Martin J Blunt

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

377 papers	23,119 citations	80 h-index	139 g-index
399 ext. papers	26,973 ext. citations	4.6 avg, IF	7.6 L-index

#	Paper	IF	Citations
377	Carbon capture and storage update. *Energy and Environmental Science*, **2014**, 7, 130-189	35.4	1404
376	Pore-scale imaging and modelling. *Advances in Water Resources*, **2013**, 51, 197-216	4.7	1056
375	Flow in porous media □pore-network models and multiphase flow. *Current Opinion in Colloid and Interface Science*, **2001**, 6, 197-207	7.6	600
374	Pore-network extraction from micro-computerized-tomography images. *Physical Review E*, **2009**, 80, 036307	2.4	592
373	Impact of relative permeability hysteresis on geological CO2 storage. *Water Resources Research*, **2006**, 42,	5.4	519
372	Tenth SPE Comparative Solution Project: A Comparison of Upscaling Techniques. *SPE Reservoir Evaluation and Engineering*, **2001**, 4, 308-317	2.3	512
371	Detailed physics, predictive capabilities and macroscopic consequences for pore-network models of multiphase flow. *Advances in Water Resources*, **2002**, 25, 1069-1089	4.7	489
370	Predictive pore-scale modeling of two-phase flow in mixed wet media. *Water Resources Research*, **2004**, 40,	5.4	469
369	Prediction of relative permeability in simple porous media. *Physical Review A*, **1992**, 46, 2004-2011	2.6	361
368	Modelling two-phase flow in porous media at the pore scale using the volume-of-fluid method. *Journal of Computational Physics*, **2012**, 231, 5653-5668	4.1	297
367	Computations of Absolute Permeability on Micro-CT Images. *Mathematical Geosciences*, **2013**, 45, 103-125	2.5	248
366	Carbon dioxide in enhanced oil recovery. *Energy Conversion and Management*, **1993**, 34, 1197-1204	10.6	245
365	Multiphase Flow in Permeable Media: A Pore-Scale Perspective **2017**,		242
364	Pore-scale contact angle measurements at reservoir conditions using X-ray microtomography. *Advances in Water Resources*, **2014**, 68, 24-31	4.7	238
363	Pore-level modeling of wetting. *Physical Review E*, **1995**, 52, 6387-6403	2.4	238
362	Measurements of the capillary trapping of super-critical carbon dioxide in Berea sandstone. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	226
361	Residual CO2 imaged with X-ray micro-tomography. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	221

360	Prediction of permeability for porous media reconstructed using multiple-point statistics. *Physical Review E*, **2004**, 70, 066135	2.4	216
359	Capillary trapping for geologic carbon dioxide storage From pore scale physics to field scale implications. *International Journal of Greenhouse Gas Control*, **2015**, 40, 221-237	4.2	207
358	Pore space reconstruction using multiple-point statistics. *Journal of Petroleum Science and Engineering*, **2005**, 46, 121-137	4.4	203
357	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	4.7	202
356	A 3D Field-Scale Streamline-Based Reservoir Simulator. *SPE Reservoir Engineering*, **1997**, 12, 246-254		194
355	Relative permeabilities from two- and three-dimensional pore-scale network modelling. *Transport in Porous Media*, **1991**, 6, 407	3.1	192
354	Simulation and theory of two-phase flow in porous media. *Physical Review A*, **1992**, 46, 7680-7699	2.6	189
353	Network extraction from sandstone and carbonate pore space images. *Journal of Petroleum Science and Engineering*, **2007**, 56, 219-231	4.4	172
352	Predictions of non-Fickian solute transport in different classes of porous media using direct simulation on pore-scale images. *Physical Review E*, **2013**, 87, 013011	2.4	169
351	Three-dimensional mixed-wet random pore-scale network modeling of two- and three-phase flow in porous media. I. Model description. *Physical Review E*, **2005**, 71, 026301	2.4	169
350	Reconstruction of three-dimensional porous media using generative adversarial neural networks. *Physical Review E*, **2017**, 96, 043309	2.4	164
349	Pore-scale modeling and continuous time random walk analysis of dispersion in porous media. *Water Resources Research*, **2006**, 42,	5.4	163
348	Signature of non-Fickian solute transport in complex heterogeneous porous media. *Physical Review Letters*, **2011**, 107, 204502	7.4	161
347	Three-dimensional modeling of three phase imbibition and drainage. *Advances in Water Resources*, **1998**, 21, 121-143	4.7	161
346	Pore-scale imaging of trapped supercritical carbon dioxide in sandstones and carbonates. *International Journal of Greenhouse Gas Control*, **2014**, 22, 1-14	4.2	158
345	Comparison of residual oil cluster size distribution, morphology and saturation in oil-wet and water-wet sandstone. *Journal of Colloid and Interface Science*, **2012**, 375, 187-92	9.3	154
344	Effects of Wettability on Three-Phase Flow in Porous Media *Journal of Physical Chemistry B*, **2000**, 104, 3833-3845	3.4	154
343	Design of carbon dioxide storage in aquifers. *International Journal of Greenhouse Gas Control*, **2009**, 3, 195-205	4.2	148

