Quanlin Zhou

List of Publications by Year
in descending order

70 papers	3,329 citations	159585 30 h-index	149698 56 g-index
72 all docs	72 docs citations	72 times ranked	2339 citing authors

#	Article	IF	Citations
1	Large-scale impact of CO2 storage in deep saline aquifers: A sensitivity study on pressure response in stratified systems. International Journal of Greenhouse Gas Control, 2009, 3, 181-194.	4.6	421
2	A method for quick assessment of CO2 storage capacity in closed and semi-closed saline formations. International Journal of Greenhouse Gas Control, 2008, 2, 626-639.	4.6	343
3	Basin-scale hydrogeologic impacts of CO2 storage: Capacity and regulatory implications. International Journal of Greenhouse Gas Control, 2009, 3, 745-756.	4.6	221
4	Modeling Basin-and Plume-Scale Processes of CO_2 Storage for Full-Scale Deployment. Ground Water, 2010, 48, 494-514.	1.3	167
5	Making sense of global sensitivity analyses. Computers and Geosciences, 2014, 65, 84-94.	4.2	149
6	CO2 migration and pressure evolution in deep saline aquifers. International Journal of Greenhouse Gas Control, 2015, 40, 203-220.	4.6	119
7	Impact-driven pressure management via targeted brine extraction—Conceptual studies of CO2 storage in saline formations. International Journal of Greenhouse Gas Control, 2012, 7, 168-180.	4.6	114
8	Field-scale effective matrix diffusion coefficient for fractured rock: Results from literature survey. Journal of Contaminant Hydrology, 2007, 93, 161-187.	3.3	98
9	Experimental study on effects of geologic heterogeneity in enhancing dissolution trapping of supercritical CO_2. Water Resources Research, 2015, 51, 1635-1648.	4.2	89
10	Analytical solutions for pressure perturbation and fluid leakage through aquitards and wells in multilayered-aquifer systems. Water Resources Research, 2011, 47, .	4.2	80
11	Brine flow up a well caused by pressure perturbation from geologic carbon sequestration: Static and dynamic evaluations. International Journal of Greenhouse Gas Control, 2011, 5, 850-861.	4.6	79
12	Early detection of brine and CO2 leakage through abandoned wells using pressure and surface-deformation monitoring data: Concept and demonstration. Advances in Water Resources, 2013, 62, 555-569.	3.8	69
13	On scale and magnitude of pressure build-up induced by large-scale geologic storage of CO_2. , 2011, 1, 11-20.		68
14	Dynamic displacement and non-equilibrium dissolution of supercritical CO2 in low-permeability sandstone: An experimental study. International Journal of Greenhouse Gas Control, 2013, 14, 1-14.	4.6	67
15	Modeling the performance of large-scale CO2 storage systems: A comparison of different sensitivity analysis methods. International Journal of Greenhouse Gas Control, 2013, 17, 189-205.	4.6	65
16	Saltwater Upconing and Decay Beneath a Well Pumping Above an Interface Zone. Transport in Porous Media, 2005, 61, 337-363.	2.6	52
17	Pore-scale supercritical CO2 dissolution and mass transfer under imbibition conditions. Advances in Water Resources, 2016, 92, 142-158.	3.8	49
18	Imaging and quantification of spreading and trapping of carbon dioxide in saline aquifers using meter-scale laboratory experiments. Water Resources Research, 2017, 53, 485-502.	4.2	49

