

Yoshinori Takano

List of Publications by Year in descending order

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89
papers

3,456
citations

186265
28
h-index

161849
54
g-index

96
all docs

96
docs citations

96
times ranked

3853
citing authors

#	ARTICLE	IF	CITATIONS
1	Determination of aquatic food web structure based on compound-specific nitrogen isotopic composition of amino acids. <i>Limnology and Oceanography: Methods</i> , 2009, 7, 740-750.	2.0	507
2	Isolation of an archaeon at the prokaryote-eukaryote interface. <i>Nature</i> , 2020, 577, 519-525.	27.8	449
3	Advances in the application of amino acid nitrogen isotopic analysis in ecological and biogeochemical studies. <i>Organic Geochemistry</i> , 2017, 113, 150-174.	1.8	213
4	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. <i>Nature Astronomy</i> , 2022, 6, 214-220.	10.1	136
5	Asymmetric synthesis of amino acid precursors in interstellar complex organics by circularly polarized light. <i>Earth and Planetary Science Letters</i> , 2007, 254, 106-114.	4.4	103
6	Sedimentary membrane lipids recycled by deep-sea benthic archaea. <i>Nature Geoscience</i> , 2010, 3, 858-861.	12.9	103
7	Abundance of <i>Zetaproteobacteria</i> within crustal fluids in back-arc hydrothermal fields of the Southern Mariana Trough. <i>Environmental Microbiology</i> , 2009, 11, 3210-3222.	3.8	93
8	Biogeography and Biodiversity in Sulfide Structures of Active and Inactive Vents at Deep-Sea Hydrothermal Fields of the Southern Mariana Trough. <i>Applied and Environmental Microbiology</i> , 2010, 76, 2968-2979.	3.1	88
9	Hayabusa2 Sampler: Collection of Asteroidal Surface Material. <i>Space Science Reviews</i> , 2017, 208, 81-106.	8.1	84
10	Microbial Community Structure, Pigment Composition, and Nitrogen Source of Red Snow in Antarctica. <i>Microbial Ecology</i> , 2010, 59, 466-475.	2.8	74
11	Isolation and desalting with cation-exchange chromatography for compound-specific nitrogen isotope analysis of amino acids: application to biogeochemical samples. <i>Rapid Communications in Mass Spectrometry</i> , 2010, 24, 2317-2323.	1.5	72
12	Nucleobase synthesis in interstellar ices. <i>Nature Communications</i> , 2019, 10, 4413.	12.8	65
13	Diet quality influences isotopic discrimination among amino acids in an aquatic vertebrate. <i>Ecology and Evolution</i> , 2015, 5, 2048-2059.	1.9	64
14	X-ray absorption near edge structure spectroscopic study of Hayabusa category 3 carbonaceous particles. <i>Earth, Planets and Space</i> , 2014, 66, .	2.5	58
15	Identifying the wide diversity of extraterrestrial purine and pyrimidine nucleobases in carbonaceous meteorites. <i>Nature Communications</i> , 2022, 13, 2008.	12.8	53
16	Diversity of sulfur-cycle prokaryotes in freshwater lake sediments investigated using <i>aprA</i> as the functional marker gene. <i>Systematic and Applied Microbiology</i> , 2013, 36, 436-443.	2.8	48
17	Fractionation of nitrogen isotopes during amino acid metabolism in heterotrophic and chemolithoautotrophic microbes across Eukarya, Bacteria, and Archaea: Effects of nitrogen sources and metabolic pathways. <i>Organic Geochemistry</i> , 2017, 111, 101-112.	1.8	46
18	The Importance of Phobos Sample Return for Understanding the Mars-Moon System. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	45

