Ivars Neretnieks

List of Publications by Year in Descending Order

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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.

97 papers	1,872 citations	16 h-index	42 g-index
97 ext. papers	2,003 ext. citations	3.8 avg, IF	4.84 L-index

#	Paper	IF	Citations
97	Visualization of Mass Transfer Between Source and Seeping Water in a Variable Aperture Fracture Impact of Tracer Density. *Nuclear Technology*, **2020**, 206, 1553-1565	1.4	
96	A Note on the Use of Uranine Tracer to Visualize Radionuclide Migration Experiments: Some Observations and Problems. *Nuclear Technology*, **2019**, 205, 964-977	1.4	2
95	Channel network concept: an integrated approach to visualize solute transport in fractured rocks. *Hydrogeology Journal*, **2019**, 27, 101-119	3.1	2
94	Density-Driven Mass Transfer in Repositories for Nuclear Waste. *Nuclear Technology*, **2019**, 205, 819-829	1.4	1
93	Solute transport along a single fracture in a porous rock: a simple analytical solution and its extension for modeling velocity dispersion. *Hydrogeology Journal*, **2018**, 26, 297-320	3.1	13
92	Solute transport along a single fracture with a finite extent of matrix: A new simple solution and temporal moment analysis. *Journal of Hydrology*, **2018**, 562, 290-304	6	6
91	A synthesis of approaches for modelling coupled thermal Hydraulic echanical chemical processes in a single novaculite fracture experiment. *Environmental Earth Sciences*, **2017**, 76, 1	2.9	13
90	Atomistic simulations of cation hydration in sodium and calcium montmorillonite nanopores. *Journal of Chemical Physics*, **2017**, 147, 084705	3.9	17
89	The effect of stagnant water zones on retarding radionuclide transport in fractured rocks: An extension to the Channel Network Model. *Journal of Hydrology*, **2016**, 540, 1122-1135	6	11
88	Solute transport through fractured rock: Radial diffusion into the rock matrix with several geological layers for an arbitrary length decay chain. *Journal of Hydrology*, **2016**, 536, 133-146	6	10
87	Hard-sphere fluid mediated interaction: a pressure expression with application of the weighted correlation approach. *Molecular Physics*, **2016**, 114, 599-607	1.7	1
86	Development of approaches for modelling coupled thermal Hydraulic echanical chemical processes in single granite fracture experiments. *Environmental Earth Sciences*, **2016**, 75, 1	2.9	10
85	Radionuclide migration through fractured rock for arbitrary-length decay chain: Analytical solution and global sensitivity analysis. *Journal of Hydrology*, **2015**, 520, 448-460	6	18
84	Hydrologic issues associated with nuclear waste repositories. *Water Resources Research*, **2015**, 51, 6923-6972	5.4	95
83	Solute transport in a single fracture involving an arbitrary length decay chain with rock matrix comprising different geological layers. *Journal of Contaminant Hydrology*, **2014**, 164, 59-71	3.9	6
82	Stress-mediated closing of fractures: Impact of matrix diffusion. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 4149-4163	3.6	12
81	A new numerical method of considering local longitudinal dispersion in single fractures. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2014**, 38, 20-36	4	2

