

# Olaf Kolditz

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

247 papers	6,310 citations	39 h-index	67 g-index
291 ext. papers	7,462 ext. citations	3.9 avg, IF	5.97 L-index

#	Paper	IF	Citations
247	Reactive transport codes for subsurface environmental simulation. <i>Computational Geosciences</i> , <b>2015</b> , 19, 445-478	2.7	408
246	OpenGeoSys: an open-source initiative for numerical simulation of thermo-hydro-mechanical/chemical (THM/C) processes in porous media. <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 589-599	2.9	392
245	Variable-density flow and transport in porous media: approaches and challenges. <i>Advances in Water Resources</i> , <b>2002</b> , 25, 899-944	4.7	331
244	Coupled groundwater flow and transport: 1. Verification of variable density flow and transport models. <i>Advances in Water Resources</i> , <b>1998</b> , 21, 27-46	4.7	188
243	Surface-subsurface model intercomparison: A first set of benchmark results to diagnose integrated hydrology and feedbacks. <i>Water Resources Research</i> , <b>2014</b> , 50, 1531-1549	5.4	175
242	Coupled groundwater flow and transport: 2. Thermohaline and 3D convection systems. <i>Advances in Water Resources</i> , <b>1998</b> , 21, 401-425	4.7	118
241	Numerical simulation of flow and heat transfer in fractured crystalline rocks: Application to the Hot Dry Rock site in Rosemanowes (U.K.). <i>Geothermics</i> , <b>1998</b> , 27, 1-23	4.3	106
240	A numerical study on the sustainability and efficiency of borehole heat exchanger coupled ground source heat pump systems. <i>Applied Thermal Engineering</i> , <b>2016</b> , 100, 421-433	5.8	101
239	Uncertainty analysis of thermo-hydro-mechanical coupled processes in heterogeneous porous media. <i>Computational Mechanics</i> , <b>2010</b> , 45, 263-280	4	95
238	Simulation of heat extraction from crystalline rocks: The influence of coupled processes on differential reservoir cooling. <i>Geothermics</i> , <b>2006</b> , 35, 321-344	4.3	95
237	A parallel finite element scheme for thermo-hydro-mechanical (THM) coupled problems in porous media. <i>Computers and Geosciences</i> , <b>2009</b> , 35, 1631-1641	4.5	92
236	Enhanced biodegradation by hydraulic heterogeneities in petroleum hydrocarbon plumes. <i>Journal of Contaminant Hydrology</i> , <b>2009</b> , 105, 56-68	3.9	87
235	Object-oriented finite element analysis of thermo-hydro-mechanical (THM) problems in porous media. <i>International Journal for Numerical Methods in Engineering</i> , <b>2007</b> , 69, 162-201	2.4	87
234	Modelling flow and heat transfer in fractured rocks: Conceptual model of a 3-D deterministic fracture network. <i>Geothermics</i> , <b>1995</b> , 24, 451-470	4.3	71
233	The Bode hydrological observatory: a platform for integrated, interdisciplinary hydro-ecological research within the TERENO Harz/Central German Lowland Observatory. <i>Environmental Earth Sciences</i> , <b>2017</b> , 76, 1	2.9	65
232	A process-oriented approach to computing multi-field problems in porous media. <i>Journal of Hydroinformatics</i> , <b>2004</b> , 6, 225-244	2.6	65
231	Non-linear flow in fractured rock. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , <b>2001</b> , 11, 547-575	4.5	60

230	Catchments as reactors: a comprehensive approach for water fluxes and solute turnover. <i>Environmental Earth Sciences</i> , <b>2013</b> , 69, 317-333	2.9	59
229	Finite element analysis of poro-elastic consolidation in porous media: Standard and mixed approaches. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2006</b> , 195, 1096-1115	5.7	52
228	Numerical simulation of non-isothermal compositional gas flow: Application to carbon dioxide injection into gas reservoirs. <i>Energy</i> , <b>2011</b> , 36, 3446-3458	7.9	51
