

# Yukio Tachi

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1064419/publications.pdf>

Version: 2024-02-01

57  
papers

763  
citations

686830

13  
h-index

552369

26  
g-index

59  
all docs

59  
docs citations

59  
times ranked

596  
citing authors

#	ARTICLE	IF	CITATIONS
1	Diffusion and sorption of Cs+, Na+, I <sup>-</sup> and HTO in compacted sodium montmorillonite as a function of porewater salinity: Integrated sorption and diffusion model. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 132, 75-93.	1.6	103
2	Guidelines for thermodynamic sorption modelling in the context of radioactive waste disposal. <i>Environmental Modelling and Software</i> , 2013, 42, 143-156.	1.9	69
3	Diffusion and sorption of Cs+, I <sup>-</sup> and HTO in samples of the argillaceous Wakkanai Formation from the Horonobe URL, Japan: Clay-based modeling approach. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6742-6759.	1.6	68
4	Effect of interlayer cations on montmorillonite swelling: Comparison between molecular dynamic simulations and experiments. <i>Applied Clay Science</i> , 2021, 204, 106034.	2.6	67
5	Experimental and modeling studies on sorption and diffusion of radium in bentonite. <i>Journal of Contaminant Hydrology</i> , 2001, 47, 171-186.	1.6	41
6	Comparative modeling of an in situ diffusion experiment in granite at the Grimsel Test Site. <i>Journal of Contaminant Hydrology</i> , 2015, 179, 89-101.	1.6	41
7	Matrix diffusion and sorption of Cs+, Na+, I <sup>-</sup> and HTO in granodiorite: Laboratory-scale results and their extrapolation to the in situ condition. <i>Journal of Contaminant Hydrology</i> , 2015, 179, 10-24.	1.6	35
8	Pore distribution of water-saturated compacted clay using NMR relaxometry and freezing temperature depression; effects of density and salt concentration. <i>Applied Clay Science</i> , 2016, 123, 148-155.	2.6	33
9	Diffusion and sorption of neptunium(V) in compacted montmorillonite: effects of carbonate and salinity. <i>Radiochimica Acta</i> , 2010, 98, 711-718.	0.5	30
10	Integrated sorption and diffusion model for bentonite. Part 2: porewater chemistry, sorption and diffusion modeling in compacted systems. <i>Journal of Nuclear Science and Technology</i> , 2014, 51, 1191-1204.	0.7	24
11	Interaction of Fe and Si under anoxic and reducing conditions: Structural characteristics of ferrous silicate co-precipitates. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 270, 1-20.	1.6	16
12	Integrated sorption and diffusion model for bentonite. Part 1: clay-water interaction and sorption modeling in dispersed systems. <i>Journal of Nuclear Science and Technology</i> , 2014, 51, 1177-1190.	0.7	15
13	The impact of cement on argillaceous rocks in radioactive waste disposal systems: A review focusing on key processes and remaining issues. <i>Applied Geochemistry</i> , 2021, 130, 104979.	1.4	15
14	Diffusion and adsorption of uranyl ion in clays: Molecular dynamics study. <i>Progress in Nuclear Energy</i> , 2016, 92, 286-297.	1.3	13
15	Sorption of Eu <sup>3+</sup> on Na-montmorillonite studied by time-resolved laser fluorescence spectroscopy and surface complexation modeling. <i>Journal of Nuclear Science and Technology</i> , 2016, 53, 592-601.	0.7	13
16	New Insights into the Cs Adsorption on Montmorillonite Clay from <sup>133</sup> Cs Solid-State NMR and Density Functional Theory Calculations. <i>Journal of Physical Chemistry A</i> , 2018, 122, 9326-9337.	1.1	13
17	Natural systems evidence for the effects of temperature and the activity of aqueous silica upon montmorillonite stability in clay barriers for the disposal of radioactive wastes. <i>Applied Clay Science</i> , 2019, 179, 105146.	2.6	12
18	3D-microstructure analysis of compacted Na- and Cs-montmorillonites with nanofocus X-ray computed tomography and correlation with macroscopic transport properties. <i>Applied Clay Science</i> , 2019, 168, 211-222.	2.6	12

