

# Solomon Brown

## List of Publications by Year in descending order

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Version: 2024-02-01

89  
papers

3,825  
citations

331259

21  
h-index

128067

60  
g-index

89  
all docs

89  
docs citations

89  
times ranked

4181  
citing authors

#	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	Pursuing safer batteries: Thermal abuse of LiFePO <sub>4</sub> cells. Journal of Power Sources, 2019, 414, 557-568.	4.0	80
3	Modelling the impact of stream impurities on ductile fractures in CO <sub>2</sub> pipelines. Chemical Engineering Science, 2012, 74, 200-210.	1.9	61
4	A homogeneous relaxation flow model for the full bore rupture of dense phase CO <sub>2</sub> pipelines. International Journal of Greenhouse Gas Control, 2013, 17, 349-356.	2.3	61
5	Methodology to determine the heat capacity of lithium-ion cells. Journal of Power Sources, 2018, 395, 369-378.	4.0	57
6	Techno-enviro-economic assessment of household and community energy storage in the UK. Energy Conversion and Management, 2020, 205, 112330.	4.4	50
7	Modelling the non-equilibrium two-phase flow during depressurisation of CO <sub>2</sub> pipelines. International Journal of Greenhouse Gas Control, 2014, 30, 9-18.	2.3	45
8	Modelling three-phase releases of carbon dioxide from high-pressure pipelines. Chemical Engineering Research and Design, 2014, 92, 36-46.	2.7	42
9	An integrated, multi-scale modelling approach for the simulation of multiphase dispersion from accidental CO <sub>2</sub> pipeline releases in realistic terrain. International Journal of Greenhouse Gas Control, 2014, 27, 221-238.	2.3	40
10	Peer-to-peer electricity trading as an enabler of increased PV and EV ownership. Energy Conversion and Management, 2021, 245, 114634.	4.4	37
11	Suitability of energy storage with reversible solid oxide cells for microgrid applications. Energy Conversion and Management, 2020, 226, 113499.	4.4	35
12	CO <sub>2</sub> capture and storage (CCS) cost reduction via infrastructure right-sizing. Chemical Engineering Research and Design, 2017, 119, 130-139.	2.7	34
13	A study of the effects of friction, heat transfer, and stream impurities on the decompression behavior in CO <sub>2</sub> pipelines. , 2012, 2, 369-379.		33
14	Grid frequency volatility in future low inertia scenarios: Challenges and mitigation options. Applied Energy, 2021, 290, 116723.	5.1	32
15	Improving the feasibility of household and community energy storage: A techno-enviro-economic study for the UK. Renewable and Sustainable Energy Reviews, 2020, 131, 110009.	8.2	30
16	CO <sub>2</sub> PipeHaz: Quantitative Hazard Assessment for Next Generation CO <sub>2</sub> Pipelines. Energy Procedia, 2014, 63, 2510-2529.	1.8	29
17	Impact of stream impurities on compressor power requirements for CO <sub>2</sub> pipeline transportation. International Journal of Greenhouse Gas Control, 2016, 54, 652-661.	2.3	29
18	Global sensitivity analysis of the impact of impurities on CO <sub>2</sub> pipeline failure. Reliability Engineering and System Safety, 2013, 115, 43-54.	5.1	27

