Kensei Kobayashi

List of Publications by Year
in descending order

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123	2,259	257450	276875
papers	citations	24 h-index	41 g-index

131	131	131	1815
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comparison of stepwise and single-step pyrolysis GC/MS for natural complex macromolecular organic matter. Analytical Sciences, 2022, 38, 113-121.	1.6	2
2	Effects of minerals on metamorphism of organic matter during thermal processes in meteorite parent bodies. Icarus, 2021, 358, 114167.	2.5	4
3	Synthesis of Organic Matter in Aqueous Environments Simulating Small Bodies in the Solar System and the Effects of Minerals on Amino Acid Formation. Life, 2021, 11, 32.	2.4	4
4	å®‡å®™ã«ãŠã‘ã‚‹ç”Ÿå‘½å…†å€™æŽ¢æŸ». Bunseki Kagaku, 2021, 70, 309-326.	0.2	1
5	Scientific Targets of Tanpopo: Astrobiology Exposure and Micrometeoroid Capture Experiments at the Japanese Experiment Module Exposed Facility of the International Space Station. Astrobiology, 2021, 21, 1451-1460.	3.0	7
6	Fluorescence microscope as a core instrument for extraterrestrial-life detection methods. , 2021, , .		0
7	Space Exposure of Amino Acids and Their Precursors during the Tanpopo Mission. Astrobiology, 2021, 21, 1479-1493.	3.0	6
8	Primordial organic matter in the xenolithic clast in the Zag H chondrite: Possible relation to D/P asteroids. Geochimica Et Cosmochimica Acta, 2020, 271, 61-77.	3.9	12
9	Kinetics in thermal evolution of Raman spectra of chondritic organic matter to evaluate thermal history of their parent bodies. Meteoritics and Planetary Science, 2020, 55, .	1.6	5
10	Molecular evolution during hydrothermal reactions from formaldehyde and ammonia simulating aqueous alteration in meteorite parent bodies. Icarus, 2020, 347, 113827.	2.5	18
11	Alteration and Stability of Complex Macromolecular Amino Acid Precursors in Hydrothermal Environments. Origins of Life and Evolution of Biospheres, 2020, 50, 15-33.	1.9	3
12	Effects of Sputtering on XPS Depth Profile Analysis of Zirconium-based Chemical Conversion Coatings. Bunseki Kagaku, 2020, 69, 559-565.	0.2	0
13	Investigation of Powder Sample Fixing Method in XPS Analysis. Bunseki Kagaku, 2020, 69, 639-645.	0.2	1
14	Origin of Terrestrial Bioorganic Homochirality and Symmetry Breaking in the Universe. Symmetry, 2019, 11, 919.	2.2	23
15	Prebiotic Synthesis of Bioorganic Compounds by Simulation Experiments. , 2019, , 43-61.		6
16	A novel organic-rich meteoritic clast from the outer solar system. Scientific Reports, 2019, 9, 3169.	3.3	25
17	Nanoscale infrared imaging analysis of carbonaceous chondrites to understand organic-mineral interactions during aqueous alteration. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 753-758.	7.1	37
18	Nucleic acid bases in Titan tholins and possible genetic systems in the Titan liquidosphere. Life Sciences in Space Research, 2019, 20, 20-29.	2.3	4

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19	STXM-XANES analyses of Murchison meteorite samples captured by aerogel after hypervelocity impacts: A potential implication of organic matter degradation for micrometeoroid collection experiments. Geochemical Journal, 2019, 53, 53-67.	1.0	9
20	One-pot synthesis of amino acid precursors with insoluble organic matter in planetesimals with aqueous activity. Science Advances, 2017, 3, e1602093.	10.3	69
