Martin J Blunt

List of Publications by Year in descending order

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Version: 2024-02-01

389 papers	30,701 citations	3531 90 h-index	6131 159 g-index
399 all docs	399 docs citations	399 times ranked	12053 citing authors

#	Article	IF	Citations
1	Crossflow effects on low salinity displacement in stratified heterogeneity. Journal of Petroleum Science and Engineering, 2022, 208, 109565.	4.2	1
2	Flow in Porous Media in the Energy Transition. Engineering, 2022, 14, 10-14.	6.7	2
3	New type of pore-snap-off and displacement correlations in imbibition. Journal of Colloid and Interface Science, 2022, 609, 384-392.	9.4	18
4	Nonlinear multiphase flow in hydrophobic porous media. Journal of Fluid Mechanics, 2022, 934, .	3.4	9
5	Pore-scale imaging of asphaltene deposition with permeability reduction and wettability alteration. Fuel, 2022, 316, 123202.	6.4	9
6	Minimal Surfaces in Porous Materials: X-Ray Image-Based Measurement of the Contact Angle and Curvature in Gas Diffusion Layers to Design Optimal Performance of Fuel Cells. ACS Applied Energy Materials, 2022, 5, 4613-4621.	5.1	13
7	Fluid â€“ Fluid Interfacial Area and Its Impact on Relative Permeability - A Pore Network Modeling Study. , 2022, , .		2
8	Quantitative determination of the threshold pressure for a discontinuous phase to pass through a constriction using microscale simulation. International Journal of Multiphase Flow, 2022, 153, 104107.	3.4	7
9	Characterization of Water Transport in Porous Building Materials Based on an Analytical Spontaneous Imbibition Model. Transport in Porous Media, 2022, 143, 417-432.	2.6	4
10	Generalized network modelling of two-phase flow in a water-wet and mixed-wet reservoir sandstone: Uncertainty and validation with experimental data. Advances in Water Resources, 2022, 164, 104194.	3.8	6
11	Experimental study of electrical heating to enhance oil production from oil-wet carbonate reservoirs. Fuel, 2022, 324, 124559.	6.4	14
12	Pore-scale processes in tertiary low salinity waterflooding in a carbonate rock: Micro-dispersions, water film growth, and wettability change. Journal of Colloid and Interface Science, 2022, 628, 486-498.	9.4	6
13	Red Noise in Steadyâ€State Multiphase Flow in Porous Media. Water Resources Research, 2022, 58, .	4.2	7
14	Determination of contact angles for three-phase flow in porous media using an energy balance. Journal of Colloid and Interface Science, 2021, 582, 283-290.	9.4	16
15	Pore-scale imaging of asphaltene-induced pore clogging in carbonate rocks. Fuel, 2021, 283, 118871.	6.4	22
16	Predictive Modeling of Relative Permeability Using a Generalized Equation of State. SPE Journal, 2021, 26, 191-205.	3.1	12
17	Pore-scale analysis of formation damage; A review of existing digital and analytical approaches. Advances in Colloid and Interface Science, 2021, 288, 102345.	14.7	15
18	Dynamic fluid configurations in steady-state two-phase flow in Bentheimer sandstone. Physical Review E, 2021, 103, 013110.	2.1	13