227	Concept and workflow for 3D visualization of atmospheric data in a virtual reality environment for analytical approaches. <i>Environmental Earth Sciences</i> , <b>2014</b> , 72, 3767-3780	2.9	49
226	Modelling of fractured carbonate reservoirs: outline of a novel technique via a case study from the Molasse Basin, southern Bavaria, Germany. <i>Environmental Earth Sciences</i> , <b>2013</b> , 70, 3585-3602	2.9	49
225	Non-isothermal flow in low permeable porous media: a comparison of Richards' and two-phase flow approaches. <i>Environmental Earth Sciences</i> , <b>2011</b> , 62, 1197-1207	2.9	49
224	Numerical modeling of stress-permeability coupling in rough fractures. <i>Hydrogeology Journal</i> , <b>2008</b> , 16, 613-627	3.1	48
223	Thermo-hydro-mechanical modeling of carbon dioxide injection for enhanced gas-recovery (CO <sub>2</sub> -EGR): a benchmarking study for code comparison. <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 549-561	2.9	47
222	CLEAN: project overview on CO <sub>2</sub> large-scale enhanced gas recovery in the Altmark natural gas field (Germany). <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 311-321	2.9	47
221	Modeling reactive transport in non-ideal aqueous-solid solution system. <i>Applied Geochemistry</i> , <b>2009</b> , 24, 1287-1300	3.5	47
220	Multi-physical continuum models of thermochemical heat storage and transformation in porous media and powder beds: A review. <i>Applied Energy</i> , <b>2016</b> , 178, 323-345	10.7	45
219	Visualization of gridded scalar data with uncertainty in geosciences. <i>Computers and Geosciences</i> , <b>2010</b> , 36, 1268-1275	4.5	45
218	Virtual Environments Begin to Embrace Process-based Geographic Analysis. <i>Transactions in GIS</i> , <b>2015</b> , 19, 493-498	2.1	42
217	GeoSysBRNS: A flexible multidimensional reactive transport model for simulating biogeochemical subsurface processes. <i>Computers and Geosciences</i> , <b>2010</b> , 36, 397-405	4.5	42
216	Numerical simulation of reactive processes in an experiment with partially saturated bentonite. <i>Journal of Contaminant Hydrology</i> , <b>2006</b> , 83, 122-47	3.9	41
215	Assessing the saltwater remediation potential of a three-dimensional, heterogeneous, coastal aquifer system. <i>Environmental Earth Sciences</i> , <b>2014</b> , 72, 3827-3837	2.9	40
214	The IWAS-ToolBox: Software coupling for an integrated water resources management. <i>Environmental Earth Sciences</i> , <b>2012</b> , 65, 1367-1380	2.9	40
213	Non-equilibrium thermochemical heat storage in porous media: Part 1 [Conceptual model. <i>Energy</i> , <b>2013</b> , 60, 254-270	7.9	39

212	A comparative simulation study of coupled THM processes and their effect on fractured rock permeability around nuclear waste repositories. <i>Environmental Geology</i> , <b>2009</b> , 57, 1347-1360		39
211	Computational Methods in Environmental Fluid Mechanics <b>2002</b> ,		39
210	Geometric modelling and object-oriented software concepts applied to a heterogeneous fractured network from the Grimsel rock laboratory. <i>Computational Geosciences</i> , <b>2007</b> , 11, 9-26	2.7	37
209	3-D numerical evaluation of density effects on tracer tests. <i>Journal of Contaminant Hydrology</i> , <b>2005</b> , 81, 89-105	3.9	37
208	The risks of long-term re-injection in supercritical geothermal systems. <i>Nature Communications</i> , <b>2019</b> , 10, 4391	17.4	36
207	Development of Open-Source Porous Media Simulators: Principles and Experiences. <i>Transport in Porous Media</i> , <b>2019</b> , 130, 337-361	3.1	36
206	Modelling flow and heat transfer in fractured rocks: dimensional effect of matrix heat diffusion. <i>Geothermics</i> , <b>1995</b> , 24, 421-437	4.3	36
