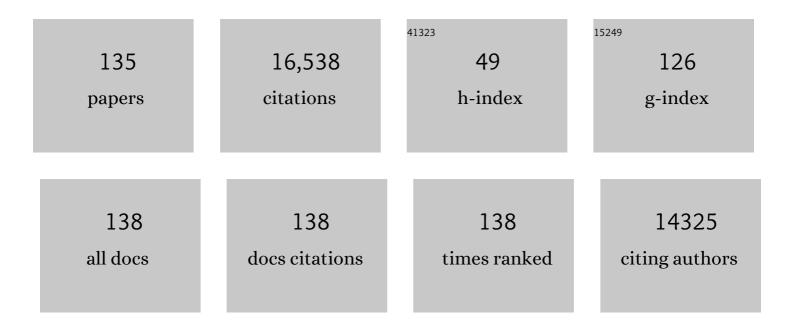
Paul S Fennell

List of Publications by Year in descending order

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DALLI S FENNELL

#	Article	IF	CITATIONS
1	Carbon capture and storage (CCS): the way forward. Energy and Environmental Science, 2018, 11, 1062-1176.	15.6	2,378
2	Carbon capture and storage update. Energy and Environmental Science, 2014, 7, 130-189.	15.6	1,765
3	An overview of CO2 capture technologies. Energy and Environmental Science, 2010, 3, 1645.	15.6	1,376
4	Net-zero emissions energy systems. Science, 2018, 360, .	6.0	1,165
5	The calcium looping cycle for large-scale CO2 capture. Progress in Energy and Combustion Science, 2010, 36, 260-279.	15.8	856
6	An overview of advances in biomass gasification. Energy and Environmental Science, 2016, 9, 2939-2977.	15.6	844
7	The role of CO2 capture and utilization in mitigating climate change. Nature Climate Change, 2017, 7, 243-249.	8.1	725
8	Progress in biofuel production from gasification. Progress in Energy and Combustion Science, 2017, 61, 189-248.	15.8	483
9	Technologies and policies to decarbonize global industry: Review and assessment of mitigation drivers through 2070. Applied Energy, 2020, 266, 114848.	5.1	427
10	Biomass-based chemical looping technologies: the good, the bad and the future. Energy and Environmental Science, 2017, 10, 1885-1910.	15.6	382
11	A Techno-economic analysis and systematic review of carbon capture and storage (CCS) applied to the iron and steel, cement, oil refining and pulp and paper industries, as well as other high purity sources. International Journal of Greenhouse Gas Control, 2017, 61, 71-84.	2.3	351
12	The calcium looping cycle for CO2 capture from power generation, cement manufacture and hydrogen production. Chemical Engineering Research and Design, 2011, 89, 836-855.	2.7	310
13	An economically viable ionic liquid for the fractionation of lignocellulosic biomass. Green Chemistry, 2017, 19, 3078-3102.	4.6	296
14	The Effects of Repeated Cycles of Calcination and Carbonation on a Variety of Different Limestones, as Measured in a Hot Fluidized Bed of Sand. Energy & Fuels, 2007, 21, 2072-2081.	2.5	247
15	Influence of High-Temperature Steam on the Reactivity of CaO Sorbent for CO ₂ Capture. Environmental Science & Technology, 2012, 46, 1262-1269.	4.6	199
16	A review of the technologies, economics and policy instruments for decarbonising energy-intensive manufacturing industries. Renewable and Sustainable Energy Reviews, 2014, 30, 616-640.	8.2	185
17	Influence of calcination conditions on carrying capacity of CaO-based sorbent in CO2 looping cycles. Fuel, 2009, 88, 1893-1900.	3.4	170
18	Effect of wind direction and speed on the dispersion of nucleation and accumulation mode particles in an urban street canyon. Science of the Total Environment, 2008, 402, 82-94.	3.9	126

#	Article	IF	CITATIONS
19	Screening and techno-economic assessment of biomass-based power generation with CCS technologies to meet 2050 CO2 targets. Applied Energy, 2017, 190, 481-489.	5.1	126
20	Regeneration of sintered limestone sorbents for the sequestration of CO ₂ from combustion and other systems. Journal of the Energy Institute, 2007, 80, 116-119.	2.7	113
21	Enhanced hydrogen production from thermochemical processes. Energy and Environmental Science, 2018, 11, 2647-2672.	15.6	111
22	Quantitative glucose release from softwood after pretreatment with low-cost ionic liquids. Green Chemistry, 2019, 21, 692-703.	4.6	111
23	Investigation into potential synergy between power generation, cement manufacture and CO2 abatement using the calcium looping cycle. Energy and Environmental Science, 2011, 4, 2050.	15.6	108
24	A novel calcium looping absorbent incorporated with polymorphic spacers for hydrogen production and CO ₂ capture. Energy and Environmental Science, 2014, 7, 3291-3295.	15.6	108