80	Exergetic efficiency of high-temperature-lift chemical heat pump (CHP) based on CaO/CO2 and CaO/H2O working pairs. *International Journal of Energy Research*, **2013**, 37, 1122-1131	4.5	10
79	A new approach to account for fracture aperture variability when modeling solute transport in fracture networks. *Water Resources Research*, **2013**, 49, 2241-2252	5.4	13
78	Some aspects of release and transport of gases in deep granitic rocks: possible implications for nuclear waste repositories. *Hydrogeology Journal*, **2013**, 21, 1701-1716	3.1	12
77	Solute transport in fractured rocks with stagnant water zone and rock matrix composed of different geological layers Model development and simulations. *Water Resources Research*, **2013**, 49, 1709-1727	5.4	28
76	Shear-Induced Flow Channels in a Single Rock Fracture and Their Effect on Solute Transport. *Transport in Porous Media*, **2011**, 87, 503-523	3.1	57
75	Filtering of Clay Colloids in Bentonite Detritus Material. *Chemical Engineering and Technology*, **2010**, 33, 1303-1310	2	6
74	Measuring sorption coefficients and BET surface areas on intact drillcore and crushed granite samples. *Radiochimica Acta*, **2008**, 96, 673-677	1.9	8
73	Fast method for simulation of radionuclide chain migration in dual porosity fracture rocks. *Journal of Contaminant Hydrology*, **2006**, 88, 269-88	3.9	3
72	Channeling with diffusion into stagnant water and into a matrix in series. *Water Resources Research*, **2006**, 42,	5.4	25
71	Prediction of some in situ tracer tests with sorbing tracers using independent data. *Journal of Contaminant Hydrology*, **2003**, 61, 351-60	3.9	22
70	Modelling of Solute Transport under Flow Conditions Varying in Time, Using the Channel Network Model. *Materials Research Society Symposia Proceedings*, **2003**, 807, 891		
69	Modelling Biochemical Processes in Rocks: Analysis and exploratory simulations of competition of different processes important for ferrous mineral oxidation and oxygen depletion. *Materials Research Society Symposia Proceedings*, **2003**, 807, 164		1
68	Fluid Flow and Solute Transport though a Fracture Intersecting a Canister - Analytical Solutions for the Parallel Plate Model. *Materials Research Society Symposia Proceedings*, **2003**, 807, 831		1
67	A Conceivable Technique of Measuring Sorption Coefficients in Intact Rock Using an Electrical Potential Gradient as the Driving Force for Migration. *Materials Research Society Symposia Proceedings*, **2003**, 807, 736		2
66	Harmonisation of Site Characterisation and Performance Assessment Modelling - The Relative Importance of Surface Sorption and Matrix Interaction Phenomena. *Materials Research Society Symposia Proceedings*, **2003**, 807, 825		
65	Solute Transport in Fractured Rock. Testing a New and Simple Aapproach. *Materials Research Society Symposia Proceedings*, **2003**, 807, 885		
64	A stochastic multi-channel model for solute transport--analysis of tracer tests in fractured rock. *Journal of Contaminant Hydrology*, **2002**, 55, 175-211	3.9	52
63	Modelling of Biochemical Processes in Rocks: Oxygen Depletion by Pyrite Oxidation Model Development and Exploratory Simulations. *Materials Research Society Symposia Proceedings*, **2002**, 757, II11.5.1		1

62	Formation factor measurements in granite in the laboratory Comparison of through diffusion and electromigration techniques.. *Materials Research Society Symposia Proceedings*, **2002**, 757, II3.15.1		1
61	A Reactive Transport Model for Oxidative Dissolution of Spent Fuel and Release of Nuclides Within a Defective Canister. *Nuclear Technology*, **2002**, 137, 228-240	1.4	4
60	The Effect of Hydrogen on Oxidative Dissolution of Spent Fuel. *Nuclear Technology*, **2002**, 138, 69-78	1.4	15
59	A Coupled Model for Oxidative Dissolution of Spent Fuel and Transport of Radionuclides from an Initially Defective Canister. *Nuclear Technology*, **2001**, 135, 273-285	1.4	4
58	Simulation of the Redox Buffer Depletion Rate in Landfills of Combustion Residue Waste Materials. *Water, Air, and Soil Pollution*, **2001**, 128, 223-242	2.6	1
57	Determination of the Flow-Wetted Surface in Fractured Media. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		1
56	Revisiting the Advection-Dispersion Model Testing an Alternative. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		
55	Surface Conductivity and Diffusion Models - Comparison and Evaluation -. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		
54	Matrix Diffusion Measurements Through Diffusion versus Electrical Conductivity Measurements. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		1
53	Formation Factor Determinations by In-Situ Resistivity Logging. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		
52	The Influence of Ligands and Precipitates on the Release of Nuclides from the Near Field under Natural Repository Conditions. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		
51	Study of the Consequences of Secondary Water Radiolysis within and Surrounding a Defective Canister. *Materials Research Society Symposia Proceedings*, **2000**, 663, 1		2
50	Atmospheric oxidation of the pyritic waste rock in Maardu, Estonia, 2: an assessment of aluminosilicate buffering potential. *Environmental Geology*, **2000**, 39, 560-566		12
49	The Channel Network Model A Tool for Transport Simulations in Fractured Media. *Ground Water*, **1999**, 37, 367-375	2.4	43
48	Atmospheric oxidation of the pyritic waste rock in Maardu, Estonia. 1 field study and modelling. *Environmental Geology*, **1999**, 39, 1-19		20
47	Sensitivity Analysis of Uranium Solubility Under Strongly Oxidizing Conditions. *Materials Research Society Symposia Proceedings*, **1999**, 556, 1001		1
46	Modelling of the Radionuclide Release from an Initially Defective Canister. *Materials Research Society Symposia Proceedings*, **1999**, 556, 591		1
45	The Channel Network Model and Field Applications. *Materials Research Society Symposia Proceedings*, **1999**, 556, 721		

