Martin J Blunt

List of Publications by Year in Descending Order

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	Pore-scale imaging of asphaltene deposition with permeability reduction and wettability alteration. *Fuel*, **2022**, 316, 123202	7.1	1
376	New type of pore-snap-off and displacement correlations in imbibition.. *Journal of Colloid and Interface Science*, **2022**, 609, 384-392	9.3	3
375	Quantitative determination of the threshold pressure for a discontinuous phase to pass through a constriction using microscale simulation. *International Journal of Multiphase Flow*, **2022**, 104107	3.6	1
374	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	4.7	0
373	Experimental study of electrical heating to enhance oil production from oil-wet carbonate reservoirs. *Fuel*, **2022**, 324, 124559	7.1	0
372	Disconnected Gas Transport in Steady-State Three-Phase Flow. *Water Resources Research*, **2021**, 57, e2021WR031147	5.4	
371	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	4.7	2
370	The human exposome and health in the Anthropocene. *International Journal of Epidemiology*, **2021**, 50, 378-389	7.8	10
369	Quantification of Nonlinear Multiphase Flow in Porous Media. *Geophysical Research Letters*, **2021**, 48, e2020GL090477	4.9	7
368	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	4.7	1
367	The development of intermittent multiphase fluid flow pathways through a porous rock. *Advances in Water Resources*, **2021**, 150, 103868	4.7	1
366	Deep learning in pore scale imaging and modeling. *Earth-Science Reviews*, **2021**, 215, 103555	10.2	23
365	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	3.1	8
364	Pore-scale modelling and sensitivity analyses of hydrogen-brine multiphase flow in geological porous media. *Scientific Reports*, **2021**, 11, 8348	4.9	21
363	Pore-scale imaging of displacement patterns in an altered-wettability carbonate. *Chemical Engineering Science*, **2021**, 235, 116464	4.4	8
362	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	3.1	1
361	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	3.1	6

360	Advances in multiscale numerical and experimental approaches for multiphysics problems in porous media. *Advances in Geo-Energy Research*, **2021**, 5, 233-238	6.2	3
359	Liquid Pressure Determination in Polymer Electrolyte Fuel Cells. *ACS Applied Materials & Interfaces*, **2021**, 13, 34003-34011	9.5	5
358	Pore-scale imaging and analysis of low salinity waterflooding in a heterogeneous carbonate rock at reservoir conditions. *Scientific Reports*, **2021**, 11, 15063	4.9	9
357	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	9.3	6
356	Pore-scale imaging of asphaltene-induced pore clogging in carbonate rocks. *Fuel*, **2021**, 283, 118871	7.1	5
355	Predictive Modeling of Relative Permeability Using a Generalized Equation of State. *SPE Journal*, **2021**, 26, 191-205	3.1	1
354	Pore-scale analysis of formation damage; A review of existing digital and analytical approaches. *Advances in Colloid and Interface Science*, **2021**, 288, 102345	14.3	5
353	Dynamic fluid configurations in steady-state two-phase flow in Bentheimer sandstone. *Physical Review E*, **2021**, 103, 013110	2.4	1
352	Poromechanical controls on spontaneous imbibition in earth materials. *Scientific Reports*, **2021**, 11, 3328	4.9	3
351	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	4.2	9
350	Acknowledgement of Reviewers for 2020. *Transport in Porous Media*, **2021**, 137, 283-286	3.1	
349	Drainage Capillary Pressure Distribution and Fluid Displacement in a Heterogeneous Laminated Sandstone. *Geophysical Research Letters*, **2021**, 48, e2021GL093604	4.9	1
348	Crossflow effects on low salinity displacement in stratified heterogeneity. *Journal of Petroleum Science and Engineering*, **2021**, 109565	4.4	
347	Flow in Porous Media in the Energy Transition. *Engineering*, **2021**,	9.7	
346	Assessment of CO2 geological storage capacity of saline aquifers under the North Sea. *International Journal of Greenhouse Gas Control*, **2021**, 111, 103463	4.2	0
345	Multispecies Reactive Transport in a Microporous Rock: Impact of Flow Heterogeneity and Reversibility of Reaction. *Water Resources Research*, **2020**, 56, e2020WR027317	5.4	3
344	Evaluation of methods using topology and integral geometry to assess wettability. *Journal of Colloid and Interface Science*, **2020**, 576, 99-108	9.3	8
343	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

342	Pore-scale numerical simulation of low salinity water flooding using the lattice Boltzmann method. *Journal of Colloid and Interface Science*, **2020**, 566, 444-453	9.3	30
341	Using energy balance to determine pore-scale wettability. *Journal of Colloid and Interface Science*, **2020**, 576, 486-495	9.3	10
340	Droplet and Percolation Network Interactions in a Fuel Cell Gas Diffusion Layer. *Journal of the Electrochemical Society*, **2020**, 167, 084506	3.9	10
339	Pore-scale dynamics and the multiphase Darcy law. *Physical Review Fluids*, **2020**, 5,	2.8	18
338	Verifying Pore Network Models of Imbibition in Rocks Using Time-Resolved Synchrotron Imaging. *Water Resources Research*, **2020**, 56, e2019WR026587	5.4	10
337	Pore-scale mechanisms of CO storage in oilfields. *Scientific Reports*, **2020**, 10, 8534	4.9	16
336	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	2.4	4
335	Stochastic Seismic Waveform Inversion Using Generative Adversarial Networks as a Geological Prior. *Mathematical Geosciences*, **2020**, 52, 53-79	2.5	50
334	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
333	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	10.7	25
332	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	3	4
331	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	4.7	14
330	Real-Time Imaging Reveals Distinct Pore-Scale Dynamics During Transient and Equilibrium Subsurface Multiphase Flow. *Water Resources Research*, **2020**, 56, e2020WR028287	5.4	5
329	Pore-by-pore modeling, analysis, and prediction of two-phase flow in mixed-wet rocks. *Physical Review E*, **2020**, 102, 023302	2.4	9
328	Advances in carbon capture, utilization and storage. *Applied Energy*, **2020**, 278, 115627	10.7	36
327	Dynamics of fluid displacement in mixed-wet porous media. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200040	2.4	16
326	In Situ Characterization of Three-Phase Flow in Mixed-Wet Porous Media Using Synchrotron Imaging. *Water Resources Research*, **2020**, 56, e2020WR027873	5.4	9
325	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	2.4	10

