

# Liquid water on Enceladus from observations of ammon

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Citation Report

#	ARTICLE	IF	CITATIONS
1	The Thermal Evolution and Internal Structure of Saturn's Mid-Sized Icy Satellites. , 2009, , 577-612.		19
2	Mass spectrometry of hyper-velocity impacts of organic micrograins. Rapid Communications in Mass Spectrometry, 2009, 23, 3895-3906.	0.7	39
4	The absence of endogenic methane on Titan and its implications for the origin of atmospheric nitrogen. Icarus, 2009, 204, 637-644.	1.1	35
5	A primordial origin for the atmospheric methane of Saturn's moon Titan. Icarus, 2009, 204, 749-751.	1.1	31
6	The Origin and Evolution of Titan. , 2009, , 35-59.		25
7	One-hundred-km-scale basins on Enceladus: Evidence for an active ice shell. Geophysical Research Letters, 2009, 36, .	1.5	38
8	Water masers in the Kronian system. Proceedings of the International Astronomical Union, 2009, 5, 147-150.	0.0	0
9	The surface composition of Enceladus: clues from the Ultraviolet. Proceedings of the International Astronomical Union, 2009, 5, 126-130.	0.0	1
10	Europa, Enceladus, and Titan as possible sites for life. Proceedings of the International Astronomical Union, 2009, 5, 676-677.	0.0	2
11	Atmospheric moons Galileo would have loved. Proceedings of the International Astronomical Union, 2010, 6, 130-140.	0.0	1
13	Photolysis of solid NH <sub>3</sub> and NH <sub>3</sub> -H <sub>2</sub> O mixtures at 193 nm. Journal of Chemical Physics, 2010, 133, 214506.	1.2	21
14	THE ROLE OF METHANOL IN THE CRYSTALLIZATION OF TITAN'S PRIMORDIAL OCEAN. Astrophysical Journal, 2010, 724, 887-894.	1.6	23
15	On the thermal history of Saturn's satellites Titan and Enceladus. Solar System Research, 2010, 44, 192-201.	0.3	6
16	The role of photochemical processes in evolution of the isotopic composition of the atmosphere of Titan. Solar System Research, 2010, 44, 498-506.	0.3	6
17	Negative ions in the Enceladus plume. Icarus, 2010, 206, 618-622.	1.1	51
18	The ultraviolet reflectance of Enceladus: Implications for surface composition. Icarus, 2010, 206, 608-617.	1.1	52
19	The initial responses of hot liquid water released under low atmospheric pressures: Experimental insights. Icarus, 2010, 210, 488-506.	1.1	13
20	Sounding of Titan's atmosphere at submillimeter wavelengths from an orbiting spacecraft. Planetary and Space Science, 2010, 58, 1724-1739.	0.9	20

#	ARTICLE	IF	CITATIONS
21	Radiolysis and Photolysis of Icy Satellite Surfaces: Experiments and Theory. <i>Space Science Reviews</i> , 2010, 153, 299-315.	3.7	73
22	Subsurface Water Oceans on Icy Satellites: Chemical Composition and Exchange Processes. <i>Space Science Reviews</i> , 2010, 153, 485-510.	3.7	83
23	Spectroscopy of Icy Moon Surface Materials. <i>Space Science Reviews</i> , 2010, 153, 219-247.	3.7	26
24	Chemical Composition of Icy Satellite Surfaces. <i>Space Science Reviews</i> , 2010, 153, 113-154.	3.7	65
25	Ceres's evolution and present state constrained by shape data. <i>Icarus</i> , 2010, 205, 443-459.	1.1	185
26	Historical and future perspectives of global soil carbon response to climate and land-use changes. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 62, 700.	0.8	103
27	The role of episodic overturn in generating the surface geology and heat flow on Enceladus. <i>Nature Geoscience</i> , 2010, 3, 88-91.	5.4	67
28	Thermodynamic data and modeling of the water and ammonia-water phase diagrams up to 2.2 GPa for planetary geophysics. <i>Journal of Chemical Physics</i> , 2010, 133, 144502.	1.2	59
29	Radiation chemistry in ammonia-water ices. <i>Journal of Chemical Physics</i> , 2010, 132, 054508.	1.2	21
30	Enceladus plume variability and the neutral gas densities in Saturn's magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	93
31	Detection and measurement of ice grains and gas distribution in the Enceladus plume by Cassini's Ion Neutral Mass Spectrometer. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	56
32	Dynamics of the ascent and eruption of water containing dissolved CO <sub>2</sub> on Mars. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	16
33	Sodium chloride as a geophysical probe of a subsurface ocean on Enceladus. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	25
34	Modification of the plasma in the near vicinity of Enceladus by the enveloping dust. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	26
35	Cassini INMS observations of neutral molecules in Saturn's E-ring. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	25
36	Mountains on Titan: Modeling and observations. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	54
37	Simulating the one-dimensional structure of Titan's upper atmosphere: 1. Formulation of the Titan Global Ionosphere-Thermosphere Model and benchmark simulations. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	34
38	Composition of Titan's lower atmosphere and simple surface volatiles as measured by the Cassini-Huygens probe gas chromatograph mass spectrometer experiment. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	377