205	How significant is the slope of the sea-side boundary for modelling seawater intrusion in coastal aquifers?. <i>Journal of Hydrology</i> , <b>2017</b> , 551, 648-659	6	35
204	Non-equilibrium thermo-chemical heat storage in porous media: Part 2 [A 1D computational model for a calcium hydroxide reaction system. <i>Energy</i> , <b>2013</b> , 60, 271-282	7.9	35
203	Saltwater intrusion modeling: Verification and application to an agricultural coastal arid region in Oman. <i>Journal of Computational and Applied Mathematics</i> , <b>2012</b> , 236, 4798-4809	2.4	35
202	Accuracy of numerical simulations of contaminant transport in heterogeneous aquifers: A comparative study. <i>Advances in Water Resources</i> , <b>2011</b> , 34, 47-61	4.7	35
201	Assessing measurement uncertainty of first-order degradation rates in heterogeneous aquifers. <i>Water Resources Research</i> , <b>2006</b> , 42,	5.4	35
200	Efficiency and economic analysis of utilizing latent heat from groundwater freezing in the context of borehole heat exchanger coupled ground source heat pump systems. <i>Applied Thermal Engineering</i> , <b>2016</b> , 105, 314-326	5.8	35
199	Numerical analysis of the groundwater regime in the western Dead Sea escarpment, Israel + West Bank. <i>Environmental Earth Sciences</i> , <b>2013</b> , 69, 571-585	2.9	34
198	Transport and retention of xanthan gum-stabilized microscale zero-valent iron particles in saturated porous media. <i>Water Research</i> , <b>2016</b> , 88, 199-206	12.5	33
197	A systematic benchmarking approach for geologic CO2 injection and storage. <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 613-632	2.9	33
196	A sensitivity analysis of Hortonian flow. <i>Advances in Water Resources</i> , <b>2009</b> , 32, 1386-1395	4.7	33
195	Numerical analysis of coupled hydrosystems based on an object-oriented compartment approach. <i>Journal of Hydroinformatics</i> , <b>2008</b> , 10, 227-244	2.6	33

194	Non-isothermal two-phase flow in low-permeable porous media. <i>Computational Mechanics</i> , <b>2004</b> , 33, 345-364	4	33
193	A Dynamic Flow Simulation Code Intercomparison based on the Revised Static Model of the Ketzin Pilot Site. <i>Energy Procedia</i> , <b>2013</b> , 40, 418-427	2.3	32
192	Coupled multiphase flow and elasto-plastic modelling of in-situ gas injection experiments in saturated claystone (Mont Terri Rock Laboratory). <i>Engineering Geology</i> , <b>2013</b> , 157, 55-68	6	32
191	Application of the geomechanical facies approach and comparison of exploration and evaluation methods used at Soultz-sous-Forêts (France) and Spa Urach (Germany) geothermal sites. <i>Environmental Earth Sciences</i> , <b>2010</b> , 61, 853-880	2.9	32
190	Coupling hydrogeological with surface runoff model in a Poltva case study in Western Ukraine. <i>Environmental Earth Sciences</i> , <b>2012</b> , 65, 1439-1457	2.9	31
189	Helmholtz Interdisciplinary Graduate School for Environmental Research (HIGRADE). <i>Gaia</i> , <b>2008</b> , 17, 71-734	34	31
188	Visual data exploration for hydrological analysis. <i>Environmental Earth Sciences</i> , <b>2012</b> , 65, 1395-1403	2.9	30
187	Geomechanical model for fracture deformation under hydraulic, mechanical and thermal loads. <i>Hydrogeology Journal</i> , <b>2006</b> , 14, 485-498	3.1	30
186	Reactive transport modeling of the clogging process at Maqarin natural analogue site. <i>Physics and Chemistry of the Earth</i> , <b>2013</b> , 64, 21-31	3	29
185	Quasi-steady-state strategy for numerical simulation of geothermal circulation in hot dry rock fractures. <i>International Journal of Non-Linear Mechanics</i> , <b>1993</b> , 28, 467-481	2.8	29
