Scott C James

List of Publications by Year
in descending order

108 papers	2,438 citations	186265 28 h-index	243625 44 g-index
117 all docs	117 docs citations	117 times ranked	2047 citing authors

#	Article	IF	Citations
1	Colloid transport through a variable-aperture fracture under unfavorable attachment conditions: Characterization with a continuous time random walk model. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 644, 128822.	4.7	3
2	Deep-Learning-Based Vuggy Facies Identification from Borehole Images. SPE Reservoir Evaluation and Engineering, 2021, 24, 250-261.	1.8	11
3	Effect of volcanic emissions on clouds during the 2008 and 2018 Kilauea degassing events. Atmospheric Chemistry and Physics, 2021, 21, 7749-7771.	4.9	8
4	Simulating current-energy converters: SNL-EFDC model development, verification, and parameter estimation. Renewable Energy, 2020, 147, 2531-2541.	8.9	4
5	A Multiphase, Multicomponent Reservoir-Simulation Framework for Miscible Gas and Steam Coinjection. SPE Reservoir Evaluation and Engineering, 2020, 23, 551-565.	1.8	1
6	Restoring Pre-Industrial CO_2 Levels While Achieving Sustainable Development Goals. Energies, 2020, 13, 4972.	3.1	12
7	A Hybrid Artificial Neural Network to Estimate Soil Moisture Using SWAT+ and SMAP Data. Machine Learning and Knowledge Extraction, 2020, 2, 283-306.	5.0	6
8	Post-Calibration Uncertainty Analysis for Travel Times at a Naval Weapons Industrial Reserve Plant. Water (Switzerland), 2020, 12, 3428.	2.7	1
9	PFLOTRAN-SIP: A PFLOTRAN Module for Simulating Spectral-Induced Polarization of Electrical Impedance Data. Energies, 2020, 13, 6552.	3.1	2
10	Are extreme soil moisture deficits captured by remotely sensed data retrievals?. Remote Sensing Letters, 2020, 11, 767-776.	1.4	2
11	Ensemble model aggregation using a computationally lightweight machine-learning model to forecast ocean waves. Journal of Marine Systems, 2019, 199, 103206.	2.1	19
12	Drag coefficient parameter estimation for aquaculture systems. Environmental Fluid Mechanics, 2019, 19, 989-1003.	1.6	10
13	When can the local advection–dispersion equation simulate non-Fickian transport through rough fractures?. Stochastic Environmental Research and Risk Assessment, 2019, 33, 931-938.	4.0	10
14	Experimental and numerical investigation of smoke dynamics in vertical cylinders and open-air environment. International Journal of Heat and Mass Transfer, 2019, 135, 985-995.	4.8	5
15	Theoretical, numerical, and experimental investigation of smoke dynamics in high-rise buildings. International Journal of Heat and Mass Transfer, 2019, 135, 604-613.	4.8	22
16	Nano-textured surfaces using hybrid micro- and nano-materials for efficient water cooling. International Journal of Heat and Mass Transfer, 2018, 123, 1120-1127.	4.8	8
17	A machine learning framework to forecast wave conditions. Coastal Engineering, 2018, 137, 1-10.	4.0	225
18	Supersonically sprayed nanotextured surfaces with silver nanowires for enhanced pool boiling. International Journal of Heat and Mass Transfer, 2018, 123, 397-406.	4.8	33

