

Yunwei Sun

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

2,363
citations

279487

23
h-index

223531

46
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79
all docs

79
docs citations

79
times ranked

1987
citing authors

#	ARTICLE	IF	CITATIONS
1	A comprehensive evaluation of various sensitivity analysis methods: A case study with a hydrological model. <i>Environmental Modelling and Software</i> , 2014, 51, 269-285.	1.9	242
2	Modeling Multispecies Reactive Transport in Ground Water. <i>Ground Water Monitoring and Remediation</i> , 1998, 18, 79-92.	0.6	204
3	Active CO ₂ reservoir management for carbon storage: Analysis of operational strategies to relieve pressure buildup and improve injectivity. <i>International Journal of Greenhouse Gas Control</i> , 2012, 6, 230-245.	2.3	169
4	Natural attenuation of chlorinated ethene compounds: model development and field-scale application at the Dover site. <i>Journal of Contaminant Hydrology</i> , 2000, 42, 113-140.	1.6	157
5	Key factors for determining groundwater impacts due to leakage from geologic carbon sequestration reservoirs. <i>International Journal of Greenhouse Gas Control</i> , 2014, 29, 153-168.	2.3	107
6	Development of analytical solutions for multispecies transport with serial and parallel reactions. <i>Water Resources Research</i> , 1999, 35, 185-190.	1.7	104
7	Combining brine extraction, desalination, and residual-brine reinjection with CO ₂ storage in saline formations: Implications for pressure management, capacity, and risk mitigation. <i>Energy Procedia</i> , 2011, 4, 4283-4290.	1.8	100
8	Analytical solutions for multiple species reactive transport in multiple dimensions. <i>Journal of Contaminant Hydrology</i> , 1999, 35, 429-440.	1.6	93
9	Thermohydrologic behavior at an underground nuclear waste repository. <i>Water Resources Research</i> , 2002, 38, 10-1-10-19.	1.7	88
10	Assessing parameter importance of the Common Land Model based on qualitative and quantitative sensitivity analysis. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 3279-3293.	1.9	69
11	A Decomposition Method for Solving Coupled Multi-Species Reactive Transport Problems. <i>Transport in Porous Media</i> , 1999, 37, 327-346.	1.2	51
12	Attachment-detachment dynamics of suspended particle in porous media: Experiment and modeling. <i>Journal of Hydrology</i> , 2014, 511, 199-204.	2.3	46
13	Detection of Noble Gas Radionuclides from an Underground Nuclear Explosion During a CTBT On-Site Inspection. <i>Pure and Applied Geophysics</i> , 2014, 171, 717-734.	0.8	41
14	Multifluid geo-energy systems: Using geologic CO ₂ storage for geothermal energy production and grid-scale energy storage in sedimentary basins. , 2016, 12, 678-696.		41
15	Overview of NUFT: A Versatile Numerical Model for Simulating Flow and Reactive Transport in Porous Media. , 2012, , 212-239.		37
16	Pre-injection brine production in CO ₂ storage reservoirs: An approach to augment the development, operation, and performance of CCS while generating water. <i>International Journal of Greenhouse Gas Control</i> , 2016, 54, 499-512.	2.3	35
17	Validation of the Multiscale Thermohydrologic Model used for analysis of a proposed repository at Yucca Mountain. <i>Journal of Contaminant Hydrology</i> , 2003, 62-63, 421-440.	1.6	34
18	Applicability of aquifer impact models to support decisions at CO ₂ sequestration sites. <i>International Journal of Greenhouse Gas Control</i> , 2016, 52, 319-330.	2.3	33

