

Tsutomu Sato

List of Publications by Year in descending order

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115
papers

3,356
citations

147566

31
h-index

155451

55
g-index

117
all docs

117
docs citations

117
times ranked

3396
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of Layer Charge, Charge Location, and Energy Change on Expansion Properties of Dioctahedral Smectites. <i>Clays and Clay Minerals</i> , 1992, 40, 103-113.	0.6	288
2	A natural attenuation of arsenic in drainage from an abandoned arsenic mine dump. <i>Applied Geochemistry</i> , 2003, 18, 1267-1278.	1.4	230
3	Factors affecting vertical distribution of Fukushima accident-derived radiocesium in soil under different land-use conditions. <i>Science of the Total Environment</i> , 2012, 431, 392-401.	3.9	175
4	Mobility of uranium during weathering. <i>American Mineralogist</i> , 1997, 82, 888-899.	0.9	173
5	Comparison of the vertical distributions of Fukushima nuclear accident radiocesium in soil before and after the first rainy season, with physicochemical and mineralogical interpretations. <i>Science of the Total Environment</i> , 2013, 447, 301-314.	3.9	134
6	Size distribution and anthropogenic sources apportionment of airborne trace metals in Kanazawa, Japan. <i>Chemosphere</i> , 2006, 65, 2440-2448.	4.2	95
7	Structure of nanocrystalline calcium silicate hydrates: insights from X-ray diffraction, synchrotron X-ray absorption and nuclear magnetic resonance. <i>Journal of Applied Crystallography</i> , 2016, 49, 771-783.	1.9	91
8	On the nature of structural disorder in calcium silicate hydrates with a calcium/silicon ratio similar to tobermorite. <i>Cement and Concrete Research</i> , 2013, 52, 31-37.	4.6	90
9	Solid-Solution Reactions in As(V) Sorption by Schwertmannite. <i>Environmental Science & Technology</i> , 2003, 37, 3581-3586.	4.6	87
10	Arsenate sorption on schwertmannite. <i>American Mineralogist</i> , 2004, 89, 1728-1734.	0.9	85
11	Source identification, size distribution and indicator screening of airborne trace metals in Kanazawa, Japan. <i>Journal of Aerosol Science</i> , 2005, 36, 197-210.	1.8	84
12	Iron Nodules Scavenging Uranium from Groundwater. <i>Environmental Science & Technology</i> , 1997, 31, 2854-2858.	4.6	83
13	Long-range transport of polycyclic aromatic hydrocarbons (PAHs) from the eastern Asian continent to Kanazawa, Japan with Asian dust. <i>Atmospheric Environment</i> , 2007, 41, 2580-2593.	1.9	73
14	Surface complexation reactions of inorganic anions on hydrotalcite-like compounds. <i>Journal of Colloid and Interface Science</i> , 2012, 384, 99-104.	5.0	70
15	Mechanisms of Se(IV) Co-precipitation with Ferrhydrite at Acidic and Alkaline Conditions and Its Behavior during Aging. <i>Environmental Science & Technology</i> , 2018, 52, 4817-4826.	4.6	69
16	Fulvic acid anchored layered double hydroxides: A multifunctional composite adsorbent for the removal of anionic dye and toxic metal. <i>Journal of Hazardous Materials</i> , 2018, 343, 19-28.	6.5	65
17	Atomic force microscopy study of montmorillonite dissolution under highly alkaline conditions. <i>Clays and Clay Minerals</i> , 2005, 53, 147-154.	0.6	63
18	Field evidence for uranium nanocrystallization and its implications for uranium transport. <i>Chemical Geology</i> , 2005, 221, 117-126.	1.4	63