44	A Study of Rock Matrix Diffusion Properties by Electrical Conductivity Measurements. *Materials Research Society Symposia Proceedings*, **1999**, 556, 767		
43	Flow channeling in heterogeneous fractured rocks. *Reviews of Geophysics*, **1998**, 36, 275-298	23.1	248
42	Neutralizing processes in leaching of solid waste: Modeling of interactions between solid waste and strong acid. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*, **1998**, 33, 923-950	2.3	5
41	Simulation of Radionuclide Release from a Repository to the Biosphere: Using a Model-Coupling Concept. *Nuclear Technology*, **1998**, 122, 93-103	1.4	5
40	Removal of CU(II) and CR(III) from naturally contaminated loam by electromigration. *Journal of Environmental Science and Health Part A: Environmental Science and Engineering*, **1997**, 32, 1293-1308		4
39	Modelling Oxidative Dissolution of Spent Fuel. *Materials Research Society Symposia Proceedings*, **1996**, 465, 573		6
38	Transport from the Canister to the Biosphere: Using an Integrated Near-and Far-Field Model. *Materials Research Society Symposia Proceedings*, **1996**, 465, 1037		0
37	A Note on Radionuclide Transport by Gas Bubbles. *Materials Research Society Symposia Proceedings*, **1996**, 465, 855		1
36	Sensitivity of the Radionuclide Release from a Repository to the Variability of Materials and Other Properties. *Nuclear Technology*, **1996**, 113, 316-326	1.4	6
35	A Channel-Network-Model for Radionuclide Transport in Fractured Rock-Testing Against Field Data. *Materials Research Society Symposia Proceedings*, **1994**, 353, 395		
34	Radionuclide Release from the Kbs-3 Repository-Sensitivity to the Variability of Materials and Other Properties. *Materials Research Society Symposia Proceedings*, **1994**, 353, 511		
33	Nuclear Waste Repositories in Crystalline Rock- an Overview of Flow and Nuclide Transport Mechanisms. *Materials Research Society Symposia Proceedings*, **1994**, 353, 7		3
32	Modelling of a Passive Adsorption Sheet to Purify Indoor Air. *Indoor Air*, **1993**, 3, 310-314	5.4	3
31	Modelling of Emission and Re-emission of Volatile Organic Compounds from Building Materials with Indoor Air Applications. *Indoor Air*, **1993**, 3, 2-11	5.4	18
30	The Effect Of A Passive Adsorption Sheet On Reducing Organic Pollutants In Indoor Air. *Indoor Air*, **1993**, 3, 12-19	5.4	7
29	Some Important Mechanisms and Processes in the Near Field of the Swedish Repository for Spent Nuclear Fuel. *Materials Research Society Symposia Proceedings*, **1992**, 294, 675		
28	Fast Model for Calculating Steady State Release of Radionuclides from the Near Field. *Materials Research Society Symposia Proceedings*, **1991**, 257, 585		1
27	Development of A Model for Handling the Movement of Redox Fronts and Other Sharp Reaction Fronts. *Materials Research Society Symposia Proceedings*, **1991**, 257, 591		

