David A Dicarlo

List of Publications by Year
in descending order

62 papers	1,699 citations	279487 23 h-index	301761 39 g-index
62 all docs	62 docs citations	62 times ranked	1358 citing authors

#	Article	IF	Citations
1	Preferential Flow in Waterâ€Repellent Sands. Soil Science Society of America Journal, 1998, 62, 1185-1190.	1.2	180
2	Size-dependent properties of silica nanoparticles for Pickering stabilization of emulsions and foams. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	129
3	Experimental measurements of saturation overshoot on infiltration. Water Resources Research, 2004, 40, .	1.7	124
4	Stability of gravityâ€driven multiphase flow in porous media: 40 Years of advancements. Water Resources Research, 2013, 49, 4531-4544.	1.7	81
5	The Effect of Wettability on Three-Phase Relative Permeability. Transport in Porous Media, 2000, 39, 347-366.	1.2	76
6	Enhancing Hydrocarbon Permeability After Hydraulic Fracturing: Laboratory Evaluations of Shut-Ins and Surfactant Additives. SPE Journal, 2017, 22, 1011-1023.	1.7	76
7	Water Blocks in Tight Formations: The Role of Matrix/Fracture Interaction in Hydrocarbon-Permeability Reduction and Its Implications in the Use of Enhanced Oil Recovery Techniques. SPE Journal, 2017, 22, 1393-1401.	1.7	64
8	Aggregation of silica nanoparticles and its impact on particle mobility under high-salinity conditions. Journal of Petroleum Science and Engineering, 2015, 133, 376-383.	2.1	62
9	Carbon Dioxide-in-Brine Foams at High Temperatures and Extreme Salinities Stabilized with Silica Nanoparticles. Energy & Fuels, 2017, 31, 10680-10690.	2.5	47
10	Effect of Dispersion on Solutal Convection in Porous Media. Geophysical Research Letters, 2018, 45, 9690-9698.	1.5	46
11	Capillary pressure overshoot as a function of imbibition flux and initial water content. Water Resources Research, 2007, 43, .	1.7	45
12	Prediction of empirical properties using direct pore-scale simulation of straining through 3D microtomography images of porous media. Journal of Hydrology, 2015, 529, 768-778.	2.3	45
13	Flow physics of how surfactants can reduce water blocking caused by hydraulic fracturing in low permeability reservoirs. Journal of Petroleum Science and Engineering, 2017, 157, 631-642.	2.1	43
14	Modeling observed saturation overshoot with continuum additions to standard unsaturated theory. Advances in Water Resources, 2005, 28, 1021-1027.	1.7	38
15	Computed-Tomography Measurements of Water Block in Low-Permeability Rocks: Scaling and Remedying Production Impairment. SPE Journal, 2018, 23, 762-771.	1.7	38
16	Nonmonotonic traveling wave solutions of infiltration into porous media. Water Resources Research, 2008, 44, .	1.7	37
17	An extended JBN method of determining unsteady-state two-phase relative permeability. Water Resources Research, 2016, 52, 8374-8383.	1.7	36
18	The effect of saturation path on threeâ€phase relative permeability. Water Resources Research, 2015, 51, 9141-9164.	1.7	30

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19	Study of formation damage caused by retention of bi-dispersed particles using combined pore-scale simulations and particle flooding experiments. Journal of Petroleum Science and Engineering, 2017, 158, 293-308.	2.1	28
20	Experimental Investigation of Gas Flow and Hydrate Formation Within the Hydrate Stability Zone. Journal of Geophysical Research: Solid Earth, 2018, 123, 5350-5371.	1.4	27
21	A new unsteady-state method of determining two-phase relative permeability illustrated by CO2-brine primary drainage in berea sandstone. Advances in Water Resources, 2016, 96, 251-265.	1.7	26
22	Comparison of Darcy's law and invasion percolation simulations with buoyancy-driven CO2-brine multiphase flow in a heterogeneous sandstone core. Journal of Petroleum Science and Engineering, 2017, 155, 54-62.	2.1	25
23	Foam Generation Hysteresis in Porous Media: Experiments and New Insights. Transport in Porous Media, 2017, 116, 687-703.	1.2	23
24	Can Continuum Extensions to Multiphase Flow Models Describe Preferential Flow?. Vadose Zone Journal, 2010, 9, 268-277.	1.3	19
25	Monitoring Methane Emissions from Oil and Gas Operations. , 2022, 1, .		19
26	Mimicking Geologic Depositional Fabrics for Multiphase Flow Experiments. Water Resources Research, 2019, 55, 9623-9638.	1.7	18
27	Nanoparticle-Stabilized Emulsions for Improved Mobility Control for Adverse-mobility Waterflooding. , 2016, , .		17
28	Capillary pressure overshoot for unstable wetting fronts is explained by Hoffman's velocityâ€dependent contactâ€angle relationship. Water Resources Research, 2014, 50, 5290-5297.	1.7	16
29	Multi-Scale Evaluation of Nanoparticle-Stabilized CO2-in-Water Foams: From the Benchtop to the Field. , 2015, , .		16
30	Fractional Flow Approach to Saturation Overshoot. Transport in Porous Media, 2012, 91, 955-971.	1.2	15
31	Pore scale consideration in unstable gravity driven finger flow. Water Resources Research, 2013, 49, 7815-7819.	1.7	15
32	Quantifying hydrate solidification front advancing using method of characteristics. Journal of Geophysical Research: Solid Earth, 2015, 120, 6681-6697.	1.4	15
33	Three-Phase Oil Relative Permeability in Water-Wet Media: A Comprehensive Study. Transport in Porous Media, 2016, 112, 665-687.	1.2	15
34	Steadyâ€state supercritical <scp>CO</scp>₂ and brine relative permeability in <scp>B</scp>erea sandstone at different temperature and pressure conditions. Water Resources Research, 2017, 53, 6312-6321.	1.7	15
35	Quantitative network model predictions of saturation behind infiltration fronts and comparison with experiments. Water Resources Research, 2006, 42, .	1.7	13
36	Measurements of CO₂â€brine relative permeability in Berea sandstone using pressure taps and a long core. , 2017, 7, 370-382.		13