25	Carbon Capture in the Cement Industry: Technologies, Progress, and Retrofitting. Environmental Science & Technology, 2016, 50, 368-377.	4.6	107
26	Synthetic CaO-Based Sorbent for CO ₂ Capture from Large-Point Sources. Energy & Fuels, 2010, 24, 4598-4604.	2.5	103
27	Pseudo-simultaneous measurements for the vertical variation of coarse, fine and ultrafine particles in an urban street canyon. Atmospheric Environment, 2008, 42, 4304-4319.	1.9	100
28	Energy and exergy analysis of chemical looping combustion technology and comparison with pre-combustion and oxy-fuel combustion technologies for CO2 capture. Journal of Environmental Chemical Engineering, 2015, 3, 2104-2114.	3.3	96
29	Measurements of particles in the 5–1000Ânm range close to road level in an urban street canyon. Science of the Total Environment, 2008, 390, 437-447.	3.9	93
30	Impact of Flue Gas Compounds on Microalgae and Mechanisms for Carbon Assimilation and Utilization. ChemSusChem, 2018, 11, 334-355.	3.6	92
31	Solubility of carbon dioxide in aqueous solution of monoethanolamine or 2-amino-2-methyl-1-propanol: Experimental measurements and modelling. International Journal of Greenhouse Gas Control, 2012, 6, 37-47.	2.3	88
32	Treatment of losses of ultrafine aerosol particles in long sampling tubes during ambient measurements. Atmospheric Environment, 2008, 42, 8819-8826.	1.9	85
33	Decarbonizing cement production. Joule, 2021, 5, 1305-1311.	11.7	85
34	Real-Time Measurement of Bubbling Phenomena in a Three-Dimensional Gas-Fluidized Bed Using Ultrafast Magnetic Resonance Imaging. Physical Review Letters, 2006, 96, 154504.	2.9	74
35	The nature of the flow just above the perforated plate distributor of a gas-fluidised bed, as imaged using magnetic resonance. Chemical Engineering Science, 2006, 61, 6002-6015.	1.9	72
36	Inhibiting the interaction between FeO and Al ₂ O ₃ during chemical looping production of hydrogen. RSC Advances, 2015, 5, 1759-1771.	1.7	72

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37	Cement and steel $\hat{a} \in$ " nine steps to net zero. Nature, 2022, 603, 574-577.	13.7	70
38	On steam hydration of CaO-based sorbent cycled for CO2 capture. Fuel, 2015, 150, 269-277.	3.4	68
39	Mechanism of Particle Breakage during Reactivation of CaO-Based Sorbents for CO ₂ Capture. Energy & Fuels, 2010, 24, 4605-4616.	2.5	67
40	Pretreatment of South African sugarcane bagasse using a low-cost protic ionic liquid: a comparison of whole, depithed, fibrous and pith bagasse fractions. Biotechnology for Biofuels, 2018, 11, 247.	6.2	64
41	Morphological Changes of Limestone Sorbent Particles during Carbonation/Calcination Looping Cycles in a Thermogravimetric Analyzer (TGA) and Reactivation with Steam. Energy & Fuels, 2010, 24, 2768-2776.	2.5	59
42	Comparison of the behaviour of manufactured and other airborne nanoparticles and the consequences for prioritising research and regulation activities. Journal of Nanoparticle Research, 2010, 12, 1523-1530.	0.8	58
43	A parametric study of CO 2 capture from gas-fired power plants using monoethanolamine (MEA). International Journal of Greenhouse Gas Control, 2017, 63, 321-328.	2.3	58
44	A shrinking core model for steam hydration of CaO-based sorbents cycled for CO2 capture. Chemical Engineering Journal, 2016, 291, 298-305.	6.6	56
45	Statistical analysis of the carbonation rate of concrete. Cement and Concrete Research, 2015, 72, 98-107.	4.6	55
46	Effects of Different Dopants and Doping Procedures on the Reactivity of CaO-based Sorbents for CO ₂ Capture. Energy & amp; Fuels, 2012, 26, 6584-6594.	2.5	54
47	Street Versus Rooftop Level Concentrations of Fine Particles in a Cambridge Street Canyon. Boundary-Layer Meteorology, 2009, 131, 3-18.	1.2	52