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19	Hayabusa2 Sample Catcher and Container: Metal-Seal System for Vacuum Encapsulation of Returned Samples with Volatiles and Organic Compounds Recovered from C-Type Asteroid Ryugu. <i>Space Science Reviews</i> , 2017, 208, 107-124.	8.1	39
20	Sequential analysis of carbonaceous materials in Hayabusa-returned samples for the determination of their origin. <i>Earth, Planets and Space</i> , 2014, 66, .	2.5	36
21	Abiotic synthesis of high-molecular-weight organics from an inorganic gas mixture of carbon monoxide, ammonia, and water by 3 MeV proton irradiation. <i>Applied Physics Letters</i> , 2004, 84, 1410-1412.	3.3	35
22	Mineralogy and Isotope Geochemistry of Active Submarine Hydrothermal Field at Suiyo Seamount, Izu-Bonin Arc, West Pacific Ocean. <i>Resource Geology</i> , 2008, 58, 220-248.	0.8	35
23	Amino acids in water samples from deep sea hydrothermal vents at Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. <i>Organic Geochemistry</i> , 2004, 35, 1121-1128.	1.8	34
24	Isolation of underivatized amino acids by ion-pair high performance liquid chromatography for precise measurement of nitrogen isotopic composition of amino acids: Development of comprehensive LC-MS-IRMS method. <i>International Journal of Mass Spectrometry</i> , 2015, 379, 16-25.	1.5	32
25	Returning Samples From Enceladus for Life Detection. <i>Frontiers in Astronomy and Space Sciences</i> , 2020, 7, .	2.8	32
26	Extraterrestrial hexamethylenetetramine in meteorites—a precursor of prebiotic chemistry in the inner solar system. <i>Nature Communications</i> , 2020, 11, 6243.	12.8	32
27	Quantitative Analysis of Coenzyme F430 in Environmental Samples: A New Diagnostic Tool for Methanogenesis and Anaerobic Methane Oxidation. <i>Analytical Chemistry</i> , 2014, 86, 3633-3638.	6.5	31
28	H, C, and N isotopic compositions of Hayabusa category 3 organic samples. <i>Earth, Planets and Space</i> , 2014, 66, 91.	2.5	31
29	Quantitative analysis of underivatized amino acids in the sub- to several-nanomolar range by ion-pair HPLC using a corona-charged aerosol detector (HPLC-CAD). <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2018, 1095, 191-197.	2.3	28
30	Holocene lake development and glacial-isostatic uplift at Lake Skallen and Lake Oyako, Lützow-Holm Bay, East Antarctica: Based on biogeochemical facies and molecular signatures. <i>Applied Geochemistry</i> , 2012, 27, 2546-2559.	3.0	27
31	DEUTERIUM FRACTIONATION DURING AMINO ACID FORMATION BY PHOTOLYSIS OF INTERSTELLAR ICE ANALOGS CONTAINING DEUTERATED METHANOL. <i>Astrophysical Journal Letters</i> , 2016, 827, L18.	8.3	26
32	d-Amino acids in molecular evolution in space—Absolute asymmetric photolysis and synthesis of amino acids by circularly polarized light. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2018, 1866, 743-758.	2.3	25
33	Amino acids in the 308°C deep-sea hydrothermal system of the Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. <i>Earth and Planetary Science Letters</i> , 2004, 219, 147-153.	4.4	24
34	A new analytical method for determination of the nitrogen isotopic composition of methionine: Its application to aquatic ecosystems with mixed resources. <i>Limnology and Oceanography: Methods</i> , 2018, 16, 607-620.	2.0	23
35	Compound-Specific Nitrogen Isotope Analysis of <i>D</i> -Alanine, <i>L</i> -Alanine, and Valine: Application of Diastereomer Separation to $\delta^{15}\text{N}$ and Microbial Peptidoglycan Studies. <i>Analytical Chemistry</i> , 2009, 81, 394-399.	6.5	22
36	Amino acid compositions in heated carbonaceous chondrites and their compound-specific nitrogen isotopic ratios. <i>Earth, Planets and Space</i> , 2016, 68, .	2.5	22

