

Satoshi Utsunomiya

List of Publications by Year in descending order

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122
papers

6,502
citations

71061

41
h-index

66879

78
g-index

123
all docs

123
docs citations

123
times ranked

5602
citing authors

#	ARTICLE	IF	CITATIONS
1	Solubility of gold in arsenian pyrite. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 2781-2796.	1.6	724
2	The coupled geochemistry of Au and As in pyrite from hydrothermal ore deposits. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 140, 644-670.	1.6	400
3	Colloid Transport of Plutonium in the Far-Field of the Mayak Production Association, Russia. <i>Science</i> , 2006, 314, 638-641.	6.0	395
4	Trace metal nanoparticles in pyrite. <i>Ore Geology Reviews</i> , 2011, 42, 32-46.	1.1	327
5	“Invisible” gold revealed: Direct imaging of gold nanoparticles in a Carlin-type deposit. <i>American Mineralogist</i> , 2004, 89, 1359-1366.	0.9	279
6	A proposed new type of arsenian pyrite: Composition, nanostructure and geological significance. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 2919-2933.	1.6	278
7	Structural Stability and Phase Transitions in WO ₃ Thin Films. <i>Journal of Physical Chemistry B</i> , 2006, 110, 10430-10435.	1.2	239
8	Application of High-Angle Annular Dark Field Scanning Transmission Electron Microscopy, Scanning Transmission Electron Microscopy-Energy Dispersive X-ray Spectrometry, and Energy-Filtered Transmission Electron Microscopy to the Characterization of Nanoparticles in the Environment. <i>Environmental Science & Technology</i> , 2003, 37, 786-791.	4.6	169
9	Gold-telluride nanoparticles revealed in arsenic-free pyrite. <i>American Mineralogist</i> , 2012, 97, 1515-1518.	0.9	150
10	Direct Identification of Trace Metals in Fine and Ultrafine Particles in the Detroit Urban Atmosphere. <i>Environmental Science & Technology</i> , 2004, 38, 2289-2297.	4.6	129
11	The mechanisms of reduction of hexavalent chromium by green rust sodium sulphate: Formation of Cr-goethite. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 3582-3592.	1.6	110
12	Decoupled geochemical behavior of As and Cu in hydrothermal systems. <i>Geology</i> , 2009, 37, 707-710.	2.0	108
13	Thermal behavior of metal nanoparticles in geologic materials. <i>Geology</i> , 2006, 34, 1033.	2.0	105
14	Focussed ion beam “transmission electron microscopy applications in ore mineralogy: Bridging micro- and nanoscale observations. <i>Ore Geology Reviews</i> , 2011, 42, 6-31.	1.1	105
15	Seafloor hydrothermal alteration at an Archaean mid-ocean ridge. <i>Journal of Metamorphic Geology</i> , 2001, 19, 583-599.	1.6	98
16	Primary haematite formation in an oxygenated sea 3.46 billion years ago. <i>Nature Geoscience</i> , 2009, 2, 301-306.	5.4	94
17	Uraninite and Fullerene in Atmospheric Particulates. <i>Environmental Science & Technology</i> , 2002, 36, 4943-4947.	4.6	93
18	Caesium-rich micro-particles: A window into the meltdown events at the Fukushima Daiichi Nuclear Power Plant. <i>Scientific Reports</i> , 2017, 7, 42731.	1.6	88