#	ARTICLE	IF	CITATIONS
19	An extended Peng-Robinson equation of state for carbon dioxide solid-vapor equilibrium. , 2013, 3, 136-147.		27
20	Techno-economic assessment of CO <sub>2</sub> quality effect on its storage and transport: CO <sub>2</sub> QUEST. International Journal of Greenhouse Gas Control, 2016, 54, 662-681.	2.3	25
21	The electricity demand of an EV providing power via vehicle-to-home and its potential impact on the grid with different electricity price tariffs. Energy Reports, 2020, 6, 132-141.	2.5	25
22	Modelling choked flow for CO <sub>2</sub> from the dense phase to below the triple point. International Journal of Greenhouse Gas Control, 2013, 19, 552-558.	2.3	24
23	Computational modelling of thermal runaway propagation potential in lithium iron phosphate battery packs. Energy Reports, 2020, 6, 189-197.	2.5	24
24	Under-expanded jets and dispersion in high pressure CO <sub>2</sub> releases from an industrial scale pipeline. Energy, 2017, 119, 53-66.	4.5	23
25	Metal recovery from jarosite waste – A resin screening study. Separation Science and Technology, 2018, 53, 22-35.	1.3	23
26	Direct measurements of CO <sub>2</sub> capture are essential to assess the technical and economic potential of algal-CCUS. Journal of CO <sub>2</sub> Utilization, 2021, 52, 101657.	3.3	23
27	Flow characteristics and dispersion during the leakage of high pressure CO <sub>2</sub> from an industrial scale pipeline. International Journal of Greenhouse Gas Control, 2018, 73, 70-78.	2.3	22
28	Higher 2nd life Lithium Titanate battery content in hybrid energy storage systems lowers environmental-economic impact and balances eco-efficiency. Renewable and Sustainable Energy Reviews, 2021, 152, 111704.	8.2	22
29	Machine learning approach for electric vehicle availability forecast to provide vehicle-to-home services. Energy Reports, 2021, 7, 71-80.	2.5	20
30	Green hydrogen investments: Investigating the option to wait. Energy, 2022, 241, 122842.	4.5	20
31	CO <sub>2</sub> QUEST: Techno-economic Assessment of CO <sub>2</sub> Quality Effect on Its Storage and Transport. Energy Procedia, 2014, 63, 2622-2629.	1.8	19
32	A closed-loop analysis of grid scale battery systems providing frequency response and reserve services in a variable inertia grid. Applied Energy, 2019, 236, 961-972.	5.1	19
33	Modelling brittle fracture propagation in gas and dense-phase CO <sub>2</sub> transportation pipelines. International Journal of Greenhouse Gas Control, 2016, 46, 39-47.	2.3	17
34	Can thermal storage assist with the electrification of heat through peak shaving?. Energy Reports, 2020, 6, 124-131.	2.5	17
35	The Role of Cycle Life on the Environmental Impact of Li <sub>0.4</sub> La <sub>0.3</sub> Zr <sub>0.14</sub> Ta <sub>0.6</sub> O <sub>12</sub> based Solid-State Batteries. Advanced Sustainable Systems, 2021, 5, 2000241.	2.7	17
36	Linking CO <sub>2</sub> capture and pipeline transportation: sensitivity analysis and dynamic study of the compression train. International Journal of Greenhouse Gas Control, 2021, 111, 103449.	2.3	17