324	A salinity cut-off method to control numerical dispersion in low-salinity waterflooding simulation. *Journal of Petroleum Science and Engineering*, **2020**, 184, 106586	4.4	2
323	Local Capillary Pressure Estimation Based on Curvature of the Fluid Interface Validation with Two-Phase Direct Numerical Simulations. *E3S Web of Conferences*, **2020**, 146, 04003	0.5	
322	iSCAL for Complete Rock Characterization: Using Pore-Scale Imaging to Determine Relative Permeability and Capillary Pressure **2019**,		2
321	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
320	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
319	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
318	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
317	The architectural design of smart ventilation and drainage systems in termite nests. *Science Advances*, **2019**, 5, eaat8520	14.3	22
316	Modelling of multispecies reactive transport on pore-space images. *Advances in Water Resources*, **2019**, 127, 192-208	4.7	11
315	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
314	Validating the Generalized Pore Network Model Using Micro-CT Images of Two-Phase Flow. *Transport in Porous Media*, **2019**, 130, 405-424	3.1	23
313	Quantification of Uncertainty and Best Practice in Computing Interfacial Curvature from Complex Pore Space Images. *Materials*, **2019**, 12,	3.5	21
312	Intermittent fluid connectivity during two-phase flow in a heterogeneous carbonate rock. *Physical Review E*, **2019**, 100, 043103	2.4	14
311	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	4.7	19
310	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	3.1	9
309	Mechanisms controlling fluid breakup and reconnection during two-phase flow in porous media. *Physical Review E*, **2019**, 100, 043115	2.4	12
308	A New Waterflood Initialization Protocol With Wettability Alteration for Pore-Scale Multiphase Flow Experiments. *Petrophysics*, **2019**, 60, 264-272	2	6
307	Chapter 8:An Introduction to Subsurface CO2 Storage. *RSC Energy and Environment Series*, **2019**, 238-295	0.6	3

306	Pore-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	5.4	27
305	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
304	Capillary-Dominated Fluid Displacement in Porous Media. *Annual Review of Fluid Mechanics*, **2019**, 51, 429-449	22	54
303	Calibration of astigmatic particle tracking velocimetry based on generalized Gaussian feature extraction. *Advances in Water Resources*, **2019**, 124, 1-8	4.7	7
302	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
301	Generalized network modeling of capillary-dominated two-phase flow. *Physical Review E*, **2018**, 97, 023308	2.4	33
300	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
299	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
298	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
297	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
296	Multiphase Flow Characteristics of Heterogeneous Rocks From CO2 Storage Reservoirs in the United Kingdom. *Water Resources Research*, **2018**, 54, 729-745	5.4	35
295	Stochastic Reconstruction of an Oolitic Limestone by Generative Adversarial Networks. *Transport in Porous Media*, **2018**, 125, 81-103	3.1	68
294	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	9.3	15
293	Estimation of relative permeability and capillary pressure from mass imbibition experiments. *Advances in Water Resources*, **2018**, 115, 88-94	4.7	29
292	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	4.7	8
291	Modelling and upscaling of transport in carbonates during dissolution: Validation and calibration with NMR experiments. *Journal of Contaminant Hydrology*, **2018**, 212, 85-95	3.9	7
290	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
289	Model-free classification of X-ray scattering signals applied to image segmentation. *Journal of Applied Crystallography*, **2018**, 51, 1378-1386	3.8	6

288	Time-resolved synchrotron X-ray micro-tomography datasets of drainage and imbibition in carbonate rocks. *Scientific Data*, **2018**, 5, 180265	8.2	15
287	Large-scale Invasion Percolation with Trapping for Upscaling Capillary-Controlled Darcy-scale Flow. *Transport in Porous Media*, **2018**, 121, 479-506	3.1	8
286	Three-Phase Flow Visualization and Characterization for a Mixed-Wet Carbonate Rock **2018**,		4
285	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
284	Spatial Correlation of Contact Angle and Curvature in Pore-Space Images. *Water Resources Research* , **2018**, 54, 6133-6152	5.4	22
283	Pore-scale Imaging and Characterization of Hydrocarbon Reservoir Rock Wettability at Subsurface Conditions Using X-ray Microtomography. *Journal of Visualized Experiments*, **2018**,	1.6	7
282	Partial dissolution of carbonate rock grains during reactive CO2-saturated brine injection under reservoir conditions. *Advances in Water Resources*, **2018**, 122, 27-36	4.7	19
281	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
280	Validation of model predictions of pore-scale fluid distributions during two-phase flow. *Physical Review E*, **2018**, 97, 053104	2.4	46
279	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
278	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
277	The impact of capillary backpressure on spontaneous counter-current imbibition in porous media. *Advances in Water Resources*, **2017**, 107, 405-420	4.7	15
276	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
275	Microstructural imaging and characterization of oil shale before and after pyrolysis. *Fuel*, **2017**, 197, 562-574	5.1	81
274	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
273	Reconstruction of three-dimensional porous media using generative adversarial neural networks. *Physical Review E*, **2017**, 96, 043309	2.4	164
272	In situ characterization of mixed-wettability in a reservoir rock at subsurface conditions. *Scientific Reports*, **2017**, 7, 10753	4.9	102
271	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