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37	A new insight into isotopic fractionation associated with decarboxylation in organisms: implications for amino acid isotope approaches in biogeoscience. <i>Progress in Earth and Planetary Science</i> , 2020, 7, .	3.0	22
38	A micro-Raman and infrared study of several Hayabusa category 3 (organic) particles. <i>Earth, Planets and Space</i> , 2015, 67, 20.	2.5	21
39	Pyrolysis of High-Molecular-Weight Complex Organics Synthesized from a Simulated Interstellar Gas Mixture Irradiated with 3 MeV Proton Beam. <i>Bulletin of the Chemical Society of Japan</i> , 2004, 77, 779-783.	3.2	20
40	Detection of coenzyme F430 in deep sea sediments: A key molecule for biological methanogenesis. <i>Organic Geochemistry</i> , 2013, 58, 137-140.	1.8	20
41	ToF-SIMS analysis of carbonaceous particles in the sample catcher of the Hayabusa spacecraft. <i>Earth, Planets and Space</i> , 2015, 67, .	2.5	20
42	Improved Method for Isolation and Purification of Underivatized Amino Acids for Radiocarbon Analysis. <i>Analytical Chemistry</i> , 2018, 90, 12035-12041.	6.5	20
43	Peptide Synthesis under the Alkaline Hydrothermal Conditions on Enceladus. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 2559-2568.	2.7	20
44	Possible cometary organic compounds as sources of planetary biospheres. <i>Advances in Space Research</i> , 2004, 33, 1277-1281.	2.6	18
45	Intra-trophic isotopic discrimination of $^{15}\text{N}/^{14}\text{N}$ for amino acids in autotrophs: Implications for nitrogen dynamics in ecological studies. <i>Ecology and Evolution</i> , 2017, 7, 2916-2924.	1.9	18
46	Biological origin for amino acids in a deep subterranean hydrothermal vent, Toyoha mine, Hokkaido, Japan. <i>Organic Geochemistry</i> , 2003, 34, 1491-1496.	1.8	17
47	Phosphatase and microbial activity with biochemical indicators in semi-permafrost active layer sediments over the past 10,000 years. <i>Applied Geochemistry</i> , 2006, 21, 48-57.	3.0	17
48	Organic Analysis of Peridotite Rocks from the Ashadze and Logatchev Hydrothermal Sites. <i>International Journal of Molecular Sciences</i> , 2009, 10, 2986-2998.	4.1	17
49	Nitrogen Isotopic Fractionation in Ammonia during Adsorption on Silicate Surfaces. <i>ACS Earth and Space Chemistry</i> , 2017, 1, 24-29.	2.7	17
50	Precometary organic matter: A hidden reservoir of water inside the snow line. <i>Scientific Reports</i> , 2020, 10, 7755.	3.3	16
51	Suitable Pretreatment Method for the Determination of Amino Acids and Their D/L Ratios in Soil Samples.. <i>Bunseki Kagaku</i> , 2003, 52, 35-40.	0.2	15
52	Vertical distribution of amino acids and chiral ratios in deep sea hydrothermal sub-vents of the Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. <i>Organic Geochemistry</i> , 2004, 35, 1105-1120.	1.8	15
53	Evidence of sub-vent biosphere: enzymatic activities in 308 Å°C deep-sea hydrothermal systems at Suiyo seamount, Izu-Bonin Arc, Western Pacific Ocean. <i>Earth and Planetary Science Letters</i> , 2005, 229, 193-203.	4.4	15
54	Insight into anaerobic methanotrophy from $^{13}\text{C}/^{12}\text{C}$ - amino acids and $^{14}\text{C}/^{12}\text{C}$ -ANME cells in seafloor microbial ecology. <i>Scientific Reports</i> , 2018, 8, 14070.	3.3	15

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55	A method for stable carbon isotope measurement of underivatized individual amino acids by multi-dimensional high-performance liquid chromatography and elemental analyzer/isotope ratio mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2020, 34, e8885.	1.5	15
56	Pyrolysis of complex organics following high-energy proton irradiation of a simple inorganic gas mixture. <i>Applied Physics Letters</i> , 2004, 85, 1633-1635.	3.3	14
57	Distribution of amino acid and its stereochemistry related with biological activities in Rikubetsu, Hokkaido, Japan. <i>Geochemical Journal</i> , 2004, 38, 153-161.	1.0	14
58	Quantification and Carbon and Nitrogen Isotopic Measurements of Heme B in Environmental Samples. <i>Analytical Chemistry</i> , 2020, 92, 11213-11222.	6.5	14
59	Large Enantiomeric Excesses of L-Form Amino Acids in Deep-sea Hydrothermal Sub-vent of 156 Å°C Fluids at the Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. <i>Chemistry Letters</i> , 2003, 32, 970-971.	1.3	13
60	Synthesis of amino acid precursors from simulated interstellar media by high-energy particles or photons. <i>Electronics and Communications in Japan</i> , 2008, 91, 15-21.	0.5	13
61	Deuterium Fractionation upon the Formation of Hexamethylenetetramines through Photochemical Reactions of Interstellar Ice Analogs Containing Deuterated Methanol Isotopologues. <i>Astrophysical Journal</i> , 2017, 849, 122.	4.5	13
62	Amino Acid Precursors from Carbon Monoxide in Simulated Interstellar Dust Ice Mantle by UV Irradiation at 10 K. <i>Chemistry Letters</i> , 2003, 32, 612-613.	1.3	12
63	Further characterization of carbonaceous materials in Hayabusa returned samples to understand their origin. <i>Meteoritics and Planetary Science</i> , 2019, 54, 638-666.	1.6	12
64	Primordial organic matter in the xenolithic clast in the Zag H chondrite: Possible relation to D/P asteroids. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 271, 61-77.	3.9	12
65	Environmental assessment in the prelaunch phase of Hayabusa2 for safety declaration of returned samples from the asteroid (162173) Ryugu: background monitoring and risk management during development of the sampler system. <i>Earth, Planets and Space</i> , 2022, 74, .	2.5	11
66	Emergence of the inflection point on racemization rate constants for d- and l-amino acids in the early stages of terrestrial diagenesis. <i>Organic Geochemistry</i> , 2006, 37, 334-341.	1.8	9
67	Prebiotic Organic Microstructures. <i>Origins of Life and Evolution of Biospheres</i> , 2012, 42, 307-316.	1.9	9
68	Beryllium isotopes in sediments from Lake Maruwan Oike and Lake Skallen, East Antarctica, reveal substantial glacial discharge during the late Holocene. <i>Quaternary Science Reviews</i> , 2021, 256, 106841.	3.0	9
69	The GAs Extraction and Analyses system (GAEA) for immediate extraction and measurements of volatiles in the Hayabusa2 sample container. <i>Earth, Planets and Space</i> , 2022, 74, .	2.5	9
70	Amino acids on witness coupons collected from the ISAS/JAXA curation facility for the assessment and quality control of the Hayabusa2 sampling procedure. <i>Earth, Planets and Space</i> , 2018, 70, .	2.5	8
71	Analytical protocols for Phobos regolith samples returned by the Martian Moons eXploration (MMX) mission. <i>Earth, Planets and Space</i> , 2021, 73, 120.	2.5	8
72	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