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19	Poromechanical controls on spontaneous imbibition in earth materials. Scientific Reports, 2021, 11, 3328.	3.3	9
20	Pore-scale characterization of carbon dioxide storage at immiscible and near-miscible conditions in altered-wettability reservoir rocks. International Journal of Greenhouse Gas Control, 2021, 105, 103232.	4.6	25
21	Acknowledgement of Reviewers for 2020. Transport in Porous Media, 2021, 137, 283-286.	2.6	0
22	Quantification of Nonlinear Multiphase Flow in Porous Media. Geophysical Research Letters, 2021, 48, e2020GL090477.	4.0	33
23	A continuous time random walk method to predict dissolution in porous media based on validation of experimental NMR data. Advances in Water Resources, 2021, 149, 103847.	3.8	5
24	The development of intermittent multiphase fluid flow pathways through a porous rock. Advances in Water Resources, 2021, 150, 103868.	3.8	16
25	Deep learning in pore scale imaging and modeling. Earth-Science Reviews, 2021, 215, 103555.	9.1	90
26	Pore-Scale Imaging and Analysis of Wettability Order, Trapping and Displacement in Three-Phase Flow in Porous Media with Various Wettabilities. Transport in Porous Media, 2021, 140, 59-84.	2.6	32
27	Pore-scale modelling and sensitivity analyses of hydrogen-brine multiphase flow in geological porous media. Scientific Reports, 2021, 11, 8348.	3.3	103
28	Pore-scale imaging of displacement patterns in an altered-wettability carbonate. Chemical Engineering Science, 2021, 235, 116464.	3.8	26
29	Pore-by-Pore Modelling, Validation and Prediction of Waterflooding in Oil-Wet Rocks Using Dynamic Synchrotron Data. Transport in Porous Media, 2021, 138, 285-308.	2.6	14
30	Direct Numerical Simulation of Pore-Scale Trapping Events During Capillary-Dominated Two-Phase Flow in Porous Media. Transport in Porous Media, 2021, 138, 443-458.	2.6	28
31	Advances in multiscale numerical and experimental approaches for multiphysics problems in porous media. Advances in Geo-Energy Research, 2021, 5, 233-238.	6.0	24
32	Operando Liquid Pressure Determination in Polymer Electrolyte Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 34003-34011.	8.0	15
33	Pore-scale imaging and analysis of low salinity waterflooding in a heterogeneous carbonate rock at reservoir conditions. Scientific Reports, 2021, 11, 15063.	3.3	25
34	Drainage Capillary Pressure Distribution and Fluid Displacement in a Heterogeneous Laminated Sandstone. Geophysical Research Letters, 2021, 48, e2021GL093604.	4.0	7
35	Wettability Characterization from Pore-Scale Images Using Topology and Energy Balance with Implications for Recovery and Storage. , 2021, , .		2
36	Pore-Scale Imaging of Tertiary Low Salinity Waterflooding in a Heterogeneous Carbonate Rock at Reservoir Conditions. , 2021, , .		1

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37	Assessment of CO2 geological storage capacity of saline aquifers under the North Sea. International Journal of Greenhouse Gas Control, 2021, 111, 103463.	4.6	12
38	The human exposome and health in the Anthropocene. International Journal of Epidemiology, 2021, 50, 378-389.	1.9	24
39	A hybrid of statistical and conditional generative adversarial neural network approaches for reconstruction of 3D porous media (ST-CGAN). Advances in Water Resources, 2021, 158, 104064.	3.8	16
40	Disconnected Gas Transport in Steadyâ€€State Threeâ€€Phase Flow. Water Resources Research, 2021, 57, e2021WR031147.	4.2	11
41	A salinity cut-off method to control numerical dispersion in low-salinity waterflooding simulation. Journal of Petroleum Science and Engineering, 2020, 184, 106586.	4.2	3
42	Stochastic Seismic Waveform Inversion Using Generative Adversarial Networks as a Geological Prior. Mathematical Geosciences, 2020, 52, 53-79.	2.4	127
43	Coupled generative adversarial and auto-encoder neural networks to reconstruct three-dimensional multi-scale porous media. Journal of Petroleum Science and Engineering, 2020, 186, 106794.	4.2	61
44	Dynamics of enhanced gas trapping applied to CO2 storage in the presence of oil using synchrotron X-ray micro tomography. Applied Energy, 2020, 259, 114136.	10.1	46
45	Deformation bands and their impact on fluid flow: Insights from geometrical modelling and multi-scale flow simulations in sandstones. Journal of Structural Geology, 2020, 141, 104215.	2.3	11
46	Pore-scale imaging with measurement of relative permeability and capillary pressure on the same reservoir sandstone sample under water-wet and mixed-wet conditions. Advances in Water Resources, 2020, 146, 103786.	3.8	37
47	Realâ€€Time Imaging Reveals Distinct Poreâ€€Scale Dynamics During Transient and Equilibrium Subsurface Multiphase Flow. Water Resources Research, 2020, 56, e2020WR028287.	4.2	22
48	Pore-by-pore modeling, analysis, and prediction of two-phase flow in mixed-wet rocks. Physical Review E, 2020, 102, 023302.	2.1	27
49	Advances in carbon capture, utilization and storage. Applied Energy, 2020, 278, 115627.	10.1	135
50	Dynamics of fluid displacement in mixed-wet porous media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200040.	2.1	25
51	Predictive Modeling of Relative Permeability using a Generalized Equation-of-State. , 2020, , .		1
52	In Situ Characterization of Threeâ€€Phase Flow in Mixedâ€€Wet Porous Media Using Synchrotron Imaging. Water Resources Research, 2020, 56, e2020WR027873.	4.2	17
53	Dynamics of water injection in an oil-wet reservoir rock at subsurface conditions: Invasion patterns and pore-filling events. Physical Review E, 2020, 102, 023110.	2.1	23
54	Multispecies Reactive Transport in a Microporous Rock: Impact of Flow Heterogeneity and Reversibility of Reaction. Water Resources Research, 2020, 56, e2020WR027317.	4.2	5