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37	Assessment of thermal runaway in commercial lithium iron phosphate cells due to overheating in an oven test. <i>Energy Procedia</i> , 2018, 151, 74-78.	1.8	16
38	Hybrid fluid-structure interaction modelling of dynamic brittle fracture in steel pipelines transporting CO <sub>2</sub> streams. <i>International Journal of Greenhouse Gas Control</i> , 2016, 54, 702-715.	2.3	15
39	An analysis of frequency events in Great Britain. <i>Energy Reports</i> , 2020, 6, 63-69.	2.5	15
40	A fully coupled fluid-structure interaction simulation of three-dimensional dynamic ductile fracture in a steel pipeline. <i>Theoretical and Applied Fracture Mechanics</i> , 2019, 101, 224-235.	2.1	14
41	Validation and application of agent-based electric vehicle charging model. <i>Energy Reports</i> , 2020, 6, 53-62.	2.5	14
42	A multi-source flow model for CCS pipeline transportation networks. <i>International Journal of Greenhouse Gas Control</i> , 2015, 43, 108-114.	2.3	13
43	Thermodynamic interpolation for the simulation of two-phase flow of non-ideal mixtures. <i>Computers and Chemical Engineering</i> , 2016, 95, 49-57.	2.0	13
44	Computational and Experimental Study of Solid-Phase Formation during the Decompression of High-Pressure CO <sub>2</sub> Pipelines. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 7054-7063.	1.8	13
45	Modeling of CO <sub>2</sub> Decompression across the Triple Point. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 10491-10499.	1.8	12
46	Social & locational impacts on electric vehicle ownership and charging profiles. <i>Energy Reports</i> , 2021, 7, 42-48.	2.5	12
47	The future of frequency response in Great Britain. <i>Energy Reports</i> , 2021, 7, 56-62.	2.5	12
48	Evaluating the role of behavior and social class in electric vehicle adoption and charging demands. <i>IScience</i> , 2021, 24, 102914.	1.9	12
49	Simulation of two-phase flow through ducts with discontinuous cross-section. <i>Computers and Fluids</i> , 2015, 120, 46-56.	1.3	11
50	A study of the thermal runaway of lithium-ion batteries: A Gaussian Process based global sensitivity analysis. <i>Journal of Power Sources</i> , 2020, 456, 228001.	4.0	11
51	Advanced abuse modelling of Li-ion cells - A novel description of cell pressurisation and simmering reactions. <i>Journal of Power Sources</i> , 2020, 474, 228396.	4.0	10
52	Assessment of Integral Thermo-Hydraulic Models for Pipeline Transportation of Dense-Phase and Supercritical CO <sub>2</sub> . <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 8587-8599.	1.8	9
53	Long term energy storage with reversible solid oxide cells for microgrid applications. <i>Energy Reports</i> , 2021, 7, 24-33.	2.5	9
54	Establishing the value of community energy storage: A comparative analysis of the UK and Germany. <i>Journal of Energy Storage</i> , 2021, 40, 102709.	3.9	9

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55	Assessment of Fracture Propagation in Pipelines Transporting Impure CO <sub>2</sub> Streams. <i>Energy Procedia</i> , 2017, 114, 6685-6697.	1.8	7
56	Pathways to economic viability: a pilot scale and techno-economic assessment for algal bioremediation of challenging waste streams. <i>Environmental Science: Water Research and Technology</i> , 2020, 6, 3400-3414.	1.2	7
57	Flexible CO <sub>2</sub> capture for open-cycle gas turbines via vacuum-pressure swing adsorption: A model-based assessment. <i>Energy</i> , 2022, 250, 123805.	4.5	7
58	Integral Multiphase Turbulence Compressible Jet Expansion Model for Accidental Releases from Pressurized Containments. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 7558-7568.	1.8	6
59	Modelling emergency isolation of carbon dioxide pipelines. <i>International Journal of Greenhouse Gas Control</i> , 2016, 44, 88-93.	2.3	6
60	Residential PV-BES Systems: Economic and Grid Impact Analysis. <i>Energy Procedia</i> , 2018, 151, 199-208.	1.8	6
61	Exploring the economics of large scale lithium ion and lead acid batteries performing frequency response. <i>Energy Reports</i> , 2021, 7, 34-41.	2.5	6
62	To trade or not to trade: Simultaneously optimising battery storage for arbitrage and ancillary services. <i>Journal of Energy Storage</i> , 2022, 50, 104234.	3.9	6
63	The economics of firm solar power from Li-ion and vanadium flow batteries in California. <i>MRS Energy &amp; Sustainability</i> , 0, , .	1.3	6
64	Exploring the possibility to provide black start services by using vehicle-to-grid. <i>Energy Reports</i> , 2022, 8, 74-82.	2.5	6
65	Flow characteristics and dispersion during the vertical anthropogenic venting of supercritical CO <sub>2</sub> from an industrial scale pipeline. <i>Energy Procedia</i> , 2018, 154, 66-72.	1.8	5
66	Impact of Household Heterogeneity on Community Energy Storage in the UK. <i>Energy Reports</i> , 2020, 6, 117-123.	2.5	5
67	Designing bioinspired green nanosilicas using statistical and machine learning approaches. <i>Molecular Systems Design and Engineering</i> , 2021, 6, 293-307.	1.7	5
68	Efficient global sensitivity-based model calibration of a high-shear wet granulation process. <i>Chemical Engineering Science</i> , 2021, 238, 116569.	1.9	5
69	Efficient simulation of chromatographic separation processes. <i>Computers and Chemical Engineering</i> , 2018, 110, 69-77.	2.0	4
70	A geometrically based grid refinement technique for multiphase flows. <i>Computers and Chemical Engineering</i> , 2015, 82, 25-33.	2.0	3
71	Modelling the Adsorption-desorption Behavior of CO <sub>2</sub> in Shales for Permanent Storage of CO <sub>2</sub> and Enhanced Hydrocarbon Extraction. <i>Energy Procedia</i> , 2017, 114, 6942-6949.	1.8	3
72	Flow batteries for energy management: Novel algebraic modelling approaches to properly assess their value. <i>Journal of Energy Storage</i> , 2019, 26, 100977.	3.9	3