270	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
269	Dynamics of snap-off and pore-filling events during two-phase fluid flow in permeable media. *Scientific Reports*, **2017**, 7, 5192	4.9	92
268	Automatic measurement of contact angle in pore-space images. *Advances in Water Resources*, **2017**, 109, 158-169	4.7	100
267	Visualization and quantification of capillary drainage in the pore space of laminated sandstone by a porous plate method using differential imaging X-ray microtomography. *Water Resources Research*, **2017**, 53, 7457-7468	5.4	22
266	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
265	Dynamic Pore-scale Reservoir-condition Imaging of Reaction in Carbonates Using Synchrotron Fast Tomography. *Journal of Visualized Experiments*, **2017**,	1.6	2
264	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
263	The Role of Local Instabilities in Fluid Invasion into Permeable Media. *Scientific Reports*, **2017**, 7, 444	4.9	43
262	In situ Wettability Measurement in a Carbonate Reservoir Rock at High Temperature and Pressure **2017**,		3
261	Multiphase Flow in Permeable Media: A Pore-Scale Perspective **2017**,		242
260	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
259	Analytical and numerical investigations of spontaneous imbibition in porous media. *Water Resources Research*, **2016**, 52, 7284-7310	5.4	27
258	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
257	Analytical Solutions for Spontaneous Imbibition: Fractional-Flow Theory and Experimental Analysis. *SPE Journal*, **2016**, 21, 2308-2316	3.1	45
256	The Impact of Pore Structure Heterogeneity, Transport, and Reaction Conditions on Fluid□Fluid Reaction Rate Studied on Images of Pore Space. *Transport in Porous Media*, **2016**, 115, 215-237	3.1	26
255	Dynamic imaging of oil shale pyrolysis using synchrotron X-ray microtomography. *Geophysical Research Letters*, **2016**, 43, 6799-6807	4.9	46
254	Early-Time 1D Analysis of Shale-Oil and -Gas Flow. *SPE Journal*, **2016**, 21, 1254-1262	3.1	3
253	Low Salinity Waterflooding: From Single Well Chemical Tracer Test Interpretation to Sector Model Forecast Scenarios **2016**,		1

252	The effect of wettability on capillary trapping in carbonates. *Advances in Water Resources*, **2016**, 90, 36-50	4.7	40
251	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
250	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
249	Preface: Special Issue in Honor of Harvey Scher 80th Birthday. *Transport in Porous Media*, **2016**, 115, 209-214	3.1	
248	Multiscale Description of Shale Pore Systems by Scanning SAXS and WAXS Microscopy. *Energy & Fuels*, **2016**, 30, 10282-10297	4.1	70
247	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
246	Pore-scale simulation of carbonate dissolution in micro-CT images. *Journal of Geophysical Research: Solid Earth*, **2016**, 121, 558-576	3.6	65
245	Pore-space structure and average dissolution rates: A simulation study. *Water Resources Research*, **2016**, 52, 7198-7212	5.4	22
244	Experimental and Analytical Investigation of Spontaneous Imbibition in Water-Wet Carbonates. *Transport in Porous Media*, **2016**, 115, 189-207	3.1	27
243	Dynamic three-dimensional pore-scale imaging of reaction in a carbonate at reservoir conditions. *Environmental Science & Technology*, **2015**, 49, 4407-14	10.3	115
242	An Efficient Optimisation Technique Using Adaptive Spectral High-Dimensional Model Representation: Application to CO2 Sequestration Strategies **2015**,		3
241	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
240	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	4.2	22
239	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
238	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
237	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
236	A Sensitivity Study of the Effect of Image Resolution on Predicted Petrophysical Properties. *Transport in Porous Media*, **2015**, 110, 157-169	3.1	31
235	Prediction of three-phase oil relative permeability through a sigmoid-based model. *Journal of Petroleum Science and Engineering*, **2015**, 126, 190-200	4.4	14

234	Low-Salinity Waterflood Simulation: Mechanistic and Phenomenological Models **2015**,		9
233	Continuum-scale characterization of solute transport based on pore-scale velocity distributions. *Geophysical Research Letters*, **2015**, 42, 7537-7545	4.9	29
232	Reservoir condition pore-scale imaging of multiple fluid phases using X-ray microtomography. *Journal of Visualized Experiments*, **2015**,	1.6	8
231	Towards Predicting Multi-Phase Flow in Porous Media Using Digital Rock Physics: Workflow to Test the Predictive Capability of Pore-Scale Modeling **2015**,		6
230	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
229	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
228	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	3.1	27
227	A chemical kinetics algorithm for geochemical modelling. *Applied Geochemistry*, **2015**, 55, 46-61	3.5	20
226	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
225	Statistical Scaling of Geometric Characteristics in Millimeter Scale Natural Porous Media. *Transport in Porous Media*, **2014**, 101, 465-475	3.1	12
224	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
223	Carbon capture and storage update. *Energy and Environmental Science*, **2014**, 7, 130-189	35.4	1404
222	Polymer flooding design and optimization under economic uncertainty. *Journal of Petroleum Science and Engineering*, **2014**, 124, 46-59	4.4	25
221	Analysis of Injectivity Decline in Some Offshore Water Injectors **2014**,		7
220	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
219	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
218	Robust optimisation of CO2 sequestration strategies under geological uncertainty using adaptive sparse grid surrogates. *Computational Geosciences*, **2014**, 18, 763-778	2.7	24
217	An Experimental Study of Three-Phase Trapping in Sand Packs. *Transport in Porous Media*, **2014**, 103, 421-436	3.1	9