#	ARTICLE	IF	CITATIONS
39	The significance of trace constituents in the solar system. Faraday Discussions, 2010, 147, 9.	1.6	11
40	Negative ions at Titan and Enceladus: recent results. Faraday Discussions, 2010, 147, 293.	1.6	51
41	The Potential for Low-Temperature Abiotic Hydrogen Generation and a Hydrogen-Driven Deep Biosphere. Astrobiology, 2011, 11, 711-724.	1.5	31
42	Limits of Enceladus's ice shell thickness from tidally driven tiger stripe shear failure. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	30
43	High heat flow from Enceladus' south polar region measured using $10^{600}$ cm <sup>-1</sup> Cassini/CIRS data. Journal of Geophysical Research, 2011, 116, .	3.3	145
44	Joule heating of the south polar terrain on Enceladus. Journal of Geophysical Research, 2011, 116, .	3.3	8
45	The composition and structure of the Enceladus plume. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	136
46	A fracture history on Enceladus provides evidence for a global ocean. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	74
47	Electron energetics in the Enceladus torus. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	15
48	Influence of negatively charged plume grains on the structure of Enceladus' Alfvén wings: Hybrid simulations versus Cassini Magnetometer data. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	56
50	Replacement and late formation of atmospheric N <sub>2</sub> on undifferentiated Titan by impacts. Nature Precedings, 2011, , .	0.1	0
51	OXIDIZING PROTO-ATMOSPHERE ON TITAN: CONSTRAINT FROM N <sub>2</sub> FORMATION BY IMPACT SHOCK. Astrophysical Journal Letters, 2011, 741, L10.	3.0	11
52	ON THE FORMATION LOCATION OF URANUS AND NEPTUNE AS CONSTRAINED BY DYNAMICAL AND CHEMICAL MODELS OF COMETS. Astrophysical Journal Letters, 2011, 734, L30.	3.0	40
53	Watery Enceladus. Physics Today, 2011, 64, 38-44.	0.3	19
54	Replacement and late formation of atmospheric N <sub>2</sub> on undifferentiated Titan by impacts. Nature Geoscience, 2011, 4, 359-362.	5.4	42
55	Compositional mapping of planetary moons by mass spectrometry of dust ejecta. Planetary and Space Science, 2011, 59, 1815-1825.	0.9	33
56	Total particulate mass in Enceladus plumes and mass of Saturn's E ring inferred from Cassini ISS images. Icarus, 2011, 216, 492-506.	1.1	64
57	The Chemical Composition of Comets' Emerging Taxonomies and Natal Heritage. Annual Review of Astronomy and Astrophysics, 2011, 49, 471-524.	8.1	688

#	ARTICLE	IF	CITATIONS
58	Ceres: Its Origin, Evolution and Structure and Dawn's Potential Contribution. <i>Space Science Reviews</i> , 2011, 163, 63-76.	3.7	52
59	Mapping Magnetospheric Equatorial Regions at Saturn from Cassini Prime Mission Observations. <i>Space Science Reviews</i> , 2011, 164, 1-83.	3.7	40
60	Plasma, plumes and rings: Saturn system dynamics as recorded in global color patterns on its midsize icy satellites. <i>Icarus</i> , 2011, 211, 740-757.	1.1	114
61	Estimating the density of intermediate size KBOs from considerations of volatile retention. <i>Icarus</i> , 2011, 214, 308-315.	1.1	6
62	Characteristics of the dust-plasma interaction near Enceladus' South Pole. <i>Planetary and Space Science</i> , 2011, 59, 17-25.	0.9	43
63	Spacecraft instrument technology and cosmochemistry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 19177-19182.	3.3	8
64	The search for life in our Solar System and the implications for science and society. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 594-606.	1.6	34
65	A salt-water reservoir as the source of a compositionally stratified plume on Enceladus. <i>Nature</i> , 2011, 474, 620-622.	13.7	394
66	Remote Raman Spectroscopy for Planetary Exploration: A Review. <i>Applied Spectroscopy</i> , 2012, 66, 137-150.	1.2	105
67	NEBULAR WATER DEPLETION AS THE CAUSE OF JUPITER'S LOW OXYGEN ABUNDANCE. <i>Astrophysical Journal Letters</i> , 2012, 751, L7.	3.0	68
68	BLISTERING AND EXPLOSIVE DESORPTION OF IRRADIATED AMMONIA-WATER MIXTURES. <i>Astrophysical Journal</i> , 2012, 744, 102.	1.6	7
69	THE $^{12}\text{C}/^{13}\text{C}$ RATIO ON TITAN FROM CASSINI INMS MEASUREMENTS AND IMPLICATIONS FOR THE EVOLUTION OF METHANE. <i>Astrophysical Journal</i> , 2012, 749, 160.	1.6	66
70	SPITZER EVIDENCE FOR A LATE-HEAVY BOMBARDMENT AND THE FORMATION OF UREILITES IN $\hat{\nu}$ . CORVI At $\hat{\nu}$ 41 Gyr. <i>Astrophysical Journal</i> , 2012, 747, 93.	1.6	80
71	Potential for Life in the Saturn System. <i>Cellular Origin and Life in Extreme Habitats</i> , 2012, , 817-833.	0.3	1
72	Friction of ice on ice. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	87
73	LIFE: Life Investigation For EnceladusA Sample Return Mission Concept in Search for Evidence of Life. <i>Astrobiology</i> , 2012, 12, 730-742.	1.5	54
74	Aqueous fluid composition in CI chondritic materials: Chemical equilibrium assessments in closed systems. <i>Icarus</i> , 2012, 220, 713-729.	1.1	81
75	Modeling ammonia-ammonium aqueous chemistries in the Solar System's icy bodies. <i>Icarus</i> , 2012, 220, 932-946.	1.1	56

