

# Takazo Shibuya

## List of Publications by Year in descending order

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71  
papers

2,480  
citations

218677

26  
h-index

206112

48  
g-index

72  
all docs

72  
docs citations

72  
times ranked

2715  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ongoing hydrothermal activities within Enceladus. <i>Nature</i> , 2015, 519, 207-210.	27.8	382
2	The Drive to Life on Wet and Icy Worlds. <i>Astrobiology</i> , 2014, 14, 308-343.	3.0	232
3	High-temperature water-rock interactions and hydrothermal environments in the chondrite-like core of Enceladus. <i>Nature Communications</i> , 2015, 6, 8604.	12.8	152
4	Geological background of the Kairei and Edmond hydrothermal fields along the Central Indian Ridge: Implications of their vent fluids' distinct chemistry. <i>Geofluids</i> , 2008, 8, 239-251.	0.7	112
5	Evolution of the composition of seawater through geologic time, and its influence on the evolution of life. <i>Gondwana Research</i> , 2008, 14, 159-174.	6.0	91
6	Highly alkaline, high-temperature hydrothermal fluids in the early Archean ocean. <i>Precambrian Research</i> , 2010, 182, 230-238.	2.7	88
7	Discovery of New Hydrothermal Activity and Chemosynthetic Fauna on the Central Indian Ridge at 18°S. <i>PLoS ONE</i> , 2012, 7, e32965.	2.5	83
8	Diversity of fluid geochemistry affected by processes during fluid upwelling in active hydrothermal fields in the Izena Hole, the middle Okinawa Trough back-arc basin. <i>Geochemical Journal</i> , 2014, 48, 357-369.	1.0	69
9	The youngest blueschist belt in SW Japan: implication for the exhumation of the Cretaceous Sanbagawa high-pressure metamorphic belt. <i>Journal of Metamorphic Geology</i> , 2008, 26, 583-602.	3.4	63
10	Grain-scale iron isotopic distribution of pyrite from Precambrian shallow marine carbonate revealed by a femtosecond laser ablation multicollector ICP-MS technique: Possible proxy for the redox state of ancient seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 2760-2778.	3.9	59
11	Reactions between basalt and CO <sub>2</sub> -rich seawater at 250 and 350 °C, 500 bars: Implications for the CO <sub>2</sub> sequestration into the modern oceanic crust and the composition of hydrothermal vent fluid in the CO <sub>2</sub> -rich early ocean. <i>Chemical Geology</i> , 2013, 359, 1-9.	3.3	56
12	Post-drilling changes in fluid discharge pattern, mineral deposition, and fluid chemistry in the Iheya North hydrothermal field, Okinawa Trough. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 4774-4790.	2.5	52
13	Free energy distribution and hydrothermal mineral precipitation in Hadean submarine alkaline vent systems: Importance of iron redox reactions under anoxic conditions. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 175, 1-19.	3.9	52
14	Deepest and hottest hydrothermal activity in the Okinawa Trough: the Yokosuka site at Yaeyama Knoll. <i>Royal Society Open Science</i> , 2017, 4, 171570.	2.4	48
15	Are the Taitao granites formed due to subduction of the Chile ridge?. <i>Lithos</i> , 2009, 113, 246-258.	1.4	46
16	Variability in Microbial Communities in Black Smoker Chimneys at the NW Caldera Vent Field, Brothers Volcano, Kermadec Arc. <i>Geomicrobiology Journal</i> , 2009, 26, 552-569.	2.0	46
17	Geotectonic framework of the Blueschist Unit on Anglesey, Llyn, UK, and its role in the development of a Neoproterozoic accretionary orogen. <i>Precambrian Research</i> , 2007, 153, 11-28.	2.7	45
18	Hydrogen-rich hydrothermal environments in the Hadean ocean inferred from serpentinization of komatiites at 300 °C and 500 bar. <i>Progress in Earth and Planetary Science</i> , 2015, 2, .	3.0	45

