

Scott C James

List of Publications by Year in descending order

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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	A machine learning framework to forecast wave conditions. <i>Coastal Engineering</i> , 2018, 137, 1-10.	4.0	225
2	Modeling Algae Growth in an Open-Channel Raceway. <i>Journal of Computational Biology</i> , 2010, 17, 895-906.	1.6	161
3	A study of ejection modes for pulsed-DC electrohydrodynamic inkjet printing. <i>Journal of Aerosol Science</i> , 2012, 46, 1-6.	3.8	68
4	Transport of polydisperse colloids in a saturated fracture with spatially variable aperture. <i>Water Resources Research</i> , 2000, 36, 1457-1465.	4.2	67
5	Optimization of supersonic nozzle flow for titanium dioxide thin-film coating by aerosol deposition. <i>Journal of Aerosol Science</i> , 2011, 42, 771-780.	3.8	66
6	Effective velocity and effective dispersion coefficient for finite-sized particles flowing in a uniform fracture. <i>Journal of Colloid and Interface Science</i> , 2003, 263, 288-295.	9.4	65
7	Effect of viscosity, electrical conductivity, and surface tension on direct-current-pulsed drop-on-demand electrohydrodynamic printing frequency. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	64
8	Measuring air core characteristics of a pressure-swirl atomizer via a transparent acrylic nozzle at various Reynolds numbers. <i>Experimental Thermal and Fluid Science</i> , 2010, 34, 1475-1483.	2.7	62
9	Transport of polydisperse colloid suspensions in a single fracture. <i>Water Resources Research</i> , 1999, 35, 707-718.	4.2	57
10	Measurements of Sediment Erosion and Transport with the Adjustable Shear Stress Erosion and Transport Flume. <i>Journal of Hydraulic Engineering</i> , 2003, 129, 862-871.	1.5	52
11	Practical Postcalibration Uncertainty Analysis: Yucca Mountain, Nevada. <i>Ground Water</i> , 2009, 47, 851-869.	1.3	51
12	Supersonic Nozzle Flow Simulations for Particle Coating Applications: Effects of Shockwaves, Nozzle Geometry, Ambient Pressure, and Substrate Location upon Flow Characteristics. <i>Journal of Thermal Spray Technology</i> , 2011, 20, 514-522.	3.1	49
13	Fully compositional and thermal reservoir simulation. <i>Computers and Chemical Engineering</i> , 2014, 63, 51-65.	3.8	49
14	Enhancement of critical heat flux and superheat through controlled wettability of cuprous-oxide fractal-like nanotextured surfaces in pool boiling. <i>International Journal of Heat and Mass Transfer</i> , 2017, 107, 105-111.	4.8	48
15	Contaminant transport in a fracture with spatially variable aperture in the presence of monodisperse and polydisperse colloids. <i>Stochastic Environmental Research and Risk Assessment</i> , 2005, 19, 266-279.	4.0	45
16	Electrohydrodynamic pulsed-inkjet characteristics of various inks containing aluminum particles. <i>Journal of Aerosol Science</i> , 2011, 42, 621-630.	3.8	43
17	Simulating pH effects in an algal growth hydrodynamics model. <i>Journal of Phycology</i> , 2013, 49, 608-615.	2.3	43
18	Analytical solutions for monodisperse and polydisperse colloid transport in uniform fractures. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2003, 226, 101-118.	4.7	39