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73	Identifying calendar-correlated day-ahead price profile clusters for enhanced energy storage scheduling. Energy Reports, 2020, 6, 35-42.	2.5	3
74	Transient CO2 capture for open-cycle gas turbines in future energy systems. Energy, 2021, 216, 119258.	4.5	3
75	DC to turnkey: An analysis of the balance of costs for behind the meter BESS at commercial/industrial sites. Energy Reports, 2021, 7, 20-23.	2.5	3
76	Modelling heat transfer in flashing CO2 fluid upon rapid decompression in pipelines. , 2015, , .		3
77	Optimising onshore wind with energy storage considering curtailment. Energy Reports, 2022, 8, 34-40.	2.5	3
78	Spectrophotometric Analysis of Ternary Uranyl Systems to Replace Tri-N-butyl Phosphate (TBP) in Used Fuel Reprocessing. Journal of Solution Chemistry, 2020, 49, 52-67.	0.6	2
79	Optimal Valve Spacing for Next Generation CO2 Pipelines. Computer Aided Chemical Engineering, 2014, 33, 265-270.	0.3	2
80	Evaluating the Transient Operation of PCC for fast Response gas Turbines in a Future Low-carbon Energy System. Computer Aided Chemical Engineering, 2020, , 157-162.	0.3	1
81	Accounting for interface behaviour in multi-stage aqueous two-phase extraction. Chemical Engineering Science, 2021, 230, 116172.	1.9	1
82	Value of aggregator-led community energy storage systems with degradation constraints. Computer Aided Chemical Engineering, 2021, , 1453-1458.	0.3	1
83	Analysing the robustness of multi-stage bioseparations to measurement errors. Computer Aided Chemical Engineering, 2021, 50, 393-398.	0.3	1
84	Compression system power requirements for various CO2 sources and transportation options. Computer Aided Chemical Engineering, 2021, 50, 1439-1444.	0.3	1
85	12 Carbon Capture. Green Chemistry and Chemical Engineering, 2017, , 457-632.	0.0	1
86	Investigating organic phase change behavior with thermal photography. Energy Procedia, 2018, 151, 52-56.	1.8	0
87	Towards Automated HAZOPs. Computer Aided Chemical Engineering, 2021, 50, 505-510.	0.3	0
88	Clean Electricity Generation from Sewage: a novel Ultra-Supercritical Water Oxidation Technology with integrated CCS. Computer Aided Chemical Engineering, 2021, 50, 1459-1464.	0.3	0
89	Active subsets as a tool for structural characterisation and selection of metal-organic frameworks. Chemical Engineering Research and Design, 2022, 179, 424-434.	2.7	0