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55	Evaluation of methods using topology and integral geometry to assess wettability. Journal of Colloid and Interface Science, 2020, 576, 99-108.	9.4	17
56	Pore-scale X-ray imaging with measurement of relative permeability, capillary pressure and oil recovery in a mixed-wet micro-porous carbonate reservoir rock. Fuel, 2020, 268, 117018.	6.4	64
57	Pore-scale numerical simulation of low salinity water flooding using the lattice Boltzmann method. Journal of Colloid and Interface Science, 2020, 566, 444-453.	9.4	51
58	Using energy balance to determine pore-scale wettability. Journal of Colloid and Interface Science, 2020, 576, 486-495.	9.4	19
59	Droplet and Percolation Network Interactions in a Fuel Cell Gas Diffusion Layer. Journal of the Electrochemical Society, 2020, 167, 084506.	2.9	24
60	Local Capillary Pressure Estimation Based on Curvature of the Fluid Interface â€“ Validation with Two-Phase Direct Numerical Simulations. E3S Web of Conferences, 2020, 146, 04003.	0.5	1
61	Verifying Pore Network Models of Imbibition in Rocks Using Timeâ€Resolved Synchrotron Imaging. Water Resources Research, 2020, 56, e2019WR026587.	4.2	27
62	Pore-scale mechanisms of CO2 storage in oilfields. Scientific Reports, 2020, 10, 8534.	3.3	31
63	Three-phase flow displacement dynamics and Haines jumps in a hydrophobic porous medium. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200671.	2.1	10
64	Pore-scale dynamics and the multiphase Darcy law. Physical Review Fluids, 2020, 5, .	2.5	46
65	Validating the Generalized Pore Network Model Using Micro-CT Images of Two-Phase Flow. Transport in Porous Media, 2019, 130, 405-424.	2.6	36
66	Quantification of Uncertainty and Best Practice in Computing Interfacial Curvature from Complex Pore Space Images. Materials, 2019, 12, 2138.	2.9	24
67	Intermittent fluid connectivity during two-phase flow in a heterogeneous carbonate rock. Physical Review E, 2019, 100, 043103.	2.1	33
68	In situ pore-scale analysis of oil recovery during three-phase near-miscible CO2 injection in a water-wet carbonate rock. Advances in Water Resources, 2019, 134, 103432.	3.8	32
69	Mechanisms of Microscopic Displacement During Enhanced Oil Recovery in Mixed-Wet Rocks Revealed Using Direct Numerical Simulation. Transport in Porous Media, 2019, 130, 731-749.	2.6	12
70	Mechanisms controlling fluid breakup and reconnection during two-phase flow in porous media. Physical Review E, 2019, 100, 043115.	2.1	19
71	iSCAL for Complete Rock Characterization: Using Pore-Scale Imaging to Determine Relative Permeability and Capillary Pressure. , 2019, , .		2
72	The Decomposition of Volumetric Sweep Efficiency and Its Utility. , 2019, , .		0