342	A New Model of Trapping and Relative Permeability Hysteresis for All Wettability Characteristics. *SPE Journal*, **2008**, 13, 277-288	3.1	146
341	Physically-based network modeling of multiphase flow in intermediate-wet porous media. *Journal of Petroleum Science and Engineering*, **1998**, 20, 117-125	4.4	143
340	Pore-scale modeling of longitudinal dispersion. *Water Resources Research*, **2004**, 40,	5.4	140
339	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	10.7	138
338	Predictive network modeling of single-phase non-Newtonian flow in porous media. *Journal of Colloid and Interface Science*, **2003**, 264, 256-65	9.3	130
337	Generalized network modeling: Network extraction as a coarse-scale discretization of the void space of porous media. *Physical Review E*, **2017**, 96, 013312	2.4	126
336	The Imaging of Dynamic Multiphase Fluid Flow Using Synchrotron-Based X-ray Microtomography at Reservoir Conditions. *Transport in Porous Media*, **2015**, 110, 1-24	3.1	124
335	Micromodel Observation of the Role of Oil Layers in Three-Phase Flow. *Transport in Porous Media*, **1997**, 26, 277-297	3.1	123
334	Pore space reconstruction of vuggy carbonates using microtomography and multiple-point statistics. *Water Resources Research*, **2007**, 43,	5.4	121
333	An Empirical Model for Three-Phase Relative Permeability. *SPE Journal*, **2000**, 5, 435-445	3.1	120
332	Measurement of aperture distribution, capillary pressure, relative permeability, and in situ saturation in a rock fracture using computed tomography scanning. *Water Resources Research*, **2001**, 37, 649-662	5.4	119
331	Modelling stress-dependent permeability in fractured rock including effects of propagating and bending fractures. *International Journal of Rock Mechanics and Minings Sciences*, **2013**, 57, 100-112	6	116
330	Dynamic three-dimensional pore-scale imaging of reaction in a carbonate at reservoir conditions. *Environmental Science & Technology*, **2015**, 49, 4407-14	10.3	115
329	Pore-scale imaging of geological carbon dioxide storage under in situ conditions. *Geophysical Research Letters*, **2013**, 40, 3915-3918	4.9	115
328	Pore-scale intermittent velocity structure underpinning anomalous transport through 3-D porous media. *Geophysical Research Letters*, **2014**, 41, 6184-6190	4.9	112
327	Insights into non-Fickian solute transport in carbonates. *Water Resources Research*, **2013**, 49, 2714-2728	5.4	112
326	Pore Scale Modeling of Rate Effects in Imbibition. *Transport in Porous Media*, **2000**, 40, 295-322	3.1	112
325	Capillary trapping in sandstones and carbonates: Dependence on pore structure. *Water Resources Research*, **2012**, 48,	5.4	110

