

# Yunwei Sun

## List of Publications by Year in descending order

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Version: 2024-02-01

78  
papers

2,363  
citations

279798  
23  
h-index

223800  
46  
g-index

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.	4.5	242
2	Modeling Multispecies Reactive Transport in Ground Water. <i>Ground Water Monitoring and Remediation</i> , 1998, 18, 79-92.	0.8	204
3	Active CO <sub>2</sub> 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.	4.6	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.	3.3	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.	4.6	107
6	Development of analytical solutions for multispecies transport with serial and parallel reactions. <i>Water Resources Research</i> , 1999, 35, 185-190.	4.2	104
7	Combining brine extraction, desalination, and residual-brine reinjection with CO <sub>2</sub> 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.	3.3	93
9	Thermohydrologic behavior at an underground nuclear waste repository. <i>Water Resources Research</i> , 2002, 38, 10-1-10-19.	4.2	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.	4.9	69
11	A Decomposition Method for Solving Coupled Multi-Species Reactive Transport Problems. <i>Transport in Porous Media</i> , 1999, 37, 327-346.	2.6	51
12	Attachment-detachment dynamics of suspended particle in porous media: Experiment and modeling. <i>Journal of Hydrology</i> , 2014, 511, 199-204.	5.4	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.	1.9	41
14	Multifluid geo-energy systems: Using geologic CO <sub>2</sub> 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 <sub>2</sub> 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.	4.6	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.	3.3	34
18	Applicability of aquifer impact models to support decisions at CO <sub>2</sub> sequestration sites. <i>International Journal of Greenhouse Gas Control</i> , 2016, 52, 319-330.	4.6	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. Journal of Contaminant Hydrology, 1998, 29, 225-244.	3.3	32
20	Modeling Noble Gas Transport and Detection for The Comprehensive Nuclear-Test-Ban Treaty. Pure and Applied Geophysics, 2014, 171, 735-750.	1.9	32
21	Integrated Geothermal-CO <sub>2</sub> Reservoir Systems: Reducing Carbon Intensity through Sustainable Energy Production and Secure CO <sub>2</sub> Storage. Energy Procedia, 2013, 37, 6587-6594.	1.8	31
22	Delayed signatures of underground nuclear explosions. Scientific Reports, 2016, 6, 23032.	3.3	31
23	Global sampling for integrating physics-specific subsystems and quantifying uncertainties of CO <sub>2</sub> geological sequestration. International Journal of Greenhouse Gas Control, 2013, 12, 108-123.	4.6	29
24	Analytical solutions for reactive transport of N-member radionuclide chains in a single fracture. Journal of Contaminant Hydrology, 2003, 62-63, 695-712.	3.3	27
25	Uncertainty quantification of CO <sub>2</sub> leakage through a fault with multiphase and nonisothermal effects. , 2012, 2, 445-459.		27
26	An Analytical Solution of Tetrachloroethylene Transport and Biodegradation. Transport in Porous Media, 2004, 55, 301-308.	2.6	24
27	Surrogate-based optimization of hydraulic fracturing in pre-existing fracture networks. Computers and Geosciences, 2013, 58, 69-79.	4.2	24
28	Value of information methodology for assessing the ability of electrical resistivity to detect CO <sub>2</sub> /brine leakage into a shallow aquifer. International Journal of Greenhouse Gas Control, 2013, 18, 101-113.	4.6	24
29	Pre-injection Brine Production for Managing Pressure in Compartmentalized CO <sub>2</sub> Storage Reservoirs. Energy Procedia, 2014, 63, 5333-5340.	1.8	21
30	Integrating CO <sub>2</sub> Storage with Geothermal Resources for Dispatchable Renewable Electricity. Energy Procedia, 2014, 63, 7619-7630.	1.8	20
31	Effect of reaction kinetics on predicted concentration profiles during subsurface bioremediation. Journal of Contaminant Hydrology, 1998, 31, 359-372.	3.3	19
32	A flexible uncertainty quantification method for linearly coupled multi-physics systems. Journal of Computational Physics, 2013, 248, 383-401.	3.8	19
33	Radioxenon Production and Transport from an Underground Nuclear Detonation to Ground Surface. Pure and Applied Geophysics, 2015, 172, 243-265.	1.9	19
34	Combining Simulation and Emulation for Calibrating Sequentially Reactive Transport Systems. Transport in Porous Media, 2012, 92, 509-526.	2.6	16
35	Modeling and Uncertainty Quantification of Vapor Sorption and Diffusion in Heterogeneous Polymers. ChemPhysChem, 2015, 16, 3072-3083.	2.1	16
36	Thermally driven advection for radioxenon transport from an underground nuclear explosion. Geophysical Research Letters, 2016, 43, 4418-4425.	4.0	16