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19	Pressure Buildup and Brine Migration During CO_2 Storage in Multilayered Aquifers. Ground Water, 2013, 51, 252-267.	1.3	48
20	Experimental analysis of spatial correlation effects on capillary trapping of supercritical CO_2 at the intermediate laboratory scale in heterogeneous porous media. Water Resources Research, 2015, 51, 8791-8805.	4.2	45
21	Field evidence of biodegradation of N-Nitrosodimethylamine (NDMA) in groundwater with incidental and active recycled water recharge. Water Research, 2009, 43, 793-805.	11.3	43
22	Flow and transport in unsaturated fractured rock: effects of multiscale heterogeneity of hydrogeologic properties. Journal of Contaminant Hydrology, 2003, 60, 1-30.	3.3	42
23	A Semi-Analytical Solution for Large-Scale Injection-Induced Pressure Perturbation and Leakage in a Laterally Bounded Aquiferâ€"Aquitard System. Transport in Porous Media, 2009, 78, 127-148.	2.6	41
24	A new second-order numerical manifold method model with an efficient scheme for analyzing free surface flow with inner drains. Applied Mathematical Modelling, 2016, 40, 1427-1445.	4.2	41
25	Potential CO2 and brine leakage through wellbore pathways for geologic CO2 sequestration using the National Risk Assessment Partnership tools: Application to the Big Sky Regional Partnership. International Journal of Greenhouse Gas Control, 2019, 81, 44-65.	4.6	39
26	An interpretation of potential scale dependence of the effective matrix diffusion coefficient. Journal of Contaminant Hydrology, 2007, 90, 41-57.	3.3	38
27	Energyâ€"workâ€"based numerical manifold seepage analysis with an efficient scheme to locate the phreatic surface. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1633-1650.	3.3	36
28	Analysis of pumpingâ€"induced unsaturated regions beneath a perennial river. Water Resources Research, 2007, 43, .	4.2	33
29	An adaptive pathline-based particle tracking algorithm for the Eulerianâ€"Lagrangian method. Advances in Water Resources, 2000, 23, 383-397.	3.8	32
30	Supercritical CO 2 dissolution and mass transfer in low-permeability sandstone: Effect of concentration difference in water-flood experiments. International Journal of Greenhouse Gas Control, 2014, 28, 328-342.	4.6	32
31	Investigation of mechanisms of supercritical CO2 trapping in deep saline reservoirs using surrogate fluids at ambient laboratory conditions. International Journal of Greenhouse Gas Control, 2014, 29, 35-49.	4.6	32
32	Behavior of the mass transfer coefficient during the MADEâ€"2 experiment: New insights. Water Resources Research, 2008, 44, .	4.2	31
33	Evidence of Multi-Process Matrix Diffusion in a Single Fracture from a Field Tracer Test. Transport in Porous Media, 2006, 63, 473-487.	2.6	30
34	Geostatistical reduced-order models in underdetermined inverse problems. Water Resources Research, 2013, 49, 6587-6600.	4.2	29
35	Pore-scale supercritical CO2 dissolution and mass transfer under drainage conditions. Advances in Water Resources, 2017, 100, 14-25.	3.8	29
36	Using Pressure and Volumetric Approaches to Estimate CO2 Storage Capacity in Deep Saline Aquifers. Energy Procedia, 2014, 63, 5294-5304.	1.8	26

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37	Scaling the impacts of pore-scale characteristics on unstable supercritical CO_2-water drainage using a complete capillary number. International Journal of Greenhouse Gas Control, 2019, 86, 11-21.	4.6	25
38	Analysis of a mesoscale infiltration and water seepage test in unsaturated fractured rock: Spatial variabilities and discrete fracture patterns. Journal of Contaminant Hydrology, 2006, 87, 96-122.	3.3	24
39	Accurate calculation of specific discharge in heterogeneous porous media. Water Resources Research, 2001, 37, 3057-3069.	4.2	23
40	Pressure management via brine extraction in geological CO_2 storage: Adaptive optimization strategies under poorly characterized reservoir conditions. International Journal of Greenhouse Gas Control, 2019, 83, 176-185.	4.6	20
41	Approximate solutions for diffusive fracture–matrix transfer: Application to storage of dissolved CO_2 in fractured rocks. Water Resources Research, 2017, 53, 1746-1762.	4.2	19
42	Coupled supercritical CO_2 dissolution and water flow in pore-scale micromodels. Advances in Water Resources, 2019, 123, 54-69.	3.8	18
43	Time-lapse gravity monitoring of CO_2 migration based on numerical modeling of a faulted storage complex. International Journal of Greenhouse Gas Control, 2020, 95, 102956.	4.6	18
44	A modeling approach to represent hysteresis in capillary pressure-saturation relationship based on fluid connectivity in void space. Water Resources Research, 2014, 50, 119-131.	4.2	16
45	Mixing and trapping of dissolved CO_2 in deep geologic formations with shale layers. Advances in Water Resources, 2017, 105, 67-81.	3.8	16
46	Effects of diffusive property heterogeneity on effective matrix diffusion coefficient for fractured rock. Water Resources Research, 2006, 42, .	4.2	15
47	Numerical modeling of the pumping tests at the Ketzin pilot site for CO_2 injection: Model calibration and heterogeneity effects. International Journal of Greenhouse Gas Control, 2014, 22, 200-212.	4.6	15
48	On the detection of leakage pathways in geological CO_2 storage systems using pressure monitoring data: Impact of model parameter uncertainties. Advances in Water Resources, 2015, 84, 112-124.	3.8	15
49	Revisiting the Analytical Solutions of Heat Transport in Fractured Reservoirs Using a Generalized Multirate Memory Function. Water Resources Research, 2019, 55, 1405-1428.	4.2	15
50	Understanding CO_2 Plume Behavior and Basin-Scale Pressure Changes during Sequestration Projects through the use of Reservoir Fluid Modeling. Energy Procedia, 2009, 1, 1799-1806.	1.8	14
51	Flow in horizontally anisotropic multilayered aquifer systems with leaky wells and aquitards. Water Resources Research, 2014, 50, 741-747.	4.2	14
52	Fast iterative implementation of large-scale nonlinear geostatistical inverse modeling. Water Resources Research, 2014, 50, 198-207.	4.2	13
53	Dynamic Processes of CO_2 Storage in the Field: 1. Multiscale and Multipath Channeling of CO_2 Flow in the Hierarchical Fluvial Reservoir at Cranfield, Mississippi. Water Resources Research, 2020, 56, e2019EF001360.	4.2	13
54	Effects of in situ stress measurement uncertainties on assessment of predicted seismic activity and risk associated with a hypothetical industrial-scale geologic CO_2 sequestration operation. Journal of Rock Mechanics and Geotechnical Engineering, 2016, 8, 873-885.	8.1	10