48	Synthetic CaO-based sorbent for CO2 capture. Energy Procedia, 2011, 4, 830-838.	1.8	52
49	Steam-Enhanced Calcium Looping Cycles with Calcium Aluminate Pellets Doped with Bromides. Industrial & Engineering Chemistry Research, 2013, 52, 7677-7683.	1.8	52
50	Improvement of Limestone-Based CO ₂ Sorbents for Ca Looping by HBr and Other Mineral Acids. Industrial & Engineering Chemistry Research, 2013, 52, 1426-1433.	1.8	52
51	LEILAC: Low Cost CO2 Capture for the Cement and Lime Industries. Energy Procedia, 2017, 114, 6166-6170.	1.8	52
52	Reactivation of CaO-Based Sorbents for CO ₂ Capture: Mechanism for the Carbonation of Ca(OH) ₂ . Industrial & Engineering Chemistry Research, 2011, 50, 10329-10334.	1.8	49
53	Calcium looping for CO2 capture: sorbent enhancement through doping. Energy Procedia, 2011, 4, 402-409.	1.8	48
54	Decarbonising the cement sector: A bottom-up model for optimising carbon capture application in the UK. Journal of Cleaner Production, 2016, 139, 1351-1361.	4.6	48

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55	Pilot testing of enhanced sorbents for calcium looping with cement production. Applied Energy, 2018, 225, 392-401.	5.1	48
56	The rate of gasification by CO2 of chars from waste. Proceedings of the Combustion Institute, 2005, 30, 2151-2159.	2.4	47
57	Solubility of carbon dioxide in aqueous blends of 2-amino-2-methyl-1-propanol and piperazine. Chemical Engineering Science, 2013, 101, 851-864.	1.9	47
58	Density and Viscosity of Partially Carbonated Aqueous Tertiary Alkanolamine Solutions at Temperatures between (298.15 and 353.15) K. Journal of Chemical & Engineering Data, 2015, 60, 2392-2399.	1.0	47
59	Tar Formation and Destruction in a Fixed-Bed Reactor Simulating Downdraft Gasification: Equipment Development and Characterization of Tar-Cracking Products. Energy & Fuels, 2010, 24, 4560-4570.	2.5	45
60	Comparison of Different Natural Sorbents for Removing CO ₂ from Combustion Gases, as Studied in a Bench-Scale Fluidized Bed. Energy & Fuels, 2008, 22, 3852-3857.	2.5	43
61	The measurement of the rate of burning of different coal chars in an electrically heated fluidised bed of sand. Chemical Engineering Science, 2007, 62, 608-618.	1.9	41
62	A study of the mixing of solids in gas-fluidized beds, using ultra-fast MRI. Chemical Engineering Science, 2005, 60, 2085-2088.	1.9	38
63	Reactivation of a CaO-based sorbent for CO2 capture from stationary sources. Proceedings of the Combustion Institute, 2011, 33, 2673-2681.	2.4	37
64	Comparative Assessment of Gasification Based Coal Power Plants with Various CO ₂ Capture Technologies Producing Electricity and Hydrogen. Energy & Fuels, 2014, 28, 1028-1040.	2.5	36
65	A systematic investigation of the performance of copper-, cobalt-, iron-, manganese- and nickel-based oxygen carriers for chemical looping combustion technology through simulation models. Chemical Engineering Science, 2015, 130, 79-91.	1.9	36
66	Optimisation and evaluation of flexible operation strategies for coal- and gas-CCS power stations with a multi-period design approach. International Journal of Greenhouse Gas Control, 2017, 59, 24-39.	2.3	36
67	Development and techno-economic analyses of a novel hydrogen production process via chemical looping. International Journal of Hydrogen Energy, 2019, 44, 21251-21263.	3.8	36
68	Oscillations in gas-fluidized beds: Ultra-fast magnetic resonance imaging and pressure sensor measurements. Powder Technology, 2007, 177, 87-98.	2.1	35
69	The order with respect to oxygen and the activation energy for the burning of an anthracitic char in O2 in a fluidised bed, as measured using a rapid analyser for CO and CO2. Proceedings of the Combustion Institute, 2009, 32, 2051-2058.	2.4	35
