Coal Science and Technology</i> , 1995, 24, 1593-1596.	0.0	4
76	Evaluation of errors associated with $\delta^{13}\text{C}$ analysis of lignin-derived TMAH thermochemolysis products by gas chromatography- $\delta^{13}\text{C}$ combustion-isotope ratio mass spectrometry. <i>Journal of Analytical and Applied Pyrolysis</i> , 2006, 76, 88-95.	2.6	4
77	Biomedical and Forensic Applications of Combined Catalytic Hydrogenation-Stable Isotope Ratio Analysis. <i>Analytical Chemistry Insights</i> , 2007, 2, 117739010700200.	2.7	4
78	Synthesis and characterization of advanced bio-carbon materials from Kraft lignin with enhanced CO ₂ capture properties. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107471.	3.3	4
79	Further Improvement of Fluidized Bed Models by Incorporating Zone Method with Aspen Plus Interface. <i>Energy Procedia</i> , 2017, 105, 1895-1901.	1.8	3
80	Study on the evolution of internal and external water of lignite during microwave drying and the moisture reabsorption characteristics of dried lignite. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 0, , 1-18.	1.2	3
81	Biomedical and forensic applications of combined catalytic hydrogenation-stable isotope ratio analysis. <i>Analytical Chemistry Insights</i> , 2007, 2, 37-42.	2.7	3
82	Effectiveness of bed additives in abating agglomeration during biomass air/oxy combustion in a fluidised bed combustor. <i>Renewable Energy</i> , 2022, 185, 945-958.	4.3	3
83	Effects of annealing temperature and time on decrepitation of lump coals and characteristics of resultant coal chars. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2017, 12, 732-744.	0.8	2
84	Chemical Characteristics of Ash Formed from the Combustion of Shoe Manufacturing Waste in a 2.5 MWth Circulating Fluidized Bed Combustor. <i>Waste and Biomass Valorization</i> , 2020, 11, 4551-4560.	1.8	2
85	Microwave-induced high-energy sites and targeted energy transition promising for efficient energy deployment. <i>Frontiers in Energy</i> , 0, , 1.	1.2	2
86	Structural Characteristics of Coal Surface and Coal Slurryability. <i>Coal Science and Technology</i> , 1995, 24, 1589-1592.	0.0	1
87	Comparison of Mercury Retention by Fly Ashes Using Different Experimental Devices. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 10702-10707.	1.8	1
88	OxyCAP UK: Oxyfuel Combustion - academic Programme for the UK. <i>Energy Procedia</i> , 2014, 63, 504-510.	1.8	1
89	Environmental Concerns Regarding CO ₂ . , 2013, , 415-454.		0