21	Laboratory Studies of Methane and Its Relationship to Prebiotic Chemistry. Astrobiology, 2017, 17, 786-812.	3.0	20
22	Development of Hydrothermal and Frictional Experimental Systems to Simulate Sub-seafloor Waterâ€“Rockâ€“Microbe Interactions. , 2015, , 71-85.		2
23	Proton Irradiation. , 2015, , 2042-2042.		0
24	Tanpopo: Astrobiology Exposure and Micrometeoroid Capture Experimentsâ€" Proposed Experiments at the Exposure Facility of ISS-JEM. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2014, 12, Tk_49-Tk_55.	0.2	11
25	Design of a Silica-aerogel-based Cosmic Dust Collector for the Tanpopo Mission Aboard the International Space Station. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2014, 12, Pk_29-Pk_34.	0.2	9
26	Fluorescence imaging of microbe-containing particles shot from a two-stage Light-gas gun into an aerogel. Origins of Life and Evolution of Biospheres, 2014, 44, 43-60.	1.9	8
27	Proton Irradiation. , 2014, , 1-1.		0
28	Photo-alteration of hydantoins against UV light and its relevance to prebiotic chemistry. Advances in Space Research, 2013, 51, 2235-2240.	2.6	22
29	Role of amino acids in the formation of polycyclic aromatic amines during pyrolysis of tobacco. Journal of Analytical and Applied Pyrolysis, 2013, 104, 508-513.	5.5	5
30	Survivability and Abiotic Reactions of Selected Amino Acids in Different Hydrothermal System Simulators. Origins of Life and Evolution of Biospheres, 2013, 43, 99-108.	1.9	10
31	The Possible Interplanetary Transfer of Microbes: Assessing the Viability of Deinococcus spp. Under the ISS Environmental Conditions for Performing Exposure Experiments of Microbes in the Tanpopo Mission. Origins of Life and Evolution of Biospheres, 2013, 43, 411-428.	1.9	42
32	Self-assembly of tholins in environments simulating Titan liquidospheres: implications for formation of primitive coacervates on Titan. International Journal of Astrobiology, 2013, 12, 282-291.	1.6	9
33	Amino Acid Precursors from a Simulated Lower Atmosphere of Titan: Experiments of Cosmic Ray Energy Source with 13C- and 18O-Stable Isotope Probing Mass Spectrometry. Analytical Sciences, 2013, 29, 777-785.	1.6	7
34	Titan Tholins as Amino Acid Precursors and Their Solubility in Possible Titan Liquidospheres. Chemistry Letters, 2013, 42, 633-635.	1.3	2
35	Photostability of Isovaline and its Precursor 5-Ethyl-5-methylhydantoin Exposed to Simulated Space Radiations. International Journal of Molecular Sciences, 2012, 13, 1006-1017.	4.1	7
36	Stability of Amino Acids and Related Compounds in Simulated Submarine Hydrothermal Systems. Bulletin of the Chemical Society of Japan, 2012, 85, 624-630.	3.2	5

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37	Characterization of Organic Aggregates Formed by Heating Products of Simulated Primitive Earth Atmosphere Experiments. Chemistry Letters, 2012, 41, 441-443.	1.3	7
38	Prebiotic Organic Microstructures. Origins of Life and Evolution of Biospheres, 2012, 42, 307-316.	1.9	9
39	The Use of Ascorbate as an Oxidation Inhibitor in Prebiotic Amino Acid Synthesis: A Cautionary Note. Origins of Life and Evolution of Biospheres, 2012, 42, 533-541.	1.9	7
40	Formation, Alteration and Delivery of Exogenous High Molecular Weight Organic Compounds: Objectives of the Tanpopo Mission from the Point of View of Chemical Evolution. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2012, 10, Tp_7-Tp_11.	0.2	1