184	Thermo-mechanical investigation of salt caverns for short-term hydrogen storage. <i>Environmental Earth Sciences</i> , <b>2017</b> , 76, 1	2.9	28
183	Numerical investigation on the performance, sustainability, and efficiency of the deep borehole heat exchanger system for building heating. <i>Geothermal Energy</i> , <b>2019</b> , 7,	3.3	27
182	Uncertainty assessment of contaminant plume length estimates in heterogeneous aquifers. <i>Journal of Contaminant Hydrology</i> , <b>2006</b> , 87, 73-95	3.9	27
181	Distinct kinetics and mechanisms of mZVI particles aging in saline and fresh groundwater: H <sub>2</sub> evolution and surface passivation. <i>Water Research</i> , <b>2016</b> , 100, 80-87	12.5	27
180	A data exploration framework for validation and setup of hydrological models. <i>Environmental Earth Sciences</i> , <b>2013</b> , 69, 469-477	2.9	26
179	A parallelization scheme to simulate reactive transport in the subsurface environment with OGS#IPhreeqc 5.5.7-3.1.2. <i>Geoscientific Model Development</i> , <b>2015</b> , 8, 3333-3348	6.3	26
178	Mechanism insights into enhanced trichloroethylene removal using xanthan gum-modified microscale zero-valent iron particles. <i>Journal of Environmental Management</i> , <b>2015</b> , 150, 420-426	7.9	26
177	TESSIN VISLab Laboratory for scientific visualization. <i>Environmental Earth Sciences</i> , <b>2014</b> , 72, 3881-3899	2.9	26

176	A coupled surface/subsurface flow model accounting for air entrapment and air pressure counterflow. <i>Environmental Earth Sciences</i> , <b>2013</b> , 69, 395-414	2.9	25
175	Experimental characterization and numerical modelling of fracture processes in granite. <i>International Journal of Solids and Structures</i> , <b>2019</b> , 163, 102-116	3.1	25
174	Visualisation strategies for environmental modelling data. <i>Environmental Earth Sciences</i> , <b>2014</b> , 72, 3857-3868	2.9	24
173	Remediation of trichloroethylene by xanthan gum-coated microscale zero valent iron (XG-mZVI) in groundwater: Effects of geochemical constituents. <i>Chemical Engineering Journal</i> , <b>2015</b> , 271, 164-172	14.7	23
172	The influence of gas-solid reaction kinetics in models of thermochemical heat storage under monotonic and cyclic loading. <i>Applied Energy</i> , <b>2014</b> , 136, 289-302	10.7	23
171	Evaluation of thermal equations of state for CO <sub>2</sub> in numerical simulations. <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 481-495	2.9	23
170	Hybrid analytical and finite element numerical modeling of mass and heat transport in fractured rocks with matrix diffusion. <i>Computational Geosciences</i> , <b>2009</b> , 13, 349-361	2.7	23
169	A study of preferential flow in heterogeneous media using random walk particle tracking. <i>Geosciences Journal</i> , <b>2008</b> , 12, 285-297	1.4	23
168	Individual and combined effects of humic acid, bicarbonate and calcium on TCE removal kinetics, aging behavior and electron efficiency of mZVI particles. <i>Chemical Engineering Journal</i> , <b>2017</b> , 324, 324-335	14.7	22
167	Comparative verification of discrete and smeared numerical approaches for the simulation of hydraulic fracturing. <i>GEM - International Journal on Geomathematics</i> , <b>2019</b> , 10, 1	2.7	22
166	TEODOOR: a distributed geodata infrastructure for terrestrial observation data. <i>Environmental Earth Sciences</i> , <b>2013</b> , 69, 507-521	2.9	22
165	Determination of first-order degradation rate constants from monitoring networks. <i>Ground Water</i> , <b>2007</b> , 45, 774-85	2.4	22
164	An experimental and numerical investigation of saltwater movement in coupled saturated-partially saturated systems. <i>Water Resources Research</i> , <b>2002</b> , 38, 5-1-5-11	5.4	22