324	Pore-scale modeling: Effects of wettability on waterflood oil recovery. *Journal of Petroleum Science and Engineering*, **2010**, 71, 169-178	4.4	110
323	Three-phase flow and gravity drainage in porous media. *Transport in Porous Media*, **1995**, 20, 77-103	3.1	109
322	Macroscopic parameters from simulations of pore scale flow. *Physical Review A*, **1990**, 42, 4780-4787	2.6	105
321	In situ characterization of mixed-wettability in a reservoir rock at subsurface conditions. *Scientific Reports*, **2017**, 7, 10753	4.9	102
320	Imaging of oil layers, curvature and contact angle in a mixed-wet and a water-wet carbonate rock. *Water Resources Research*, **2016**, 52, 1716-1728	5.4	101
319	Automatic measurement of contact angle in pore-space images. *Advances in Water Resources*, **2017**, 109, 158-169	4.7	100
318	X-ray tomography measurements of power-law cluster size distributions for the nonwetting phase in sandstones. *Physical Review E*, **2010**, 82, 056315	2.4	98
317	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	11.5	97
316	Pore-by-pore capillary pressure measurements using X-ray microtomography at reservoir conditions: Curvature, snap-off, and remobilization of residual CO2. *Water Resources Research*, **2014**, 50, 8760-8774	5.4	97
315	Simultaneous oil recovery and residual gas storage: A pore-level analysis using in situ X-ray micro-tomography. *Fuel*, **2013**, 103, 905-914	7.1	96
314	Development of a pore network simulation model to study nonaqueous phase liquid dissolution. *Water Resources Research*, **2000**, 36, 439-454	5.4	94
313	Hydrocarbon Drainage along Corners of Noncircular Capillaries. *Journal of Colloid and Interface Science*, **1997**, 187, 11-21	9.3	93
312	The impact of porous media heterogeneity on non-Darcy flow behaviour from pore-scale simulation. *Advances in Water Resources*, **2016**, 95, 329-340	4.7	92
311	Dynamics of snap-off and pore-filling events during two-phase fluid flow in permeable media. *Scientific Reports*, **2017**, 7, 5192	4.9	92
310	Effects of Heterogeneity and Wetting on Relative Permeability Using Pore Level Modeling. *SPE Journal*, **1997**, 2, 70-87	3.1	92
309	CO2 injection impairment due to halite precipitation. *Energy Procedia*, **2009**, 1, 3507-3514	2.3	91
308	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	9.3	89
307	Pore-scale modeling of transverse dispersion in porous media. *Water Resources Research*, **2007**, 43,	5.4	89

306	Simulating Flow in Heterogeneous Systems Using Streamtubes and Streamlines. *SPE Reservoir Engineering*, **1996**, 11, 5-12		85
305	Pore Level Modeling of the Effects of Wettability. *SPE Journal*, **1997**, 2, 494-510	3.1	85
304	Reservoir condition imaging of reactive transport in heterogeneous carbonates using fast synchrotron tomography Effect of initial pore structure and flow conditions. *Chemical Geology*, **2016**, 428, 15-26	4.2	84
303	Streamline-based simulation of solute transport. *Water Resources Research*, **1999**, 35, 3061-3078	5.4	84
302	Effect of spreading coefficient on the distribution of light non-aqueous phase liquid in the subsurface. *Journal of Contaminant Hydrology*, **1997**, 25, 1-19	3.9	82
301	Effect of fracture aperture variations on the dispersion of contaminants. *Water Resources Research*, **1999**, 35, 55-63	5.4	82
300	Microstructural imaging and characterization of oil shale before and after pyrolysis. *Fuel*, **2017**, 197, 562-574	5.1	81
299	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	11.5	81
298	Simulation of counter-current imbibition in water-wet fractured reservoirs. *Journal of Petroleum Science and Engineering*, **2006**, 50, 21-39	4.4	80
297	Simulation of Flow and Dispersion on Pore-Space Images. *SPE Journal*, **2012**, 17, 1131-1141	3.1	79
296	Three-Phase Relative Permeability of Water-Wet, Oil-Wet, and Mixed-Wet Sandpacks. *SPE Journal*, **2000**, 5, 82-91	3.1	78
295	Dynamic network modeling of two-phase drainage in porous media. *Physical Review E*, **2005**, 71, 016308	2.4	77
294	Modelling capillary trapping using finite-volume simulation of two-phase flow directly on micro-CT images. *Advances in Water Resources*, **2015**, 83, 102-110	4.7	76
293	Numerical study of the effects of particle shape and polydispersity on permeability. *Physical Review E*, **2009**, 80, 021304	2.4	76
292	Thermally Induced Wettability Alteration To Improve Oil Recovery in Fractured Reservoirs. *SPE Reservoir Evaluation and Engineering*, **2001**, 4, 179-186	2.3	75
291	Measurement of Nonwetting-Phase Trapping in Sandpacks. *SPE Journal*, **2010**, 15, 274-281	3.1	74
290	A Streamline-Based 3D Field-Scale Compositional Reservoir Simulator **1997**,		74
289	Network modeling of multiphase flow in fractures. *Advances in Water Resources*, **2001**, 24, 409-421	4.7	74