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73	Minimal surfaces in porous media: Pore-scale imaging of multiphase flow in an altered-wettability Bentheimer sandstone. Physical Review E, 2019, 99, 063105.	2.1	98
74	A review of the phenomenon of counter-current spontaneous imbibition: Analysis and data interpretation. Journal of Petroleum Science and Engineering, 2019, 180, 456-470.	4.2	68
75	A thermodynamically consistent characterization of wettability in porous media using high-resolution imaging. Journal of Colloid and Interface Science, 2019, 552, 59-65.	9.4	69
76	The Effect of Mixed Wettability on Poreâ€Scale Flow Regimes Based on a Flooding Experiment in Ketton Limestone. Geophysical Research Letters, 2019, 46, 3225-3234.	4.0	76
77	The architectural design of smart ventilation and drainage systems in termite nests. Science Advances, 2019, 5, eaat8520.	10.3	35
78	Modelling of multispecies reactive transport on pore-space images. Advances in Water Resources, 2019, 127, 192-208.	3.8	15
79	Pore occupancy, relative permeability and flow intermittency measurements using X-ray micro-tomography in a complex carbonate. Advances in Water Resources, 2019, 129, 56-69.	3.8	58
80	Poreâ€Scale Dissolution by CO₂ Saturated Brine in a Multimineral Carbonate at Reservoir Conditions: Impact of Physical and Chemical Heterogeneity. Water Resources Research, 2019, 55, 3171-3193.	4.2	49
81	Modeling Oil Recovery in Mixed-Wet Rocks: Pore-Scale Comparison Between Experiment and Simulation. Transport in Porous Media, 2019, 127, 393-414.	2.6	64
82	Capillary-Dominated Fluid Displacement in Porous Media. Annual Review of Fluid Mechanics, 2019, 51, 429-449.	25.0	109
83	Calibration of astigmatic particle tracking velocimetry based on generalized Gaussian feature extraction. Advances in Water Resources, 2019, 124, 1-8.	3.8	12
84	4D in situ synchrotron X-ray tomographic microscopy and laser-based heating study of oil shale pyrolysis. Applied Energy, 2019, 235, 1468-1475.	10.1	66
85	An Introduction to Subsurface CO2 Storage. RSC Energy and Environment Series, 2019, , 238-295.	0.5	7
86	A New Waterflood Initialization Protocol With Wettability Alteration for Pore-Scale Multiphase Flow Experiments. Petrophysics, 2019, 60, 264-272.	0.3	9
87	Generalized network modeling of capillary-dominated two-phase flow. Physical Review E, 2018, 97, 023308.	2.1	57
88	4D multi-scale imaging of reactive flow in carbonates: Assessing the impact of heterogeneity on dissolution regimes using streamlines at multiple length scales. Chemical Geology, 2018, 481, 27-37.	3.3	60
89	Wetting boundary condition for the color-gradient lattice Boltzmann method: Validation with analytical and experimental data. Advances in Water Resources, 2018, 116, 56-66.	3.8	84
90	Reservoir-condition pore-scale imaging of dolomite reaction with supercritical CO 2 acidified brine: Effect of pore-structure on reaction rate using velocity distribution analysis. International Journal of Greenhouse Gas Control, 2018, 68, 99-111.	4.6	52

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91	A numerical model of two-phase flow at the micro-scale using the volume-of-fluid method. Journal of Computational Physics, 2018, 357, 159-182.	3.8	77
92	Multiphase Flow Characteristics of Heterogeneous Rocks From <scp>CO</scp>₂ Storage Reservoirs in the United Kingdom. Water Resources Research, 2018, 54, 729-745.	4.2	48
93	Stochastic Reconstruction of an Oolitic Limestone by Generative Adversarial Networks. Transport in Porous Media, 2018, 125, 81-103.	2.6	112
94	A study to investigate viscous coupling effects on the hydraulic conductance of fluid layers in two-phase flow at the pore level. Journal of Colloid and Interface Science, 2018, 522, 299-310.	9.4	22
95	Estimation of relative permeability and capillary pressure from mass imbibition experiments. Advances in Water Resources, 2018, 115, 88-94.	3.8	37
96	Optimization of image quality and acquisition time for lab-based X-ray microtomography using an iterative reconstruction algorithm. Advances in Water Resources, 2018, 115, 112-124.	3.8	12
97	Modelling and upscaling of transport in carbonates during dissolution: Validation and calibration with NMR experiments. Journal of Contaminant Hydrology, 2018, 212, 85-95.	3.3	9
98	Large-scale Invasion Percolation with Trapping for Upscaling Capillary-Controlled Darcy-scale Flow. Transport in Porous Media, 2018, 121, 479-506.	2.6	8
99	Three-Phase Flow Visualization and Characterization for a Mixed-Wet Carbonate Rock. , 2018, , .		4
100	In situ characterization of immiscible three-phase flow at the pore scale for a water-wet carbonate rock. Advances in Water Resources, 2018, 121, 446-455.	3.8	72
101	Spatial Correlation of Contact Angle and Curvature in Poreâ€Space Images. Water Resources Research, 2018, 54, 6133-6152.	4.2	36
102	Pore-scale Imaging and Characterization of Hydrocarbon Reservoir Rock Wettability at Subsurface Conditions Using X-ray Microtomography. Journal of Visualized Experiments, 2018, , .	0.3	8
103	Partial dissolution of carbonate rock grains during reactive CO2-saturated brine injection under reservoir conditions. Advances in Water Resources, 2018, 122, 27-36.	3.8	34
104	Imaging and Measurement of Poreâ€Scale Interfacial Curvature to Determine Capillary Pressure Simultaneously With Relative Permeability. Water Resources Research, 2018, 54, 7046-7060.	4.2	87
105	Validation of model predictions of pore-scale fluid distributions during two-phase flow. Physical Review E, 2018, 97, 053104.	2.1	72
106	Wettability in complex porous materials, the mixed-wet state, and its relationship to surface roughness. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8901-8906.	7.1	153
107	Time-resolved synchrotron X-ray micro-tomography datasets of drainage and imbibition in carbonate rocks. Scientific Data, 2018, 5, 180265.	5.3	23
108	Model-free classification of X-ray scattering signals applied to image segmentation. Journal of Applied Crystallography, 2018, 51, 1378-1386.	4.5	11