#	ARTICLE	IF	CITATIONS
76	Life in the Saturnian Neighborhood. Cellular Origin and Life in Extreme Habitats, 2012, , 485-522.	0.3	0
77	Charged nanograins in the Enceladus plume. Journal of Geophysical Research, 2012, 117, .	3.3	71
78	Modeling of electron fluxes in the Enceladus plume. Journal of Geophysical Research, 2012, 117, n/a-n/a.	3.3	8
79	Laboratory spectroscopic analyses of electron irradiated alkanes and alkenes in solar system ices. Journal of Geophysical Research, 2012, 117, .	3.3	13
80	Enceladus: A hypothesis for bringing both heat and chemicals to the surface. Icarus, 2012, 221, 53-62.	1.1	46
82	The Provenances of Asteroids, and Their Contributions to the Volatile Inventories of the Terrestrial Planets. Science, 2012, 337, 721-723.	6.0	511
83	The Search for Habitable Worlds: Planetary Exploration in the 21st Century. Daedalus, 2012, 141, 8-22.	0.9	5
84	Possible sources for methane and C <sub>2</sub> -C <sub>5</sub> organics in the plume of Enceladus. Planetary and Space Science, 2012, 71, 73-79.	0.9	15
85	Small Habitable Worlds. , 2012, , 201-228.		7
86	Sub-millimetre spectroscopy of Saturn's trace gases from <i>Herschel</i> /SPIRE. Astronomy and Astrophysics, 2012, 539, A44.	2.1	30
87	The impact of a weak south pole on thermal convection in Enceladus' ice shell. Icarus, 2012, 218, 320-330.	1.1	24
88	The electromagnetic pickup of submicron-sized dust above Enceladus' northern hemisphere. Icarus, 2012, 219, 498-501.	1.1	12
89	UV spectrum of Enceladus. Icarus, 2012, 220, 29-35.	1.1	7
90	Clues on the importance of comets in the origin and evolution of the atmospheres of Titan and Earth. Planetary and Space Science, 2012, 60, 3-9.	0.9	19
91	Ice rheology and tidal heating of Enceladus. Icarus, 2013, 226, 10-19.	1.1	32
93	The Science of Solar System Ices. Astrophysics and Space Science Library, 2013, , .	1.0	35
94	Space-Weathering of Solar System Bodies: A Laboratory Perspective. Chemical Reviews, 2013, 113, 9086-9150.	23.0	130
95	Thermal convection in a spherical shell with melting/freezing at either or both of its boundaries. Journal of Earth Science (Wuhan, China), 2013, 24, 669-682.	1.1	13

#	ARTICLE	IF	CITATIONS
96	Habitability of Other Planets and Satellites. Cellular Origin and Life in Extreme Habitats, 2013, , .	0.3	1
97	Clathrate Hydrates: Implications for Exchange Processes in the Outer Solar System. Astrophysics and Space Science Library, 2013, , 409-454.	1.0	27
98	Hydrogen Isotopes in Lunar Volcanic Glasses and Melt Inclusions Reveal a Carbonaceous Chondrite Heritage. Science, 2013, 340, 1317-1320.	6.0	218
99	Shock synthesis of amino acids from impacting cometary and icy planet surface analogues. Nature Geoscience, 2013, 6, 1045-1049.	5.4	129
100	The Early Evolution of the Atmospheres of Terrestrial Planets. Thirty Years of Astronomical Discovery With UKIRT, 2013, , .	0.3	4
101	The shape of Enceladus as explained by an irregular core: Implications for gravity, libration, and survival of its subsurface ocean. Journal of Geophysical Research E: Planets, 2013, 118, 1775-1788.	1.5	19
102	Crystalline and amorphous structure of astrophysical ices. Low Temperature Physics, 2013, 39, 430-433.	0.2	2
103	Modeling serpentinization: Applied to the early evolution of Enceladus and Mimas. Icarus, 2013, 225, 763-774.	1.1	40
104	The D/H ratio of water in the solar nebula during its formation and evolution. Icarus, 2013, 226, 256-267.	1.1	75
105	Phase equilibria in the H <sub>2</sub> O-CO <sub>2</sub> system between 250-330K and 0-1.7GPa: Stability of the CO <sub>2</sub> hydrates and H <sub>2</sub> O-ice VI at CO <sub>2</sub> saturation. Geochimica Et Cosmochimica Acta, 2013, 119, 322-339.	1.6	49
106	Plasma ion composition measurements for Europa. Planetary and Space Science, 2013, 88, 26-41.	0.9	11
107	Refractive index and density of ammonia ice at different temperatures of deposition. Icarus, 2013, 225, 703-708.	1.1	28
108	Formation of a Nitrogen-Rich Atmosphere on Titan: A Review of Pre- and Post-Cassini-Huygens Knowledge. Thirty Years of Astronomical Discovery With UKIRT, 2013, , 107-122.	0.3	1
109	Enceladus: An Active Ice World in the Saturn System. Annual Review of Earth and Planetary Sciences, 2013, 41, 693-717.	4.6	142
110	Saturn suprathermal O <sub>2</sub> and mass <sup>28</sup> molecular ions: Long-term seasonal and solar variation. Journal of Geophysical Research: Space Physics, 2013, 118, 3446-3463.	0.8	15
111	Saturn's tides control Enceladus' plume. Nature, 2013, 500, 155-156.	13.7	7
112	Nitrogen in Extraterrestrial Environments: Clues to the Possible Presence of Life. Elements, 2013, 9, 367-372.	0.5	8
113	GAS-PHASE SEQUESTRATION OF NOBLE GASES IN THE PROTOSOLAR NEBULA: POSSIBLE CONSEQUENCES ON THE OUTER SOLAR SYSTEM COMPOSITION. Astrophysical Journal, 2013, 777, 29.	1.6	27