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19	Rapid growth of mineral deposits at artificial seafloor hydrothermal vents. <i>Scientific Reports</i> , 2016, 6, 22163.	3.3	44
20	Middle Archean ocean ridge hydrothermal metamorphism and alteration recorded in the Cleaverville area, Pilbara Craton, Western Australia. <i>Journal of Metamorphic Geology</i> , 2007, 25, 751-767.	3.4	42
21	Potential for biogeochemical cycling of sulfur, iron and carbon within massive sulfide deposits below the seafloor. <i>Environmental Microbiology</i> , 2015, 17, 1817-1835.	3.8	42
22	Genome-enabled metabolic reconstruction of dominant chemosynthetic colonizers in deep-sea massive sulfide deposits. <i>Environmental Microbiology</i> , 2018, 20, 862-877.	3.8	41
23	<sup>87</sup> Sr/ <sup>86</sup> Sr chemostratigraphy of Neoproterozoic Dalradian carbonates below the Port Askaig Glaciogenic Formation, Scotland. <i>Precambrian Research</i> , 2010, 179, 150-164.	2.7	37
24	Monazite geochronology and geochemistry of meta-sediments in the Narryer Gneiss Complex, Western Australia: constraints on the tectonothermal history and provenance. <i>Contributions To Mineralogy and Petrology</i> , 2010, 160, 803-823.	3.1	32
25	H <sub>2</sub> generation by experimental hydrothermal alteration of komatiitic glass at 300°C and 500 bars: A preliminary result from on-going experiment. <i>Geochemical Journal</i> , 2009, 43, e17-e22.	1.0	30
26	Fluid chemistry in the Solitaire and Dodo hydrothermal fields of the Central Indian Ridge. <i>Geofluids</i> , 2016, 16, 988-1005.	0.7	29
27	Depth variation of carbon and oxygen isotopes of calcites in Archean altered upperoceanic crust: Implications for the CO <sub>2</sub> flux from ocean to oceanic crust in the Archean. <i>Earth and Planetary Science Letters</i> , 2012, 321-322, 64-73.	4.4	27
28	Experimental and Simulation Efforts in the Astrobiological Exploration of Exooceans. <i>Space Science Reviews</i> , 2020, 216, 9.	8.1	25
29	Reactions between komatiite and CO <sub>2</sub> -rich seawater at 250 and 350°C, 500 bars: implications for hydrogen generation in the Hadean seafloor hydrothermal system. <i>Progress in Earth and Planetary Science</i> , 2016, 3, .	3.0	24
30	Nitrification-driven forms of nitrogen metabolism in microbial mat communities thriving along an ammonium-enriched subsurface geothermal stream. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 113, 152-173.	3.9	23
31	Simulating Serpentinization as It Could Apply to the Emergence of Life Using the JPL Hydrothermal Reactor. <i>Astrobiology</i> , 2020, 20, 307-326.	3.0	22
32	Progressive metamorphism of the Taitao ophiolite; evidence for axial and off-axis hydrothermal alterations. <i>Lithos</i> , 2007, 98, 233-260.	1.4	21
33	Rock magnetism of tiny exsolved magnetite in plagioclase from a Paleoarchean granitoid in the Pilbara craton. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 112-125.	2.5	20
34	Peptide Synthesis under the Alkaline Hydrothermal Conditions on Enceladus. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 2559-2568.	2.7	20
35	Molecular-scale insights into differences in the adsorption of cesium and selenium on biogenic and abiogenic ferrihydrite. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 251, 1-14.	3.9	19
36	In-situ iron isotope analyses of pyrites from 3.5 to 3.2Ga sedimentary rocks of the Barberton Greenstone Belt, Kaapvaal Craton. <i>Chemical Geology</i> , 2015, 403, 58-73.	3.3	17

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37	Decrease of seawater CO <sub>2</sub> concentration in the Late Archean: An implication from 2.6 Ga seafloor hydrothermal alteration. <i>Precambrian Research</i> , 2013, 236, 59-64.	2.7	16
38	Stratigraphy-related, low-pressure metamorphism in the Hardey Syncline, Hamersley Province, Western Australia. <i>Gondwana Research</i> , 2010, 18, 213-221.	6.0	15
39	Petrogenesis of the ridge subduction-related granitoids from the Taitao Peninsula, Chile Triple Junction Area. <i>Geochemical Journal</i> , 2013, 47, 167-183.	1.0	15
40	Biological and physical modification of carbonate system parameters along the salinity gradient in shallow hypersaline solar salterns in Trapani, Italy. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 208, 354-367.	3.9	15
41	Europium anomaly variation under low-temperature water-rock interaction: A new thermometer. <i>Geochemistry International</i> , 2017, 55, 822-832.	0.7	15
42	Large P- <i>T</i> gap between Ballantrae blueschist/garnet pyroxenite and surrounding ophiolite, southern Scotland, UK: Diapiric exhumation of a Caledonian serpentinite mélange. <i>Lithos</i> , 2008, 104, 337-354.	1.4	14
43	Recycled Archean sulfur in the mantle wedge of the Mariana Forearc and microbial sulfate reduction within an extremely alkaline serpentine seamount. <i>Earth and Planetary Science Letters</i> , 2018, 491, 109-120.	4.4	14
44	The role of hydrothermal sulfate reduction in the sulfur cycles within Europa: Laboratory experiments on sulfate reduction at 100 MPa. <i>Icarus</i> , 2021, 357, 114222.	2.5	13
45	Composition of the Primordial Ocean Just after Its Formation: Constraints from the Reactions between the Primitive Crust and a Strongly Acidic, CO <sub>2</sub> -Rich Fluid at Elevated Temperatures and Pressures. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 389.	2.0	13
46	Authigenic carbonate precipitation at the end-Guadalupian (Middle Permian) in China: Implications for the carbon cycle in ancient anoxic oceans. <i>Progress in Earth and Planetary Science</i> , 2015, 2, .	3.0	11
47	Stable Abiotic Production of Ammonia from Nitrate in Komatiite-Hosted Hydrothermal Systems in the Hadean and Archean Oceans. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 321.	2.0	10
48	Chemical Nature of Hydrothermal Fluids Generated by Serpentinization and Carbonation of Komatiite: Implications for H <sub>2</sub> -Rich Hydrothermal System and Ocean Chemistry in the Early Earth. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009827.	2.5	9
49	Chemical assessment of the explosive chamber in the projector system of Hayabusa2 for asteroid sampling. <i>Earth, Planets and Space</i> , 2020, 72, .	2.5	8
50	PIXE and microthermometric analyses of fluid inclusions in hydrothermal quartz from the 2.2Ga Ongeluk Formation, South Africa: Implications for ancient seawater salinity. <i>Precambrian Research</i> , 2016, 286, 337-351.	2.7	7
51	Heterogeneous nature of the carbonaceous chondrite breccia Aguas Zarcas – Cosmochemical characterization and origin of new carbonaceous chondrite lithologies. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 334, 155-186.	3.9	7
52	Weak hydrothermal carbonation of the Ongeluk volcanics: evidence for low CO <sub>2</sub> concentrations in seawater and atmosphere during the Paleoproterozoic global glaciation. <i>Progress in Earth and Planetary Science</i> , 2017, 4, .	3.0	6
53	Experimental chondrite-water reactions under reducing and low-temperature hydrothermal conditions: Implications for incipient aqueous alteration in planetesimals. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 319, 151-167.	3.9	6
54	Tellurium stable isotope composition in the surface layer of ferromanganese crusts from two seamounts in the Northwest Pacific Ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 318, 279-291.	3.9	6