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19	Adsorption and co-precipitation behavior of arsenate, chromate, selenate and boric acid with synthetic allophane-like materials. <i>Journal of Hazardous Materials</i> , 2009, 170, 79-86.	6.5	59
20	Weathering of Chlorite in a Quartz-Chlorite Schist: I. Mineralogical and Chemical Changes. <i>Clays and Clay Minerals</i> , 1996, 44, 244-256.	0.6	58
21	Using a Surface Complexation Model To Predict the Nature and Stability of Nanoparticles. <i>Environmental Science & Technology</i> , 2005, 39, 1250-1256.	4.6	57
22	Biosorption of Pb (II) and Zn (II) from aqueous solution by <i>Oceanobacillus profundus</i> isolated from an abandoned mine. <i>Scientific Reports</i> , 2020, 10, 21189.	1.6	56
23	Detoxification of lead-bearing zinc plant leach residues from Kabwe, Zambia by coupled extraction-cementation method. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 104197.	3.3	49
24	Dissolution kinetics of synthetic Na-smectite. An integrated experimental approach. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 5849-5864.	1.6	44
25	Recovery of Lead and Zinc from Zinc Plant Leach Residues by Concurrent Dissolution-Cementation Using Zero-Valent Aluminum in Chloride Medium. <i>Metals</i> , 2020, 10, 531.	1.0	43
26	Change in Layer Charge of Smectites and Smectite Layers in Illite/Smectite during Diagenetic Alteration. <i>Clays and Clay Minerals</i> , 1996, 44, 460-469.	0.6	42
27	Microstructure of saturated bentonites characterized by X-ray CT observations. <i>Engineering Geology</i> , 2009, 106, 51-57.	2.9	38
28	Cellulose-metallothionein biosorbent for removal of Pb(II) and Zn(II) from polluted water. <i>Chemosphere</i> , 2020, 246, 125733.	4.2	38
29	HRTEM evidence for the process and mechanism of saponite-to-chlorite conversion through corrensite. <i>American Mineralogist</i> , 1999, 84, 1080-1087.	0.9	36
30	Spectroscopic investigations of humic-like acids formed via polycondensation reactions between glycine, catechol and glucose in the presence of natural zeolites. <i>Journal of Molecular Structure</i> , 2010, 982, 181-186.	1.8	35
31	Adsorption behaviour of simulant radionuclide cations and anions in metakaolin-based geopolymer. <i>Journal of Hazardous Materials</i> , 2022, 429, 128373.	6.5	35
32	Natural attenuation of antimony in mine drainage water. <i>Geochemical Journal</i> , 2007, 41, 17-27.	0.5	31
33	Effects of surface Fe(III) oxides in a steel slag on the formation of humic-like dark-colored polymers by the polycondensation of humic precursors. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2013, 418, 117-123.	2.3	29
34	Solidification of sand by Pb(II)-tolerant bacteria for capping mine waste to control metallic dust: Case of the abandoned Kabwe Mine, Zambia. <i>Chemosphere</i> , 2019, 228, 17-25.	4.2	27
35	Key Factors Affecting Strength Development of Steel Slag-Dredged Soil Mixtures. <i>Minerals (Basel)</i> , 2021, 11, 1078.	0.8	26
36	Kinetics of Fe ³⁺ mineral crystallization from ferrihydrite in the presence of Si at alkaline conditions and implications for nuclear waste disposal. <i>American Mineralogist</i> , 2016, 101, 2057-2069.	0.9	25

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37	Alkali aluminosilicate geopolymers as binders to encapsulate strontium-selective titanate ion-exchangers. <i>Dalton Transactions</i> , 2019, 48, 12116-12126.	1.6	25
38	Dehydration processes in the meta-autunite group minerals meta-autunite, metasaleeite, and metatorbernite. <i>American Mineralogist</i> , 2005, 90, 1308-1314.	0.9	22
39	Radiocesium distribution in aggregate-size fractions of cropland and forest soils affected by the Fukushima nuclear accident. <i>Chemosphere</i> , 2018, 205, 147-155.	4.2	22
40	Efficacy of biocementation of lead mine waste from the Kabwe Mine site evaluated using <i>Pararhodobacter</i> sp.. <i>Environmental Science and Pollution Research</i> , 2019, 26, 15653-15664.	2.7	22
41	Immobilization of Lead and Zinc Leached from Mining Residual Materials in Kabwe, Zambia: Possibility of Chemical Immobilization by Dolomite, Calcined Dolomite, and Magnesium Oxide. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 101.	0.8	13
42	Synthesis of Zn ²⁺ /Fe layered double hydroxides via an oxidation process and structural analysis of products. <i>Journal of Solid State Chemistry</i> , 2015, 228, 221-225.	1.4	21
43	Permeability of Granite Including Macro-Fracture Naturally Filled with Fine-Grained Minerals. <i>Pure and Applied Geophysics</i> , 2018, 175, 917-927.	0.8	21
44	Melt extraction and metasomatism recorded in basal peridotites above the metamorphic sole of the northern Fizh massif, Oman ophiolite. <i>Tectonophysics</i> , 2015, 650, 53-64.	0.9	19
45	Monopersulfate oxidation of Acid Orange 7 with an iron(III)-tetrakis(N) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 427 Td (-methyl) Journal of Molecular Catalysis A, 2015, 396, 84-89.	4.8	17
46	Immobilization of selenium by Mg-bearing minerals and its implications for selenium removal from contaminated water and wastewater. <i>Applied Clay Science</i> , 2016, 123, 121-128.	2.6	17
47	Dissolved Silica Effects on Adsorption and Co-Precipitation of Sb(III) and Sb(V) with Ferrihydrite. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 101.	0.8	16
48	Geochemical signatures and processes in a stream contaminated by heavy mineral processing near Ipoh city, Malaysia. <i>Applied Geochemistry</i> , 2017, 82, 89-101.	1.4	15
49	Magmatic-Hydrothermal Processes Associated with Rare Earth Element Enrichment in the Kangankunde Carbonatite Complex, Malawi. <i>Minerals (Basel, Switzerland)</i> , 2019, 9, 442.	0.8	15
50	Uptake of dissolved arsenic during the retrieval of silica from spent geothermal brine. <i>Geothermics</i> , 2007, 36, 230-242.	1.5	14
51	Decomposition of Polycyclic Aromatic Hydrocarbon (PAHs) on Mineral Surface under Controlled Relative Humidity. <i>Acta Geologica Sinica</i> , 2010, 80, 185-191.	0.8	14
52	Characterization of an adsorbed humin-like substance on an allophanic soil formed via catalytic polycondensation between catechol and glycine, and its adsorption capability to pentachlorophenol. <i>Chemosphere</i> , 2011, 83, 1502-1506.	4.2	13
53	Effect of Dissolved Silica on Immobilization of Boron by Magnesium Oxide. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 101.	0.8	13
54	The formation of Fe colloids and layered double hydroxides as sequestration agents in the natural remediation of mine drainage. <i>Science of the Total Environment</i> , 2021, 774, 145183.	3.9	13