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19	A framework for determining improved placement of current energy converters subject to environmental constraints. International Journal of Sustainable Energy, 2018, 37, 654-668.	2.4	3
20	Modifying capillary pressure and boiling regime of micro-porous wicks textured with graphene oxide. Applied Thermal Engineering, 2018, 128, 1605-1610.	6.0	26
21	Ocean Forests: Breakthrough Yields for Macroalgae. , 2018, , .		1
22	SeaweedPaddock: Initial Modeling and Design for a Sargassum Ranch. , 2018, , .		3
23	Geologic and resource assessment of the Upper Devonian Grosmont and upper Ireton Formations, central Grosmont shelf complex, Alberta, Canada. AAPG Bulletin, 2018, 102, 731-759.	1.5	2
24	Modeling colloid transport in fractures with spatially variable aperture and surface attachment. Journal of Hydrology, 2018, 566, 735-742.	5.4	18
25	Uncertainty analysis: influence of hydraulic fracturing on overlying aquifers in the presence of leaky abandoned wells. Environmental Earth Sciences, 2018, 77, 1.	2.7	2
26	Numerical investigation of smoke dynamics in unconfined and confined environments. International Journal of Heat and Mass Transfer, 2018, 127, 571-582.	4.8	6
27	An integrated framework that combines machine learning and numerical models to improve wave-condition forecasts. Journal of Marine Systems, 2018, 186, 29-36.	2.1	39
28	Supersonically spray-coated copper meshes as textured surfaces for pool boiling. International Journal of Thermal Sciences, 2018, 132, 26-33.	4.9	32
29	Effects of impact conditions on the electrical and mechanical properties of supersonic cold sprayed Cu–Ni electrodes. Journal of Alloys and Compounds, 2017, 695, 3714-3721.	5.5	9
30	Effects of capillarity on pool boiling using nano-textured surfaces through electrosprayed $BiVO_4$ nano-pillars. Chemical Engineering Science, 2017, 171, 360-367.	3.8	23
31	Supersonically sprayed, triangular copper lines for pool boiling enhancement. International Journal of Heat and Mass Transfer, 2017, 113, 210-216.	4.8	15
32	Theoretical, numerical, and experimental investigation of pressure rise due to deflagration in confined spaces. International Journal of Thermal Sciences, 2017, 120, 469-480.	4.9	12
33	Modelling study of the effects of suspended aquaculture installations on tidal stream generation in Cobscook Bay. Renewable Energy, 2017, 102, 65-76.	8.9	19
34	Spatial Risk Analysis of Hydraulic Fracturing near Abandoned and Converted Oil and Gas Wells. Ground Water, 2017, 55, 268-280.	1.3	11
35	Enhancement of critical heat flux and superheat through controlled wettability of cuprous-oxide fractal-like nanotextured surfaces in pool boiling. International Journal of Heat and Mass Transfer, 2017, 107, 105-111.	4.8	48
36	Deployment and parametrisation of couplec hydrodynamic and wave models. , 2017, , .		0

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37	Calibration of a 3D hydrodynamic aquaculture model. , 2016, , .		2
38	Deploying and optimizing performance of a 3D hydrodynamic model on cloud. , 2016, , .		1
39	Simulating the thermal behavior in Lake Ontario using EFDC. Journal of Great Lakes Research, 2016, 42, 511-523.	1.9	39
40	On the Efficiency of Executing Hydro-environmental Models on Cloud. Procedia Engineering, 2016, 154, 199-206.	1.2	6
41	Influence of Hydraulic Fracturing on Overlying Aquifers in the Presence of Leaky Abandoned Wells. Ground Water, 2016, 54, 781-792.	1.3	25
42	Experimental and Numerical Simulations of Spray Impingement and Combustion Characteristics in Gasoline Direct Injection Engines under Variable Driving Conditions. Flow, Turbulence and Combustion, 2016, 96, 391-415.	2.6	15
43	Validating and Applying SNL-EFDC to Current Energy Capture Devices Simulation. , 2015, , .		0
44	Robust Mechanical Properties of Electrically Insulative Alumina Films by Supersonic Aerosol Deposition. Journal of Thermal Spray Technology, 2015, 24, 1046-1051.	3.1	11
45	Thin film metallization by supersonic spraying of copper and nickel nanoparticles on a silicon substrate. Computational Materials Science, 2015, 108, 114-120.	3.0	20
46	Parallelisation of hydro-environmental model for simulating marine current devices. , 2015, , .		3
47	Nickelâ€"copper hybrid electrodes self-adhered onto a silicon wafer by supersonic cold-spray. Acta Materialia, 2015, 93, 156-163.	7.9	34
48	Numerical modelling study of the effects of suspended aquaculture farms on tidal stream energy generation. , 2015, , .		3
49	Thin-film metallization of CuInGaSe2 nanoparticles by supersonic kinetic spraying. Computational Materials Science, 2015, 101, 66-76.	3.0	14
50	Three dimensional web-like fibrous CuInS2 film. Applied Surface Science, 2015, 351, 588-593.	6.1	3
51	Effects of surface thermodynamics on hydrogen isotope exchange kinetics in palladium: Particle and flow models. Chemical Engineering Science, 2015, 122, 474-490.	3.8	6
52	Conceptual Site Model for Newark Bayâ€"Hydrodynamics and Sediment Transport. Journal of Marine Science and Engineering, 2014, 2, 123-139.	2.6	6
53	Simulating Flow Changes Due to Current Energy Capture: SNL-EFDC Model Verification. , 2014, , .		2
54	Effect of viscosity, electrical conductivity, and surface tension on direct-current-pulsed drop-on-demand electrohydrodynamic printing frequency. Applied Physics Letters, 2014, 105, .	3.3	64