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55	Kinetics in thermal evolution of Raman spectra of chondritic organic matter to evaluate thermal history of their parent bodies. <i>Meteoritics and Planetary Science</i> , 2020, 55, .	1.6	5
56	Organic matter in carbonaceous chondrite lithologies of Almahata Sitta: Incorporation of previously unsampled carbonaceous chondrite lithologies into ureilitic regolith. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1311-1327.	1.6	5
57	Exploration of Enceladus' Water-Rich Plumes toward Understanding of Chemistry and Biology of the Interior Ocean. <i>Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan</i> , 2014, 12, Tk_7-Tk_11.	0.2	5
58	Enceladus as a potential oasis for life: Science goals and investigations for future explorations. <i>Experimental Astronomy</i> , 2022, 54, 809-847.	3.7	5
59	Thermodynamic Constraints on Smectite and Iron Oxide Formation at Gale Crater, Mars: Insights into Potential Free Energy from Aerobic Fe Oxidation in Lake Water's Groundwater Mixing Zone. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 341.	2.0	4
60	Petrology of Peridotites and Related Gabbroic Rocks Around the Kairei Hydrothermal Field in the Central Indian Ridge. , 2015, , 177-193.		4
61	Elemental dissolution of basalts with ultra-pure water at 340°C and 40 Mpa in a newly developed flow-type hydrothermal apparatus. <i>Geochemical Journal</i> , 2013, 47, 89-92.	1.0	3
62	Removal of organic contaminants from iron sulfides as a pretreatment for mineral-mediated chemical synthesis under prebiotic hydrothermal conditions. <i>Geochemical Journal</i> , 2017, 51, 495-505.	1.0	3
63	Chemical composition and Ar age of Phengite from Barrovian metapelites, Loch Leven, Scotland. <i>Journal of the Geological Society of Japan</i> , 2013, 119, 437-442.	0.6	2
64	Development of Hydrothermal and Frictional Experimental Systems to Simulate Sub-seafloor Water-Rock-Microbe Interactions. , 2015, , 71-85.		2
65	Experimental Simulations of Hypervelocity Impact Penetration of Asteroids Into the Terrestrial Ocean and Benthic Cratering. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006291.	3.6	2
66	Enceladus: Evidence and Unsolved Questions for an Ice-Covered Habitable World. , 2019, , 399-407.		1
67	Post-drilling changes in fluid discharge pattern, mineral deposition, and fluid chemistry in the Iheya North hydrothermal field, Okinawa Trough. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, n/a-n/a.	2.5	1
68	Experimental Hydrogen Production in Hydrothermal and Fault Systems: Significance for Habitability of Subseafloor H <sub>2</sub> Chemoautotroph Microbial Ecosystems. , 2015, , 87-94.		1
69	Ar dating for hydrothermal quartz from the 2.4 Ga Ongeluk Formation, South Africa: implications for seafloor hydrothermal circulation. <i>Royal Society Open Science</i> , 2018, 5, 180260.	2.4	0
70	Identification of paleomagnetic remanence carriers in ca. 3.47 Ga dacite from the Duffer Formation, the Pilbara Craton. <i>Physics of the Earth and Planetary Interiors</i> , 2020, 299, 106411.	1.9	0
71	Characterization of groundwater chemistry beneath Gale Crater on early Mars by hydrothermal experiments. <i>Icarus</i> , 2022, 386, 115149.	2.5	0