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19	Simulating the thermal behavior in Lake Ontario using EFDC. <i>Journal of Great Lakes Research</i> , 2016, 42, 511-523.	1.9	39
20	An integrated framework that combines machine learning and numerical models to improve wave-condition forecasts. <i>Journal of Marine Systems</i> , 2018, 186, 29-36.	2.1	39
21	Advances in sediment transport modelling. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2010, 48, 754-763.	1.7	37
22	Monodisperse and polydisperse colloid transport in water-saturated fractures with various orientations: Gravity effects. <i>Advances in Water Resources</i> , 2011, 34, 1249-1255.	3.8	37
23	Nickel-copper hybrid electrodes self-adhered onto a silicon wafer by supersonic cold-spray. <i>Acta Materialia</i> , 2015, 93, 156-163.	7.9	34
24	Supersonically sprayed nanotextured surfaces with silver nanowires for enhanced pool boiling. <i>International Journal of Heat and Mass Transfer</i> , 2018, 123, 397-406.	4.8	33
25	Numerical Studies on the Effects of Stagnation Pressure and Temperature on Supersonic Flow Characteristics in Cold Spray Applications. <i>Journal of Thermal Spray Technology</i> , 2011, 20, 1085-1097.	3.1	32
26	Supersonically spray-coated copper meshes as textured surfaces for pool boiling. <i>International Journal of Thermal Sciences</i> , 2018, 132, 26-33.	4.9	32
27	An efficient particle tracking equation with specified spatial step for the solution of the diffusion equation. <i>Chemical Engineering Science</i> , 2001, 56, 6535-6543.	3.8	30
28	Releases from hydrogen fuel-cell vehicles in tunnels. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 715-719.	7.1	28
29	Title is missing!. <i>Transport in Porous Media</i> , 2003, 51, 191-210.	2.6	26
30	Modifying capillary pressure and boiling regime of micro-porous wicks textured with graphene oxide. <i>Applied Thermal Engineering</i> , 2018, 128, 1605-1610.	6.0	26
31	The Political Economy of Voting Rights Enforcement in America's Gilded Age: Electoral College Competition, Partisan Commitment, and the Federal Election Law. <i>American Political Science Review</i> , 1999, 93, 115-131.	3.7	25
32	Influence of Hydraulic Fracturing on Overlying Aquifers in the Presence of Leaky Abandoned Wells. <i>Ground Water</i> , 2016, 54, 781-792.	1.3	25
33	Electrostatic Spray Deposition of Copper-Indium Thin Films. <i>Aerosol Science and Technology</i> , 2011, 45, 1448-1455.	3.1	24
34	Effects of capillarity on pool boiling using nano-textured surfaces through electrospayed BiVO ₄ nano-pillars. <i>Chemical Engineering Science</i> , 2017, 171, 360-367.	3.8	23
35	Model analysis of the colloid and radionuclide retardation experiment at the Grimsel Test Site. <i>Journal of Colloid and Interface Science</i> , 2006, 298, 467-475.	9.4	22
36	CuInSe ₂ (CIS) Thin Film Solar Cells by Electrostatic Spray Deposition. <i>Journal of the Electrochemical Society</i> , 2012, 159, H444-H449.	2.9	22

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37	Theoretical, numerical, and experimental investigation of smoke dynamics in high-rise buildings. <i>International Journal of Heat and Mass Transfer</i> , 2019, 135, 604-613.	4.8	22
38	Determining the random time step in a constant spatial step particle tracking algorithm. <i>Chemical Engineering Science</i> , 2002, 57, 4429-4434.	3.8	20
39	Thin film metallization by supersonic spraying of copper and nickel nanoparticles on a silicon substrate. <i>Computational Materials Science</i> , 2015, 108, 114-120.	3.0	20
40	Are Drop-Impact Phenomena Described by Rayleigh-Taylor or Kelvin-Helmholtz Theory?. <i>Drying Technology</i> , 2009, 27, 316-321.	3.1	19
41	Modelling study of the effects of suspended aquaculture installations on tidal stream generation in Cobscook Bay. <i>Renewable Energy</i> , 2017, 102, 65-76.	8.9	19
42	Ensemble model aggregation using a computationally lightweight machine-learning model to forecast ocean waves. <i>Journal of Marine Systems</i> , 2019, 199, 103206.	2.1	19
43	Analysis and modeling of <i>Nannochloropsis</i> growth in lab, greenhouse, and raceway experiments. <i>Journal of Applied Phycology</i> , 2014, 26, 2303-2314.	2.8	18
44	Modeling colloid transport in fractures with spatially variable aperture and surface attachment. <i>Journal of Hydrology</i> , 2018, 566, 735-742.	5.4	18
45	A new ghost-node method for linking different models and initial investigations of heterogeneity and nonmatching grids. <i>Advances in Water Resources</i> , 2007, 30, 1722-1736.	3.8	17
46	Tuning Hydrophobicity with Honeycomb Surface Structure and Hydrophilicity with CF_4 Plasma Etching for Aerosol-Deposited Titania Films. <i>Journal of the American Ceramic Society</i> , 2012, 95, 3955-3961.	3.8	16
47	Modeling Thermal-Hydrologic Processes for a Heated Fractured Rock System: Impact of a Capillary-Pressure Maximum. <i>Transport in Porous Media</i> , 2010, 83, 501-523.	2.6	15
48	Assessment of gas and liquid velocities induced by an impacting liquid drop. <i>International Journal of Multiphase Flow</i> , 2011, 37, 55-66.	3.4	15
49	Experimental and Numerical Simulations of Spray Impingement and Combustion Characteristics in Gasoline Direct Injection Engines under Variable Driving Conditions. <i>Flow, Turbulence and Combustion</i> , 2016, 96, 391-415.	2.6	15
50	Supersonically sprayed, triangular copper lines for pool boiling enhancement. <i>International Journal of Heat and Mass Transfer</i> , 2017, 113, 210-216.	4.8	15
51	Simulating environmental changes due to marine hydrokinetic energy installations. , 2010, , .		14
52	Effect of Zinc Acetate Concentration on Structural, Optical and Electrical Properties of ZnO Thin Films Deposited by Electrostatic Spray on an ITO Substrate. <i>Journal of the Electrochemical Society</i> , 2012, 159, H716-H721.	2.9	14
53	Thin-film metallization of $CuInGaSe_2$ nanoparticles by supersonic kinetic spraying. <i>Computational Materials Science</i> , 2015, 101, 66-76.	3.0	14
54	Simulations to Verify Horizontal Flow Measurements from a Borehole Flowmeter. <i>Ground Water</i> , 2006, 44, 394-405.	1.3	12