216	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
215	Efficient chemical equilibrium calculations for geochemical speciation and reactive transport modelling. *Geochimica Et Cosmochimica Acta*, **2014**, 131, 301-322	5.5	46
214	Pore-scale intermittent velocity structure underpinning anomalous transport through 3-D porous media. *Geophysical Research Letters*, **2014**, 41, 6184-6190	4.9	112
213	Impact of Reservoir Conditions on CO2-brine Relative Permeability in Sandstones. *Energy Procedia*, **2014**, 63, 5577-5585	2.3	15
212	Microscale solute transport and precipitation in complex rock during drying. *Geophysical Research Letters*, **2014**, 41, 8369-8376	4.9	28
211	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
210	Reservoir Condition Pore Scale Imaging of the Capillary Trapping of CO2. *Energy Procedia*, **2014**, 63, 5427-5434	2.3	3
209	Dynamic Pore-scale Imaging of Reactive Transport in Heterogeneous Carbonates at Reservoir Conditions. *Energy Procedia*, **2014**, 63, 5503-5511	2.3	9
208	Statistical scaling of pore-scale Lagrangian velocities in natural porous media. *Physical Review E*, **2014**, 90, 023013	2.4	13
207	Pore-scale contact angle measurements at reservoir conditions using X-ray microtomography. *Advances in Water Resources*, **2014**, 68, 24-31	4.7	238
206	Pore-scale imaging of geological carbon dioxide storage under in situ conditions. *Geophysical Research Letters*, **2013**, 40, 3915-3918	4.9	115
205	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
204	Computations of Absolute Permeability on Micro-CT Images. *Mathematical Geosciences*, **2013**, 45, 103-125	2.5	248
203	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
202	A robust and efficient numerical method for multiphase equilibrium calculations: Application to CO2–brine–rock systems at high temperatures, pressures and salinities. *Advances in Water Resources*, **2013**, 62, 409-430	4.7	24
201	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
200	Residual CO2 trapping in Indiana limestone. *Environmental Science & Technology*, **2013**, 47, 227-33	10.3	62
199	Pore-scale imaging and modelling. *Advances in Water Resources*, **2013**, 51, 197-216	4.7	1056

198	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
197	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
196	Laboratory investigation of capillary trapping under mixed-wet conditions. *Water Resources Research*, **2013**, 49, 4311-4319	5.4	28
195	Design of Simultaneous Enhanced Oil Recovery and Carbon Dioxide Storage With Potential Application to Offshore Trinidad. *SPE Journal*, **2013**, 18, 345-354	3.1	12
194	Insights into non-Fickian solute transport in carbonates. *Water Resources Research*, **2013**, 49, 2714-2728	5.4	112
193	Control of Numerical Dispersion in Streamline-Based Simulations of Augmented Waterflooding. *SPE Journal*, **2013**, 18, 1102-1111	3.1	11
192	Reservoir-Condition Pore-Scale Imaging Of Supercritical Carbon Dioxide **2013**,		3
191	Reservoir Modeling for Flow Simulation Using Surfaces, Adaptive Unstructured Meshes and Control-Volume-Finite-Element Methods **2013**,		16
190	Influence of Micro-Computed Tomography Image Resolution on Petrophysical Properties **2013**,		3
189	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
188	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
187	Editorial for the January 2012 Issue of Transport in Porous Media. *Transport in Porous Media*, **2012**, 91, 3-3	3.1	
186	Wastewater filtration and re-use: an alternative water source for London. *Science of the Total Environment*, **2012**, 437, 173-84	10.2	4
185	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
184	Capillary trapping in sandstones and carbonates: Dependence on pore structure. *Water Resources Research*, **2012**, 48,	5.4	110
183	The impact of wettability and connectivity on relative permeability in carbonates: A pore network modeling analysis. *Water Resources Research*, **2012**, 48,	5.4	53
182	A segregated flow scheme to control numerical dispersion for multi-component flow simulations. *Computational Geosciences*, **2012**, 16, 335-350	2.7	8
181	Artificial neural networks workflow and its application in the petroleum industry. *Neural Computing and Applications*, **2012**, 21, 409-421	4.8	41

