

Yasuhiro Oba

List of Publications by Year in descending order

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47
papers

1,246
citations

331670

21
h-index

377865

34
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48
all docs

48
docs citations

48
times ranked

1181
citing authors

#	ARTICLE	IF	CITATIONS
1	FORMATION OF COMPACT AMORPHOUS H ₂ O ICE BY CODEPOSITION OF HYDROGEN ATOMS WITH OXYGEN MOLECULES ON GRAIN SURFACES. <i>Astrophysical Journal</i> , 2009, 701, 464-470.	4.5	115
2	WATER FORMATION THROUGH A QUANTUM TUNNELING SURFACE REACTION, OH + H ₂ , AT 10 K. <i>Astrophysical Journal</i> , 2012, 749, 67.	4.5	97
3	EXPERIMENTAL STUDY OF CO ₂ FORMATION BY SURFACE REACTIONS OF NON-ENERGETIC OH RADICALS WITH CO MOLECULES. <i>Astrophysical Journal Letters</i> , 2010, 712, L174-L178.	8.3	92
4	Nucleobase synthesis in interstellar ices. <i>Nature Communications</i> , 2019, 10, 4413.	12.8	65
5	Oxygen isotope fractionation of dissolved oxygen during reduction by ferrous iron. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 13-24.	3.9	63
6	An infrared measurement of chemical desorption from interstellar ice analogues. <i>Nature Astronomy</i> , 2018, 2, 228-232.	10.1	59
7	Identifying the wide diversity of extraterrestrial purine and pyrimidine nucleobases in carbonaceous meteorites. <i>Nature Communications</i> , 2022, 13, 2008.	12.8	53
8	FORMATION OF CARBONIC ACID (H ₂ CO ₃) BY SURFACE REACTIONS OF NON-ENERGETIC OH RADICALS WITH CO MOLECULES AT LOW TEMPERATURES. <i>Astrophysical Journal</i> , 2010, 722, 1598-1606.	4.5	50
9	Diel behavior of stable isotopes of dissolved oxygen and dissolved inorganic carbon in rivers over a range of trophic conditions, and in a mesocosm experiment. <i>Chemical Geology</i> , 2010, 269, 22-32.	3.3	44
10	Experimental studies of surface reactions among OH radicals that yield H ₂ O and CO ₂ at 40–60 K. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 15792.	2.8	39
11	DIRECT EVIDENCE FOR AMMONIUM ION FORMATION IN ICE THROUGH ULTRAVIOLET-INDUCED ACID-BASE REACTION OF NH ₃ WITH H ₃ O ⁺ . <i>Astrophysical Journal</i> , 2010, 713, 906-911.	4.5	34
12	Liquid-like behavior of UV-irradiated interstellar ice analog at low temperatures. <i>Science Advances</i> , 2017, 3, eaao2538.	10.3	32
13	Extraterrestrial hexamethylenetetramine in meteorites—a precursor of prebiotic chemistry in the inner solar system. <i>Nature Communications</i> , 2020, 11, 6243.	12.8	32
14	Elemental and isotope behavior of macromolecular organic matter from CM chondrites during hydrous pyrolysis. <i>Meteoritics and Planetary Science</i> , 2009, 44, 943-953.	1.6	31
15	Reaction kinetics and isotope effect of water formation by the surface reaction of solid H ₂ O ₂ with H atoms at low temperatures. <i>Faraday Discussions</i> , 2014, 168, 185.	3.2	29
16	Oxygen isotope fractionation of dissolved oxygen during abiological reduction by aqueous sulfide. <i>Chemical Geology</i> , 2009, 268, 226-232.	3.3	28
17	FAUST I. The hot corino at the heart of the prototypical Class I protostar L1551 IRS5. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2020, 498, L87-L92.	3.3	27
18	Transmission Electron Microscopy Study of the Morphology of Ices Composed of H ₂ O, CO ₂ , and CO on Refractory Grains. <i>Astrophysical Journal</i> , 2021, 918, 45.	4.5	27