163	Quantification of exploitable shallow geothermal energy by using Borehole Heat Exchanger coupled Ground Source Heat Pump systems. <i>Energy Conversion and Management</i> , <b>2016</b> , 127, 80-89	10.6	22
162	Optimization of well-doublet placement in geothermal reservoirs using numerical simulation and economic analysis. <i>Environmental Earth Sciences</i> , <b>2017</b> , 76, 1	2.9	21
161	Groundwater drawdown at Nankou site of Beijing Plain: model development and calibration. <i>Environmental Earth Sciences</i> , <b>2011</b> , 64, 1323-1333	2.9	21
160	Assessment of adsorbate density models for numerical simulations of zeolite-based heat storage applications. <i>Applied Energy</i> , <b>2017</b> , 185, 1965-1970	10.7	20
159	Evaluating the thermal impacts and sustainability of intensive shallow geothermal utilization on a neighborhood scale: Lessons learned from a case study. <i>Energy Conversion and Management</i> , <b>2019</b> , 199, 111913	10.6	20

158	Development and application of a novel method for regional assessment of groundwater contamination risk in the Songhua River Basin. <i>Science of the Total Environment</i> , <b>2017</b> , 605-606, 598-609	10.2	20
157	Development of a 3D groundwater model based on scarce data: the Wadi Kafrein catchment/Jordan. <i>Environmental Earth Sciences</i> , <b>2011</b> , 64, 771-785	2.9	20
156	Using global node-based velocity in random walk particle tracking in variably saturated porous media: application to contaminant leaching from road constructions. <i>Environmental Geology</i> , <b>2008</b> , 55, 1755-1766		20
155	Investigation of coupled hydraulic-geomechanical processes at the KTB site: pressure-dependent characteristics of a long-term pump test and elastic interpretation using a geomechanical facies model. <i>Geofluids</i> , <b>2006</b> , 6, 67-81	1.5	20
154	Development and application of a CAD interface for fractured rock. <i>Environmental Geology</i> , <b>2005</b> , 47, 1017-1027		20
153	Analysis of flow path around the sealing section HG-A experiment in the Mont Terri Rock Laboratory. <i>Environmental Earth Sciences</i> , <b>2013</b> , 70, 3363-3380	2.9	19
152	Recent studies on hydrothermal systems in China: a review. <i>Geothermal Energy</i> , <b>2014</b> , 2,	3.3	19
151	Acceptability of geothermal installations: A geoethical concept for GeoLaB. <i>Geothermics</i> , <b>2018</b> , 73, 133-145	4.5	18
150	Numerical simulation of two-phase flow in deformable porous media: Application to carbon dioxide storage in the subsurface. <i>Mathematics and Computers in Simulation</i> , <b>2012</b> , 82, 1919-1935	3.3	18
149	Groundwater deterioration in Nankou suburban area of Beijing: data assessment and remediation scenarios. <i>Environmental Earth Sciences</i> , <b>2012</b> , 67, 1573-1586	2.9	18
148	Are upwind techniques in multi-phase flow models necessary?. <i>Journal of Computational Physics</i> , <b>2011</b> , 230, 8304-8312	4.1	18
147	Implicit numerical integration and consistent linearization of inelastic constitutive models of rock salt. <i>Computers and Structures</i> , <b>2017</b> , 182, 87-103	4.5	17
146	The brittle-ductile transition in active volcanoes. <i>Scientific Reports</i> , <b>2019</b> , 9, 143	4.9	17
145	A new approach to coupled two-phase reactive transport simulation for long-term degradation of concrete. <i>Construction and Building Materials</i> , <b>2018</b> , 190, 805-829	6.7	17
144	Identifying the influential aquifer heterogeneity factor on nitrate reduction processes by numerical simulation. <i>Advances in Water Resources</i> , <b>2017</b> , 99, 38-52	4.7	16
