

Samuel C M Krevor

List of Publications by Year in descending order

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Version: 2024-02-01

86
papers

6,182
citations

136950

32
h-index

82547

72
g-index

101
all docs

101
docs citations

101
times ranked

5503
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbon capture and storage (CCS): the way forward. Energy and Environmental Science, 2018, 11, 1062-1176.	30.8	2,378
2	Relative permeability and trapping of CO ₂ and water in sandstone rocks at reservoir conditions. Water Resources Research, 2012, 48, .	4.2	444
3	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.	4.6	329
4	An assessment of CCS costs, barriers and potential. Energy Strategy Reviews, 2018, 22, 61-81.	7.3	284
5	Capillary pressure and heterogeneity for the CO ₂ /water system in sandstone rocks at reservoir conditions. Advances in Water Resources, 2012, 38, 48-59.	3.8	248
6	Capillary heterogeneity trapping of CO ₂ in a sandstone rock at reservoir conditions. Geophysical Research Letters, 2011, 38, .	4.0	204
7	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
8	Enhancing serpentine dissolution kinetics for mineral carbon dioxide sequestration. International Journal of Greenhouse Gas Control, 2011, 5, 1073-1080.	4.6	99
9	Pore-scale heterogeneity in the mineral distribution and reactive surface area of porous rocks. Chemical Geology, 2015, 411, 260-273.	3.3	98
10	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
11	Characterizing flow behavior for gas injection: Relative permeability of CO ₂ brine and N ₂ water in heterogeneous rocks. Water Resources Research, 2015, 51, 9464-9489.	4.2	95
12	Capillary Trapping of CO ₂ in Oil Reservoirs: Observations in a Mixed-Wet Carbonate Rock. Environmental Science & Technology, 2016, 50, 2727-2734.	10.0	87
13	Imaging and Measurement of Pore-scale Interfacial Curvature to Determine Capillary Pressure Simultaneously With Relative Permeability. Water Resources Research, 2018, 54, 7046-7060.	4.2	87
14	An Experimental Study of CO ₂ Exsolution and Relative Permeability Measurements During CO ₂ Saturated Water Depressurization. Transport in Porous Media, 2012, 91, 459-478.	2.6	82
15	The impact of reservoir conditions on the residual trapping of carbon dioxide in Berea sandstone. Water Resources Research, 2015, 51, 2009-2029.	4.2	82
16	Characterizing Drainage Multiphase Flow in Heterogeneous Sandstones. Water Resources Research, 2018, 54, 3139-3161.	4.2	77
17	Enhancing process kinetics for mineral carbon sequestration. Energy Procedia, 2009, 1, 4867-4871.	1.8	68
18	Capillarity and wetting of carbon dioxide and brine during drainage in Berea sandstone at reservoir conditions. Water Resources Research, 2015, 51, 7895-7914.	4.2	68

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19	A Procedure for the Accurate Determination of Sub-Core Scale Permeability Distributions with Error Quantification. <i>Transport in Porous Media</i> , 2013, 98, 565-588.	2.6	67
20	Impact of alkalinity sources on the life-cycle energy efficiency of mineral carbonation technologies. <i>Energy and Environmental Science</i> , 2012, 5, 8631.	30.8	64
21	Relationship between wetting and capillary pressure in a crude oil/brine/rock system: From nano-scale to core-scale. <i>Journal of Colloid and Interface Science</i> , 2020, 562, 159-169.	9.4	62
22	CO ₂ enhanced oil recovery: a catalyst for gigatonne-scale carbon capture and storage deployment?. <i>Energy and Environmental Science</i> , 2017, 10, 2594-2608.	30.8	62
23	Global geologic carbon storage requirements of climate change mitigation scenarios. <i>Energy and Environmental Science</i> , 2020, 13, 1561-1567.	30.8	57
24	Rapid detection and characterization of surface CO ₂ leakage through the real-time measurement of $\delta^{13}\text{C}$ signatures in CO ₂ flux from the ground. <i>International Journal of Greenhouse Gas Control</i> , 2010, 4, 811-815.	4.6	53
25	Multiphase Flow Characteristics of Heterogeneous Rocks From CO ₂ Storage Reservoirs in the United Kingdom. <i>Water Resources Research</i> , 2018, 54, 729-745.	4.2	48
26	Small-scale Capillary Heterogeneity Linked to Rapid Plume Migration During CO ₂ Storage. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088616.	4.0	45
27	Validation of a population balance model for olivine dissolution. <i>Chemical Engineering Science</i> , 2007, 62, 6412-6422.	3.8	44
28	The Sensitivity of Estimates of Multiphase Fluid and Solid Properties of Porous Rocks to Image Processing. <i>Transport in Porous Media</i> , 2020, 131, 985-1005.	2.6	43
29	Representative Elementary Volumes, Hysteresis, and Heterogeneity in Multiphase Flow From the Pore to Continuum Scale. <i>Water Resources Research</i> , 2020, 56, e2019WR026396.	4.2	43
30	Rock-buffered recrystallization of Marion Plateau dolomites at low temperature evidenced by clumped isotope thermometry and X-ray diffraction analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 252, 190-212.	3.9	39
31	Storage of Carbon Dioxide in Saline Aquifers: Physicochemical Processes, Key Constraints, and Scale-Up Potential. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2021, 12, 471-494.	6.8	34
32	Intermittent fluid connectivity during two-phase flow in a heterogeneous carbonate rock. <i>Physical Review E</i> , 2019, 100, 043103.	2.1	33
33	Observations of the impact of rock heterogeneity on solute spreading and mixing. <i>Water Resources Research</i> , 2017, 53, 4624-4642.	4.2	32
34	Fluid Surface Coverage Showing the Controls of Rock Mineralogy on the Wetting State. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086380.	4.0	32
35	Capillary Heterogeneity in Sandstone Rocks During CO ₂ /Water Core-flooding Experiments. <i>Energy Procedia</i> , 2013, 37, 5473-5479.	1.8	24
36	Pore scale heterogeneity in the mineral distribution and surface area of Berea sandstone. <i>Energy Procedia</i> , 2014, 63, 3582-3588.	1.8	22