41	ã‚¬ã‚¹ã‚¯ãƒãƒžãƒˆã‚°ãƒ©ãƒ•ã‚£ãƒ¼ï¼è³ªé‡åˆ†æž³•ã«ã‚ˆã‚‹å¡©ä¸ã®æ®‹ç•™è¾²è–¬ç‰©ã®ä¸€æ–‰åˆ†æž. Bunseki Kagaku, 2010, 59, 5	0.2	1
42	Biogeography and Biodiversity in Sulfide Structures of Active and Inactive Vents at Deep-Sea Hydrothermal Fields of the Southern Mariana Trough. Applied and Environmental Microbiology, 2010, 76, 2968-2979.	3.1	88
43	Japan Astrobiology Mars Project (JAMP): Search for Microbes on The Mars Surface with Special Interest in Methane-Oxidizing Bacteria. Uchu Seibutsu Kagaku, 2010, 24, 67-82.	0.3	12
44	Tanpopo: Astrobiology Exposure and Micrometeoroid Capture Experiments. Transactions of the Japan Society for Aeronautical and Space Sciences Space Technology Japan, 2009, 7, Tk_49-Tk_55.	0.2	11
45	Chirality Emergence in Thin Solid Films of Amino Acids by Polarized Light from Synchrotron Radiation and Free Electron Laser. International Journal of Molecular Sciences, 2009, 10, 3044-3064.	4.1	44
46	Abundance of<i>Zetaproteobacteria</i>within crustal fluids in backâ€arc hydrothermal fields of the Southern Mariana Trough. Environmental Microbiology, 2009, 11, 3210-3222.	3.8	93
47	Synthesis of amino acid precursors from simulated interstellar media by highâ€energy particles or photons. Electronics and Communications in Japan, 2008, 91, 15-21.	0.5	13
48	Formation of amino acid precursors with large molecular weight in dense clouds and their relevance to origins of bio-homochirality. Proceedings of the International Astronomical Union, 2008, 4, 465-472.	0.0	2
49	Asymmetric synthesis of amino acid precursors in interstellar complex organics by circularly polarized light. Earth and Planetary Science Letters, 2007, 254, 106-114.	4.4	103
50	Unimolecular Decomposition of N-Ethoxycarbonyl Heptafluorobutyl Ester Derivatives of Amino Acids upon Electron Ionization. Journal of the Mass Spectrometry Society of Japan, 2007, 55, 271-277.	0.1	6
51	Synthesis of Amino Acid Precursors from Simulated Interstellar Media by High-Energy Particles or Photons. IEEJ Transactions on Electronics, Information and Systems, 2007, 127, 293-298.	0.2	1
52	Phosphatase and microbial activity with biochemical indicators in semi-permafrost active layer sediments over the past 10,000 years. Applied Geochemistry, 2006, 21, 48-57.	3.0	17
53	Emergence of the inflection point on racemization rate constants for d- and l-amino acids in the early stages of terrestrial diagenesis. Organic Geochemistry, 2006, 37, 334-341.	1.8	9
54	Fluctuation in proteinaceous labile organic matter verified with degradation rate constants of terrestrial biochemical indicators. Organic Geochemistry, 2006, 37, 1655-1663.	1.8	1

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55	In Situ Ore Formation Experiment: Amino Acids and Amino Sugars Trapped in Artificial Chimneys on Deep-Sea Hydrothermal Systems at Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. Bulletin of the Chemical Society of Japan, 2005, 78, 638-651.	3.2	4
56	Characterization of Water-Extractable Amino Acids in the Sub-Surface of Semi-Permafrost Environments. Bulletin of the Chemical Society of Japan, 2005, 78, 1994-1999.	3.2	3
57	Photochemical abiotic synthesis of amino-acid precursors from simulated planetary atmospheres by vacuum ultraviolet light. Journal of Applied Physics, 2005, 98, 024907.	2.5	18