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19	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
20	Carbon isotopic composition of acetic acid generated by hydrous pyrolysis of macromolecular organic matter from the Murchison meteorite. <i>Meteoritics and Planetary Science</i> , 2006, 41, 1175-1181.	1.6	25
21	Octanol-water partition coefficients (K _{ow}) vs. pH for fluorescent dye tracers (fluorescein, eosin Y), and implications for hydrologic tracer tests. <i>Geochemical Journal</i> , 2012, 46, 517-520.	1.0	24
22	FAUST. II. Discovery of a Secondary Outflow in IRAS 15398âˆ’3359: Variability in Outflow Direction during the Earliest Stage of Star Formation?. <i>Astrophysical Journal</i> , 2021, 910, 11.	4.5	19
23	Precometary organic matter: A hidden reservoir of water inside the snow line. <i>Scientific Reports</i> , 2020, 10, 7755.	3.3	16
24	An Experimental Study of Chemical Desorption for Phosphine in Interstellar Ice. <i>Astrophysical Journal Letters</i> , 2020, 898, L52.	8.3	16
25	Hydrogen isotopic substitution of solid methylamine through atomic surface reactions at low temperatures: A potential contribution to the D/H ratio of methylamine in molecular clouds. <i>Meteoritics and Planetary Science</i> , 2014, 49, 117-132.	1.6	15
26	Chiral glycine formation on cold interstellar grains by quantum tunneling hydrogenâˆ’deuterium substitution reactions. <i>Chemical Physics Letters</i> , 2015, 634, 53-59.	2.6	15
27	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
28	Physico-chemical Behavior of Hydrogen Sulfide Induced by Reactions with H and D Atoms on Different Types of Ice Surfaces at Low Temperature. <i>Astrophysical Journal</i> , 2019, 874, 124.	4.5	13
29	Formation of chiral CO polyhedral crystals on icy interstellar grains. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 1530-1542.	4.4	13
30	Carbon and hydrogen isotopic fractionation of low molecular weight organic compounds during ultraviolet degradation. <i>Organic Geochemistry</i> , 2008, 39, 501-509.	1.8	12
31	Efficient Formation Pathway of Methyl Formate: The Role of OH Radicals on Ice Dust. <i>Astrophysical Journal Letters</i> , 2021, 921, L13.	8.3	11
32	Diffusion Activation Energy and Desorption Activation Energy for Astrochemically Relevant Species on Water Ice Show No Clear Relation. <i>Astrophysical Journal Letters</i> , 2022, 933, L16.	8.3	11
33	Site-specific carbon isotope analysis of aromatic carboxylic acids by elemental analysis/pyrolysis/isotope ratio mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2006, 20, 3649-3653.	1.5	10
34	UV-ray irradiation never causes amorphization of crystalline CO ₂ : A transmission electron microscopy study. <i>Chemical Physics Letters</i> , 2020, 760, 137999.	2.6	10
35	Successive H-atom Addition to Solid OCS on Compact Amorphous Solid Water. <i>Astrophysical Journal</i> , 2021, 922, 146.	4.5	10
36	Hydrogenâˆ’deuterium substitution in solid ethanol by surface reactions at low temperatures. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, 689-695.	4.4	9

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37	Experimental and Computational Studies on the Physicochemical Behavior of Phosphine Induced by Reactions with H and D Atoms on Interstellar Ice Grains. <i>Astrophysical Journal</i> , 2021, 918, 73.	4.5	9
38	Hydrogen abstraction reactions in formic and thioformic acid isomers by hydrogen and deuterium atoms. <i>Astronomy and Astrophysics</i> , 2022, 663, A41.	5.1	9
39	Quantifying the Chemical Desorption of H ₂ S and PH ₃ from Amorphous Water-ice Surfaces. <i>Astrophysical Journal</i> , 2022, 926, 171.	4.5	7
40	Misaligned Rotations of the Envelope, Outflow, and Disks in the Multiple Protostellar System of VLA 1623-2417: FAUST. III. <i>Astrophysical Journal</i> , 2022, 927, 54.	4.5	7
41	UV-Induced Formation of Ice XI Observed Using an Ultra-High Vacuum Cryogenic Transmission Electron Microscope and its Implications for Planetary Science. <i>Frontiers in Chemistry</i> , 2021, 9, 799851.	3.6	7
42	Carbon and hydrogen isotope fractionation of acetic acid during degradation by ultraviolet light. <i>Geochemical Journal</i> , 2007, 41, 103-110.	1.0	6
43	Negative catalytic effect of water on the reactivity of hydrogen abstraction from the C-H bond of dimethyl ether by deuterium atoms through tunneling at low temperatures. <i>Chemical Physics Letters</i> , 2016, 662, 14-18.	2.6	4
44	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
45	Modelling the Radical Chemistry on Ice Surfaces: An Integrated Quantum Chemical and Experimental Approach. <i>Frontiers in Astronomy and Space Sciences</i> , 2022, 9, .	2.8	4
46	Nonenergetic reactions between atomic hydrogen and molecules on interstellar grain surfaces. <i>Journal of Physics: Conference Series</i> , 2009, 194, 012044.	0.4	2
47	Physicochemical Processes of Hydrogen on Cosmic Dust in Molecular Clouds. <i>Hyomen Kagaku</i> , 2012, 33, 662-668.	0.0	1