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37	Real-Time Imaging Reveals Distinct Pore-Scale Dynamics During Transient and Equilibrium Subsurface Multiphase Flow. <i>Water Resources Research</i> , 2020, 56, e2020WR028287.	4.2	22
38	Mechanisms controlling fluid breakup and reconnection during two-phase flow in porous media. <i>Physical Review E</i> , 2019, 100, 043115.	2.1	19
39	Impact of Reservoir Conditions on CO ₂ -brine Relative Permeability in Sandstones. <i>Energy Procedia</i> , 2014, 63, 5577-5585.	1.8	18
40	The impact of time-varying CO ₂ injection rate on large scale storage in the UK Bunter Sandstone. <i>International Journal of Greenhouse Gas Control</i> , 2018, 68, 77-85.	4.6	18
41	Pore Network Model Predictions of Darcy-Scale Multiphase Flow Heterogeneity Validated by Experiments. <i>Water Resources Research</i> , 2020, 56, e2019WR026708.	4.2	18
42	A Study of Residual Carbon Dioxide Trapping in Sandstone. <i>Energy Procedia</i> , 2014, 63, 5522-5529.	1.8	17
43	A tool for first order estimates and optimisation of dynamic storage resource capacity in saline aquifers. <i>International Journal of Greenhouse Gas Control</i> , 2021, 106, 103258.	4.6	17
44	Determination of the spatial distribution of wetting in the pore networks of rocks. <i>Journal of Colloid and Interface Science</i> , 2022, 613, 786-795.	9.4	17
45	Cut, overlap and locate: a deep learning approach for the 3D localization of particles in astigmatic optical setups. <i>Experiments in Fluids</i> , 2020, 61, 1.	2.4	16
46	The development of intermittent multiphase fluid flow pathways through a porous rock. <i>Advances in Water Resources</i> , 2021, 150, 103868.	3.8	16
47	Real-Time Tracking of CO ₂ Injected into a Subsurface Coal Fire through High-Frequency Measurements of the ¹³ C Signature. <i>Environmental Science & Technology</i> , 2011, 45, 4179-4186.	10.0	14
48	Laboratory experiments on core-scale behavior of CO ₂ evolved from CO ₂ -saturated brine. <i>Energy Procedia</i> , 2011, 4, 3210-3215.	1.8	14
49	An Estimate of the Amount of Geological CO ₂ Storage over the Period of 1996-2020. <i>Environmental Science and Technology Letters</i> , 2022, 9, 693-698.	8.7	14
50	Effective Wettability Measurements of CO ₂ -brine-Sandstone System at Different Reservoir Conditions. <i>Energy Procedia</i> , 2014, 63, 5420-5426.	1.8	13
51	The impact of energy systems demands on pressure limited CO ₂ storage in the Bunter Sandstone of the UK Southern North Sea. <i>International Journal of Greenhouse Gas Control</i> , 2017, 65, 128-136.	4.6	13
52	Calibration of astigmatic particle tracking velocimetry based on generalized Gaussian feature extraction. <i>Advances in Water Resources</i> , 2019, 124, 1-8.	3.8	12
53	Pore-Scale X-ray Imaging of Wetting Alteration and Oil Redistribution during Low-Salinity Flooding of Berea Sandstone. <i>Energy & Fuels</i> , 2021, 35, 1197-1207.	5.1	12
54	Observations of the Impacts of Millimeter-to Centimeter-Scale Heterogeneities on Relative Permeability and Trapping in Carbonate Rocks. <i>Water Resources Research</i> , 2021, 57, e2020WR028597.	4.2	11