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114	The effect of an asymmetric core on convection in Enceladus' ice shell: Implications for south polar tectonics and heat flux. <i>Geophysical Research Letters</i> , 2013, 40, 5610-5614.	1.5	15
115	Planetary volcanism. , 2013, , 384-413.		4
116	The origin and evolution of Titan. , 0, , 29-62.		4
117	The composition of Titan's atmosphere. , 2014, , 158-189.		14
118	Geyser. , 2014, , 1-8.		0
119	IceMole: a maneuverable probe for clean in situ analysis and sampling of subsurface ice and subglacial aquatic ecosystems. <i>Annals of Glaciology</i> , 2014, 55, 14-22.	2.8	51
120	Science goals and mission concept for the future exploration of Titan and Enceladus. <i>Planetary and Space Science</i> , 2014, 104, 59-77.	0.9	15
121	Some remarks on the early evolution of Enceladus. <i>Planetary and Space Science</i> , 2014, 104, 185-199.	0.9	8
122	The Grand Tack model: a critical review. <i>Proceedings of the International Astronomical Union</i> , 2014, 9, 194-203.	0.0	26
123	TOWARD A UNIQUE NITROGEN ISOTOPIC RATIO IN COMETARY ICES. <i>Astrophysical Journal Letters</i> , 2014, 780, L17.	3.0	78
124	Time-resolved stand-off UV-Raman spectroscopy for planetary exploration. <i>Planetary and Space Science</i> , 2014, 92, 88-100.	0.9	24
125	Follow the Plume: The Habitability of Enceladus. <i>Astrobiology</i> , 2014, 14, 352-355.	1.5	91
126	Chance and Necessity in Biochemistry: Implications for the Search for Extraterrestrial Biomarkers in Earth-like Environments. <i>Astrobiology</i> , 2014, 14, 534-540.	1.5	49
127	Impact chemistry of methanol: Implications for volatile evolution on icy satellites and dwarf planets, and cometary delivery to the Moon. <i>Icarus</i> , 2014, 243, 39-47.	1.1	6
128	HOW THE GEYSERS, TIDAL STRESSES, AND THERMAL EMISSION ACROSS THE SOUTH POLAR TERRAIN OF ENCELADUS ARE RELATED. <i>Astronomical Journal</i> , 2014, 148, 45.	1.9	129
129	Formation, Habitability, and Detection of Extrasolar Moons. <i>Astrobiology</i> , 2014, 14, 798-835.	1.5	120
130	TIDALLY MODULATED ERUPTIONS ON ENCELADUS: <i>CASSINI</i> ISS OBSERVATIONS AND MODELS. <i>Astronomical Journal</i> , 2014, 148, 46.	1.9	66
131	Modeling nitrogen-gas, -liquid, -solid chemistries at low temperatures (173â€“298K) with applications to Titan. <i>Icarus</i> , 2014, 236, 1-8.	1.1	10



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132	Non-steady state tidal heating of Enceladus. <i>Icarus</i> , 2014, 235, 75-85.	1.1	24
133	PROTOSOLAR AMMONIA AS THE UNIQUE SOURCE OF TITAN'S NITROGEN. <i>Astrophysical Journal Letters</i> , 2014, 788, L24.	3.0	74
134	Processing of analogues of plume fallout in cold regions of Enceladus by energetic electrons. <i>Astronomy and Astrophysics</i> , 2014, 570, A120.	2.1	23
135	The evolution of infalling sulfur species in Titan's atmosphere. <i>Astronomy and Astrophysics</i> , 2014, 572, A58.	2.1	18
136	Suprathermal magnetospheric minor ions heavier than water at Saturn: Discovery of $M^{28+}$ seasonal variations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5662-5673.	0.8	11
137	Ion densities and magnetic signatures of dust pickup at Enceladus. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2740-2774.	0.8	38
138	Polar confinement of Saturn's magnetosphere revealed by in situ Cassini observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2858-2875.	0.8	21
139	An empirical model for the plasma environment along Titan's orbit based on Cassini plasma observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5674-5684.	0.8	12
140	Isotopic compositions of asteroidal liquid water trapped in fluid inclusions of chondrites. <i>Geochemical Journal</i> , 2014, 48, 549-560.	0.5	22
141	Constraining the heat flux between Enceladus's tiger stripes: Numerical modeling of funicular plains formation. <i>Icarus</i> , 2015, 260, 232-245.	1.1	27
142	Shock wave synthesis of amino acids from solutions of ammonium formate and ammonium bicarbonate. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 2382-2394.	1.0	4
143	In situ apparatus for the study of clathrate hydrates relevant to solar system bodies using synchrotron X-ray diffraction and Raman spectroscopy. <i>Astronomy and Astrophysics</i> , 2015, 574, A91.	2.1	5
144	Monte-Carlo simulation of Callisto's exosphere. <i>Icarus</i> , 2015, 262, 14-29.	1.1	36
145	Thermal conductivity of $H_2O-H_2O$ mixtures at high pressures: Implications for the dynamics of icy super-Earth's outer shells. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1697-1707.	1.5	5
146	Discovery of suprathermal $Fe^{+}$ in Saturn's magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2720-2738.	0.8	9
147	Modeling insights into the locations of density enhancements from the Enceladus water vapor jets. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1763-1773.	1.5	3
148	Stable Carbon Isotope Fractionation during Bacterial Acetylene Fermentation: Potential for Life Detection in Hydrocarbon-Rich Volatiles of Icy Planet(oid)s. <i>Astrobiology</i> , 2015, 15, 977-986.	1.5	11
149	Assessing the Ecophysiology of Methanogens in the Context of Recent Astrobiological and Planetological Studies. <i>Life</i> , 2015, 5, 1652-1686.	1.1	55