70	Efficient Fractionation of Lignin- and Ash-Rich Agricultural Residues Following Treatment With a Low-Cost Protic Ionic Liquid. Frontiers in Chemistry, 2019, 7, 246.	1.8	35
71	Tar Formation and Destruction in a Fixed Bed Reactor Simulating Downdraft Gasification: Effect of Reaction Conditions on Tar Cracking Products. Energy & Fuels, 2014, 28, 1970-1982.	2.5	34
72	Additive effects of steam addition and HBr doping for CaO-based sorbents for CO 2 capture. Chemical Engineering and Processing: Process Intensification, 2016, 103, 21-26.	1.8	34

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73	CO 2 capture and storage (CCS) cost reduction via infrastructure right-sizing. Chemical Engineering Research and Design, 2017, 119, 130-139.	2.7	34
74	Fractionation by Sequential Antisolvent Precipitation of Grass, Softwood, and Hardwood Lignins Isolated Using Low-Cost Ionic Liquids and Water. ACS Sustainable Chemistry and Engineering, 2020, 8, 3751-3761.	3.2	34
75	CO2 capture by calcium aluminate pellets in a small fluidized bed. Fuel Processing Technology, 2016, 142, 100-106.	3.7	33
76	Rise velocities of bubbles and slugs in gas-fluidised beds: Ultra-fast magnetic resonance imaging. Chemical Engineering Science, 2007, 62, 82-93.	1.9	32
77	Pressurized calcium looping in the presence of steam in a spout-fluidized-bed reactor with DFT analysis. Fuel Processing Technology, 2018, 169, 24-41.	3.7	32
78	Production and applications of electric-arc-furnace slag as solid waste in environmental technologies: a review. Environmental Technology Reviews, 2016, 5, 1-11.	2.1	29
79	Towards an environmentally and economically sustainable biorefinery: heavy metal contaminated waste wood as a low-cost feedstock in a low-cost ionic liquid process. Green Chemistry, 2020, 22, 5032-5041.	4.6	24
80	Degradation study of a novel polymorphic sorbent under realistic post-combustion conditions. Fuel, 2016, 186, 708-713.	3.4	22
81	Spouted bed reactor for kinetic measurements of reduction of Fe2O3 in a CO2/CO atmosphere Part I: Atmospheric pressure measurements and equipment commissioning. Chemical Engineering Research and Design, 2016, 114, 307-320.	2.7	21
82	Simple pyrolysis experiments for the preliminary assessment of biomass feedstocks and low-cost tar cracking catalysts for downdraft gasification applications. Biomass and Bioenergy, 2018, 108, 398-414.	2.9	21
83	Investigations into the effects of volatile biomass tar on the performance of Fe-based CLC oxygen carrier materials. Environmental Research Letters, 2016, 11, 115001.	2.2	20
84	A Comparative Study of Different Sorbents in the Context of Direct Air Capture (DAC): Evaluation of Key Performance Indicators and Comparisons. Applied Sciences (Switzerland), 2022, 12, 2618.	1.3	20
85	Integrating Calcium Looping CO2 Capture with the Manufacture of Cement. Energy Procedia, 2013, 37, 7078-7090.	1.8	19
86	Hydrogen Production by Sorption Enhanced Steam Reforming (SESR) of Biomass in a Fluidised-Bed Reactor Using Combined Multifunctional Particles. Materials, 2018, 11, 859.	1.3	18
87	The kinetics of the reduction of NO to N2 by reaction with particles of Fe. Proceedings of the Combustion Institute, 2002, 29, 2179-2185.	2.4	17
88	A Review of Recent Research on Catalytic Biomass Pyrolysis and Low-Pressure Hydropyrolysis. Energy & Fuels, 2021, 35, 18333-18369.	2.5	17
89	A Techno-economic Analysis and Systematic Review of Carbon Capture and Storage (CCS) Applied to the Iron and Steel, Cement, Oil Refining and Pulp and Paper Industries. Energy Procedia, 2017, 114, 6297-6302.	1.8	16
90	Co-precipitated Cu-Mn mixed metal oxides as oxygen carriers for chemical looping processes. Chemical Engineering Journal, 2021, 407, 127093.	6.6	16

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91	The Zero Emission Carbon Concept (ZECA): Extents of Reaction with Different Coals in Steam/Hydrogen, Tar Formation and Residual Char Reactivity. Energy & Fuels, 2008, 22, 2504-2511.	2.5	15