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55	Computational Tools for Calculating $\log \hat{\gamma}^2$ Values of Geochemically Relevant Uranium Organometallic Complexes. <i>Journal of Physical Chemistry A</i> , 2018, 122, 8007-8019.	2.5	10
56	Experimental study of pH effect on uranium (UVI) particle formation and transport through quartz sand in alkaline 0.1 M sodium chloride solutions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020, 592, 124375.	4.7	10
57	Can Carbon Capture and Storage Unlock "Unburnable Carbon"? <i>Energy Procedia</i> , 2017, 114, 7504-7515.	1.8	9
58	Sensitivity Analysis of the Dynamic CO ₂ Storage Capacity Estimate for the Bunter Sandstone of the UK Southern North Sea. <i>Energy Procedia</i> , 2017, 114, 4564-4570.	1.8	8
59	The Error in Using Superposition to Estimate Pressure During Multisite Subsurface CO ₂ Storage. <i>Geophysical Research Letters</i> , 2019, 46, 6525-6533.	4.0	8
60	Characterization of Hysteretic Multiphase Flow from the MM to M Scale in Heterogeneous Rocks. <i>E3S Web of Conferences</i> , 2019, 89, 02001.	0.5	8
61	Assessing the Potential of Mineral Carbonation with Industrial Alkalinity Sources in the U.S. <i>Energy Procedia</i> , 2013, 37, 5858-5869.	1.8	7
62	The Impact of Mineral Dissolution on Drainage Relative Permeability and Residual Trapping in Two Carbonate Rocks. <i>Transport in Porous Media</i> , 2020, 131, 363-380.	2.6	7
63	Simulating Core Floods in Heterogeneous Sandstone and Carbonate Rocks. <i>Water Resources Research</i> , 2021, 57, e2021WR030581.	4.2	7
64	An Introduction to Subsurface CO ₂ Storage. <i>RSC Energy and Environment Series</i> , 2019, , 238-295.	0.5	7
65	The impact of heterogeneity on the capillary trapping of CO_2 in the Captain Sandstone.. <i>International Journal of Greenhouse Gas Control</i> , 2021, 112, 103511.	4.6	7
66	Red Noise in Steady-State Multiphase Flow in Porous Media. <i>Water Resources Research</i> , 2022, 58, .	4.2	7
67	Delineation of Magnesium-rich Ultramafic Rocks Available for Mineral Carbon Sequestration in the United States. <i>Energy Procedia</i> , 2009, 1, 4915-4920.	1.8	6
68	Measurement of the Multiphase Flow Properties of the CO ₂ Brine System for Carbon Sequestration. <i>Energy Procedia</i> , 2013, 37, 4499-4503.	1.8	6
69	Laboratory Studies to Understand the Controls on Flow and Transport for CO ₂ Storage. , 2019, , 145-180.		6
70	CO ₂ -EOR and Storage Potentials in Depleted Reservoirs in the Norwegian Continental Shelf NCS. , 2020, , .		4
71	Analysis of Viscous Crossflow in Polymer Flooding. , 2017, , .		4
72	The Effect of Viscosity Ratio and Peclet Number on Miscible Viscous Fingering in a Hele-Shaw Cell: A Combined Numerical and Experimental Study. <i>Transport in Porous Media</i> , 2022, 143, 23-45.	2.6	4

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73	Capillary Limited Flow Behavior of CO ₂ in Target Reservoirs in the UK. Energy Procedia, 2017, 114, 4518-4523.	1.8	3
74	Advanced Reservoir Characterization for CO ₂ Storage. , 2014, , .		3
75	European carbon storage resource requirements of climate change mitigation targets. International Journal of Greenhouse Gas Control, 2022, 114, 103568.	4.6	3
76	Experimental and Numerical Studies of First Contact Miscible Injection in a Quarter Five Spot Pattern. , 2016, , .		2
77	Pore-scale Analysis of In Situ Contact Angle Measurements in Mixed-wet Rocks: Applications to Carbon Utilization in Oil Fields. Energy Procedia, 2017, 114, 6919-6927.	1.8	2
78	The Impact of Crude Oil Induced Wettability Alteration on Remaining Saturations of CO ₂ in Carbonates Reservoirs: A Core Flood Method. , 2016, , .		1
79	High Resolution Modelling And Steady-State Upscaling Of Large Scale Gravity Currents In Heterogeneous Sandstone Reservoirs. , 2018, , .		1
80	The impacts of heterogeneity on CO ₂ capillary trapping within the Captain Sandstone - a core to field scale study.. SSRN Electronic Journal, 0, , .	0.4	1
81	Optimising Brine Production for Pressure Management During CO ₂ Sequestration in the Bunter Sandstone of the UK Southern North Sea. , 2017, , .		1
82	3D Visualization of Film Flow During Three-Phase Displacement in Water-Wet Rocks via Microtomography Method. , 2021, , .		1
83	Remaining Saturations of Supercritical CO ₂ in Mixed-wet Carbonates for Carbon Utilization in Oil Fields: Core to Pore Scales Observations and Field Scale Implications. , 2016, , .		0
84	The Impact of Reservoir Conditions on the Measurement of Multiphase Flow Properties for CO ₂ -brine Systems. , 2014, , .		0
85	Modelling Basin-scale CO ₂ Storage in the Bunter Sandstone of the UK Southern North Sea. , 2016, , .		0
86	A Novel Approach for Waterflood Management Optimisation using Streamline Technology. , 2016, , .		0