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19	Biotite dissolution processes and mechanisms in the laboratory and in nature: Early stage weathering environment and vermiculitization. <i>American Mineralogist</i> , 2003, 88, 377-386.	0.9	82
20	Structural Characteristics of Lithium Nickel Phosphate Studied Using Analytical Electron Microscopy and Raman Spectroscopy. <i>Chemistry of Materials</i> , 2006, 18, 3788-3794.	3.2	74
21	Direct evidence of late Archean to early Proterozoic anoxic atmosphere from a product of 2.5 Ga old weathering. <i>Earth and Planetary Science Letters</i> , 2001, 184, 523-528.	1.8	71
22	Groundwater Nanoparticles in the Far-Field at the Nevada Test Site: Mechanism for Radionuclide Transport. <i>Environmental Science & Technology</i> , 2009, 43, 1293-1298.	4.6	69
23	Isotopic signature and nano-texture of cesium-rich micro-particles: Release of uranium and fission products from the Fukushima Daiichi Nuclear Power Plant. <i>Scientific Reports</i> , 2017, 7, 5409.	1.6	68
24	Spectroscopic ellipsometry characterization of the optical properties and thermal stability of ZrO ₂ films made by ion-beam assisted deposition. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	67
25	The chemical stability of coffinite, $USiO_4 \cdot nH_2O$, associated with organic matter: A case study from Grants uranium region, New Mexico, USA. <i>Chemical Geology</i> , 2008, 251, 33-49.	1.4	64
26	Chemical and structural characterization of As immobilization by nanoparticles of mackinawite (FeSm). <i>Chemical Geology</i> , 2009, 268, 116-125.	1.4	63
27	Uranium Dioxides and Debris Fragments Released to the Environment with Cesium-Rich Microparticles from the Fukushima Daiichi Nuclear Power Plant. <i>Environmental Science & Technology</i> , 2018, 52, 2586-2594.	4.6	63
28	Spectroscopic and Chemical Imaging Analysis of Lithium Iron Triphosphate. <i>Journal of Physical Chemistry C</i> , 2007, 111, 1049-1054.	1.5	57
29	Vapor hydration of SON68 glass from 90°C to 200°C: A kinetic study and corrosion products investigation. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 2894-2905.	1.5	57
30	Nanoscale occurrence of Pb in an Archean zircon. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 4679-4686.	1.6	55
31	Adsorbed U(VI) Surface Species on Muscovite Identified by Laser Fluorescence Spectroscopy and Transmission Electron Microscopy. <i>Environmental Science & Technology</i> , 2006, 40, 4646-4652.	4.6	55
32	Radiation damage and alteration of zircon from a 3.3 Ga porphyritic granite from the Jack Hills, Western Australia. <i>Chemical Geology</i> , 2007, 236, 92-111.	1.4	55
33	Mechanism of water oxidation by non-heme iron catalysts when driven with sodium periodate. <i>Dalton Transactions</i> , 2014, 43, 12501-12513.	1.6	54
34	Novel Method of Quantifying Radioactive Cesium-Rich Microparticles (CsMPs) in the Environment from the Fukushima Daiichi Nuclear Power Plant. <i>Environmental Science & Technology</i> , 2018, 52, 6390-6398.	4.6	54
35	Nanoscale "liquid" inclusions of As-Fe-S in arsenian pyrite. <i>American Mineralogist</i> , 2009, 94, 391-394.	0.9	53
36	Ion-beam and electron-beam irradiation of synthetic britholite. <i>Journal of Nuclear Materials</i> , 2003, 322, 180-188.	1.3	51