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37	Effect of Gas Flow Rate on Hydrate Formation Within the Hydrate Stability Zone. Journal of Geophysical Research: Solid Earth, 2018, 123, 6263-6276.	1.4	13
38	Compositional gravity drainage 2: experimental measurements using an analog system. Transport in Porous Media, 2007, 69, 159-174.	1.2	12
39	Mechanisms of Capillaryâ€Controlled Immiscible Fluid Flow in Fractionally Wet Porous Media. Vadose Zone Journal, 2010, 9, 610-623.	1.3	12
40	Hydrate is a Nonwetting Phase in Porous Media. Geophysical Research Letters, 2020, 47, e2020GL089289.	1.5	12
41	Tomographic measurements of pore filling at infiltration fronts. Advances in Water Resources, 2010, 33, 485-492.	1.7	11
42	The Transition between Sharp and Diffusive Wetting Fronts as a Function of Imbibing Fluid Properties. Vadose Zone Journal, 2010, 9, 588-596.	1.3	11
43	The Effect of Vuggy Porosity on Straining in Porous Media. SPE Journal, 2019, 24, 1164-1178.	1.7	9
44	The Effect of Contact Angle on Saturation Overshoot. Vadose Zone Journal, 2011, 10, 466-468.	1.3	8
45	When Less Flowback Is More: A Mechanism of Permeability Damage and its Implications on the Application of EOR Techniques. , 2015, , .		8
46	The Applicability of Surfactant-Based EOR Technique to Enhance the Productivity in Tight Formations. , 2015, , .		7
47	Unified Model of Drainage and Imbibition in 3D Fractionally Wet Porous Media. Transport in Porous Media, 2013, 99, 581-611.	1.2	6
48	Subsurface injection of combustion power plant effluent as a solidâ€phase carbon dioxide storage strategy. Geophysical Research Letters, 2017, 44, 5521-5530.	1.5	6
49	Nitrogenâ€Driven Chromatographic Separation During Gas Injection Into Hydrateâ€Bearing Sediments. Water Resources Research, 2019, 55, 6673-6691.	1.7	6
50	Experimental study on the formation damage caused by gas fracturing fluids. Journal of Petroleum Science and Engineering, 2020, 192, 107254.	2.1	5
51	Gas Flow by Invasion Percolation Through the Hydrate Stability Zone. Geophysical Research Letters, 2020, 47, e2019GL084380.	1.5	5
52	Monitoring methane emissions from oil and gas operations^{â€¡}. Optics Express, 2022, 30, 24326.	1.7	5
53	Impact of gravity on hydrate saturation in gasâ€rich environments. Water Resources Research, 2016, 52, 1265-1285.	1.7	4
54	The effect of vug distribution on particle straining in permeable media. Journal of Hydrology, 2020, 580, 124306.	2.3	4

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55	Compositional gravity drainage 1. Equilibrium solutions and controlling Bond numbers for a two-phase, three-component system. Transport in Porous Media, 2007, 69, 13-32.	1.2	3
56	Comment on â€œA phase field model of unsaturated flowâ€•by L. Cuetoâ€Felgueroso and R. Juanes. Water Resources Research, 2010, 46, .	1.7	3
57	Permeability Estimation of Damaged Formations Near Wellbore. , 2011, , .		3
58	A two-site filtration model for silica nanoaggregate mobility in porous media under high salinity conditions. Journal of Nanoparticle Research, 2018, 20, 1.	0.8	3
59	The Extremum Condition of the Local Volumetric Flux for Compositional Displacements. Transport in Porous Media, 2019, 129, 941-953.	1.2	3
60	Measurements of Three-Phase Relative Permeability as a Function of Fluid Composition. , 2020, , .		3
61	A Simple Scaling Approach to the Spontaneous Clearing Time of Water Block. Transport in Porous Media, 2021, 137, 1-19.	1.2	3
62	Prediction of three-phase saturation profiles from two-phase capillary pressure curves as a function of wettability. International Journal of Oil, Gas and Coal Technology, 2012, 5, 123.	0.1	2