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109	Dynamic reservoir-condition microtomography of reactive transport in complex carbonates: Effect of initial pore structure and initial brine pH. Geochimica Et Cosmochimica Acta, 2017, 204, 267-285.	3.9	66
110	Automatic method for estimation of in situ effective contact angle from X-ray micro tomography images of two-phase flow in porous media. Journal of Colloid and Interface Science, 2017, 496, 51-59.	9.4	123
111	The impact of capillary backpressure on spontaneous counter-current imbibition in porous media. Advances in Water Resources, 2017, 107, 405-420.	3.8	19
112	An improved pore-network model including viscous coupling effects using direct simulation by the lattice Boltzmann method. Advances in Water Resources, 2017, 100, 26-34.	3.8	53
113	Microstructural imaging and characterization of oil shale before and after pyrolysis. Fuel, 2017, 197, 562-574.	6.4	123
114	Reaction Rates in Chemically Heterogeneous Rock: Coupled Impact of Structure and Flow Properties Studied by X-ray Microtomography. Environmental Science & Technology, 2017, 51, 4108-4116.	10.0	55
115	Reconstruction of three-dimensional porous media using generative adversarial neural networks. Physical Review E, 2017, 96, 043309.	2.1	294
116	In situ characterization of mixed-wettability in aÂreservoir rock at subsurface conditions. Scientific Reports, 2017, 7, 10753.	3.3	147
117	Dynamic fluid connectivity during steady-state multiphase flow in a sandstone. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8187-8192.	7.1	121
118	Generalized network modeling: Network extraction as a coarse-scale discretization of the void space of porous media. Physical Review E, 2017, 96, 013312.	2.1	213
119	Dynamics of snap-off and pore-filling events during two-phase fluid flow in permeable media. Scientific Reports, 2017, 7, 5192.	3.3	135
120	Automatic measurement of contact angle in pore-space images. Advances in Water Resources, 2017, 109, 158-169.	3.8	153
121	Visualization and quantification of capillary drainage in the pore space of laminated sandstone by a porous plate method using differential imaging Xâ€ray microtomography. Water Resources Research, 2017, 53, 7457-7468.	4.2	29
122	Xâ€ray Microtomography of Intermittency in Multiphase Flow at Steady State Using a Differential Imaging Method. Water Resources Research, 2017, 53, 10274-10292.	4.2	83
123	Dynamic Pore-scale Reservoir-condition Imaging of Reaction in Carbonates Using Synchrotron Fast Tomography. Journal of Visualized Experiments, 2017, , .	0.3	3
124	Multi-scale multi-dimensional microstructure imaging of oil shale pyrolysis using X-ray micro-tomography, automated ultra-high resolution SEM, MAPS Mineralogy and FIB-SEM. Applied Energy, 2017, 202, 628-647.	10.1	219
125	The Role of Local Instabilities in Fluid Invasion into Permeable Media. Scientific Reports, 2017, 7, 444.	3.3	65
126	In situ Wettability Measurement in a Carbonate Reservoir Rock at High Temperature and Pressure. , 2017, , .		3