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37	Biological nano-mineralization of Ce phosphate by <i>Saccharomyces cerevisiae</i> . <i>Chemical Geology</i> , 2010, 277, 61-69.	1.4	48
38	Ion irradiation-induced amorphization and nano-crystal formation in garnets. <i>Journal of Nuclear Materials</i> , 2002, 303, 177-187.	1.3	47
39	Novel Lithium Iron Pyrophosphate ($\text{LiFe}_{1.5}\text{P}_2\text{O}_7$) as a Positive Electrode for Li-Ion Batteries. <i>Chemistry of Materials</i> , 2007, 19, 5319-5324.	3.2	45
40	Radiation effects in ferrate garnet. <i>Journal of Nuclear Materials</i> , 2005, 336, 251-260.	1.3	44
41	Dissolution of radiation-damaged zircon in lateritic soils. <i>American Mineralogist</i> , 2007, 92, 1978-1989.	0.9	43
42	Iron oxidation state of a 2.45-Byr-old paleosol developed on mafic volcanics. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 213-221.	1.6	42
43	Anoxic dissolution processes of biotite: implications for Fe behavior during Archean weathering. <i>Earth and Planetary Science Letters</i> , 2004, 224, 117-129.	1.8	39
44	Radioactive Cs in the Severely Contaminated Soils Near the Fukushima Daiichi Nuclear Power Plant. <i>Frontiers in Energy Research</i> , 2015, 3, .	1.2	38
45	Time-response relationship of nano and micro particle induced lung inflammation. Quartz as reference compound. <i>Human and Experimental Toxicology</i> , 2010, 29, 915-933.	1.1	37
46	Abundance and distribution of radioactive cesium-rich microparticles released from the Fukushima Daiichi Nuclear Power Plant into the environment. <i>Chemosphere</i> , 2020, 241, 125019.	4.2	36
47	Organic complexation of U(VI) in reducing soils at a natural analogue site: Implications for uranium transport. <i>Chemosphere</i> , 2020, 254, 126859.	4.2	36
48	Radioactive Cs in the estuary sediments near Fukushima Daiichi Nuclear Power Plant. <i>Science of the Total Environment</i> , 2016, 551-552, 155-162.	3.9	35
49	Microscale characterization of uranium(VI) silicate solids and associated neptunium(V). <i>Radiochimica Acta</i> , 2005, 93, .	0.5	33
50	Formation of V_2O_3 nanocrystals by thermal reduction of V_2O_5 thin films. <i>Solid State Communications</i> , 2006, 137, 645-649.	0.9	33
51	Post-adsorption process of Yb phosphate nano-particle formation by <i>Saccharomyces cerevisiae</i> . <i>Geochimica Et Cosmochimica Acta</i> , 2012, 93, 30-46.	1.6	33
52	Dissolution of radioactive, cesium-rich microparticles released from the Fukushima Daiichi Nuclear Power Plant in simulated lung fluid, pure-water, and seawater. <i>Chemosphere</i> , 2019, 233, 633-644.	4.2	33
53	Effective and efficient desorption of Cs from hydrothermal-treated clay minerals for the decontamination of Fukushima radioactive soil. <i>Chemical Engineering Journal</i> , 2018, 333, 392-401.	6.6	32
54	Nanoscale mineralogy of arsenic in a region of New Hampshire with elevated As-concentrations in the groundwater. <i>American Mineralogist</i> , 2003, 88, 1844-1852.	0.9	31