#	ARTICLE	IF	CITATIONS
19	Uranium (VI) sorption on illite under varying carbonate concentrations: Batch experiments, modeling, and cryogenic time-resolved laser fluorescence spectroscopy study. <i>Applied Geochemistry</i> , 2022, 136, 105178.	1.4	12
20	Diffusion of tritiated water, $^{137}\text{Cs}^+$ , and $^{125}\text{I}^-$ in compacted Ca-montmorillonite: Experimental and modeling approaches. <i>Applied Clay Science</i> , 2021, 211, 106176.	2.6	11
21	Reduction of contaminated concrete waste by recycling aggregate with the aid of pulsed power discharge. <i>Construction and Building Materials</i> , 2014, 67, 192-196.	3.2	9
22	Diffusion of Uranium in Compacted Bentonites in the Reducing Condition with Corrosion Products of Iron. <i>Materials Research Society Symposia Proceedings</i> , 1995, 412, 683.	0.1	8
23	Pore distribution of compacted Ca-montmorillonite using NMR relaxometry and cryoporometry: Comparison with Na-montmorillonite. <i>Microporous and Mesoporous Materials</i> , 2021, 313, 110841.	2.2	8
24	Diffusion of Cs and Sr in Compacted Bentonites Under Reducing Conditions and in the Presence of Corrosion Products of Iron. <i>Materials Research Society Symposia Proceedings</i> , 1997, 506, 351.	0.1	7
25	Key factors controlling radiocesium sorption and fixation in river sediments around the Fukushima Daiichi Nuclear Power Plant. Part 1: Insights from sediment properties and radiocesium distributions. <i>Science of the Total Environment</i> , 2020, 724, 138098.	3.9	7
26	Diffusion of Uranium in Compacted Bentonite in the Presence of Carbon Steel. <i>Materials Research Society Symposia Proceedings</i> , 1993, 333, 939.	0.1	6
27	Diffusion of Cesium and Iodine in Compacted Sodium Montmorillonite Under Different Saline Conditions. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1193, 185.	0.1	6
28	Fast reactor irradiation effects on fracture toughness of $\text{Si}_3\text{N}_4$ in comparison with $\text{MgAl}_2\text{O}_4$ and yttria stabilized $\text{ZrO}_2$ . <i>Journal of Nuclear Materials</i> , 2016, 471, 69-73.	1.3	6
29	Surface complexation of Ca and competitive sorption of divalent cations on montmorillonite under alkaline conditions. <i>Applied Clay Science</i> , 2021, 200, 105910.	2.6	6
30	Retention of uranium in cement systems: effects of cement degradation and complexing ligands. <i>Progress in Nuclear Science and Technology</i> , 2018, 5, 208-212.	0.3	6
31	Decrease of radionuclide sorption in hydrated cement systems by organic ligands: Comparative evaluation using experimental data and thermodynamic calculations for ISA/EDTA-actinide-cement systems. <i>Applied Geochemistry</i> , 2022, 136, 105161.	1.4	6
32	A Technical Problem in the Through-Diffusion Experiments for Compacted Bentonite. <i>Journal of Nuclear Science and Technology</i> , 2003, 40, 698-701.	0.7	5
33	Effects of Fine-Scale Surface Alterations on Tracer Retention in a Fractured Crystalline Rock From the Grimsel Test Site. <i>Water Resources Research</i> , 2018, 54, 9287-9305.	1.7	5
34	Sorption behavior of selenide on montmorillonite. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2020, 324, 615-622.	0.7	4
35	Key factors controlling radiocesium sorption and fixation in river sediments around the Fukushima Daiichi Nuclear Power Plant. Part 2: Sorption and fixation behaviors and their relationship to sediment properties. <i>Science of the Total Environment</i> , 2020, 724, 138097.	3.9	4
36	Reaction and Alteration of Mudstone with Ordinary Portland Cement and Low Alkali Cement Pore Fluids. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 588.	0.8	4