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19	Optimization of pump-treat-inject (PTI) design for the remediation of a contaminated aquifer: multi-stage design with chance constraints. <i>Journal of Contaminant Hydrology</i> , 1998, 29, 225-244.	1.6	32
20	Modeling Noble Gas Transport and Detection for The Comprehensive Nuclear-Test-Ban Treaty. <i>Pure and Applied Geophysics</i> , 2014, 171, 735-750.	0.8	32
21	Integrated Geothermal-CO ₂ Reservoir Systems: Reducing Carbon Intensity through Sustainable Energy Production and Secure CO ₂ Storage. <i>Energy Procedia</i> , 2013, 37, 6587-6594.	1.8	31
22	Delayed signatures of underground nuclear explosions. <i>Scientific Reports</i> , 2016, 6, 23032.	1.6	31
23	Global sampling for integrating physics-specific subsystems and quantifying uncertainties of CO ₂ geological sequestration. <i>International Journal of Greenhouse Gas Control</i> , 2013, 12, 108-123.	2.3	29
24	Analytical solutions for reactive transport of N-member radionuclide chains in a single fracture. <i>Journal of Contaminant Hydrology</i> , 2003, 62-63, 695-712.	1.6	27
25	Uncertainty quantification of CO ₂ leakage through a fault with multiphase and nonisothermal effects. , 2012, 2, 445-459.		27
26	An Analytical Solution of Tetrachloroethylene Transport and Biodegradation. <i>Transport in Porous Media</i> , 2004, 55, 301-308.	1.2	24
27	Surrogate-based optimization of hydraulic fracturing in pre-existing fracture networks. <i>Computers and Geosciences</i> , 2013, 58, 69-79.	2.0	24
28	Value of information methodology for assessing the ability of electrical resistivity to detect CO ₂ /brine leakage into a shallow aquifer. <i>International Journal of Greenhouse Gas Control</i> , 2013, 18, 101-113.	2.3	24
29	Pre-injection Brine Production for Managing Pressure in Compartmentalized CO ₂ Storage Reservoirs. <i>Energy Procedia</i> , 2014, 63, 5333-5340.	1.8	21
30	Integrating CO ₂ Storage with Geothermal Resources for Dispatchable Renewable Electricity. <i>Energy Procedia</i> , 2014, 63, 7619-7630.	1.8	20
31	Effect of reaction kinetics on predicted concentration profiles during subsurface bioremediation. <i>Journal of Contaminant Hydrology</i> , 1998, 31, 359-372.	1.6	19
32	A flexible uncertainty quantification method for linearly coupled multi-physics systems. <i>Journal of Computational Physics</i> , 2013, 248, 383-401.	1.9	19
33	Radioxenon Production and Transport from an Underground Nuclear Detonation to Ground Surface. <i>Pure and Applied Geophysics</i> , 2015, 172, 243-265.	0.8	19
34	Combining Simulation and Emulation for Calibrating Sequentially Reactive Transport Systems. <i>Transport in Porous Media</i> , 2012, 92, 509-526.	1.2	16
35	Modeling and Uncertainty Quantification of Vapor Sorption and Diffusion in Heterogeneous Polymers. <i>ChemPhysChem</i> , 2015, 16, 3072-3083.	1.0	16
36	Thermally driven advection for radioxenon transport from an underground nuclear explosion. <i>Geophysical Research Letters</i> , 2016, 43, 4418-4425.	1.5	16

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37	Analytical Solutions of TCE Transport with Convergent Reactions. <i>Transport in Porous Media</i> , 2003, 51, 211-225.	1.2	15
38	Modeling Thermal-Hydrologic Processes for a Heated Fractured Rock System: Impact of a Capillary-Pressure Maximum. <i>Transport in Porous Media</i> , 2010, 83, 501-523.	1.2	15
39	The characteristic release of noble gases from an underground nuclear explosion. <i>Journal of Environmental Radioactivity</i> , 2019, 196, 91-97.	0.9	15
40	Merits of pressure and geochemical data as indicators of CO ₂ /brine leakage into a heterogeneous, sedimentary aquifer. <i>International Journal of Greenhouse Gas Control</i> , 2016, 52, 237-249.	2.3	14
41	Dynamic Triple-Mode Sorption and Outgassing in Materials. <i>Scientific Reports</i> , 2017, 7, 2942.	1.6	14
42	Role of filler and its heterostructure on moisture sorption mechanisms in polyimide films. <i>Scientific Reports</i> , 2018, 8, 16889.	1.6	14
43	Analysis of fault leakage from Leroy underground natural gas storage facility, Wyoming, USA. <i>Hydrogeology Journal</i> , 2013, 21, 1429-1445.	0.9	13
44	Analysis of thermohydrologic behavior for above-boiling and below-boiling thermal-operating modes for a repository at Yucca Mountain. <i>Journal of Contaminant Hydrology</i> , 2003, 62-63, 441-457.	1.6	12
45	Modeling reactive transport using exact solutions for first-order reaction networks. <i>Transport in Porous Media</i> , 2008, 71, 217-231.	1.2	12
46	An analytical method for modeling first-order decay networks. <i>Computers and Geosciences</i> , 2012, 39, 86-97.	2.0	12
47	Alteration of natural ³⁷ Ar activity concentration in the subsurface by gas transport and water infiltration. <i>Journal of Environmental Radioactivity</i> , 2016, 155-156, 89-96.	0.9	11
48	Uncertainty quantification for discrimination of nuclear events as violations of the comprehensive nuclear-test-ban treaty. <i>Journal of Environmental Radioactivity</i> , 2016, 155-156, 130-139.	0.9	11
49	Effect of residual oil saturation on hydrodynamic properties of porous media. <i>Journal of Hydrology</i> , 2014, 515, 281-291.	2.3	10
50	An Analytical Solution Evaluating Steady-State Plumes of Sequentially Reactive Contaminants. <i>Transport in Porous Media</i> , 2000, 41, 287-303.	1.2	9
51	Managing Geologic CO ₂ Storage with Pre-injection Brine Production in Tandem Reservoirs. <i>Energy Procedia</i> , 2017, 114, 4757-4764.	1.8	9
52	Reduced Order Models for Prediction of Groundwater Quality Impacts from CO ₂ and Brine Leakage. <i>Energy Procedia</i> , 2014, 63, 4875-4883.	1.8	8
53	Dynamic reduced-order models of integrated physics-specific systems for carbon sequestration. <i>Geomechanics and Geophysics for Geo-Energy and Geo-Resources</i> , 2017, 3, 315-325.	1.3	7
54	Expeditious modeling of vapor transport and reactions in polymeric materials. <i>AIChE Journal</i> , 2017, 63, 4079-4089.	1.8	7