180	Simulation of Flow and Dispersion on Pore-Space Images. *SPE Journal*, **2012**, 17, 1131-1141	3.1	79
179	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
178	Residual CO2 imaged with X-ray micro-tomography. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	221
177	Coreflood Measurements of CO2 Trapping **2011**,		3
176	Design of Simultaneous Enhanced Oil Recovery and Carbon Dioxide Storage Applied to a Heavy Oil Field Offshore Trinidad **2011**,		2
175	Polymer Flooding Design and Optimization Under Uncertainty **2011**,		13
174	Remobilization of residual non-aqueous phase liquid in porous media by freeze-thaw cycles. *Environmental Science & Technology*, **2011**, 45, 3473-8	10.3	25
173	Enhanced solubility trapping of CO2 in fractured reservoirs. *Energy Procedia*, **2011**, 4, 4961-4968	2.3	8
172	Immiscible Displacements and Capillary Trapping in CO2 Storage. *Energy Procedia*, **2011**, 4, 4969-4976	2.3	55
171	Capillary-Trapping Capacity of Sandstones and Sandpacks. *SPE Journal*, **2011**, 16, 778-783	3.1	69
170	Signature of non-Fickian solute transport in complex heterogeneous porous media. *Physical Review Letters*, **2011**, 107, 204502	7.4	161
169	Role of geomechanically grown fractures on dispersive transport in heterogeneous geological formations. *Physical Review E*, **2011**, 84, 056301	2.4	41
168	Capillary Trapping in Carbonate Rocks **2010**,		3
167	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
166	Generating a capillary saturation-height function to predict hydrocarbon saturation using artificial neural networks. *Petroleum Geoscience*, **2010**, 16, 77-85	1.9	1
165	Simulation of Flow and Dispersion on Pore-Space Images **2010**,		7
164	Measurement of Nonwetting-Phase Trapping in Sandpacks. *SPE Journal*, **2010**, 15, 274-281	3.1	74
163	Optimizing Oil Recovery and Carbon Dioxide Storage in Heavy Oil Reservoirs **2010**,		2

162	Capillary Trapping in Water-Wet Sandstones: Coreflooding Experiments and Pore-Network Modeling **2010**,		15
161	Control of Numerical Dispersion in Simulations of Augmented Waterflooding **2010**,		4
160	Effects of CO2 Storage in Saline Aquifers on Groundwater Supplies **2010**,		1
159	Streamline-Based Simulation of Non-Newtonian Polymer Flooding. *SPE Journal*, **2010**, 15, 895-905	3.1	31
158	Pore-scale network simulation of NMR response in two-phase flow. *Journal of Petroleum Science and Engineering*, **2010**, 72, 1-9	4.4	35
157	Simulation of multiphase flow in fractured reservoirs using a fracture-only model with transfer functions. *Computational Geosciences*, **2010**, 14, 527-538	2.7	38
156	Pore-Scale Modelling of Rate Effects in Waterflooding. *Transport in Porous Media*, **2010**, 83, 151-169	3.1	58
155	Measurements of non-wetting phase trapping applied to carbon dioxide storage. *International Journal of Greenhouse Gas Control*, **2010**, 4, 283-288	4.2	41
154	Pore-scale modeling: Effects of wettability on waterflood oil recovery. *Journal of Petroleum Science and Engineering*, **2010**, 71, 169-178	4.4	110
153	Open or closed? A discussion of the mistaken assumptions in the Economides pressure analysis of carbon sequestration. *Journal of Petroleum Science and Engineering*, **2010**, 74, 107-110	4.4	24
152	NONWETTING PHASE RESIDUAL SATURATION IN SAND PACKS. *Journal of Porous Media*, **2010**, 13, 591-599	2.9	19
151	Topological Analysis of Foams and Tetrahedral Structures. *Advanced Engineering Materials*, **2009**, 11, 169-176	3.5	12
150	A three-phase four-component streamline-based simulator to study carbon dioxide storage. *Computational Geosciences*, **2009**, 13, 493-509	2.7	21
149	Pore-scale simulation of NMR response. *Journal of Petroleum Science and Engineering*, **2009**, 67, 168-178	4.4	64
148	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
147	Design of carbon dioxide storage in aquifers. *International Journal of Greenhouse Gas Control*, **2009**, 3, 195-205	4.2	148
146	Measurements of Non-Wetting Phase Trapping Applied to Carbon Dioxide Storage. *Energy Procedia* , **2009**, 1, 3173-3180	2.3	21
145	CO2 injection impairment due to halite precipitation. *Energy Procedia*, **2009**, 1, 3507-3514	2.3	91

144	Three-phase measurements of oil and gas trapping in sand packs. *Advances in Water Resources*, **2009**, 32, 1535-1542	4.7	15
143	Numerical study of the effects of particle shape and polydispersity on permeability. *Physical Review E*, **2009**, 80, 021304	2.4	76
142	Pore-network extraction from micro-computerized-tomography images. *Physical Review E*, **2009**, 80, 036307	2.4	592
141	A Rigorous Pore-to-Field-Scale Simulation Method for Single-Phase Flow Based on Continuous-Time Random Walks. *SPE Journal*, **2009**, 14, 88-94	3.1	30
140	Comparison of deterministic with stochastic fracture models in water-flooding numerical simulations. *AAPG Bulletin*, **2009**, 93, 1633-1648	2.5	38
139	Compressible Streamline-Based Simulation With Changes in Oil Composition. *SPE Reservoir Evaluation and Engineering*, **2009**, 12, 963-973	2.3	15
138	Numerical Simulation of Oil Recovery After Cross-Linked Polymer Flooding. *Journal of Canadian Petroleum Technology*, **2009**, 48, 37-41		34
137	A New Model of Trapping and Relative Permeability Hysteresis for All Wettability Characteristics. *SPE Journal*, **2008**, 13, 277-288	3.1	146
136	Multiphase flow predictions from carbonate pore space images using extracted network models. *Water Resources Research*, **2008**, 44,	5.4	36
135	General Transfer Functions for Multiphase Flow in Fractured Reservoirs. *SPE Journal*, **2008**, 13, 289-297	3.1	44
134	Pore-scale network modeling of Ellis and HerschelBulkley fluids. *Journal of Petroleum Science and Engineering*, **2008**, 60, 105-124	4.4	62
133	Effects of wettability and pore-level displacement on hydrocarbon trapping. *Advances in Water Resources*, **2008**, 31, 503-512	4.7	41
132	Pore-to-field simulation of single-phase transport using continuous time random walks. *Advances in Water Resources*, **2008**, 31, 1527-1539	4.7	45
131	Pore space reconstruction of vuggy carbonates using microtomography and multiple-point statistics. *Water Resources Research*, **2007**, 43,	5.4	121
130	Pore-scale modeling of transverse dispersion in porous media. *Water Resources Research*, **2007**, 43,	5.4	89
129	Pore-scale Simulation of Water Alternate Gas Injection. *Transport in Porous Media*, **2007**, 66, 259-286	3.1	28
128	Network extraction from sandstone and carbonate pore space images. *Journal of Petroleum Science and Engineering*, **2007**, 56, 219-231	4.4	172
127	Advective transport in percolation clusters. *Physical Review E*, **2007**, 75, 011124	2.4	4