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55	The fate of the epsilon phase (Mo-Ru-Pd-Tc-Rh) in the UO ₂ of the Oklo natural fission reactors. <i>Radiochimica Acta</i> , 2006, 94, 749-753.	0.5	30
56	Fate of trace elements during alteration of uraninite in a hydrothermal vein-type U-deposit from Marshall Pass, Colorado, USA. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 4954-4973.	1.6	30
57	Particulate plutonium released from the Fukushima Daiichi meltdowns. <i>Science of the Total Environment</i> , 2020, 743, 140539.	3.9	30
58	Identification and characterization of nanosized tripuhyite in soil near Sb mine tailings. <i>American Mineralogist</i> , 2011, 96, 1171-1181.	0.9	28
59	Nanogeoscience in ore systems research: Principles, methods, and applications. <i>Ore Geology Reviews</i> , 2011, 42, 1-5.	1.1	28
60	Sorption of trivalent cerium by a mixture of microbial cells and manganese oxides: Effect of microbial cells on the oxidation of trivalent cerium. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 163, 1-13.	1.6	26
61	Accommodation of Uranium into the Garnet Structure. <i>Materials Research Society Symposia Proceedings</i> , 2002, 713, 1.	0.1	25
62	Summertime carbonaceous aerosols collected in the marine boundary layer of the Arctic Ocean. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	25
63	Nano-scale reaction processes at the interface between apatite and aqueous lead. <i>Chemical Geology</i> , 2013, 340, 121-130.	1.4	24
64	THE APPLICATION OF HRTEM TECHNIQUES AND NANOSIMS TO CHEMICALLY AND ISOTOPICALLY CHARACTERIZE GEOBACTER SULFURREDUCTENS SURFACES. <i>Canadian Mineralogist</i> , 2005, 43, 1631-1641.	0.3	23
65	Vapor hydration of a simulated borosilicate nuclear waste glass in unsaturated conditions at 50 Å°C and 90 Å°C. <i>RSC Advances</i> , 2015, 5, 64538-64549.	1.7	23
66	Effects of ionizing radiation on the hollandite structure-type: Ba _{0.85} Cs _{0.26} Al _{1.35} Fe _{0.77} Ti _{5.90} O ₁₆ . <i>American Mineralogist</i> , 2008, 93, 241-247.	0.9	22
67	Cesium and Strontium Incorporation into Uranophane, Ca[(UO ₂) ₂](SiO ₃ OH)] ₂ .5H ₂ O. <i>Journal of Nuclear Science and Technology</i> , 2002, 39, 504-507.	0.7	20
68	Alteration of UO _{2+x} under oxidizing conditions, Marshall Pass, Colorado, USA. <i>Journal of Alloys and Compounds</i> , 2007, 444-445, 584-589.	2.8	20
69	Removal of Soluble Strontium via Incorporation into Biogenic Carbonate Minerals by Halophilic Bacterium <i>Bacillus</i> sp. Strain TK2d in a Highly Saline Solution. <i>Applied and Environmental Microbiology</i> , 2017, 83, .	1.4	20
70	Studies of (Cs,Ba)-hollandite dissolution under gamma irradiation at 95Å°C and at pH 2.5, 4.4 and 8.6. <i>Journal of Nuclear Materials</i> , 2011, 419, 281-290.	1.3	19
71	Crystal chemistry and radiation-induced amorphization of P-coffinite from the natural fission reactor at Bangombe, Gabon. <i>American Mineralogist</i> , 2009, 94, 827-837.	0.9	18
72	New highly radioactive particles derived from Fukushima Daiichi Reactor Unit 1: Properties and environmental impacts. <i>Science of the Total Environment</i> , 2021, 773, 145639.	3.9	18

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73	Lead in zircon at the atomic scale. <i>American Mineralogist</i> , 2012, 97, 1094-1102.	0.9	17
74	Crystal Chemistry and Stability of Hydrated Rare-Earth Phosphates Formed at Room Temperature. <i>Minerals (Basel, Switzerland)</i> , 2017, 7, 84.	0.8	17
75	Biominalization of Middle Rare Earth Element Samarium in Yeast and Bacteria Systems. <i>Geomicrobiology Journal</i> , 2018, 35, 375-384.	1.0	17
76	Ten years after the NPP accident at Fukushima : review on fuel debris behavior in contact with water. <i>Journal of Nuclear Science and Technology</i> , 2022, 59, 1-24.	0.7	16
77	The effect of ionizing radiation on uranophane. <i>American Mineralogist</i> , 2003, 88, 159-166.	0.9	15
78	Adsorption of Extracellular Polymeric Substances Derived from <i>S. cerevisiae</i> to Ceria Nanoparticles and the Effects on Their Colloidal Stability. <i>Environments - MDPI</i> , 2017, 4, 48.	1.5	15
79	Radiation-induced decomposition of U(VI) phases to nanocrystals of UO ₂ . <i>Earth and Planetary Science Letters</i> , 2005, 240, 521-528.	1.8	14
80	Stability of uranium (VI) peroxide hydrates under ionizing radiation. <i>American Mineralogist</i> , 2009, 94, 229-235.	0.9	14
81	Role of vein-phases in nanoscale sequestration of U, Nb, Ti, and Pb during the alteration of pyrochlore. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 150, 226-252.	1.6	14
82	Metaschoepite Dissolution in Sediment Column Systems—Implications for Uranium Speciation and Transport. <i>Environmental Science & Technology</i> , 2019, 53, 9915-9925.	4.6	14
83	Electron microscopy investigation of structural transformations in tungsten oxide (WO ₃) thin films. <i>Physica Status Solidi A</i> , 2005, 202, R108-R110.	1.7	13
84	Effects of CeO ₂ nanoparticles on microbial metabolism. <i>Chemical Geology</i> , 2015, 391, 33-41.	1.4	13
85	Ion irradiation effects in natural garnets: Comparison with zircon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2002, 191, 600-605.	0.6	12
86	Oxygen isotopic composition of nano-scale uraninite at the Oklo-Oklobondo natural fission reactors, Gabon. <i>American Mineralogist</i> , 2003, 88, 1583-1590.	0.9	12
87	Multi-scale analysis of the occurrence of Pb, Cr and Mn in the NIST standards: Urban dust (SRM 1649a) and indoor dust (SRM 2584). <i>Atmospheric Environment</i> , 2014, 82, 364-374.	1.9	12
88	Occurrence of highly radioactive microparticles in the seafloor sediment from the pacific coast 35 km northeast of the Fukushima Daiichi nuclear power plant. <i>Chemosphere</i> , 2021, 267, 128907.	4.2	12
89	The effect of partial pressure of carbon dioxide on anorthite dissolution.. <i>Journal of the Mineralogical Society of Japan</i> , 1999, 21, 1-8.	1.0	12
90	Structure of a Gold(III) Hydroxide and Determination of Its Solubility. <i>Bulletin of the Chemical Society of Japan</i> , 2016, 89, 1385-1390.	2.0	11