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55	Gas transport across the low-permeability containment zone of an underground nuclear explosion. <i>Scientific Reports</i> , 2020, 10, 1437.	1.6	7
56	Cavity-melt partitioning of refractory radionuclides and implications for detecting underground nuclear explosions. <i>Journal of Environmental Radioactivity</i> , 2020, 219, 106269.	0.9	7
57	Double-Diffusive Natural Convection in a Nuclear Waste Repository. <i>Nuclear Technology</i> , 2008, 163, 38-46.	0.7	6
58	Active CO ₂ Reservoir Management for CO ₂ Capture, Utilization, and Storage: An Approach to Improve CO ₂ Storage Capacity and to Reduce Risk. , 2012, , .		5
59	A Closed-form Solution for Source-term Emission of Xenon Isotopes from Underground Nuclear Explosions. <i>Transport in Porous Media</i> , 2021, 139, 131-153.	1.2	5
60	Modeling Microbial Transport and Biodegradation in a Dual-porosity System. <i>Transport in Porous Media</i> , 1999, 35, 49-65.	1.2	4
61	Analytical Solutions for Reactive Transport of Multiple Volatile Contaminants in the Vadose Zone. <i>Transport in Porous Media</i> , 2002, 49, 175-190.	1.2	4
62	The Role of Wellbore Remediation on the Evolution of Groundwater Quality from CO ₂ and Brine Leakage. <i>Energy Procedia</i> , 2014, 63, 4799-4806.	1.8	4
63	Framing Monitoring Needs to Detect Leakage from Wells to the Overburden. <i>Energy Procedia</i> , 2017, 114, 3628-3635.	1.8	4
64	Microkinetic modeling of H ₂ SO ₄ formation on Pt based diesel oxidation catalysts. <i>Applied Catalysis B: Environmental</i> , 2018, 220, 348-355.	10.8	4
65	Estimation of mass transport parameters in a column packed with BioSep beads. <i>Biotechnology Letters</i> , 1998, 12, 913-918.	0.5	3
66	A computational method for simulating subsurface flow and reactive transport in heterogeneous porous media embedded with flexible uncertainty quantification. <i>Water Resources Research</i> , 2013, 49, 5740-5755.	1.7	3
67	In Situ Curing Kinetics of Moisture-Reactive Acetoxysiloxane Sealants. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 17266-17276.	1.8	3
68	Predicting 3D moisture sorption behavior of materials from 1D investigations. <i>Scientific Reports</i> , 2020, 10, 17852.	1.6	3
69	Multi-material modeling of sorption-desorption processes with experimental validation. <i>Chemical Engineering Science</i> , 2022, 253, 117542.	1.9	3
70	Multiscale Thermohydrologic Model Analyses of Heterogeneity and Thermal-Loading Factors for a Proposed Nuclear Waste Repository. <i>Nuclear Technology</i> , 2004, 148, 125-137.	0.7	2
71	A Screening Model for Evaluating the Degradation and Transport of MTBE and Other Fuel Oxygenates in Groundwater. <i>Transport in Porous Media</i> , 2005, 60, 75-88.	1.2	2
72	A solution of transport in porous media with equilibrium and kinetic reactions. <i>Transport in Porous Media</i> , 2008, 72, 199-206.	1.2	2

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73	Uncertainty Quantification of Multiple Gas Transport and Sorption in Porous Polymers. <i>Transport in Porous Media</i> , 2019, 130, 655-673.	1.2	2
74	Implications of Underground Nuclear Explosion Cavity Evolution for Radioxenon Isotopic Composition. <i>Pure and Applied Geophysics</i> , 2023, 180, 1395-1406.	0.8	2
75	A chloride transport model for identifying sequential bioreactive systems of chlorinated solvents. , 2006, 2, 83.		1
76	Modeling Biodegradation and Reactive Transport: Analytical and Numerical Models. <i>ACS Symposium Series</i> , 2006, , 153-174.	0.5	1
77	Analytical Solutions of TCE Transport with Convergent Reactions, <i>Transport in Porous Media</i> 51, 211â€“225, 2003. <i>Transport in Porous Media</i> , 2004, 55, 255.	1.2	0
78	Wells for In-Situ Volatile Extraction from Regolith. , 2015, , .		0