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73	Characterization of Organic Aggregates Formed by Heating Products of Simulated Primitive Earth Atmosphere Experiments. <i>Chemistry Letters</i> , 2012, 41, 441-443.	1.3	7
74	Amino Acid Precursors from a Simulated Lower Atmosphere of Titan: Experiments of Cosmic Ray Energy Source with ¹³ C- and ¹⁸ O-Stable Isotope Probing Mass Spectrometry. <i>Analytical Sciences</i> , 2013, 29, 777-785.	1.6	7
75	Planetary protection on international waters: An onboard protocol for capsule retrieval and biosafety control in sample return mission. <i>Advances in Space Research</i> , 2014, 53, 1135-1142.	2.6	7
76	Estimation of methanogenesis by quantification of coenzyme F430 in marine sediments. <i>Geochemical Journal</i> , 2016, 50, 453-460.	1.0	7
77	Biogeochemistry and limnology in Antarctic subglacial weathering: molecular evidence of the linkage between subglacial silica input and primary producers in a perennially ice-covered lake. <i>Progress in Earth and Planetary Science</i> , 2015, 2, .	3.0	6
78	Origin of Deep Methane Associated with a Unique Community of Microorganisms in an Organic- and Iodine-Rich Aquifer. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1-11.	2.7	6
79	Insights into the Methanogenic Population and Potential in Subsurface Marine Sediments Based on Coenzyme F430 as a Function-Specific Biomarker. <i>Jacs Au</i> , 2021, 1, 1743-1751.	7.9	6
80	Molecular and isotopic compositions of nitrogen-containing organic molecules formed during UV-irradiation of simulated interstellar ice. <i>Geochemical Journal</i> , 2019, 53, 5-20.	1.0	6
81	Stability of Amino Acids and Related Compounds in Simulated Submarine Hydrothermal Systems. <i>Bulletin of the Chemical Society of Japan</i> , 2012, 85, 624-630.	3.2	5
82	Analytical development of seamless procedures on cation-exchange chromatography and ion-pair chromatography with high-precision mass spectrometry for short-chain peptides. <i>International Journal of Mass Spectrometry</i> , 2021, 463, 116529.	1.5	4
83	A diatom-inferred record of lake variability during the last 900 years in 1/4 Holm Bay, East Antarctica. <i>Journal of Quaternary Science</i> , 2016, 31, 114-125.	2.1	3
84	Detection of planktonic coenzyme factor 430 in a freshwater lake: small-scale analysis for probing archaeal methanogenesis. <i>Progress in Earth and Planetary Science</i> , 2021, 8, .	3.0	3
85	Formation of amino acid precursors with large molecular weight in dense clouds and their relevance to origins of bio-homochirality. <i>Proceedings of the International Astronomical Union</i> , 2008, 4, 465-472.	0.0	2
86	Prebiotic Organic Microstructures. <i>Nature Precedings</i> , 0, , .	0.1	2
87	Prebiotic Organic Globules. <i>Nature Precedings</i> , 2010, , .	0.1	1
88	Suspected meteorite fragments in marine sediments from East Antarctica. <i>Antarctic Science</i> , 2018, 30, 307-321.	0.9	1
89	Origin of Deep Methane from Active Faults along the Itoigawa-Shizuoka Tectonic Line between the Eurasian and North American Plates: ¹³ C/ ¹² C and ¹⁴ C/ ¹² C Methane Profiles from a Pull-Apart Basin at Lake Suwa. <i>ACS Earth and Space Chemistry</i> , 0, . .	2.7	0