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91	Precipitation and alteration of coffinite (USiO ₄ nH ₂ O) in the presence of apatite. <i>European Journal of Mineralogy</i> , 2010, 22, 75-88.	0.4	10
92	Effect of minerals on accumulation of Cs by fungus <i>Saccaromyces cerevisiae</i> . <i>Journal of Environmental Radioactivity</i> , 2015, 144, 127-133.	0.9	10
93	Effect of Temperature on K ⁺ and Mg ²⁺ Extracted Desorption of Cs from Vermiculitized Biotite. <i>Chemistry Letters</i> , 2017, 46, 1350-1352.	0.7	9
94	Desorption mechanisms of cesium from illite and vermiculite. <i>Applied Geochemistry</i> , 2020, 123, 104768.	1.4	9
95	Effect of Redox Conditions on Actinide Speciation and Partitioning with Colloidal Matter. , 2011, , 361-375.		8
96	Formation of radioactive cesium microparticles originating from the Fukushima Daiichi Nuclear Power Plant accident: characteristics and perspectives. <i>Journal of Nuclear Science and Technology</i> , 2019, 56, 790-800.	0.7	8
97	Volatilization of B ⁴ C control rods in Fukushima Daiichi nuclear reactors during meltdown: B ⁶ Li isotopic signatures in cesium-rich microparticles. <i>Journal of Hazardous Materials</i> , 2022, 428, 128214.	6.5	8
98	Early Proterozoic weathering processes under low O ₂ conditions reconstructed from a 2.45 Ga paleosol in Pronto, Canada. <i>American Mineralogist</i> , 2011, 96, 1613-1623.	0.9	7
99	The competing effects of microbially derived polymeric and low molecular-weight substances on the dispersibility of CeO ₂ nanoparticles. <i>Scientific Reports</i> , 2018, 8, 3648.	1.6	7
100	Solubility of monoclinic and yttrium stabilized cubic ZrO ₂ : Solution and surface thermodynamics guiding ultra-trace analytics in aqueous phase. <i>Journal of Nuclear Materials</i> , 2021, 545, 152631.	1.3	7
101	A review of efforts for volume reduction of contaminated soil in the ten years after the accident at the Fukushima Daiichi Nuclear Power Plant. <i>Journal of Nuclear Science and Technology</i> , 2022, 59, 135-147.	0.7	7
102	Source-to-receptor pathways of anthropogenic PM _{2.5} in Detroit, Michigan: Comparison of two inhalation exposure studies. <i>Atmospheric Environment</i> , 2009, 43, 1805-1813.	1.9	6
103	The role of nanoscale aggregation of ferrihydrite and amorphous silica in the natural attenuation of contaminant metals at mill tailings sites. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 298, 207-226.	1.6	6
104	Radiation-induced decomposition of U(VI) alteration phases of UO ₂ . <i>Materials Research Society Symposia Proceedings</i> , 2006, 932, 1.	0.1	4
105	Ion Irradiation Effects in Synthetic Garnets Incorporating Actinides. <i>Materials Research Society Symposia Proceedings</i> , 2002, 713, 1.	0.1	3
106	Scanning Transmission Electron Microscopy and Related Techniques for Research on Actinide and Radionuclide Nanomaterials. , 2011, , 33-62.		3
107	Adsorption of ytterbium onto <i>Saccharomyces cerevisiae</i> fungal cells: A pH-dependent contribution of phosphoryl functional group. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2013, 295, 2283-2287.	0.7	3
108	Constraints on Hf and Zr mobility in high-sulfidation epithermal systems: formation of kosnarite, KZr ₂ (PO ₄) ₃ , in the Chaquicocha gold deposit, Yanacocha district, Peru. <i>Mineralium Deposita</i> , 2015, 50, 429-436.	1.7	3