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55	Adsorption of pentachlorophenol to a humin-like substance—bentonite complex prepared by polycondensation reactions of humic precursors. <i>Applied Clay Science</i> , 2014, 87, 136-141.	2.6	12
56	A novel method for remediation of nickel containing wastewater at neutral conditions. <i>Journal of Hazardous Materials</i> , 2017, 329, 49-56.	6.5	12
57	Strontium adsorption and penetration in kaolinite at low Sr ²⁺ concentration. <i>Soil Science and Plant Nutrition</i> , 2017, 63, 14-17.	0.8	12
58	Encapsulation of Sr-loaded titanate spent adsorbents in potassium aluminosilicate geopolymer. <i>Journal of Nuclear Science and Technology</i> , 2020, 57, 1181-1188.	0.7	12
59	Evaluation of the Affinity of Some Toxic Elements to Schwertmannite in Natural Streams Contaminated with Acid Mine Drainage. <i>Water, Air, and Soil Pollution</i> , 2011, 216, 153-166.	1.1	11
60	Effect of Flowing Water on Sr Sorption Changes of Hydrous Sodium Titanate. <i>Minerals (Basel)</i> , 2019, 9, 1075.	0.8	11
61	Formation of Fe- and Mg-Rich Smectite under Hyperalkaline Conditions at Narra in Palawan, the Philippines. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 155.	0.8	11
62	Geochemical constraints on the mobilization of Ni and critical metals in laterite deposits, Sulawesi, Indonesia: A mass balance approach. <i>Resource Geology</i> , 2021, 71, 255-282.	0.3	11
63	Environmental Behavior and Management of Hazardous Inorganic Anions in Nature. <i>Journal of MMJ</i> , 2007, 123, 132-144.	0.4	9
64	Comparison of strontium retardation for kaolinite, illite, vermiculite and allophane. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2018, 317, 409-419.	0.7	9
65	Solid-Phase Partitioning and Leaching Behavior of Pb and Zn from Playground Soils in Kabwe, Zambia. <i>Toxics</i> , 2021, 9, 248.	1.6	9
66	Influence of phosphate sorption on dispersion of a Ferralsol. <i>Soil Science and Plant Nutrition</i> , 2014, 60, 356-366.	0.8	8
67	Determination and reduction of Fe(III) incorporated into Mg—Fe layered double hydroxide structures. <i>Applied Clay Science</i> , 2016, 121-122, 71-76.	2.6	8
68	Application of the Transient Pulse Method to Measure Clay Permeability. <i>Materials Transactions</i> , 2018, 59, 1427-1432.	0.4	8
69	Year-round variations in the fluvial transport load of particulate ¹³⁷ Cs in a forested catchment affected by the Fukushima Daiichi Nuclear Power Plant accident. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2016, 310, 679-693.	0.7	7
70	Seasonal effects of natural attenuation on drainage contamination from artisanal gold mining, Cambodia: Implication for passive treatment. <i>Science of the Total Environment</i> , 2022, 806, 150398.	3.9	7
71	Uranium Micro-isotopic Analysis of Weathered Rock by a Sensitive High Resolution Ion Microprobe (SHRIMP II). <i>Radiochimica Acta</i> , 1998, 82, 335-340.	0.5	6
72	Seasonal Deposition Fluxes of Polycyclic Aromatic Hydrocarbons (PAHs) in Lake Biwa, Japan. <i>Water, Air, and Soil Pollution</i> , 2009, 198, 297-306.	1.1	6