92	Phase evolution, characterisation, and performance of cement prepared in an oxy-fuel atmosphere. Faraday Discussions, 2016, 192, 113-124.	1.6	15
93	Pressurised chemical-looping combustion of an iron-based oxygen carrier: Reduction kinetic measurements and modelling. Fuel Processing Technology, 2018, 171, 205-214.	3.7	15
94	Iron-based chemical-looping technology for decarbonising iron and steel production. International Journal of Greenhouse Gas Control, 2019, 91, 102766.	2.3	15
95	Demetallization of Sewage Sludge Using Low-Cost Ionic Liquids. Environmental Science & Technology, 2021, 55, 5291-5300.	4.6	15
96	Process intensification of the ionoSolv pretreatment: effects of biomass loading, particle size and scale-up from 10ÂmL to 1ÂL. Scientific Reports, 2021, 11, 15383.	1.6	15
97	Co-firing of Single, Binary, and Ternary Fuel Blends: Comparing Synergies within Trace Element Partitioning Arrived at by Thermodynamic Equilibrium Modeling and Experimental Measurements. Energy & Fuels, 2010, 24, 2918-2923.	2.5	14
98	Combustion of polymer pellets in a bubbling fluidised bed. Combustion and Flame, 2011, 158, 1638-1645.	2.8	14
99	Two-Phase Fluidized Bed Model for Pressurized Carbonation Kinetics of Calcium Oxide. Energy & Fuels, 2017, 31, 11181-11193.	2.5	14
100	High CO2 absorption in new amine based-transition-temperature mixtures (deep eutectic analogues) and reporting thermal stability, viscosity and surface tension: Response surface methodology (RSM). Journal of Molecular Liquids, 2020, 316, 113863.	2.3	14
101	On the driftâ€flux analysis of flotation and foam fractionation processes. Canadian Journal of Chemical Engineering, 2008, 86, 635-642.	0.9	13
102	Latter Stages of the Reduction of NO to N ₂ on Particles of Fe while Simultaneously Oxidizing Fe to Its Oxides. Energy & Fuels, 2011, 25, 1510-1520.	2.5	13
103	Evaluation of cooling requirements of post-combustion CO 2 capture applied to coal-fired power plants. Chemical Engineering Research and Design, 2017, 122, 1-10.	2.7	13
104	Rhododendron and Japanese Knotweed: invasive species as innovative crops for second generation biofuels for the ionoSolv process. RSC Advances, 2021, 11, 18395-18403.	1.7	13
105	Techno-economic assessment for a pumped thermal energy storage integrated with open cycle gas turbine and chemical looping technology. Energy Conversion and Management, 2022, 255, 115332.	4.4	12
106	The sampling of nanoparticles of MgO formed when doping an oxygen-rich flame with magnesium: The measurement of the concentrations and size-distributions of these nanoparticles. Combustion and Flame, 2007, 151, 560-572.	2.8	11
107	Density and Viscosity of Partially Carbonated Aqueous Solutions Containing a Tertiary Alkanolamine and Piperazine at Temperatures between 298.15 and 353.15 K. Journal of Chemical & Engineering Data, 2017, 62, 2075-2083.	1.0	11
108	Comparison of the structural motifs and packing arrangements of six novel derivatives and one polymorph of 2-(1-phenyl-1H-1,2,3-triazol-4-yl)pyridine. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2014, 70, 379-389.	0.5	10

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109	End use and disposal of CO ₂ – storage or utilisation?: general discussion. Faraday Discussions, 2016, 192, 561-579.	1.6	10
110	Simultaneous design of separation sequences and whole process energy integration. Chemical Engineering Research and Design, 2017, 125, 166-180.	2.7	10
111	The feasibility of char and bio-oil production from pyrolysis of pit latrine sludge. Environmental Science: Water Research and Technology, 2018, 4, 253-264.	1.2	10
112	CCS from industrial sources. Sustainable Technologies Systems & Policies, 2012, 2012, .	0.0	9