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109	Chemical species of iodine during sorption by activated carbon -Effects of original chemical species and fulvic acids. Journal of Nuclear Science and Technology, 2022, 59, 580-589.	0.7	3
110	Investigation of Temperature Induced Structural Transformations in Tungsten Oxide (WO ₃) Thin Films. ECS Transactions, 2006, 1, 37-42.	0.3	2
111	Calcium molybdate nanoparticles formation in egg phosphatidyl choline based liposome caused by liposome fusion. Journal of Colloid and Interface Science, 2018, 530, 473-480.	5.0	2
112	Editorial for Special Issue "Minerals Down to the Nanoscale: A Glimpse at Ore-Forming Processes" Minerals (Basel, Switzerland), 2019, 9, 692.	0.8	2
113	Geochemistry of barium ions associated with biogenic manganese oxide nanoparticles generated by a fungus strain: Implications for radium sequestration in uranium mill tailings. Gondwana Research, 2022, 110, 270-282.	3.0	2
114	Alteration of Coffinite (USiO ₄) Under Reducing and Oxidizing Conditions. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	1
115	Nano-scaled Calcium Molybdate Particle Formation on Egg Phosphatidylcholine Liposome Surface. Chemistry Letters, 2019, 48, 1480-1483.	0.7	1
116	Function of Microbes on Chemical Species Transformation of Radionuclides. , 2020, , 67-92.		1
117	Application of Electron Microscopy to Understanding Colloid-Facilitated Transport of Radionuclides at the Mayak Production Association Facility, Near Lake Karachai, Russia. , 2020, , 177-200.		1
118	Commentary on the Role of Microorganisms and Nanoparticles in Radionuclides Migration through Groundwater. , 2020, , 221-225.		1
119	Gravitational separation of ¹³⁷ Cs contaminated soil in Fukushima environment: Density dependence of ¹³⁷ Cs activity and application to volume reduction. Journal of Environmental Radioactivity, 2022, 246, 106846.	0.9	1
120	Nanoscale Heavy Metal Phases on Atmospheric and Groundwater Colloids. ACS Symposium Series, 2004, , 97-101.	0.5	0
121	Synthesis, Structure, and Electrochemical Properties of Li ₄ Ti ₅ O ₁₂ . Materials Research Society Symposia Proceedings, 2006, 973, 1.	0.1	0
122	Sorption Behavior of Np(V) on Microbe Pure Culture and Consortia. Chemistry Letters, 2017, 46, 771-774.	0.7	0