58	Evidence of sub-vent biosphere: enzymatic activities in 308 Â°C deep-sea hydrothermal systems at Suiyo seamount, Izuâ€“Bonin Arc, Western Pacific Ocean. Earth and Planetary Science Letters, 2005, 229, 193-203.	4.4	15
59	Pyrolysis of complex organics following high-energy proton irradiationof a simple inorganic gas mixture. Applied Physics Letters, 2004, 85, 1633-1635.	3.3	14
60	Formation of interstellar vinyl alcohol via simple radical processes: Theoretical study. International Journal of Quantum Chemistry, 2004, 97, 713-718.	2.0	13
61	DFT study of HCN and N?C?C?N reactions with hydrogen species. International Journal of Quantum Chemistry, 2004, 99, 91-101.	2.0	14
62	Possible cometary organic compounds as sources of planetary biospheres. Advances in Space Research, 2004, 33, 1277-1281.	2.6	18
63	Experimental verification of photostability for free- and bound-amino acids exposed to Î³-rays and UV irradiation. Earth, Planets and Space, 2004, 56, 669-674.	2.5	25
64	Abiotic synthesis of high-molecular-weight organics from an inorganic gas mixture of carbon monoxide, ammonia, and water by 3 MeV proton irradiation. Applied Physics Letters, 2004, 84, 1410-1412.	3.3	35
65	Amino acids in water samples from deep sea hydrothermal vents at Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. Organic Geochemistry, 2004, 35, 1121-1128.	1.8	34
66	Vertical distribution of amino acids and chiral ratios in deep sea hydrothermal sub-vents of the Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. Organic Geochemistry, 2004, 35, 1105-1120.	1.8	15
67	Amino acids in the 308Â°C deep-sea hydrothermal system of the Suiyo Seamount, Izu-Bonin Arc, Pacific Ocean. Earth and Planetary Science Letters, 2004, 219, 147-153.	4.4	24
68	Glucosamine and Galactosamine in Terrestrial Organic Matter and Their Correlation with Other Biochemical Indicators. Bulletin of the Chemical Society of Japan, 2004, 77, 729-732.	3.2	5
69	Evidence of the Hypsithermal Verified Using the Racemization Rate Constant of Amino Acids: An Estimation of Paleo-Ground Temperatures. Bulletin of the Chemical Society of Japan, 2004, 77, 1029-1030.	3.2	4
70	Pyrolysis of High-Molecular-Weight Complex Organics Synthesized from a Simulated Interstellar Gas Mixture Irradiated with 3 MeV Proton Beam. Bulletin of the Chemical Society of Japan, 2004, 77, 779-783.	3.2	20
71	Separation and detection limit of chiral amino acids in multiple components by analytical techniques. Bunseki Kagaku, 2004, 53, 1507-1514.	0.2	1
72	Correlation coefficients between biomarkers and sub-surface microbial activities in terrestrial sediment over the past 10000 years. Bunseki Kagaku, 2004, 53, 167-172.	0.2	3

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73	Distribution of amino acid and its stereochemistry related with biological activities in Rikubetsu, Hokkaido, Japan. Geochemical Journal, 2004, 38, 153-161.	1.0	14
74	Detection of biosphere frontier by using phosphatase activity. , 2004, 18, 144-5.		0
75	Formation and stability of complex organic compounds in space environments. , 2004, 18, 179-80.		1
76	Biological origin for amino acids in a deep subterranean hydrothermal vent, Toyoha mine, Hokkaido, Japan. Organic Geochemistry, 2003, 34, 1491-1496.	1.8	17
77	Suitable Pretreatment Method for the Determination of Amino Acids and Their D/L Ratios in Soil Samples.. Bunseki Kagaku, 2003, 52, 35-40.	0.2	15