288	Experimental measurement of air-water interfacial area during gravity drainage and secondary imbibition in porous media. *Water Resources Research*, **2000**, 36, 885-890	5.4	74
287	Three-dimensional mixed-wet random pore-scale network modeling of two- and three-phase flow in porous media. II. Results. *Physical Review E*, **2005**, 71, 026302	2.4	73
286	Numerical Modelling of Sub-pore Scale Events in Two-Phase Flow Through Porous Media. *Transport in Porous Media*, **2014**, 101, 191-213	3.1	72
285	Streamline-based simulation of carbon dioxide storage in a North Sea aquifer. *Water Resources Research*, **2006**, 42,	5.4	72
284	Multiscale Description of Shale Pore Systems by Scanning SAXS and WAXS Microscopy. *Energy & Fuels*, **2016**, 30, 10282-10297	4.1	70
283	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	4.7	69
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281	Analytic Analysis for Oil Recovery During Counter-Current Imbibition in Strongly Water-Wet Systems. *Transport in Porous Media*, **2005**, 58, 173-189	3.1	69
280	Stochastic Reconstruction of an Oolitic Limestone by Generative Adversarial Networks. *Transport in Porous Media*, **2018**, 125, 81-103	3.1	68
279	Predictive Pore-Scale Modeling of Single and Multiphase Flow. *Transport in Porous Media*, **2005**, 58, 23-41	3.1	67
278	Implicit flux limiting schemes for petroleum reservoir simulation. *Journal of Computational Physics*, **1992**, 102, 194-210	4.1	67
277	Streamline-based dual-porosity simulation of reactive transport and flow in fractured reservoirs. *Water Resources Research*, **2004**, 40,	5.4	66
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275	Network Modeling of Three-Phase Flow in Porous Media. *SPE Journal*, **1998**, 3, 86-96	3.1	66
274	Pore-scale simulation of carbonate dissolution in micro-CT images. *Journal of Geophysical Research: Solid Earth*, **2016**, 121, 558-576	3.6	65
273	Pore-scale simulation of NMR response. *Journal of Petroleum Science and Engineering*, **2009**, 67, 168-178	4.4	64
272	Imaging and Measurement of Pore-Scale Interfacial Curvature to Determine Capillary Pressure Simultaneously With Relative Permeability. *Water Resources Research*, **2018**, 54, 7046-7060	5.4	63
271	Residual CO2 trapping in Indiana limestone. *Environmental Science & Technology*, **2013**, 47, 227-33	10.3	62