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150	Nebular dead zone effects on the D/H ratio in chondrites and comets. <i>Astronomy and Astrophysics</i> , 2015, 583, A58.	2.1	6
151	Methane Clathrates in the Solar System. <i>Astrobiology</i> , 2015, 15, 308-326.	1.5	62
152	Introduction to "Pluto, Charon, and the Kuiper Belt Objects": Pluto on the Eve of the New Horizons Encounter. , 2015, , 637-651.		4
153	Cassini INMS measurements of Enceladus plume density. <i>Icarus</i> , 2015, 257, 139-162.	1.1	24
154	Evolution of Titan's atmosphere during the Late Heavy Bombardment. <i>Icarus</i> , 2015, 257, 324-335.	1.1	10
155	Cometary Isotopic Measurements. <i>Space Science Reviews</i> , 2015, 197, 47-83.	3.7	112
156	Modeling nitrogen and methane with ethane and propane gas hydrates at low temperatures (173-290K) with applications to Titan. <i>Icarus</i> , 2015, 257, 355-361.	1.1	6
157	Low-speed friction and brittle compressive failure of ice: fundamental processes in ice mechanics. <i>International Materials Reviews</i> , 2015, 60, 451-478.	9.4	24
158	Noble gases, nitrogen, and methane from the deep interior to the atmosphere of Titan. <i>Icarus</i> , 2015, 250, 570-586.	1.1	41
159	Infrared spectroscopy of solid mixed ammonia-water and acetylene-water aerosol particles. <i>Molecular Physics</i> , 2015, 113, 823-834.	0.8	4
160	Possible evidence for a methane source in Enceladus' ocean. <i>Geophysical Research Letters</i> , 2015, 42, 1334-1339.	1.5	65
161	Interiors and Evolution of Icy Satellites. , 2015, , 605-635.		24
162	The fluffy core of Enceladus. <i>Icarus</i> , 2015, 258, 54-66.	1.1	61
163	On understanding the physics of the Enceladus south polar plume via numerical simulation. <i>Icarus</i> , 2015, 253, 205-222.	1.1	34
164	The pH of Enceladus' ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 202-219.	1.6	205
165	High-temperature water-rock interactions and hydrothermal environments in the chondrite-like core of Enceladus. <i>Nature Communications</i> , 2015, 6, 8604.	5.8	152
166	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. <i>Space Science Reviews</i> , 2015, 197, 297-342.	3.7	25
167	Spatial distribution of ice blocks on Enceladus and implications for their origin and emplacement. <i>Icarus</i> , 2015, 245, 162-176.	1.1	20