126	Multirate-Transfer Dual-Porosity Modeling of Gravity Drainage and Imbibition. *SPE Journal*, **2007**, 12, 77-88	3.1	54
125	Criteria for three-fluid configurations including layers in a pore with nonuniform wettability. *Water Resources Research*, **2007**, 43,	5.4	24
124	Streamline-based simulation of carbon dioxide storage in a North Sea aquifer. *Water Resources Research*, **2006**, 42,	5.4	72
123	An exact particle tracking algorithm for advective-dispersive transport in networks with complete mixing at nodes. *Water Resources Research*, **2006**, 42,	5.4	14
122	Pore-scale modeling and continuous time random walk analysis of dispersion in porous media. *Water Resources Research*, **2006**, 42,	5.4	163
121	Impact of relative permeability hysteresis on geological CO2 storage. *Water Resources Research*, **2006**, 42,	5.4	519
120	Simulation of counter-current imbibition in water-wet fractured reservoirs. *Journal of Petroleum Science and Engineering*, **2006**, 50, 21-39	4.4	80
119	Analytical and numerical analysis of oil recovery by gravity drainage. *Journal of Petroleum Science and Engineering*, **2006**, 54, 55-69	4.4	27
118	Analytical Solutions to Multiphase First-Contact Miscible Models with Viscous Fingering. *Transport in Porous Media*, **2006**, 64, 339-373	3.1	20
117	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
116	Analysis of Imbibition in Mixed-Wet Rocks Using Pore-Scale Modeling. *SPE Journal*, **2005**, 10, 466-474	3.1	38
115	Prediction of Wettability Variation Within an Oil/Water Transition Zone and Its Impact on Production. *SPE Journal*, **2005**, 10, 185-195	3.1	23
114	Pore space reconstruction using multiple-point statistics. *Journal of Petroleum Science and Engineering*, **2005**, 46, 121-137	4.4	203
113	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
112	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
111	Predictive Pore-Scale Modeling of Single and Multiphase Flow. *Transport in Porous Media*, **2005**, 58, 23-41	3.1	67
110	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
109	Predictive Pore-Scale Modeling of Single and Multiphase Flow **2005**, 23-41		6

108	Dynamic network modeling of two-phase drainage in porous media. *Physical Review E*, **2005**, 71, 016308	2.4	77
107	Analytic Analysis for Oil Recovery During Counter-Current Imbibition in Strongly Water-Wet Systems **2005**, 173-189		
106	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
105	2D dynamic pore-scale network model of imbibition. *Developments in Water Science*, **2004**, 55, 71-82		3
104	Dual Mesh Method for Upscaling in Waterflood Simulation. *Transport in Porous Media*, **2004**, 55, 71-89	3.1	31
103	Streamline-based simulation of advective□dispersive solute transport. *Advances in Water Resources*, **2004**, 27, 913-924	4.7	29
102	Comparison of streamline-based and grid-based dual porosity simulation. *Journal of Petroleum Science and Engineering*, **2004**, 43, 129-137	4.4	34
101	Predictive pore-scale modeling of two-phase flow in mixed wet media. *Water Resources Research*, **2004**, 40,	5.4	469
100	Streamline-based dual-porosity simulation of reactive transport and flow in fractured reservoirs. *Water Resources Research*, **2004**, 40,	5.4	66
99	Pore-scale modeling of longitudinal dispersion. *Water Resources Research*, **2004**, 40,	5.4	140
98	Prediction of permeability for porous media reconstructed using multiple-point statistics. *Physical Review E*, **2004**, 70, 066135	2.4	216
97	Analysis of Imbibition in Mixed-Wet Rocks Using Pore-Scale Modeling **2004**,		3
96	A Streamline-Based Method for Assisted History Matching Applied to. *SPE Journal*, **2004**, 9, 437-449	3.1	8
95	Predicting the Impact of Non-Newtonian Rheology on Relative Permeability Using Pore-Scale Modeling **2004**,		9
94	A Streamline-Based Method for Assisted History Matching Applied to an Arabian Gulf Field **2003**,		3
93	Streamline-Based Method With Full-Physics Forward Simulation for History-Matching Performance Data of a North Sea Field. *SPE Journal*, **2003**, 8, 171-180	3.1	19
92	Streamline-Based Dual Porosity Simulation of Fractured Reservoirs **2003**,		34
91	A New Streamline Method for Evaluating Uncertainty in Small-Scale, Two-Phase Flow Properties. *SPE Journal*, **2003**, 8, 32-40	3.1	2