113	Combining phytoremediation and biorefinery: Metal extraction from lead contaminated Miscanthus during pretreatment using the ionoSolv process. Industrial Crops and Products, 2022, 176, 114259.	2.5	7
114	Simulation of direct separation technology for carbon capture and storage in the cement industry. Chemical Engineering Journal, 2022, 449, 137721.	6.6	7
115	The size distributions of nanoparticles of the oxides of Mg, Ba and Al in flames: Their measurement and dependence on the concentrations of free radicals in the flame. Proceedings of the Combustion Institute, 2007, 31, 1939-1945.	2.4	6
116	Enhancement of CaOâ€based sorbent for CO ₂ capture through doping with seawater. , 2020, 10, 878-883.		6
117	CCS – A technology for now: general discussion. Faraday Discussions, 2016, 192, 125-151.	1.6	5
118	Kinetics Modeling, Development, and Comparison for the Reaction of Calcium Oxide with Steam. Energy & Fuels, 2019, 33, 5505-5517.	2.5	5
119	Simulation of a 100-MW solar-powered thermo-chemical air separation system combined with an oxy-fuel power plant for bio-energy with carbon capture and storage (BECCS). Mitigation and Adaptation Strategies for Global Change, 2020, 25, 539-557.	1.0	5
120	Potassium carbonate-based ternary transition temperature mixture (deep eutectic analogues) for CO2 absorption: Characterizations and DFT analysis. Frontiers of Environmental Science and Engineering, 2022, 16, 1.	3.3	5
121	CCS – A technology for the future: general discussion. Faraday Discussions, 2016, 192, 303-335.	1.6	4
122	Flexible Operation Strategies for Coal- and gas-CCS Power Stations under the UK and USA Markets. Energy Procedia, 2017, 114, 6543-6551.	1.8	4
123	Comparative Energy Analysis of Renewable Electricity and Carbon Capture and Storage. Joule, 2019, 3, 1406-1408.	11.7	4
124	Assessing the economic viability of wetland remediation of wastewater, and the potential for parallel biomass valorisation. Environmental Science: Water Research and Technology, 2020, 6, 2103-2121.	1.2	4
125	Process Integration of Chemical Looping Water Splitting with a Sintering Plant for Iron Making. Industrial & Engineering Chemistry Research, 2020, 59, 7021-7032.	1.8	4
126	Production of nanoparticles of MgO, BAO, and A12O3 in a premixed flame and its relation to the flame structure. Combustion, Explosion and Shock Waves, 2006, 42, 642-648.	0.3	2

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127	Pressurized In Situ CO2 Capture from Biomass Combustion via the Calcium Looping Process in a Spout-Fluidized-Bed Reactor. Industrial & Engineering Chemistry Research, 2020, 59, 8571-8580.	1.8	2
128	Design and techno-economic analysis of a fluidized bed-based CaO/Ca(OH)2 thermochemical energy combined storage/discharge plant with concentrated solar power. AIP Conference Proceedings, 2020, , .	0.3	2
129	Modeling and Evaluation of Ash-Forming Element Fate and Occurrence in Woody Biomass Combustion in an Entrained-Flow Burner. ACS Omega, 2022, 7, 16306-16322.	1.6	2
130	OxyCAP UK: Oxyfuel Combustion - academic Programme for the UK. Energy Procedia, 2014, 63, 504-510.	1.8	1
131	Techno-economics of Biomass-based Power Generation with CCS Technologies for Deployment in 2050. , 0, , 93-113.		1
132	Reclamation of nutrients, carbon, and metals from compromised surface waters fated to the Salton Sea: Biomass production and ecosystem services using an attached periphytic algae flow-way. Algal Research, 2022, 66, 102757.	2.4	1
133	Solubility of CO2 in aqueous amine solutions: A study to select solvents for carbon capture from natural-gas power plant. , 2015, , 1-10.		0
134	Modelling – from molecules to mega-scale: general discussion. Faraday Discussions, 2016, 192, 493-509.	1.6	0
135	Carbon Capture Technology: Status and Future Prospects. , 2011, , .		Ο