143	A parallel finite element method for two-phase flow processes in porous media: OpenGeoSys with PETSc. <i>Environmental Earth Sciences</i> , <b>2015</b> , 73, 2269-2285	2.9	16
142	Non-isothermal, compressible gas flow for the simulation of an enhanced gas recovery application. <i>Journal of Computational and Applied Mathematics</i> , <b>2012</b> , 236, 4933-4943	2.4	16
141	Analysis of heat extraction performance and long-term sustainability for multiple deep borehole heat exchanger array: A project-based study. <i>Applied Energy</i> , <b>2021</b> , 289, 116590	10.7	16



140	Influence of input and parameter uncertainty on the prediction of catchment-scale groundwater travel time distributions. <i>Hydrology and Earth System Sciences</i> , <b>2019</b> , 23, 171-190	5.5	15
139	GO2OGS 1.0: a versatile workflow to integrate complex geological information with fault data into numerical simulation models. <i>Geoscientific Model Development</i> , <b>2015</b> , 8, 3681-3694	6.3	15
138	Coupled 3-D thermo-hydro-mechanical analysis of geotechnological in situ tests. <i>International Journal of Rock Mechanics and Minings Sciences</i> , <b>2011</b> , 48, 1-15	6	15
137	Vacuum assisted removal of volatile to semi volatile organic contaminants from water using hollow fiber membrane contactorsII: A hybrid numerical-analytical modeling approach. <i>Journal of Membrane Science</i> , <b>2007</b> , 292, 17-28	9.6	15
136	Modelling of a european prototype hdr reservoir. <i>Geothermics</i> , <b>1995</b> , 24, 403-419	4.3	15
135	Numerical modeling of heating and hydration experiments on bentonite pellets. <i>Engineering Geology</i> , <b>2015</b> , 198, 94-106	6	14
134	A water quality model applied for the rivers into the Qinhuangdao coastal water in the Bohai Sea, China. <i>Journal of Hydrodynamics</i> , <b>2016</b> , 28, 905-913	3.3	14
133	A mixed finite element discretization scheme for a concrete carbonation model with concentration-dependent porosity. <i>Journal of Computational and Applied Mathematics</i> , <b>2013</b> , 246, 74-85	2.4	14
132	Numerical Modelling of Swelling Pressure in Unsaturated Expansive Elasto-Plastic Porous Media. <i>Transport in Porous Media</i> , <b>2007</b> , 66, 311-339	3.1	14
131	Influence of small-scale heterogeneities on contaminant transport in fractured crystalline rock. <i>Ground Water</i> , <b>2006</b> , 44, 687-96	2.4	14
130	A synthesis of approaches for modelling coupled thermal-hydraulic-mechanical-chemical processes in a single novaculite fracture experiment. <i>Environmental Earth Sciences</i> , <b>2017</b> , 76, 1	2.9	13
129	Virtual geographic environments for water pollution control. <i>International Journal of Digital Earth</i> , <b>2018</b> , 11, 397-407	3.9	13
128	Screening the geomechanical stability (thermal and mechanical) of shared multi-user CO2 storage assets: A simple effective tool applied to the Captain Sandstone Aquifer. <i>International Journal of Greenhouse Gas Control</i> , <b>2016</b> , 45, 43-61	4.2	13
127	Impact of heterogeneous permeability distribution on the groundwater flow systems of a small sedimentary basin. <i>Journal of Hydrology</i> , <b>2016</b> , 532, 90-101	6	13
126	A sub-stepping approach for elasto-plasticity with rotational hardening. <i>Computational Mechanics</i> , <b>2006</b> , 37, 266-278	4	13
125	Parallel finite element modelling of multi-physical processes in thermochemical energy storage devices. <i>Applied Energy</i> , <b>2017</b> , 185, 1954-1964	10.7	12
124	Joint interpretation of geoelectrical and soil-gas measurements for monitoring CO2 releases at a natural analogue. <i>Near Surface Geophysics</i> , <b>2014</b> , 12, 165-178	1.6	12
123	Numerical analysis of thermal impact on hydro-mechanical properties of clay. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , <b>2014</b> , 6, 405-416	5.3	12