90	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
89	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
88	Multicomponent mass transfer across water films during hydrocarbon gas injection. *Chemical Engineering Science*, **2003**, 58, 2377-2388	4.4	27
87	Anomalous transport in heterogeneous media demonstrated by streamline-based simulation. *Geophysical Research Letters*, **2003**, 30,	4.9	44
86	Predictive Pore-Scale Network Modeling **2003**,		35
85	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
84	Elliptic Regions and Stable Solutions for Three-Phase flow in Porous Media. *Transport in Porous Media*, **2002**, 48, 249-269	3.1	26
83	Streamline Tracing on Curvilinear Structured and Unstructured Grids. *SPE Journal*, **2002**, 7, 139-148	3.1	55
82	Pore-Scale Modeling Of Three-Phase Flow In Mixed-Wet Systems **2002**,		25
81	Prediction Of Wettability Variation And Its Impact On Waterflooding Using Pore- To Reservoir-Scale Simulation **2002**,		10
80	Effect of Composition on Waterblocking for Multicomponent Gasfloods **2002**,		9
79	Thermally Induced Wettability Alteration To Improve Oil Recovery in Fractured Reservoirs. *SPE Reservoir Evaluation and Engineering*, **2001**, 4, 179-186	2.3	75
78	Network modeling of multiphase flow in fractures. *Advances in Water Resources*, **2001**, 24, 409-421	4.7	74
77	Flow in porous media □pore-network models and multiphase flow. *Current Opinion in Colloid and Interface Science*, **2001**, 6, 197-207	7.6	600
76	Constraints on Contact Angles for Multiple Phases in Thermodynamic Equilibrium. *Journal of Colloid and Interface Science*, **2001**, 239, 281-282	9.3	18
75	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
74	Tenth SPE Comparative Solution Project: A Comparison of Upscaling Techniques. *SPE Reservoir Evaluation and Engineering*, **2001**, 4, 308-317	2.3	512
73	A functional relation for field-scale nonaqueous phase liquid dissolution developed using a pore network model. *Journal of Contaminant Hydrology*, **2001**, 48, 89-119	3.9	28

72	Pore-Scale Modeling of Multiphase Flow in Fractures and Matrix/Fracture Transfer. *SPE Journal*, **2001**, 6, 126-136	3.1	17
71	Pore-Scale Modeling of Three-Phase Flow and the Effects of Wettability **2000**,		15
70	Three-Phase Relative Permeability of Water-Wet, Oil-Wet, and Mixed-Wet Sandpacks. *SPE Journal*, **2000**, 5, 82-91	3.1	78
69	Determination of Water-Oil Interfacial Area during 3-Phase Gravity Drainage in Porous Media. *Journal of Colloid and Interface Science*, **2000**, 221, 308-312	9.3	41
68	Field observations of a capillary fringe before and after a rainy season. *Journal of Contaminant Hydrology*, **2000**, 44, 103-118	3.9	38
67	Behavior of Nonaqueous Phase Liquids in Fractured Porous Media under Two-Phase Flow Conditions. *Transport in Porous Media*, **2000**, 38, 189-203	3.1	29
66	Pore Scale Modeling of Rate Effects in Imbibition. *Transport in Porous Media*, **2000**, 40, 295-322	3.1	112
65	The Effect of Wettability on Three-Phase Relative Permeability. *Transport in Porous Media*, **2000**, 39, 347-366	3.1	66
64	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
63	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
62	Effects of Wettability on Three-Phase Flow in Porous Media *Journal of Physical Chemistry B*, **2000**, 104, 3833-3845	3.4	154
61	An Empirical Model for Three-Phase Relative Permeability. *SPE Journal*, **2000**, 5, 435-445	3.1	120
60	Determination of finger shape using the dynamic capillary pressure. *Water Resources Research*, **2000**, 36, 2781-2785	5.4	21
59	Development of a pore network simulation model to study nonaqueous phase liquid dissolution. *Water Resources Research*, **2000**, 36, 439-454	5.4	94
58	Three-phase flow and wetability effects in triangular capillaries. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1999**, 155, 259-276	5.1	30
57	Nested gridding and streamline-based simulation for fast reservoir performance prediction. *Annals of Software Engineering*, **1999**, 3, 295-320		49
56	An Empirical Model for Three-Phase Relative Permeability **1999**,		7
55	Effect of fracture aperture variations on the dispersion of contaminants. *Water Resources Research*, **1999**, 35, 55-63	5.4	82