270	Pore-scale network modeling of Ellis and HerschelBulkley fluids. *Journal of Petroleum Science and Engineering*, **2008**, 60, 105-124	4.4	62
269	Prediction of wettability variation and its impact on flow using pore- to reservoir-scale simulations. *Journal of Petroleum Science and Engineering*, **2003**, 39, 231-246	4.4	62
268	Minimal surfaces in porous media: Pore-scale imaging of multiphase flow in an altered-wettability Bentheimer sandstone. *Physical Review E*, **2019**, 99, 063105	2.4	60
267	A fast method to equilibrate carbon dioxide with brine at high pressure and elevated temperature including solubility measurements. *Journal of Supercritical Fluids*, **2012**, 62, 55-59	4.2	60
266	Pore-Scale Modelling of Rate Effects in Waterflooding. *Transport in Porous Media*, **2010**, 83, 151-169	3.1	58
265	The Effect of Mixed Wettability on Pore-Scale Flow Regimes Based on a Flooding Experiment in Ketton Limestone. *Geophysical Research Letters*, **2019**, 46, 3225-3234	4.9	55
264	X-ray Microtomography of Intermittency in Multiphase Flow at Steady State Using a Differential Imaging Method. *Water Resources Research*, **2017**, 53, 10274-10292	5.4	55
263	Immiscible Displacements and Capillary Trapping in CO2 Storage. *Energy Procedia*, **2011**, 4, 4969-4976	2.3	55
262	Streamline Tracing on Curvilinear Structured and Unstructured Grids. *SPE Journal*, **2002**, 7, 139-148	3.1	55
261	Multirate-Transfer Dual-Porosity Modeling of Gravity Drainage and Imbibition. *SPE Journal*, **2007**, 12, 77-88	3.1	54
260	Capillary-Dominated Fluid Displacement in Porous Media. *Annual Review of Fluid Mechanics*, **2019**, 51, 429-449	22	54
259	The impact of wettability and connectivity on relative permeability in carbonates: A pore network modeling analysis. *Water Resources Research*, **2012**, 48,	5.4	53
258	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, 171-81	3.9	51
257	Analysis of counter-current imbibition with gravity in weakly water-wet systems. *Journal of Petroleum Science and Engineering*, **2005**, 48, 94-104	4.4	51
256	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	2.3	50
255	Stochastic Seismic Waveform Inversion Using Generative Adversarial Networks as a Geological Prior. *Mathematical Geosciences*, **2020**, 52, 53-79	2.5	50
254	A thermodynamically consistent characterization of wettability in porous media using high-resolution imaging. *Journal of Colloid and Interface Science*, **2019**, 552, 59-65	9.3	49
253	Wetting boundary condition for the color-gradient lattice Boltzmann method: Validation with analytical and experimental data. *Advances in Water Resources*, **2018**, 116, 56-66	4.7	49

252	Nested gridding and streamline-based simulation for fast reservoir performance prediction. *Annals of Software Engineering*, **1999**, 3, 295-320		49
251	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	4.1	48
250	A Physically Based Model of Dissolution of Nonaqueous Phase Liquids in the Saturated Zone. *Transport in Porous Media*, **2000**, 39, 227-255	3.1	47
249	Modeling Oil Recovery in Mixed-Wet Rocks: Pore-Scale Comparison Between Experiment and Simulation. *Transport in Porous Media*, **2019**, 127, 393-414	3.1	47
248	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	4.7	47
247	Dynamic imaging of oil shale pyrolysis using synchrotron X-ray microtomography. *Geophysical Research Letters*, **2016**, 43, 6799-6807	4.9	46
246	Efficient chemical equilibrium calculations for geochemical speciation and reactive transport modelling. *Geochimica Et Cosmochimica Acta*, **2014**, 131, 301-322	5.5	46
245	Validation of model predictions of pore-scale fluid distributions during two-phase flow. *Physical Review E*, **2018**, 97, 053104	2.4	46
244	Analytical Solutions for Spontaneous Imbibition: Fractional-Flow Theory and Experimental Analysis. *SPE Journal*, **2016**, 21, 2308-2316	3.1	45
243	Pore-to-field simulation of single-phase transport using continuous time random walks. *Advances in Water Resources*, **2008**, 31, 1527-1539	4.7	45
242	A generalized streamline method to predict reservoir flow. *Petroleum Geoscience*, **1996**, 2, 259-269	1.9	44
241	General Transfer Functions for Multiphase Flow in Fractured Reservoirs. *SPE Journal*, **2008**, 13, 289-297	3.1	44
240	Anomalous transport in heterogeneous media demonstrated by streamline-based simulation. *Geophysical Research Letters*, **2003**, 30,	4.9	44
239	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	5.5	43
238	The Role of Local Instabilities in Fluid Invasion into Permeable Media. *Scientific Reports*, **2017**, 7, 444	4.9	43
237	Development of artificial neural network models for predicting water saturation and fluid distribution. *Journal of Petroleum Science and Engineering*, **2009**, 68, 197-208	4.4	43
236	Pore Scale Observations of Trapped CO2 in Mixed-Wet Carbonate Rock: Applications to Storage in Oil Fields. *Environmental Science & Technology*, **2016**, 50, 10282-90	10.3	41
235	Changes in Pore Structure and Connectivity Induced by CO2 Injection in Carbonates: A Combined Pore-Scale Approach. *Energy Procedia*, **2013**, 37, 5367-5378	2.3	41