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55	Experimental Investigation of Supercritical CO2 Trapping Mechanisms at the Intermediate Laboratory Scale in Well-defined Heterogeneous Porous Media. Energy Procedia, 2014, 63, 5646-5653.	1.8	9
56	Revisiting the Fundamental Analytical Solutions of Heat and Mass Transfer: The Kernel of Multirate and Multidimensional Diffusion. Water Resources Research, 2017, 53, 9960-9979.	4.2	9
57	Non-Darcy interfacial dynamics of air-water two-phase flow in rough fractures under drainage conditions. Scientific Reports, 2017, 7, 4570.	3.3	9
58	Geologic carbon sequestration injection wells in overpressured storage reservoirs: estimating area of review. , 2016, 6, 775-786.		7
59	Modeling Three‐Dimensional Groundwater Flow and Advective Contaminant Transport at a Heterogeneous Mountainous Site in Support of Remediation. Vadose Zone Journal, 2004, 3, 884-900.	2.2	6
60	Integrated simulations of CO_2 spreading and pressure response in the multilayer saline aquifer of South Scania Site, Sweden. , 2016, 6, 531-545.		5
61	Delineating Area of Review in a System with Pre-injection Relative Overpressure. Energy Procedia, 2014, 63, 3715-3722.	1.8	4
62	Effects of the distribution and evolution of the coefficient of friction along a fault on the assessment of the seismic activity associated with a hypothetical industrial-scale geologic CO2 sequestration operation. International Journal of Greenhouse Gas Control, 2017, 66, 254-263.	4.6	4
63	On producing CO_2 from subsurface reservoirs: simulations of liquid‐gas phase change caused by decompression. , 2019, 9, 194-208.		4
64	A Connectivity-Based Modeling Approach for Representing Hysteresis in Macroscopic Two-Phase Flow Properties. Energy Procedia, 2014, 63, 3456-3463.	1.8	3
65	Propagation, arrest, and reactivation of thermally driven fractures in an unconfined half-space using stability analysis. Theoretical and Applied Fracture Mechanics, 2021, 114, 102969.	4.7	3
66	Scaling Behavior of Thermally Driven Fractures in Deep Low‐Permeability Formations: A Plane Strain Model With 1‐D Heat Conduction. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	3
67	Experimental study of three-dimensional CO2-water drainage and fracture-matrix interactions in fractured porous media. Advances in Water Resources, 2021, 155, 104008.	3.8	1
68	Sea Water Intrusion into Coastal Aquifers. , 2006, , 12-1-12-29.		1
69	Reply to Comments by Veling on â€œA Semi-Analytical Solution for Large-Scale Injection-Induced Pressure Perturbation and Leakage in a Laterally Bounded Aquiferâ€"Aquitard Systemâ€•by Zhou, Birkholzer, and Tsang. Transport in Porous Media, 2011, 86, 327-328.	2.6	0
70	Reply to comments by Schnaar et al. on â€œBrine flow up a well caused by pressure perturbation from geologic carbon sequestration: Static and dynamic evaluationsâ€•by Birkholzer et al. (2011). International Journal of Greenhouse Gas Control, 2013, 17, 544-545.	4.6	0