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168	Keeping Enceladus warm. <i>Icarus</i> , 2015, 250, 32-42.	1.1	75
169	67P/Churyumov-Gerasimenko, a Jupiter family comet with a high D/H ratio. <i>Science</i> , 2015, 347, 1261952.	6.0	403
170	A kinetic study of the formation of organic solids from formaldehyde: Implications for the origin of extraterrestrial organic solids in primitive Solar System objects. <i>Icarus</i> , 2015, 248, 412-423.	1.1	35
171	Prerequisites for explosive cryovolcanism on dwarf planet-class Kuiper belt objects. <i>Icarus</i> , 2015, 246, 48-64.	1.1	53
172	A lander mission to probe subglacial water on Saturn's moon Enceladus for life. <i>Acta Astronautica</i> , 2015, 106, 63-89.	1.7	64
173	Geophysical controls of chemical disequilibria in Europa. <i>Geophysical Research Letters</i> , 2016, 43, 4871-4879.	1.5	153
174	Isotopic ratios of H, C, N, O, and S in comets C/2012 F6 (Lemmon) and C/2014 Q2 (Lovejoy). <i>Astronomy and Astrophysics</i> , 2016, 589, A78.	2.1	66
175	Controlled boiling on Enceladus. 1. Model of the vapor-driven jets. <i>Icarus</i> , 2016, 272, 309-318.	1.1	30
176	Strategic map for exploring the ocean-world Enceladus. <i>Acta Astronautica</i> , 2016, 126, 52-58.	1.7	20
177	Enceladus Life Finder: The search for life in a habitable Moon. , 2016, , .		39
178	Crustal control of dissipative ocean tides in Enceladus and other icy moons. <i>Icarus</i> , 2016, 280, 278-299.	1.1	44
179	The Astrobiology Primer v2.0. <i>Astrobiology</i> , 2016, 16, 561-653.	1.5	133
180	Ocean worlds in the outer solar system. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1378-1399.	1.5	149
181	An analytical equation of state for ammonia at high temperatures and high pressures. <i>Journal of Molecular Liquids</i> , 2016, 222, 733-738.	2.3	2
182	An asteroidal origin for water in the Moon. <i>Nature Communications</i> , 2016, 7, 11684.	5.8	68
183	Fluctuation Analysis of Redox Potential to Distinguish Microbial Fe(II) Oxidation. <i>Astrobiology</i> , 2016, 16, 846-852.	1.5	5
184	Trajectories for Flyby Sample Return at Saturn's Moons. , 2016, , .		1
185	Ion energy distributions and densities in the plume of Enceladus. <i>Planetary and Space Science</i> , 2016, 130, 60-79.	0.9	4

#	ARTICLE	IF	CITATIONS
186	THEO concept mission: Testing the Habitability of Enceladus's Ocean. <i>Advances in Space Research</i> , 2016, 58, 1117-1137.	1.2	13
187	Bright carbonate deposits as evidence of aqueous alteration on (1) Ceres. <i>Nature</i> , 2016, 536, 54-57.	13.7	240
188	Salty Ceres. <i>Nature Geoscience</i> , 2016, 9, 476-477.	5.4	5
189	Genesis of volatile components at Saturn's regular satellites. Origin of Titan's atmosphere. <i>Geochemistry International</i> , 2016, 54, 7-26.	0.2	8
190	Sustained eruptions on Enceladus explained by turbulent dissipation in tiger stripes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3972-3975.	3.3	74
191	A 1-D evolutionary model for icy satellites, applied to Enceladus. <i>Icarus</i> , 2016, 268, 1-11.	1.1	17
192	Europa ocean sampling by plume flythrough: Astrobiological expectations. <i>Icarus</i> , 2016, 267, 217-219.	1.1	20
193	Habitability: A Review. <i>Astrobiology</i> , 2016, 16, 89-117.	1.5	246
194	Aggregate particles in the plumes of Enceladus. <i>Icarus</i> , 2016, 264, 227-238.	1.1	16
195	Enceladus's measured physical libration requires a global subsurface ocean. <i>Icarus</i> , 2016, 264, 37-47.	1.1	289
196	Modification of ices by cosmic rays and solar wind. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2017, 50, 062001.	0.6	56
197	A Low-Temperature Thermodynamic Model for the Na-K-Ca-Mg-Cl System Incorporating New Experimental Heat Capacities in KCl, MgCl <sub>2</sub> , and CaCl <sub>2</sub> Solutions. <i>Journal of Chemical &amp; Engineering Data</i> , 2017, 62, 995-1010.	1.0	27
198	Titan's atmosphere and climate. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 432-482.	1.5	228
199	Cassini finds molecular hydrogen in the Enceladus plume: Evidence for hydrothermal processes. <i>Science</i> , 2017, 356, 155-159.	6.0	396
200	The origin of inner Solar System water. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150384.	1.6	46
201	Fates of satellite ejecta in the Saturn system, II. <i>Icarus</i> , 2017, 284, 70-89.	1.1	13
202	The search for and analysis of direct samples of early Solar System aqueous fluids. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150386.	1.6	15
203	Aqueous origins of bright salt deposits on Ceres. <i>Icarus</i> , 2017, 296, 289-304.	1.1	48