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233	Role of geomechanically grown fractures on dispersive transport in heterogeneous geological formations. *Physical Review E*, **2011**, 84, 056301	2.4	41
232	Measurements of non-wetting phase trapping applied to carbon dioxide storage. *International Journal of Greenhouse Gas Control*, **2010**, 4, 283-288	4.2	41
231	Effects of wettability and pore-level displacement on hydrocarbon trapping. *Advances in Water Resources*, **2008**, 31, 503-512	4.7	41
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229	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	10.3	40
228	The effect of wettability on capillary trapping in carbonates. *Advances in Water Resources*, **2016**, 90, 36-50	4.7	40
227	4D in situ synchrotron X-ray tomographic microscopy and laser-based heating study of oil shale pyrolysis. *Applied Energy*, **2019**, 235, 1468-1475	10.7	40
226	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	4.2	39
225	Three-dimensional streamline-based simulation of non-isothermal two-phase flow in heterogeneous porous media. *Computers and Fluids*, **2014**, 103, 116-131	2.8	39
224	Comparison of deterministic with stochastic fracture models in water-flooding numerical simulations. *AAPG Bulletin*, **2009**, 93, 1633-1648	2.5	38
223	Simulation of multiphase flow in fractured reservoirs using a fracture-only model with transfer functions. *Computational Geosciences*, **2010**, 14, 527-538	2.7	38
222	Three-phase threshold capillary pressures in noncircular capillary tubes with different wettabilities including contact angle hysteresis. *Physical Review E*, **2004**, 70, 061603	2.4	38
221	Analysis of Imbibition in Mixed-Wet Rocks Using Pore-Scale Modeling. *SPE Journal*, **2005**, 10, 466-474	3.1	38
220	Field observations of a capillary fringe before and after a rainy season. *Journal of Contaminant Hydrology*, **2000**, 44, 103-118	3.9	38
219	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	4.7	37
218	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	4.7	36
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215	A review of the phenomenon of counter-current spontaneous imbibition: Analysis and data interpretation. *Journal of Petroleum Science and Engineering*, **2019**, 180, 456-470	4.4	35
214	Multiphase Flow Characteristics of Heterogeneous Rocks From CO2 Storage Reservoirs in the United Kingdom. *Water Resources Research*, **2018**, 54, 729-745	5.4	35
213	Pore-scale network simulation of NMR response in two-phase flow. *Journal of Petroleum Science and Engineering*, **2010**, 72, 1-9	4.4	35
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210	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 37°C and 100bar. *Chemical Geology*, **2014**, 367, 39-50	4.2	34
209	Numerical Simulation of Oil Recovery After Cross-Linked Polymer Flooding. *Journal of Canadian Petroleum Technology*, **2009**, 48, 37-41		34
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207	Comparison of streamline-based and grid-based dual porosity simulation. *Journal of Petroleum Science and Engineering*, **2004**, 43, 129-137	4.4	34
206	Measurement of Three Phase Relative Permeability during Gravity Drainage using CT **1998**,		34
205	Predictive Theory for Viscous Fingering in Compositional Displacement. *SPE Reservoir Engineering*, **1994**, 9, 73-80		34
204	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	4.1	33
203	Generalized network modeling of capillary-dominated two-phase flow. *Physical Review E*, **2018**, 97, 023308	2.4	33
202	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	7.1	32
201	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	4.2	32
200	Dipping open aquifers—The effect of top-surface topography and heterogeneity on CO2 storage efficiency. *International Journal of Greenhouse Gas Control*, **2013**, 17, 318-331	4.2	32
199	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	4.4	32

198	A Sensitivity Study of the Effect of Image Resolution on Predicted Petrophysical Properties. *Transport in Porous Media*, **2015**, 110, 157-169	3.1	31
197	Streamline-Based Simulation of Non-Newtonian Polymer Flooding. *SPE Journal*, **2010**, 15, 895-905	3.1	31
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195	How to predict viscous fingering in three component flow. *Transport in Porous Media*, **1993**, 12, 207-236	3.1	31
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