122	Thermo-hydro-mechanical analysis of cement-based sensible heat stores for domestic applications. <i>Environmental Earth Sciences</i> , <b>2016</b> , 75, 1	2.9	12
121	Improving large-scale groundwater models by considering fossil gradients. <i>Advances in Water Resources</i> , <b>2017</b> , 103, 32-43	4.7	11
120	On crack opening computation in variational phase-field models for fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 369, 113210	5.7	11
119	A geochemical transport model for thermo-hydro-chemical (THC) coupled processes with saline water. <i>Water Resources Research</i> , <b>2011</b> , 47,	5.4	11
118	Modeling the competition between solid solution formation and cation exchange on the retardation of aqueous radium in an idealized bentonite column. <i>Geochemical Journal</i> , <b>2009</b> , 43, e37-e42 <sup>0.9</sup>		11
117	Modeling Soil-Coupled Water Uptake of Multiple Root Systems with Automatic Time Stepping. <i>Vadose Zone Journal</i> , <b>2011</b> , 10, 727-735	2.7	11
116	On advantages of the Kelvin mapping in finite element implementations of deformation processes. <i>Environmental Earth Sciences</i> , <b>2016</b> , 75, 1	2.9	11
115	Modelling sorption equilibria and kinetics in numerical simulations of dynamic sorption experiments in packed beds of salt/zeolite composites for thermochemical energy storage. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 128, 1102-1113	4.9	11
114	Environmental Information Systems: Paving the Path for Digitally Facilitated Water Management (Water 4.0). <i>Engineering</i> , <b>2019</b> , 5, 828-832	9.7	10
113	Numerical modelling of water sorption isotherms of zeolite 13XBF based on sparse experimental data sets for heat storage applications. <i>Energy Conversion and Management</i> , <b>2017</b> , 150, 392-402	10.6	10
112	Front Tracking Using a Hybrid Analytical Finite Element Approach for Two-Phase Flow Applied to Supercritical CO <sub>2</sub> Replacing Brine in a Heterogeneous Reservoir and Caprock. <i>Transport in Porous Media</i> , <b>2011</b> , 90, 545-573	3.1	10
111	Non-isothermal effects on two-phase flow in porous medium: CO <sub>2</sub> disposal into a saline aquifer. <i>Energy Procedia</i> , <b>2011</b> , 4, 3889-3895	2.3	10
110	Development of approaches for modelling coupled thermal-hydraulic-mechanical-chemical processes in single granite fracture experiments. <i>Environmental Earth Sciences</i> , <b>2016</b> , 75, 1	2.9	10
109	Tensor Field Visualization using Fiber Surfaces of Invariant Space. <i>IEEE Transactions on Visualization and Computer Graphics</i> , <b>2018</b> ,	4	10
108	Modelling thermal performance degradation of high and low-temperature solid thermal energy storage due to cracking processes using a phase-field approach. <i>Energy Conversion and Management</i> , <b>2019</b> , 180, 977-989	10.6	10
107	Geothermal Energy: a glimpse at the state of the field and an introduction to the journal. <i>Geothermal Energy</i> , <b>2013</b> , 1,	3.3	9
106	Comments on "Two-dimensional concentration distribution for mixing-controlled bioreactive transport in steady-state" by O.A. Cirpka and A.J. Valocchi. <i>Advances in Water Resources</i> , <b>2009</b> , 32, 293-294 <sup>7</sup>	4.7	9
105	MEVA--An Interactive Visualization Application for Validation of Multifaceted Meteorological Data with Multiple 3D Devices. <i>PLoS ONE</i> , <b>2015</b> , 10, e0123811	3.7	9

104	Shifted thermal extraction rates in large Borehole Heat Exchanger array [A numerical experiment. <i>Applied Thermal Engineering</i> , <b>2020</b> , 167, 114750	5.8	9
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