54	Streamline-based simulation of solute transport. *Water Resources Research*, **1999**, 35, 3061-3078	5.4	84
53	Measurement and Prediction of Effective Diffusivities through Spreading and Nonspreading Oils in Unsaturated Porous Media. *Environmental Science & Technology*, **1999**, 33, 2879-2884	10.3	4
52	Pore-Scale Modeling of Multiphase Flow in Fractures and Matrix/Fracture Transfer **1999**,		4
51	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
50	Wettability effects in three-phase gravity drainage. *Journal of Petroleum Science and Engineering*, **1998**, 20, 203-211	4.4	27
49	Three-dimensional modeling of three phase imbibition and drainage. *Advances in Water Resources*, **1998**, 21, 121-143	4.7	161
48	Network Modeling of Three-Phase Flow in Porous Media. *SPE Journal*, **1998**, 3, 86-96	3.1	66
47	Measurement of Three Phase Relative Permeability during Gravity Drainage using CT **1998**,		34
46	Effects of Heterogeneity and Wetting on Relative Permeability Using Pore Level Modeling. *SPE Journal*, **1997**, 2, 70-87	3.1	92
45	Pore Level Modeling of the Effects of Wettability. *SPE Journal*, **1997**, 2, 494-510	3.1	85
44	A 3D Field-Scale Streamline-Based Reservoir Simulator. *SPE Reservoir Engineering*, **1997**, 12, 246-254		194
43	A Streamline-Based 3D Field-Scale Compositional Reservoir Simulator **1997**,		74
42	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
41	On the Structure and Flow Processes in the Capillary Fringe of Phreatic Aquifers. *Transport in Porous Media*, **1997**, 28, 159-180	3.1	35
40	Micromodel Observation of the Role of Oil Layers in Three-Phase Flow. *Transport in Porous Media*, **1997**, 26, 277-297	3.1	123
39	Hydrocarbon Drainage along Corners of Noncircular Capillaries. *Journal of Colloid and Interface Science*, **1997**, 187, 11-21	9.3	93
38	A generalized streamline method to predict reservoir flow. *Petroleum Geoscience*, **1996**, 2, 259-269	1.9	44
37	Simulating Flow in Heterogeneous Systems Using Streamtubes and Streamlines. *SPE Reservoir Engineering*, **1996**, 11, 5-12		85

36	Theoretical Analysis of Three Phase Flow Experiments in Porous Media **1996**,		19
35	Quantifying uncertainty in reservoir performance using streamtubes. *Mathematical Geosciences*, **1996**, 28, 843-856		13
34	Calculating Three-Phase Relative Permeabilities Using Network Modeling **1996**,		3
33	Three-phase flow and gravity drainage in porous media. *Transport in Porous Media*, **1995**, 20, 77-103	3.1	109
32	Pore Level Modelling of Three Phase Flow in Porous Media **1995**, cp-107-00023		4
31	Rapid evaluation of the impact of heterogeneity on miscible gas injection. *Geological Society Special Publication*, **1995**, 84, 133-142	1.7	
30	Pore-level modeling of wetting. *Physical Review E*, **1995**, 52, 6387-6403	2.4	238
29	Theory of Viscous Fingering in Two Phase, Three Component Flow. *SPE Advanced Technology Series*, **1994**, 2, 52-60		17
28	Predictive Theory for Viscous Fingering in Compositional Displacement. *SPE Reservoir Engineering*, **1994**, 9, 73-80		34
27	How to predict viscous fingering in three component flow. *Transport in Porous Media*, **1993**, 12, 207-236	3.1	31
26	Carbon dioxide in enhanced oil recovery. *Energy Conversion and Management*, **1993**, 34, 1197-1204	10.6	245
25	Comparisons of Empirical Viscous-Fingering Models and Their Calibration for Heterogeneous Problems. *SPE Reservoir Engineering*, **1992**, 7, 195-203		19
24	Simulation and theory of two-phase flow in porous media. *Physical Review A*, **1992**, 46, 7680-7699	2.6	189
23	Prediction of relative permeability in simple porous media. *Physical Review A*, **1992**, 46, 2004-2011	2.6	361
22	Implicit flux limiting schemes for petroleum reservoir simulation. *Journal of Computational Physics*, **1992**, 102, 194-210	4.1	67
21	Relative permeabilities from two- and three-dimensional pore-scale network modelling. *Transport in Porous Media*, **1991**, 6, 407	3.1	192
20	Accurate Calibration of Empirical Viscous Fingering Models. *Oil & Gas Science & Technology*, **1991**, 46, 311-324		9
19	Dynamics of screening in multifractal growth. *Physical Review A*, **1990**, 41, 582-589	2.6	5

18	Macroscopic parameters from simulations of pore scale flow. *Physical Review A*, **1990**, 42, 4780-4787	2.6	105
17	Hydrodynamic force distribution on a fractal cluster. *Physical Review A*, **1989**, 39, 5801-5806	2.6	4
16	Screening in multifractal growth. *Physical Review A*, **1989**, 39, 3591-3596	2.6	17
15	Geometry of multifractal systems. *Physical Review A*, **1989**, 39, 2780-2782	2.6	7
14	Polymer adsorption and electron binding on rough and fractal surfaces. *Macromolecules*, **1989**, 22, 1458-1466	5.5	21
13	Scaling structure of viscous fingering. *Physical Review A*, **1988**, 37, 3935-3941	2.6	23
12	A family of exponents from a fractal model of viscous fingering and DLA. *Journal of Physics A*, **1987**, 20, 5961-5969		3
11	Interfacial Curvature and Contact Angle1-16		0
10	Porous Media and Fluid Displacement17-72		
9	Primary Drainage73-114		
8	Imbibition and Trapping115-187		2
7	Wettability and Displacement Paths188-218		
6	Navier-Stokes Equations, Darcy's Law and Multiphase Flow219-314		
5	Relative Permeability315-353		
4	Three-Phase Flow354-401		
3	Solutions to Equations for Multiphase Flow402-436		3
2	Appendix Exercises437-446		
1	Residual CO2 Saturation Distributions in Rock Samples Measured by X-Ray CT381-388		2