Sergi Molins

List of Publications by Year
in descending order

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35 papers	2,340 citations	279798 23 h-index	361022 35 g-index
37 all docs	37 docs citations	37 times ranked	2060 citing authors

#	Article	IF	Citations
1	Reactive transport codes for subsurface environmental simulation. Computational Geosciences, 2015, 19, 445-478.	2.4	566
2	An investigation of the effect of pore scale flow on average geochemical reaction rates using direct numerical simulation. Water Resources Research, 2012, 48, .	4.2	238
3	Pore-Scale Controls on Calcite Dissolution Rates from Flow-through Laboratory and Numerical Experiments. Environmental Science & Technology, 2014, 48, 7453-7460.	10.0	154
4	Coupling between geochemical reactions and multicomponent gas and solute transport in unsaturated media: A reactive transport modeling study. Water Resources Research, 2007, 43, .	4.2	100
5	Vadose zone attenuation of organic compounds at a crude oil spill site â€" Interactions between biogeochemical reactions and multicomponent gas transport. Journal of Contaminant Hydrology, 2010, 112, 15-29.	3.3	86
6	Pore Scale Processes Associated with Subsurface CO2 Injection and Sequestration. Reviews in Mineralogy and Geochemistry, 2013, 77, 259-303.	4.8	83
7	A 2.5D Reactive Transport Model for Fracture Alteration Simulation. Environmental Science & Technology, 2016, 50, 7564-7571.	10.0	79
8	Pore-scale numerical investigation of the impacts of surface roughness: Upscaling of reaction rates in rough fractures. Geochimica Et Cosmochimica Acta, 2018, 239, 374-389.	3.9	79
9	Influence of hydrological, biogeochemical and temperature transients on subsurface carbon fluxes in a flood plain environment. Biogeochemistry, 2016, 127, 367-396.	3.5	76
10	Simulation of mineral dissolution at the pore scale with evolving fluid-solid interfaces: review of approaches and benchmark problem set. Computational Geosciences, 2021, 25, 1285-1318.	2.4	72
11	Timing the Onset of Sulfate Reduction over Multiple Subsurface Acetate Amendments by Measurement and Modeling of Sulfur Isotope Fractionation. Environmental Science & Technology, 2012, 46, 8895-8902.	10.0	66
12	A formulation for decoupling components in reactive transport problems. Water Resources Research, 2004, 40, .	4.2	63
13	Reoxidation of Chromium(III) Products Formed under Different Biogeochemical Regimes. Environmental Science & Technology, 2017, 51, 4918-4927.	10.0	60
14	Reactive Interfaces in Direct Numerical Simulation of Pore-Scale Processes. Reviews in Mineralogy and Geochemistry, 2015, 80, 461-481.	4.8	58
15	High-Resolution Simulation of Pore-Scale Reactive Transport Processes Associated with Carbon Sequestration. Computing in Science and Engineering, 2014, 16, 22-31.	1.2	51
16	Alteration and Erosion of Rock Matrix Bordering a Carbonate-Rich Shale Fracture. Environmental Science & Technology, 2017, 51, 8861-8868.	10.0	50
17	Transport and Reaction Processes Affecting the Attenuation of Landfill Gas in Cover Soils. Journal of Environmental Quality, 2008, 37, 459-468.	2.0	49
18	Mineralogical and transport controls on the evolution of porous media texture using direct numerical simulation. Water Resources Research, 2017, 53, 3645-3661.	4.2	49

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19	Fracture Evolution in Multimineral Systems: The Role of Mineral Composition, Flow Rate, and Fracture Aperture Heterogeneity. ACS Earth and Space Chemistry, 2018, 2, 112-124.	2.7	49
20	Reactive Transport Model of Sulfur Cycling as Impacted by Perchlorate and Nitrate Treatments. Environmental Science & Technology, 2016, 50, 7010-7018.	10.0	45
21	Multiscale Approaches in Reactive Transport Modeling. Reviews in Mineralogy and Geochemistry, 2019, 85, 27-48.	4.8	45
22	ParCrunchFlow: an efficient, parallel reactive transport simulation tool for physically and chemically heterogeneous saturated subsurface environments. Computational Geosciences, 2015, 19, 403-422.	2.4	39
23	Multi-scale Model of Reactive Transport in Fractured Media: Diffusion Limitations on Rates. Transport in Porous Media, 2019, 128, 701-721.	2.6	32
24	Divergent Aquifer Biogeochemical Systems Converge on Similar and Unexpected Cr(VI) Reduction Products. Environmental Science & Technology, 2014, 48, 10699-10706.	10.0	24
25	A Poreâ€Scale Investigation of Mineral Precipitation Driven Diffusivity Change at the Columnâ€Scale. Water Resources Research, 2021, 57, e2020WR028483.	4.2	19
26	Determination of mineral dissolution regimes using flow-through time-resolved analysis (FT-TRA) and numerical simulation. Chemical Geology, 2016, 430, 1-12.	3.3	18
27	Reactive Transport Modeling in Variably Saturated Media with MIN3P: Basic Model Formulation and Model Enhancements. , 2012, , 186-211.		15
28	Wavelet-based local mesh refinement for rainfallâ€“runoff simulations. Journal of Hydroinformatics, 2020, 22, 1059-1077.	2.4	14
29	A reactive transport modeling perspective on the dynamics of interface-coupled dissolution-precipitation. Applied Geochemistry, 2022, 137, 105207.	3.0	14
30	Investigation of Coupled Processes in Fractures and the Bordering Matrix via a Microâ€Continuum Reactive Transport Model. Water Resources Research, 2022, 58, .	4.2	12
31	A benchmark for microbially mediated chromium reduction under denitrifying conditions in a biostimulation column experiment. Computational Geosciences, 2015, 19, 479-496.	2.4	10
32	Experimental studies and model analysis of noble gas fractionation in low-permeability porous media. Geochimica Et Cosmochimica Acta, 2017, 205, 149-167.	3.9	7
33	The Effect of Pore-Scale Two-Phase Flow on Mineral Reaction Rates. Frontiers in Water, 2022, 3, .	2.3	2
34	Reactive transport modeling for supporting climate resilience at groundwater contamination sites. Hydrology and Earth System Sciences, 2022, 26, 755-773.	4.9	2
35	Hyperbolic Reformulation Approach to Enable Efficient Simulation of Groundwater Flow and Reactive Transport. Environmental Engineering Science, 2021, 38, 181-191.	1.6	1