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55	Analysis and modeling of Nannochloropsis growth in lab, greenhouse, and raceway experiments. Journal of Applied Phycology, 2014, 26, 2303-2314.	2.8	18
56	Fully compositional and thermal reservoir simulation. Computers and Chemical Engineering, 2014, 63, 51-65.	3.8	49
57	Estimating the Storm Surge Recurrence Interval for Hurricane Sandy. , 2014, , .		3
58	Simulating <scp>pH</scp> effects in an algal growth hydrodynamics model[1]. Journal of Phycology, 2013, 49, 608-615.	2.3	43
59	Fully Compositional and Thermal Reservoir Simulations Efficiently Compare EOR Techniques. , 2013, , .		2
60	Core-scale solute transport model selection using Monte Carlo analysis. Water Resources Research, 2013, 49, 3133-3147.	4.2	6
61	The saturated zone hydrology of Yucca Mountain and the surrounding area, southern Nevada and adjacent areas of California, USA. , 2012, , .		3
62	$CuInSe_2$ (CIS) Thin Film Solar Cells by Electrostatic Spray Deposition. Journal of the Electrochemical Society, 2012, 159, H444-H449.	2.9	22
63	Effect of Zinc Acetate Concentration on Structural, Optical and Electrical Properties of ZnO Thin Films Deposited by Electrostatic Spray on an ITO Substrate. Journal of the Electrochemical Society, 2012, 159, H716-H721.	2.9	14
64	Experimental Study on the Combustion and NO_x Emission Characteristics of DME/LPG Blended Fuel Using Counterflow Burner. Combustion Science and Technology, 2012, 184, 97-113.	2.3	12
65	A study of ejection modes for pulsed-DC electrohydrodynamic inkjet printing. Journal of Aerosol Science, 2012, 46, 1-6.	3.8	68
66	Tuning Hydrophobicity with Honeycomb Surface Structure and Hydrophilicity with CF_4 Plasma Etching for Aerosol Deposited Titania Films. Journal of the American Ceramic Society, 2012, 95, 3955-3961.	3.8	16
67	Diffusional exchange of isotopes in a metal hydride sphere. Chemical Engineering Science, 2012, 68, 250-257.	3.8	9
68	Releases from hydrogen fuel-cell vehicles in tunnels. International Journal of Hydrogen Energy, 2012, 37, 715-719.	7.1	28
69	Electrostatic Spray Deposition of Copper–Indium Thin Films. Aerosol Science and Technology, 2011, 45, 1448-1455.	3.1	24
70	Monodisperse and polydisperse colloid transport in water-saturated fractures with various orientations: Gravity effects. Advances in Water Resources, 2011, 34, 1249-1255.	3.8	37
71	Electrohydrodynamic pulsed-inkjet characteristics of various inks containing aluminum particles. Journal of Aerosol Science, 2011, 42, 621-630.	3.8	43
72	Optimization of supersonic nozzle flow for titanium dioxide thin-film coating by aerosol deposition. Journal of Aerosol Science, 2011, 42, 771-780.	3.8	66