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127	Preface: Special Issue in Honor of Harvey Scherâ€™s 80th Birthday. Transport in Porous Media, 2016, 115, 209-214.	2.6	0
128	Multiscale Description of Shale Pore Systems by Scanning SAXS and WAXS Microscopy. Energy & Fuels, 2016, 30, 10282-10297.	5.1	92
129	Imaging of oil layers, curvature and contact angle in a mixedâ€wet and a waterâ€wet carbonate rock. Water Resources Research, 2016, 52, 1716-1728.	4.2	124
130	Poreâ€scale simulation of carbonate dissolution in microâ€CT images. Journal of Geophysical Research: Solid Earth, 2016, 121, 558-576.	3.4	81
131	Poreâ€space structure and average dissolution rates: A simulation study. Water Resources Research, 2016, 52, 7198-7212.	4.2	28
132	Experimental and Analytical Investigation of Spontaneous Imbibition in Water-Wet Carbonates. Transport in Porous Media, 2016, 115, 189-207.	2.6	36
133	Quantification of sub-resolution porosity in carbonate rocks by applying high-salinity contrast brine using X-ray microtomography differential imaging. Advances in Water Resources, 2016, 96, 306-322.	3.8	92
134	Analytical and numerical investigations of spontaneous imbibition in porous media. Water Resources Research, 2016, 52, 7284-7310.	4.2	33
135	Pore Scale Observations of Trapped CO₂ in Mixed-Wet Carbonate Rock: Applications to Storage in Oil Fields. Environmental Science & Technology, 2016, 50, 10282-10290.	10.0	57
136	Analytical Solutions for Spontaneous Imbibition: Fractional-Flow Theory and Experimental Analysis. SPE Journal, 2016, 21, 2308-2316.	3.1	59
137	The Impact of Pore Structure Heterogeneity, Transport, and Reaction Conditions on Fluidâ€“Fluid Reaction Rate Studied on Images of Pore Space. Transport in Porous Media, 2016, 115, 215-237.	2.6	33
138	Dynamic imaging of oil shale pyrolysis using synchrotron Xâ€ray microtomography. Geophysical Research Letters, 2016, 43, 6799-6807.	4.0	63
139	Early-Time 1D Analysis of Shale-Oil and -Gas Flow. SPE Journal, 2016, 21, 1254-1262.	3.1	5
140	Low Salinity Waterflooding: From Single Well Chemical Tracer Test Interpretation to Sector Model Forecast Scenarios. , 2016, , .		1
141	The effect of wettability on capillary trapping in carbonates. Advances in Water Resources, 2016, 90, 36-50.	3.8	56
142	The impact of porous media heterogeneity on non-Darcy flow behaviour from pore-scale simulation. Advances in Water Resources, 2016, 95, 329-340.	3.8	137
143	Reservoir condition imaging of reactive transport in heterogeneous carbonates using fast synchrotron tomography â€" Effect of initial pore structure and flow conditions. Chemical Geology, 2016, 428, 15-26.	3.3	114
144	Imbibition and Trapping. , 2016, , 115-187.		2