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55	Experimental Study on the Combustion and NO _x Emission Characteristics of DME/LPG Blended Fuel Using Counterflow Burner. <i>Combustion Science and Technology</i> , 2012, 184, 97-113.	2.3	12
56	Theoretical, numerical, and experimental investigation of pressure rise due to deflagration in confined spaces. <i>International Journal of Thermal Sciences</i> , 2017, 120, 469-480.	4.9	12
57	Restoring Pre-Industrial CO ₂ Levels While Achieving Sustainable Development Goals. <i>Energies</i> , 2020, 13, 4972.	3.1	12
58	Dense colloid transport in a bifurcating fracture. <i>Journal of Colloid and Interface Science</i> , 2004, 270, 250-254.	9.4	11
59	Modeling Noncohesive Sediment Transport Using Multiple Sediment Size Classes. <i>Journal of Coastal Research</i> , 2006, 225, 1125-1132.	0.3	11
60	Robust Mechanical Properties of Electrically Insulative Alumina Films by Supersonic Aerosol Deposition. <i>Journal of Thermal Spray Technology</i> , 2015, 24, 1046-1051.	3.1	11
61	Spatial Risk Analysis of Hydraulic Fracturing near Abandoned and Converted Oil and Gas Wells. <i>Ground Water</i> , 2017, 55, 268-280.	1.3	11
62	Deep-Learning-Based Vuggy Facies Identification from Borehole Images. <i>SPE Reservoir Evaluation and Engineering</i> , 2021, 24, 250-261.	1.8	11
63	Drag coefficient parameter estimation for aquaculture systems. <i>Environmental Fluid Mechanics</i> , 2019, 19, 989-1003.	1.6	10
64	When can the local advectionâ€“dispersion equation simulate non-Fickian transport through rough fractures?. <i>Stochastic Environmental Research and Risk Assessment</i> , 2019, 33, 931-938.	4.0	10
65	Colloid dispersion in a uniform-aperture fracture. <i>Journal of Colloid and Interface Science</i> , 2006, 300, 383-390.	9.4	9
66	Verifying marine-hydro-kinetic energy generation simulations using SNL-EFDC. , 2011, , .		9
67	Diffusional exchange of isotopes in a metal hydride sphere. <i>Chemical Engineering Science</i> , 2012, 68, 250-257.	3.8	9
68	Effects of impact conditions on the electrical and mechanical properties of supersonic cold sprayed Cuâ€“Ni electrodes. <i>Journal of Alloys and Compounds</i> , 2017, 695, 3714-3721.	5.5	9
69	Experimental Splash Studies of Monodisperse Sprays Impacting Various Shaped Surfaces. <i>Drying Technology</i> , 2009, 27, 258-266.	3.1	8
70	Nano-textured surfaces using hybrid micro- and nano-materials for efficient water cooling. <i>International Journal of Heat and Mass Transfer</i> , 2018, 123, 1120-1127.	4.8	8
71	Effect of volcanic emissions on clouds during the 2008â€“and 2018â€“Kilauea degassing events. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 7749-7771.	4.9	8
72	Building a Democratic Majority: The Progressive Party Vote and the Federal Trade Commission. <i>Studies in American Political Development</i> , 1995, 9, 331-385.	0.4	7