#	ARTICLE	IF	CITATIONS
37	Predictive Modeling of a Simple Field Matrix Diffusion Experiment Addressing Radionuclide Transport in Fractured Rock. Is It So Straightforward?. Nuclear Technology, 2022, 208, 1059-1073.	0.7	4
38	Stability of Montmorillonite Edge Faces Studied Using First-Principles Calculations. Clays and Clay Minerals, 2017, 65, 252-272.	0.6	3
39	Kd setting approach through semi-quantitative estimation procedures and thermodynamic sorption models: A case study for Horonobe URL conditions. Materials Research Society Symposia Proceedings, 2014, 1665, 149-155.	0.1	2
40	Using natural systems evidence to test models of transformation of montmorillonite. Applied Clay Science, 2020, 195, 105741.	2.6	2
41	Evolution of the Reaction and Alteration of Mudstone with Ordinary Portland Cement Leachates: Sequential Flow Experiments and Reactive-Transport Modelling. Minerals (Basel, Switzerland), 2021, 11, 1026.	0.8	2
42	Clay-Based Modeling Approach to Diffusion and Sorption in the Argillaceous Rock from the Horonobe URL. , 0, , 241-250.		2
43	Selenide [Se(II)] Immobilization in Anoxic, Fe(II)-Rich Environments: Coprecipitation and Behavior during Phase Transformations. Environmental Science & Technology, 2022, , .	4.6	2
44	Diffusion Modeling in Compacted Bentonite Based on Modified Gouy-Chapman Model. Materials Research Society Symposia Proceedings, 2014, 1665, 123-129.	0.1	1
45	Evaluation of source term parameters for spent fuel disposal in foreign countries. Journal of Nuclear Fuel Cycle and Environment, 2016, 23, 55-72.	0.1	1
46	K <sub>d</sub> setting approaches for rocks for the performance assessment of geological disposal: Application for granitic rocks. Journal of Nuclear Fuel Cycle and Environment, 2017, 24, 109-134.	0.1	1
47	Decontamination of Radioactive Concrete Waste and Reuse of Aggregate Using Pulsed Power Technology. Transactions of the Atomic Energy Society of Japan, 2018, 17, 57-66.	0.2	1
48	A Scaling Approach for Retention Properties of Crystalline Rock: Case Study of the In-Situ Long-Term Sorption and Diffusion Experiment (LTDESD) at the Åspå Hard Rock Laboratory in Sweden. Water Resources Research, 2021, 57, e2020WR029335.	1.7	1
49	Sorption parameter setting approaches for radioactive waste disposal considering perturbation effects: sorption reduction factors for organics. Progress in Nuclear Science and Technology, 2018, 5, 229-232.	0.3	1
50	Influence of Operational Conditions on Retardation Parameters Measured by Diffusion Experiment in Compacted Bentonite. Materials Research Society Symposia Proceedings, 2010, 1265, 1.	0.1	0
51	The effect of alkaline alteration on sorption properties of sedimentary rock. Materials Research Society Symposia Proceedings, 2014, 1665, 179-184.	0.1	0
52	Evaluation of source term parameters for spent fuel disposal in foreign countries. Journal of Nuclear Fuel Cycle and Environment, 2016, 23, 31-54.	0.1	0
53	Development of evaluation method for diffusion and filtration behavior of colloid in compacted bentonites using dendrimers. Transactions of the Atomic Energy Society of Japan, 2021, 20, 9-22.	0.2	0
54	Sorption behavior of U and Np on zeolite. Progress in Nuclear Science and Technology, 2018, 5, 221-224.	0.3	0

#	ARTICLE	IF	CITATIONS
55	Diffusion and sorption behavior of HTO, Cs, I and U in mortar. Progress in Nuclear Science and Technology, 2018, 5, 233-236.	0.3	0
56	Current status of geological disposal by "all-Japan" activities (6). Atomos, 2022, 64, 290-295.	0.0	0
57	Evolution of the Reaction and Alteration of Granite with Ordinary Portland Cement Leachates: Sequential Flow Experiments and Reactive Transport Modelling. Minerals (Basel, Switzerland), 2022, 12, 883.	0.8	0