#	ARTICLE	IF	CITATIONS
204	Photoinitiated Dynamics in Amorphous Solid Water via Nanoimprint Lithography. <i>Journal of Physical Chemistry A</i> , 2017, 121, 4968-4981.	1.1	2
205	The bulk valence state of Fe and the origin of water in chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 211, 115-132.	1.6	42
206	Deciphering sub-micron ice particles on Enceladus surface. <i>Icarus</i> , 2017, 290, 183-200.	1.1	22
207	The photochemical fractionation of oxygen isotopologues in Titan's atmosphere. <i>Icarus</i> , 2017, 291, 17-30.	1.1	26
208	Methane: Fuel or Exhaust at the Emergence of Life?. <i>Astrobiology</i> , 2017, 17, 1053-1066.	1.5	54
209	Enceladus Plume Structure and Time Variability: Comparison of Cassini Observations. <i>Astrobiology</i> , 2017, 17, 926-940.	1.5	43
210	Water and Volatiles in the Outer Solar System. <i>Space Science Reviews</i> , 2017, 212, 835-875.	3.7	44
211	Experimentally Testing Hydrothermal Vent Origin of Life on Enceladus and Other Icy/Ocean Worlds. <i>Astrobiology</i> , 2017, 17, 820-833.	1.5	62
212	Laboratory Studies of Methane and Its Relationship to Prebiotic Chemistry. <i>Astrobiology</i> , 2017, 17, 786-812.	1.5	20
213	Aqueous geochemistry in icy world interiors: Equilibrium fluid, rock, and gas compositions, and fate of antifreezes and radionuclides. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 212, 324-371.	1.6	74
214	Water in the Earth's Interior: Distribution and Origin. <i>Space Science Reviews</i> , 2017, 212, 743-810.	3.7	139
215	Could It Be Snowing Microbes on Enceladus? Assessing Conditions in Its Plume and Implications for Future Missions. <i>Astrobiology</i> , 2017, 17, 876-901.	1.5	67
216	Antarctic environments as models of planetary habitats: University Valley as a model for modern Mars and Lake Untersee as a model for Enceladus and ancient Mars. <i>Polar Journal</i> , 2017, 7, 303-318.	0.4	10
217	Feasibility of Detecting Bioorganic Compounds in Enceladus Plumes with the Enceladus Organic Analyzer. <i>Astrobiology</i> , 2017, 17, 902-912.	1.5	35
218	Abiotic and Biotic Formation of Amino Acids in the Enceladus Ocean. <i>Astrobiology</i> , 2017, 17, 862-875.	1.5	40
220	Plume and surface feature structure and compositional effects on Europa's global exosphere: Preliminary Europa mission predictions. <i>Icarus</i> , 2017, 284, 18-29.	1.1	41
221	Interior thermal state of Enceladus inferred from the viscoelastic state of the ice shell. <i>Icarus</i> , 2017, 284, 387-393.	1.1	25
222	Ocean worlds exploration. <i>Acta Astronautica</i> , 2017, 131, 123-130.	1.7	93

#	ARTICLE	IF	CITATIONS
223	A Community Grows around the Geysering World of Enceladus. <i>Astrobiology</i> , 2017, 17, 815-819.	1.5	4
224	Perchlorate-Coupled Carbon Monoxide (CO) Oxidation: Evidence for a Plausible Microbe-Mediated Reaction in Martian Brines. <i>Frontiers in Microbiology</i> , 2017, 8, 2571.	1.5	18
225	Particle Radiation Sources, Propagation and Interactions in Deep Space, at Earth, the Moon, Mars, and Beyond: Examples of Radiation Interactions and Effects. <i>Space Science Reviews</i> , 2017, 212, 1069-1106.	3.7	18
226	Bayesian evidence for the prevalence of waterworlds. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 468, 2803-2815.	1.6	39
227	Titan's cold case files - Outstanding questions after Cassini-Huygens. <i>Planetary and Space Science</i> , 2018, 155, 50-72.	0.9	37
228	Biological methane production under putative Enceladus-like conditions. <i>Nature Communications</i> , 2018, 9, 748.	5.8	91
229	Laboratory Studies of Planetary Ring Systems. , 0, , 494-516.		1
230	An experimental study on impact-induced alterations of planetary organic simulants. <i>Meteoritics and Planetary Science</i> , 2018, 53, 1267-1282.	0.7	4
231	Trajectories for Flyby Sample Return at Icy Moons. <i>Journal of Spacecraft and Rockets</i> , 2018, 55, 529-540.	1.3	0
232	Halogens on and Within the Ocean Worlds of the Outer Solar System. <i>Springer Geochemistry</i> , 2018, , 997-1016.	0.1	2
233	The UK Centre for Astrobiology: A Virtual Astrobiology Centre. Accomplishments and Lessons Learned, 2011-2016. <i>Astrobiology</i> , 2018, 18, 224-243.	1.5	5
234	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	88
235	Guest Partitioning and Metastability of the Nitrogen Gas Hydrate. <i>Journal of Physical Chemistry C</i> , 2018, 122, 566-573.	1.5	25
236	Geologic constraints on the origin of red organic-rich material on Ceres. <i>Meteoritics and Planetary Science</i> , 2018, 53, 1983-1998.	0.7	34
237	One-Dimensional Convective Thermal Evolution Calculation Using a Modified Mixing Length Theory: Application to Saturnian Icy Satellites. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 93-112.	1.5	8
238	Isotopic ratios D/H and <sup>15</sup> N/ <sup>14</sup> N in giant planets. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 475, 2355-2362.	1.6	6
239	Icy Saturnian satellites: Disk-integrated UV-IR characteristics and links to exogenic processes. <i>Icarus</i> , 2018, 300, 103-114.	1.1	25
240	Explorer of Enceladus and Titan (E2T): Investigating ocean worlds' evolution and habitability in the solar system. <i>Planetary and Space Science</i> , 2018, 155, 73-90.	0.9	26