78	Reaction of Amino Acids in a Supercritical Water-Flow Reactor Simulating Submarine Hydrothermal Systems. Bulletin of the Chemical Society of Japan, 2003, 76, 1171-1178.	3.2	69
79	Amino Acid Precursors from Carbon Monoxide in Simulated Interstellar Dust Ice Mantle by UV Irradiation at 10 K. Chemistry Letters, 2003, 32, 612-613.	1.3	12
80	Large Enantiomeric Excesses of L-Form Amino Acids in Deep-sea Hydrothermal Sub-vent of 156 Â°C Fluids at the Suiyo Seamount, Izuâ€“Bonin Arc, Pacific Ocean. Chemistry Letters, 2003, 32, 970-971.	1.3	13
81	Prebiotic synthesis from CO atmospheres: Implications for the origins of life. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14628-14631.	7.1	144
82	Formation of Amino Acids from Possible Interstellar Media by Î³-rays and UV Irradiation. Chemistry Letters, 2002, 31, 986-987.	1.3	21
83	Irradiation of Single-Walled Carbon Nanotubes with High-Energy Protons. Nano Letters, 2002, 2, 789-791.	9.1	64
84	Submarine Hydrothermal Vents as Possible Sites of the Origin of Life. , 2002, , 221-238.		1
85	Formation of bioorganic compounds in simulated planetary atmospheres by high energy particles or photons. Advances in Space Research, 2001, 27, 207-215.	2.6	41
86	Continuous Monitoring of the Methane Concentration in the Atmosphere by IR Spectrometry with a 1.66-.MU.m Diode Laser.. Analytical Sciences, 2000, 16, 1211-1214.	1.6	4
87	Abiotic synthesis of guanine with high-temperature plasma. Origins of Life and Evolution of Biospheres, 2000, 30, 557-566.	1.9	20
88	Abiotic synthesis of amino acids by x-ray irradiation of simple inorganic gases. Applied Physics Letters, 1999, 74, 877-879.	3.3	32
89	Characterization of complex organic compounds formed in simulated planetary atmospheres by the action of high energy particles. Advances in Space Research, 1999, 24, 461-464.	2.6	26
90	Synthesis of amino acids in Earth orbit: Proposal. Advances in Space Research, 1999, 23, 401-404.	2.6	11

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91	Permutation of modules or secondary structure units creates proteins with basal enzymatic properties. FEBS Letters, 1999, 453, 145-150.	2.8	9
92	Cytosine and Uracil Synthesis by Quenching with High-Temperature Plasma. Journal of the American Chemical Society, 1999, 121, 8144-8145.	13.7	21
93	Foldability of barnase mutants obtained by permutation of modules or secondary structure units 1 1Edited by A. R. Fersht. Journal of Molecular Biology, 1999, 286, 1581-1596.	4.2	31
94	Amino acid formation in gas mixtures by high energy particle irradiation. Origins of Life and Evolution of Biospheres, 1998, 28, 155-165.	1.9	105
95	Amino acid synthesis from an amorphous substance composed of carbon, nitrogen, and oxygen. Applied Physics Letters, 1998, 72, 990-992.	3.3	19
96	Abiotic Formation of Bioorganic Compounds in Space. Preliminary Experiments on Ground and Future Exobiology Experiments in Space.. Uchu Seibutsu Kagaku, 1998, 12, 102-105.	0.3	10
97	Ecological Cultivation Ark (ECA) Project. Mutation and Evolution of Micro-organisms in Space.. Uchu Seibutsu Kagaku, 1998, 12, 112-114.	0.3	1
98	Production and Detection of Organic Compounds on Mars. , 1998, , 251-254.		1
99	Production of Organic Compounds in Interstellar Space. , 1998, , 213-216.		0
100	New Application of a Magneto-Plasma Dynamic Arc-Jet to Amino Acid Synthesis. Japanese Journal of Applied Physics, 1997, 36, 4481-4485.	1.5	6