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73	Core-scale solute transport model selection using Monte Carlo analysis. <i>Water Resources Research</i> , 2013, 49, 3133-3147.	4.2	6
74	Conceptual Site Model for Newark Bayâ€™Hydrodynamics and Sediment Transport. <i>Journal of Marine Science and Engineering</i> , 2014, 2, 123-139.	2.6	6
75	Effects of surface thermodynamics on hydrogen isotope exchange kinetics in palladium: Particle and flow models. <i>Chemical Engineering Science</i> , 2015, 122, 474-490.	3.8	6
76	On the Efficiency of Executing Hydro-environmental Models on Cloud. <i>Procedia Engineering</i> , 2016, 154, 199-206.	1.2	6
77	Numerical investigation of smoke dynamics in unconfined and confined environments. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 571-582.	4.8	6
78	A Hybrid Artificial Neural Network to Estimate Soil Moisture Using SWAT+ and SMAP Data. <i>Machine Learning and Knowledge Extraction</i> , 2020, 2, 283-306.	5.0	6
79	Experimental and numerical investigation of smoke dynamics in vertical cylinders and open-air environment. <i>International Journal of Heat and Mass Transfer</i> , 2019, 135, 985-995.	4.8	5
80	Simulating current-energy converters: SNL-EFDC model development, verification, and parameter estimation. <i>Renewable Energy</i> , 2020, 147, 2531-2541.	8.9	4
81	Recent Advances in Sediment Transport Modeling. , 2008, , .		3
82	The saturated zone hydrology of Yucca Mountain and the surrounding area, southern Nevada and adjacent areas of California, USA. , 2012, , .		3
83	Estimating the Storm Surge Recurrence Interval for Hurricane Sandy. , 2014, , .		3
84	Parallelisation of hydro-environmental model for simulating marine current devices. , 2015, , .		3
85	Numerical modelling study of the effects of suspended aquaculture farms on tidal stream energy generation. , 2015, , .		3
86	Three dimensional web-like fibrous CuInS2 film. <i>Applied Surface Science</i> , 2015, 351, 588-593.	6.1	3
87	A framework for determining improved placement of current energy converters subject to environmental constraints. <i>International Journal of Sustainable Energy</i> , 2018, 37, 654-668.	2.4	3
88	SeaweedPaddock: Initial Modeling and Design for a Sargassum Ranch. , 2018, , .		3
89	The Effect of Montmorillonite Partial Density on the Role of Colloid Filtration by a Bentonite Buffer. <i>Journal of Nuclear Science and Technology</i> , 2006, 43, 605-609.	1.3	3
90	Colloid transport through a variable-aperture fracture under unfavorable attachment conditions: Characterization with a continuous time random walk model. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 644, 128822.	4.7	3

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91	Noncohesive Sediment Transport Modeling with Multiple Size Classes. , 2005, , 1.		2
92	Splashing Characteristics of Monodisperse Sprays with Significant Viscosity Differences Impacting a Flat Surface. Drying Technology, 2010, 28, 1321-1330.	3.1	2
93	Fully Compositional and Thermal Reservoir Simulations Efficiently Compare EOR Techniques. , 2013, , .		2
94	Simulating Flow Changes Due to Current Energy Capture: SNL-EFDC Model Verification. , 2014, , .		2
95	Calibration of a 3D hydrodynamic aquaculture model. , 2016, , .		2
96	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
97	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
98	PFLOTRAN-SIP: A PFLOTRAN Module for Simulating Spectral-Induced Polarization of Electrical Impedance Data. Energies, 2020, 13, 6552.	3.1	2
99	Are extreme soil moisture deficits captured by remotely sensed data retrievals?. Remote Sensing Letters, 2020, 11, 767-776.	1.4	2
100	Deploying and optimizing performance of a 3D hydrodynamic model on cloud. , 2016, , .		1
101	Ocean Forests: Breakthrough Yields for Macroalgae. , 2018, , .		1
102	A Multiphase, Multicomponent Reservoir-Simulation Framework for Miscible Gas and Steam Coinjection. SPE Reservoir Evaluation and Engineering, 2020, 23, 551-565.	1.8	1
103	Post-Calibration Uncertainty Analysis for Travel Times at a Naval Weapons Industrial Reserve Plant. Water (Switzerland), 2020, 12, 3428.	2.7	1
104	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
105	Investigation of Break-Up, Splash, and Fingerlike Instabilities for a Large Water Slug Impact. , 2006, , 529.		0
106	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
107	Validating and Applying SNL-EFDC to Current Energy Capture Devices Simulation. , 2015, , .		0
108	Deployment and parametrisation of couplec hydrodynamic and wave models. , 2017, , .		0