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73	Verifying marine-hydro-kinetic energy generation simulations using SNL-EFDC. , 2011, , .		9
74	Supersonic Nozzle Flow Simulations for Particle Coating Applications: Effects of Shockwaves, Nozzle Geometry, Ambient Pressure, and Substrate Location upon Flow Characteristics. Journal of Thermal Spray Technology, 2011, 20, 514-522.	3.1	49
75	Numerical Studies on the Effects of Stagnation Pressure and Temperature on Supersonic Flow Characteristics in Cold Spray Applications. Journal of Thermal Spray Technology, 2011, 20, 1085-1097.	3.1	32
76	Assessment of gas and liquid velocities induced by an impacting liquid drop. International Journal of Multiphase Flow, 2011, 37, 55-66.	3.4	15
77	Modeling Thermal-Hydrologic Processes for a Heated Fractured Rock System: Impact of a Capillary-Pressure Maximum. Transport in Porous Media, 2010, 83, 501-523.	2.6	15
78	Measuring air core characteristics of a pressure-swirl atomizer via a transparent acrylic nozzle at various Reynolds numbers. Experimental Thermal and Fluid Science, 2010, 34, 1475-1483.	2.7	62
79	Advances in sediment transport modelling. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 754-763.	1.7	37
80	Splashing Characteristics of Monodisperse Sprays with Significant Viscosity Differences Impacting a Flat Surface. Drying Technology, 2010, 28, 1321-1330.	3.1	2
81	Simulating environmental changes due to marine hydrokinetic energy installations. , 2010, , .		14
82	Modeling Algae Growth in an Open-Channel Raceway. Journal of Computational Biology, 2010, 17, 895-906.	1.6	161
83	Are Drop-Impact Phenomena Described by Rayleigh-Taylor or Kelvin-Helmholtz Theory?. Drying Technology, 2009, 27, 316-321.	3.1	19
84	Practical Postcalibration Uncertainty Analysis: Yucca Mountain, Nevada. Ground Water, 2009, 47, 851-869.	1.3	51
85	Experimental Splash Studies of Monodisperse Sprays Impacting Variously Shaped Surfaces. Drying Technology, 2009, 27, 258-266.	3.1	8
86	Recent Advances in Sediment Transport Modeling. , 2008, , .		3
87	A new ghost-node method for linking different models and initial investigations of heterogeneity and nonmatching grids. Advances in Water Resources, 2007, 30, 1722-1736.	3.8	17
88	Simulations to Verify Horizontal Flow Measurements from a Borehole Flowmeter. Ground Water, 2006, 44, 394-405.	1.3	12
89	Model analysis of the colloid and radionuclide retardation experiment at the Grimsel Test Site. Journal of Colloid and Interface Science, 2006, 298, 467-475.	9.4	22
90	Colloid dispersion in a uniform-aperture fracture. Journal of Colloid and Interface Science, 2006, 300, 383-390.	9.4	9

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91	Investigation of Break-Up, Splash, and Fingerlike Instabilities for a Large Water Slug Impact. , 2006, , 529.		0
92	Modeling Habitat Availability as a Function of Flow Rate for the Pecos River, New Mexico. Environmental and Engineering Geoscience, 2006, 12, 103-113.	0.9	0
93	Modeling Noncohesive Sediment Transport Using Multiple Sediment Size Classes. Journal of Coastal Research, 2006, 225, 1125-1132.	0.3	11
94	The Effect of Montmorillonite Partial Density on the Role of Colloid Filtration by a Bentonite Buffer. Journal of Nuclear Science and Technology, 2006, 43, 605-609.	1.3	3
95	Noncohesive Sediment Transport Modeling with Multiple Size Classes. , 2005, , 1.		2
96	Contaminant transport in a fracture with spatially variable aperture in the presence of monodisperse and polydisperse colloids. Stochastic Environmental Research and Risk Assessment, 2005, 19, 266-279.	4.0	45
97	Dense colloid transport in a bifurcating fracture. Journal of Colloid and Interface Science, 2004, 270, 250-254.	9.4	11
98	Title is missing!. Transport in Porous Media, 2003, 51, 191-210.	2.6	26
99	Effective velocity and effective dispersion coefficient for finite-sized particles flowing in a uniform fracture. Journal of Colloid and Interface Science, 2003, 263, 288-295.	9.4	65
100	Analytical solutions for monodisperse and polydisperse colloid transport in uniform fractures. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2003, 226, 101-118.	4.7	39
101	Measurements of Sediment Erosion and Transport with the Adjustable Shear Stress Erosion and Transport Flume. Journal of Hydraulic Engineering, 2003, 129, 862-871.	1.5	52
102	Determining the random time step in a constant spatial step particle tracking algorithm. Chemical Engineering Science, 2002, 57, 4429-4434.	3.8	20
103	An efficient particle tracking equation with specified spatial step for the solution of the diffusion equation. Chemical Engineering Science, 2001, 56, 6535-6543.	3.8	30
104	Transport of polydisperse colloids in a saturated fracture with spatially variable aperture. Water Resources Research, 2000, 36, 1457-1465.	4.2	67
105	The Political Economy of Voting Rights Enforcement in America's Gilded Age: Electoral College Competition, Partisan Commitment, and the Federal Election Law. American Political Science Review, 1999, 93, 115-131.	3.7	25
106	Transport of polydisperse colloid suspensions in a single fracture. Water Resources Research, 1999, 35, 707-718.	4.2	57
107	Building a Democratic Majority: The Progressive Party Vote and the Federal Trade Commission. Studies in American Political Development, 1995, 9, 331-385.	0.4	7
108	Applicability of decision tree-based machine learning models in the prediction of core-calibrated shale facies from wireline logs in the late Devonian Duvernay Formation, Alberta, Canada. Interpretation, 0, , 1-45.	1.1	1