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145	Solutions to Equations for Multiphase Flow. , 2016, , 402-436.		3
146	Low-Salinity Waterflood Simulation: Mechanistic and Phenomenological Models. , 2015, , .		12
147	Continuumâ€scale characterization of solute transport based on poreâ€scale velocity distributions. Geophysical Research Letters, 2015, 42, 7537-7545.	4.0	33
148	Reservoir Condition Pore-scale Imaging of Multiple Fluid Phases Using X-ray Microtomography. Journal of Visualized Experiments, 2015, , .	0.3	12
149	Towards Predicting Multi-Phase Flow in Porous Media Using Digital Rock Physics: Workflow to Test the Predictive Capability of Pore-Scale Modeling. , 2015, , .		11
150	The Imaging of Dynamic Multiphase Fluid Flow Using Synchrotron-Based X-ray Microtomography at Reservoir Conditions. Transport in Porous Media, 2015, 110, 1-24.	2.6	153
151	Reservoir Modeling for Flow Simulation by Use of Surfaces, Adaptive Unstructured Meshes, and an Overlapping-Control-Volume Finite-Element Method. SPE Reservoir Evaluation and Engineering, 2015, 18, 115-132.	1.8	64
152	Time-of-Flight Distributions and Breakthrough Curves in Heterogeneous Porous Media Using a Pore-Scale Streamline Tracing Algorithm. Transport in Porous Media, 2015, 109, 317-336.	2.6	31
153	A chemical kinetics algorithm for geochemical modelling. Applied Geochemistry, 2015, 55, 46-61.	3.0	26
154	Dynamic Three-Dimensional Pore-Scale Imaging of Reaction in a Carbonate at Reservoir Conditions. Environmental Science & Technology, 2015, 49, 4407-4414.	10.0	153
155	An Efficient Optimisation Technique Using Adaptive Spectral High-Dimensional Model Representation: Application to CO₂ Sequestration Strategies. , 2015, , .		4
156	Predictions of dynamic changes in reaction rates as a consequence of incomplete mixing using pore scale reactive transport modeling on images of porous media. Journal of Contaminant Hydrology, 2015, 179, 171-181.	3.3	63
157	Design of foam-assisted carbon dioxide storage in a North Sea aquifer using streamline-based simulation. International Journal of Greenhouse Gas Control, 2015, 33, 113-121.	4.6	28
158	Interface control volume finite element method for modelling multi-phase fluid flow in highly heterogeneous and fractured reservoirs. Journal of Computational Physics, 2015, 298, 41-61.	3.8	42
159	Modelling capillary trapping using finite-volume simulation of two-phase flow directly on micro-CT images. Advances in Water Resources, 2015, 83, 102-110.	3.8	97
160	Capillary trapping for geologic carbon dioxide storage â€“ From pore scale physics to field scale implications. International Journal of Greenhouse Gas Control, 2015, 40, 221-237.	4.6	329
161	A Sensitivity Study of the Effect of Image Resolution on Predicted Petrophysical Properties. Transport in Porous Media, 2015, 110, 157-169.	2.6	40
162	Prediction of three-phase oil relative permeability through a sigmoid-based model. Journal of Petroleum Science and Engineering, 2015, 126, 190-200.	4.2	18

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163	Microscale solute transport and precipitation in complex rock during drying. Geophysical Research Letters, 2014, 41, 8369-8376.	4.0	39
164	Poreâ€byâ€pore capillary pressure measurements using <scp>X</scp>â€ray microtomography at reservoir conditions: Curvature, snapâ€off, and remobilization of residual <scp>CO</scp>₂. Water Resources Research, 2014, 50, 8760-8774.	4.2	119
165	Reservoir Condition Pore Scale Imaging of the Capillary Trapping of CO2. Energy Procedia, 2014, 63, 5427-5434.	1.8	3
166	Dynamic Pore-scale Imaging of Reactive Transport in Heterogeneous Carbonates at Reservoir Conditions. Energy Procedia, 2014, 63, 5503-5511.	1.8	12
167	Statistical scaling of pore-scale Lagrangian velocities in natural porous media. Physical Review E, 2014, 90, 023013.	2.1	16
168	Pore-scale contact angle measurements at reservoir conditions using X-ray microtomography. Advances in Water Resources, 2014, 68, 24-31.	3.8	317
169	Reactive transport modelling of geologic CO2 sequestration in saline aquifers: The influence of pure CO2 and of mixtures of CO2 with CH4 on the sealing capacity of cap rock at 37Â°C and 100bar. Chemical Geology, 2014, 367, 39-50.	3.3	43
170	Statistical Scaling of Geometric Characteristics in Millimeter Scale Natural Porous Media. Transport in Porous Media, 2014, 101, 465-475.	2.6	12
171	Numerical Modelling of Sub-pore Scale Events in Two-Phase Flow Through Porous Media. Transport in Porous Media, 2014, 101, 191-213.	2.6	87
172	Carbon capture and storage update. Energy and Environmental Science, 2014, 7, 130-189.	30.8	1,765
173	Polymer flooding design and optimization under economic uncertainty. Journal of Petroleum Science and Engineering, 2014, 124, 46-59.	4.2	36
174	Analysis of Injectivity Decline in Some Offshore Water Injectors. , 2014, , .		11
175	Three-dimensional streamline-based simulation of non-isothermal two-phase flow in heterogeneous porous media. Computers and Fluids, 2014, 103, 116-131.	2.5	42
176	Direct simulations of two-phase flow on micro-CT images of porous media and upscaling of pore-scale forces. Advances in Water Resources, 2014, 74, 116-126.	3.8	254
177	Robust optimisation of CO2 sequestration strategies under geological uncertainty using adaptive sparse grid surrogates. Computational Geosciences, 2014, 18, 763-778.	2.4	27
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