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73	Na-montmorillonite dissolution rate determined by varying the Gibbs free energy of reaction in a dispersed system and its application to a coagulated system in 0.3M NaOH solution at 70°C. <i>Applied Clay Science</i> , 2014, 93-94, 62-71.	2.6	6
74	Effect of Soil Organic Matters in Dredged Soils to Utilization of their Mixtures Made with a Steel Slag. <i>Materials</i> , 2020, 13, 5450.	1.3	6
75	Evaluation of Dispersion of Lead-Bearing Mine Wastes in Kabwe District, Zambia. <i>Minerals (Basel)</i> , 2022, 12, 393.	0.8	6
76	Redistribution of Strontium and Cesium During Alteration of Smectite to Illite. <i>Radiochimica Acta</i> , 1994, 66-67, 323-326.	0.5	5
77	Field and Laboratory Examination of Uranium Microcrystallization and Its Role in Uranium Transport. <i>Materials Research Society Symposia Proceedings</i> , 2000, 663, 1.	0.1	5
78	Geochemical characteristics of ores and surface waters for environmental risk assessment in the Pinpet iron deposit, southern Shan State, Myanmar. <i>Resource Geology</i> , 2020, 70, 296-308.	0.3	5
79	Large Fe isotope fractionations in sulfide ores and ferruginous sedimentary rocks from the Kuroko volcanogenic massive sulfide deposits in the Hokuroku district, northeast Japan. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 295, 49-64.	1.6	5
80	Alkaline Leaching and Concurrent Cementation of Dissolved Pb and Zn from Zinc Plant Leach Residues. <i>Minerals (Basel, Switzerland)</i> , 2022, 12, 393.	0.8	5
81	Distributions of Uranium-Series Radionuclides in Rock and Migration Rate of Uranium at the Koongarra Uranium Deposit, Australia. <i>Radiochimica Acta</i> , 1998, 82, 319-326.	0.5	4
82	Elucidation of polycyclic aromatic hydrocarbon sources in the sinking particles in Lake Biwa, Japan. <i>Limnology</i> , 2010, 11, 241-250.	0.8	4
83	A passive collection system for whole size fractions in river suspended solids. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2015, 303, 1291-1295.	0.7	4
84	Stiffness and strength mobilisation in steel-slag-mixed dredged clays in early curing. <i>Proceedings of the Institution of Civil Engineers: Ground Improvement</i> , 2020, 173, 65-81.	0.7	4
85	Formation of Natural Silicate Hydrates by the Interaction of Alkaline Seepage and Sediments Derived from Serpentinized Ultramafic Rocks at Narra, Palawan, the Philippines. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 719.	0.8	4
86	Geochemical and Mineralogical Characterizations of Bentonite interacted with Alkaline Fluids generating in Zambales Ophiolite, Northwestern Luzons, Philippines. <i>Journal of the Geological Society of Japan</i> , 2014, 120, 361-375.	0.2	4
87	Mineralogical evolution of a weathering profile in the Tagaung Taung Ni laterite deposit: significance of smectite in the formation of high-grade Ni ore in Myanmar. <i>Mineralium Deposita</i> , 2022, 57, 1107-1122.	1.7	4
88	Significance of the Effect of Mineral Alteration on Nuclide Migration. <i>Materials Research Society Symposia Proceedings</i> , 1993, 333, 645.	0.1	3
89	SHRIMP measurements of U and Pb isotopes in the Koongarra secondary ore deposit, Northern Australia.. <i>Geochemical Journal</i> , 2000, 34, 349-358.	0.5	3
90	Using Fe-Mn binary oxide three-dimensional nanostructure to remove arsenic from aqueous systems. <i>Water Science and Technology: Water Supply</i> , 2016, 16, 516-524.	1.0	3