101	Abiotic Synthesis of Bioorganic Compounds in Simulated Primitive Planetary Environments.. Nippon Kagaku Kaishi / Chemical Society of Japan - Chemistry and Industrial Chemistry Journal, 1997, 1997, 823-834.	0.1	6
102	Abiotic Synthesis of Uracil from Carbon Monoxide, Nitrogen and Water by Proton Irradiation. Chemistry Letters, 1997, 26, 903-904.	1.3	18
103	Formation of Organic Compounds in Simulated Interstellar Media with High Energy Particles. Bulletin of the Chemical Society of Japan, 1997, 70, 1021-1026.	3.2	55
104	Stability of Amino Acids in Simulated Hydrothermal Vent Environments. Chemistry Letters, 1997, 26, 1053-1054.	1.3	22
105	Analysis of proton irradiation products in simulated intersteller dusts by mass spectrometry.. Bunseki Kagaku, 1996, 45, 569-574.	0.2	0
106	Analytical chemistry in the studies of chemical evolution.. Bunseki Kagaku, 1996, 45, 811-824.	0.2	1
107	Chapter 8 An experimental approach to chemical evolution in submarine hydrothermal systems. Origins of Life and Evolution of Biospheres, 1992, 22, 147-159.	1.9	63
108	ANALYSIS OF PRODUCTS SYNTHESIZED FROM SIMULATED PRIMITIVE PLANETARY ATMOSPHERES. Analytical Sciences, 1991, 7, 921-924.	1.6	18

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109	ANALYSIS OF PRODUCTS SYNTHESIZED FROM SIMULATED PRIMITIVE PLANETARY ATMOSPHERES. Analytical Sciences, 1991, 7, 925-928.	1.6	15
110	Determination of Trace Metals Forming Large Molecular Complexes in Natural Waters as Estimated by Ultrafiltration/Liquid Chromatography/Atomic Spectroscopy. Bulletin of the Chemical Society of Japan, 1990, 63, 554-558.	3.2	14
111	Abiotic synthesis of amino acids and imidazole by proton irradiation of simulated primitive earth atmospheres. Origins of Life and Evolution of Biospheres, 1990, 20, 99-109.	1.9	68
112	Formation of amino acids, peptide-like polymers, and microspheres in superheated hydrothermal environments. Origins of Life and Evolution of Biospheres, 1989, 19, 540-541.	1.9	10
113	Analysis of sugars in the products of spark discharge in simulated primitive atmospheres by GC/MS.. Bunseki Kagaku, 1989, 38, 608-612.	0.2	2
114	Abiotic Synthesis of Amino Acids by Proton Irradiation of a Mixture of Carbon Monoxide, Nitrogen, and Water. Chemistry Letters, 1989, 18, 1527-1530.	1.3	11
115	Studies on Dissolved Metalloenzymes in Lake Water. III. Correlation between Dissolved Alkaline Phosphatase and Orthophosphate in Lake Water. Bulletin of the Chemical Society of Japan, 1987, 60, 925-931.	3.2	9
116	Trace elements in chemical evolution, I. Origins of Life and Evolution of Biospheres, 1985, 16, 41-55.	1.9	34
117	Trace elements in chemical evolution. Origins of Life and Evolution of Biospheres, 1985, 16, 57-67.	1.9	18
118	CORRELATIONS BETWEEN DISSOLVED ALKALINE PHOSPHATASE AND ORTHOPHOSPHATE IN LAKE WATER. Chemistry Letters, 1984, 13, 565-568.	1.3	4
119	Identification of alkaline phosphatase in sea water. Journal of Inorganic Biochemistry, 1983, 18, 41-47.	3.5	16
120	Studies on Dissolved Metalloenzymes in Lake Water. I. Identification of Alkaline Phosphatase. Bulletin of the Chemical Society of Japan, 1982, 55, 3459-3463.	3.2	12
121	DISSOLVED NITRATE REDUCTASE IN NATURAL WATER. Chemistry Letters, 1982, 11, 837-838.	1.3	5
122	The ABS (Autonomous Biological System): Spaceflight Results from a Bioregenerative Closed Life Support System. , 0, , .		7
123	Prebiotic Organic Microstructures. Nature Precedings, 0, , .	0.1	2