26	Fluid and Solute Transport in a Network of Channels. *Materials Research Society Symposia Proceedings*, **1991**, 257, 691		3
25	Tracer Tests in a Small Fracture Zone at Stripa. *Materials Research Society Symposia Proceedings*, **1991**, 257, 713		2
24	The Swedish Repository for Low and Intermediate Reactor Waste- SFR. Radioactivity Release and Transport Calculations. *Materials Research Society Symposia Proceedings*, **1988**, 127, 537		3
23	Channeling in Fractured Zones and its Potential Impact on the Transport of Radionuclides. *Materials Research Society Symposia Proceedings*, **1988**, 127, 779		1
22	Channeling and its Potential Consequences for Radionuclides Transport. *Materials Research Society Symposia Proceedings*, **1987**, 112, 169		2
21	Diffusion in the Matrix of Granitic Rock Field Test in the Stripa Mine. *Materials Research Society Symposia Proceedings*, **1987**, 112, 189		3
20	Some Aspects on the Use of Iron Canisters for HLW. *Materials Research Society Symposia Proceedings*, **1985**, 50, 411		8
19	Flow and Tracer Experiments in Crystalline Rocks: Results from Several Swedish in Situ Experiments. *Materials Research Society Symposia Proceedings*, **1985**, 50, 627		11
18	Radionuclide Transport Modelling in Fissured Zones and Channels. *Materials Research Society Symposia Proceedings*, **1985**, 50, 641		
17	Diffusivities in Crystalline Rock Materials. *Materials Research Society Symposia Proceedings*, **1985**, 50, 73		0
16	Analysis of Some Laboratory Tracer Runs in Natural Fissures. *Water Resources Research*, **1985**, 21, 951-958	34	112
15	The Impact of Alpha-Radiolysis on the Release of Radionuclides from Spent Fuel in a Geologic Repository. *Materials Research Society Symposia Proceedings*, **1983**, 26, 1009		3
14	Migration in a Single Fracture in Granitic Rock. *Materials Research Society Symposia Proceedings*, **1983**, 26, 239		5
13	Diffusion in the Matrix of Granitic Rock Field Test in the Stripa Mine Part 2.. *Materials Research Society Symposia Proceedings*, **1983**, 26, 247		2
12	An Integrated Approach to the Description of Radionuclide Release and Transport in the Geosphere. *Materials Research Society Symposia Proceedings*, **1983**, 26, 269		
11	Porosities of and Diffusivities in Crystalline Rock and Fissure Coating Materials. *Materials Research Society Symposia Proceedings*, **1983**, 26, 835		2
10	A Study of Strontium and Cesium Sorption on Granite. *Nuclear Technology*, **1982**, 59, 302-313	1.4	34
9	Model for Near Field Migration. *Materials Research Society Symposia Proceedings*, **1981**, 11, 539		1

8	Diffusion in Crystalline Rocks. *Materials Research Society Symposia Proceedings*, **1981**, 11, 509		7
7	Diffusion in the Matrix of Granitic Rock. Field Test in the Stripa Mine. *Materials Research Society Symposia Proceedings*, **1981**, 11, 519		4
6	Migration in a Single Fracture. *Materials Research Society Symposia Proceedings*, **1981**, 11, 529		8
5	Model for Far Field Migration. *Materials Research Society Symposia Proceedings*, **1981**, 11, 549		
4	Leach Rates of High Level Waste and Spent Fuel. Limiting Rates as Determined by Backfill and Bedrock Conditions. *Materials Research Society Symposia Proceedings*, **1981**, 11, 559		
3	Exact solution of a model for diffusion in particles and longitudinal dispersion in packed beds. *AICHE Journal*, **1980**, 26, 686-690	3.6	174
2	Diffusion in the rock matrix: An important factor in radionuclide retardation?. *Journal of Geophysical Research*, **1980**, 85, 4379-4397		614
1	Predictive Modeling of a Simple Field Matrix Diffusion Experiment Addressing Radionuclide Transport in Fractured Rock. Is It So Straightforward?. *Nuclear Technology*,1-15	1.4	0