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37	Analytical Solutions of TCE Transport with Convergent Reactions. Transport in Porous Media, 2003, 51, 211-225.	2.6	15
38	Modeling Thermal-Hydrologic Processes for a Heated Fractured Rock System: Impact of a Capillary-Pressure Maximum. Transport in Porous Media, 2010, 83, 501-523.	2.6	15
39	The characteristic release of noble gases from an underground nuclear explosion. Journal of Environmental Radioactivity, 2019, 196, 91-97.	1.7	15
40	Merits of pressure and geochemical data as indicators of CO <sub>2</sub> /brine leakage into a heterogeneous, sedimentary aquifer. International Journal of Greenhouse Gas Control, 2016, 52, 237-249.	4.6	14
41	Dynamic Triple-Mode Sorption and Outgassing in Materials. Scientific Reports, 2017, 7, 2942.	3.3	14
42	Role of filler and its heterostructure on moisture sorption mechanisms in polyimide films. Scientific Reports, 2018, 8, 16889.	3.3	14
43	Analysis of fault leakage from Leroy underground natural gas storage facility, Wyoming, USA. Hydrogeology Journal, 2013, 21, 1429-1445.	2.1	13
44	Analysis of thermohydrologic behavior for above-boiling and below-boiling thermal-operating modes for a repository at Yucca Mountain. Journal of Contaminant Hydrology, 2003, 62-63, 441-457.	3.3	12
45	Modeling reactive transport using exact solutions for first-order reaction networks. Transport in Porous Media, 2008, 71, 217-231.	2.6	12
46	An analytical method for modeling first-order decay networks. Computers and Geosciences, 2012, 39, 86-97.	4.2	12
47	Alteration of natural <sup>37</sup> Ar activity concentration in the subsurface by gas transport and water infiltration. Journal of Environmental Radioactivity, 2016, 155-156, 89-96.	1.7	11
48	Uncertainty quantification for discrimination of nuclear events as violations of the comprehensive nuclear-test-ban treaty. Journal of Environmental Radioactivity, 2016, 155-156, 130-139.	1.7	11
49	Effect of residual oil saturation on hydrodynamic properties of porous media. Journal of Hydrology, 2014, 515, 281-291.	5.4	10
50	An Analytical Solution Evaluating Steady-State Plumes of Sequentially Reactive Contaminants. Transport in Porous Media, 2000, 41, 287-303.	2.6	9
51	Managing Geologic CO <sub>2</sub> Storage with Pre-injection Brine Production in Tandem Reservoirs. Energy Procedia, 2017, 114, 4757-4764.	1.8	9
52	Reduced Order Models for Prediction of Groundwater Quality Impacts from CO <sub>2</sub> and Brine Leakage. Energy Procedia, 2014, 63, 4875-4883.	1.8	8
53	Dynamic reduced-order models of integrated physics-specific systems for carbon sequestration. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2017, 3, 315-325.	2.9	7
54	Expeditious modeling of vapor transport and reactions in polymeric materials. AIChE Journal, 2017, 63, 4079-4089.	3.6	7

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55	Gas transport across the low-permeability containment zone of an underground nuclear explosion. Scientific Reports, 2020, 10, 1437.	3.3	7
56	Cavity-melt partitioning of refractory radionuclides and implications for detecting underground nuclear explosions. Journal of Environmental Radioactivity, 2020, 219, 106269.	1.7	7
57	Double-Diffusive Natural Convection in a Nuclear Waste Repository. Nuclear Technology, 2008, 163, 38-46.	1.2	6
58	Active CO2 Reservoir Management for CO2 Capture, Utilization, and Storage: An Approach to Improve CO2 Storage Capacity and to Reduce Risk. , 2012, , .		5
59	A Closed-form Solution for Source-term Emission of Xenon Isotopes from Underground Nuclear Explosions. Transport in Porous Media, 2021, 139, 131-153.	2.6	5
60	Modeling Microbial Transport and Biodegradation in a Dual-porosity System. Transport in Porous Media, 1999, 35, 49-65.	2.6	4
61	Analytical Solutions for Reactive Transport of Multiple Volatile Contaminants in the Vadose Zone. Transport in Porous Media, 2002, 49, 175-190.	2.6	4
62	The Role of Wellbore Remediation on the Evolution of Groundwater Quality from CO2 and Brine Leakage. Energy Procedia, 2014, 63, 4799-4806.	1.8	4
63	Framing Monitoring Needs to Detect Leakage from Wells to the Overburden. Energy Procedia, 2017, 114, 3628-3635.	1.8	4
64	Microkinetic modeling of H2SO4 formation on Pt based diesel oxidation catalysts. Applied Catalysis B: Environmental, 2018, 220, 348-355.	20.2	4
65	Estimation of mass transport parameters in a column packed with BioSep beads. Biotechnology Letters, 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. Water Resources Research, 2013, 49, 5740-5755.	4.2	3
67	In Situ Curing Kinetics of Moisture-Reactive Acetoxysiloxane Sealants. Industrial & Engineering Chemistry Research, 2019, 58, 17266-17276.	3.7	3
68	Predicting 3D moisture sorption behavior of materials from 1D investigations. Scientific Reports, 2020, 10, 17852.	3.3	3
69	Multi-material modeling of sorption-desorption processes with experimental validation. Chemical Engineering Science, 2022, 253, 117542.	3.8	3
70	Multiscale Thermohydrologic Model Analyses of Heterogeneity and Thermal-Loading Factors for a Proposed Nuclear Waste Repository. Nuclear Technology, 2004, 148, 125-137.	1.2	2
71	A Screening Model for Evaluating the Degradation and Transport of MTBE and Other Fuel Oxygenates in Groundwater. Transport in Porous Media, 2005, 60, 75-88.	2.6	2
72	A solution of transport in porous media with equilibrium and kinetic reactions. Transport in Porous Media, 2008, 72, 199-206.	2.6	2

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73	Uncertainty Quantification of Multiple Gas Transport and Sorption in Porous Polymers. Transport in Porous Media, 2019, 130, 655-673.	2.6	2
74	Implications of Underground Nuclear Explosion Cavity Evolution for Radioxenon Isotopic Composition. Pure and Applied Geophysics, 2023, 180, 1395-1406.	1.9	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. ACS Symposium Series, 2006, , 153-174.	0.5	1
77	Analytical Solutions of TCE Transport with Convergent Reactions, Transport in Porous Media 51, 211â€“225, 2003. Transport in Porous Media, 2004, 55, 255.	2.6	0
78	Wells for In-Situ Volatile Extraction from Regolith. , 2015, , .		0