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91	Sorption behaviour of arsenate by non-crystalline aluminosilicate minerals: implications for arsenic immobilisation during the disposal of alkaline coal fly ash materials. <i>International Journal of Oil, Gas and Coal Technology</i> , 2016, 12, 197.	0.1	3
92	Application of Transient Pulse Method to Permeability Measurement for Clay. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , 2018, 67, 318-323.	0.1	3
93	Uranium Fixation During Uranium Migration Under an Oxidizing Condition. <i>Materials Research Society Symposia Proceedings</i> , 1994, 353, 1219.	0.1	2
94	Formation of Secondary Minerals and Uptake of Various Anions Under Naturally-Occurring Hyperalkaline Conditions in Oman. , 2009, , .		2
95	Sorption Behavior of Arsenate by Mg-Bearing Minerals at Hyperalkaline Condition: Implications for Oxyanions Sequestration During the Use and Disposal of Alkaline Wastes. <i>Water, Air, and Soil Pollution</i> , 2012, 223, 3471-3483.	1.1	2
96	Mineral Synthesis in Si-Al-Ca Systems and Their Iodide Sorption Capacity under Alkaline Conditions. <i>Water, Air, and Soil Pollution</i> , 2013, 224, 1.	1.1	2
97	Evaluation of bentonite alteration due to interactions with iron: sensitivity analyses to identify the important factors for the bentonite alteration. <i>Journal of Nuclear Fuel Cycle and Environment</i> , 2013, 20, 39-52.	0.1	2
98	Dissolution Behavior of Lead Borate Glass under Simulated Geological Disposal Conditions. <i>MRS Advances</i> , 2018, 3, 1139-1145.	0.5	2
99	Geochemical behaviour of heavy metals in sludge effluents and solid deposits on the Zambian Copperbelt: Implication for effluent treatment and sludge reuse. <i>Science of the Total Environment</i> , 2021, 769, 144342.	3.9	2
100	Diagenetic alteration of the Neogene sedimentary rocks in the no district, Niigata prefecture.. <i>Journal of Mineralogy, Petrology and Economic Geology</i> , 1989, 84, 259-269.	0.1	2
101	Application of Ferro Nickel Slag to Soil Improvement Agent. <i>Journal of MMIJ</i> , 2013, 129, 29-35.	0.4	2
102	In Situ EXAFS Study of Sr Adsorption on TiO ₂ (110) under High Ionic Strength Wastewater Conditions. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 1386.	0.8	2
103	Impacts of Surface Water on Windborne Lead Dispersion from the Zinc Plant Leach Residue in Kabwe, Zambia. <i>Minerals (Basel, Switzerland)</i> , 2022, 12, 535.	0.8	2
104	Modelling Study on Uranium Migration in Rocks Under Weathering Condition. <i>Materials Research Society Symposia Proceedings</i> , 1994, 353, 1227.	0.1	1
105	Effect of Crystallochemistry of Starting Materials on the Rate of Smectite to Illite Reaction. <i>Materials Research Society Symposia Proceedings</i> , 1994, 353, 239.	0.1	1
106	Mechanism of Saleeite Formation at the Koongarra Secondary Ore Deposit. <i>Materials Research Society Symposia Proceedings</i> , 1995, 412, 809.	0.1	1
107	XAFS study of Sb and As in Cretaceous-Tertiary boundary sediments: an index of soiling of the global environment with dust and ashes from impact ejecta falls. <i>Journal of Mineralogical and Petrological Sciences</i> , 2019, 114, 224-230.	0.4	1
108	A Novel Remediation Method for Arsenic Bearing Acid Mine Drainage Learnt from Natural Attenuation Process. <i>Journal of MMIJ</i> , 2008, 124, 519-528.	0.4	1

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109	Permeability Change in Macro-Fractured Granite Using Water Including Clay. Journal of MMIJ, 2022, 138, 44-50.	0.4	1
110	Effect of Calcium Silicate Hydrate Precipitates at Cementitious and Bentonite Material Interface on Long-Term Engineered Barrier System Performance in TRU Waste Disposal Facilities. Materials Research Society Symposia Proceedings, 2009, 1193, 225.	0.1	0
111	Mineralogical and Geochemical Constraints on Arsenic Mobility in a Philippine Geothermal Field. Acta Geologica Sinica, 2006, 80, 330-335.	0.8	0
112	Geochemical fractionation and risk assessment of copper in urban soil, Yogyakarta city, Indonesia. AIP Conference Proceedings, 2016, , .	0.3	0
113	8. Applied mineralogy for recovery from the accident of Fukushima Daiichi Nuclear Power Station. , 2017, , 153-170.		0
114	Crystallographer's Challenge in the 21st Century. 4. Environmental Crystallography. Clay Crystallography and Environmental Material Science for our 21st Century.. Nihon Kessho Gakkaishi, 2001, 43, 76-80.	0.0	0
115	Redistribution of Strontium and Cesium During Alteration of Smectite to Illite. Radiochimica Acta, 1994, 66-67, 323-326.	0.5	0