#	ARTICLE	IF	CITATIONS
241	Occupied and Empty Regions of the Space of Extremophile Parameters. , 2018, , 199-230.		5
242	Enceladusâ€™ near-surface CO <sub>2</sub> gas pockets and surface frost deposits. <i>Icarus</i> , 2018, 302, 18-26.	1.1	8
243	Extraction of amino acids from aerogel for analysis by capillary electrophoresis. Implications for a mission concept to Enceladusâ€™ Plume. <i>Electrophoresis</i> , 2018, 39, 620-625.	1.3	6
244	Compaction and Melt Transport in Ammoniaâ€Rich Ice Shells: Implications for the Evolution of Triton. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 3105-3118.	1.5	25
245	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 2855-2877.		2
246	Dust Emission by Active Moons. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	3
247	The Liquidus Temperature for Methanolâ€“Water Mixtures at High Pressure and Low Temperature, With Application to Titan. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 3080-3087.	1.5	7
248	Ocean Worlds in the Outer Regions of the Solar System (Review). <i>Solar System Research</i> , 2018, 52, 371-381.	0.3	10
249	Kinetics of D/H isotope fractionation between molecular hydrogen and water. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 242, 191-212.	1.6	15
250	Photochemical Processes in CO <sub>2</sub> /H <sub>2</sub> O Ice Mixtures with Trapped Pyrene, a Model Polycyclic Aromatic Hydrocarbon. <i>Astrophysical Journal</i> , 2018, 864, 151.	1.6	6
251	Cryovolcanism on the Earth: Origin of a Spectacular Crater in the Yamal Peninsula (Russia). <i>Scientific Reports</i> , 2018, 8, 13534.	1.6	77
252	Effects of Gamma and Electron Radiation on the Structural Integrity of Organic Molecules and Macromolecular Biomarkers Measured by Microarray Immunoassays and Their Astrobiological Implications. <i>Astrobiology</i> , 2018, 18, 1497-1516.	1.5	23
253	Simulating putative Enceladus-like conditions: The possibility of biological methane production on Saturnâ€™s icy moon. <i>Proceedings of the International Astronomical Union</i> , 2018, 14, 219-221.	0.0	1
254	The Origin of Titanâ€™s External Oxygen: Further Constraints from ALMA Upper Limits on CS and CH <sub>2</sub> NH. <i>Astronomical Journal</i> , 2018, 155, 251.	1.9	8
255	Preface: Life as a Cosmic Phenomenon by Alexei A. Sharov & Richard Gordon. , 2018, , xxvii-xlii.		0
256	Review of Saturnâ€™s icy moons following the Cassini mission. <i>Reports on Progress in Physics</i> , 2018, 81, 065901.	8.1	9
257	Hydrothermal dynamics in a $\text{Ca-Mg}$ -based model of Ceres. <i>Meteoritics and Planetary Science</i> , 2018, 53, 2008-2032.	0.7	29
258	Low Energy Subsurface Environments as Extraterrestrial Analogs. <i>Frontiers in Microbiology</i> , 2018, 9, 1605.	1.5	37

#	ARTICLE	IF	CITATIONS
259	The Search for Signatures of Life and Habitability on Planets and Moons of Our Solar System. , 2018, , 457-481.		2
260	The Ladder of Life Detection. <i>Astrobiology</i> , 2018, 18, 1375-1402.	1.5	162
261	Nature, distribution and origin of CO2 on Enceladus. <i>Icarus</i> , 2019, 317, 491-508.	1.1	14
262	Follow the High Subcritical Water. <i>Geosciences (Switzerland)</i> , 2019, 9, 249.	1.0	3
263	Acoustic and Microstructural Properties of Partially Molten Samples in the Ice- <i>Ammonia</i> System. <i>Geosciences (Switzerland)</i> , 2019, 9, 327.	1.0	3
264	Peptide Synthesis under the Alkaline Hydrothermal Conditions on Enceladus. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 2559-2568.	1.2	20
265	Differentiation of Enceladus and Retention of a Porous Core. <i>Astrophysical Journal</i> , 2019, 882, 47.	1.6	14
266	Chemical Ionization Mass Spectrometry: Applications for the In Situ Measurement of Nonvolatile Organics at Ocean Worlds. <i>Astrobiology</i> , 2019, 19, 1196-1210.	1.5	9
267	Photochemistry and desorption induced by X-rays in water rich astrophysical ice analogs: implications for the moon Enceladus and other frozen space environments. <i>RSC Advances</i> , 2019, 9, 28823-28840.	1.7	13
269	Contributions from Accreted Organics to Titan's Atmosphere: New Insights from Cometary and Chondritic Data. <i>Astrophysical Journal</i> , 2019, 871, 59.	1.6	39
270	Decomposition and oligomerization of 2,3-naphthyridine under high-pressure and high-temperature conditions. <i>Scientific Reports</i> , 2019, 9, 7335.	1.6	5
271	Enceladus's crust as a non-uniform thin shell: II tidal dissipation. <i>Icarus</i> , 2019, 332, 66-91.	1.1	31
272	Cassini-Huygens's exploration of the Saturn system: 13 years of discovery. <i>Science</i> , 2019, 364, 1046-1051.	6.0	35
273	Pluto's ocean is capped and insulated by gas hydrates. <i>Nature Geoscience</i> , 2019, 12, 407-410.	5.4	101
274	Living at the Extremes: Extremophiles and the Limits of Life in a Planetary Context. <i>Frontiers in Microbiology</i> , 2019, 10, 780.	1.5	339
275	Decomposition of amino acids in water with application to in-situ measurements of Enceladus, Europa and other hydrothermally active icy ocean worlds. <i>Icarus</i> , 2019, 329, 140-147.	1.1	24
276	Enceladus: Evidence and Unsolved Questions for an Ice-Covered Habitable World. , 2019, , 399-407.		1
277	How Adsorption Affects the Gas-Ice Partitioning of Organics Erupted from Enceladus. <i>Astrophysical Journal</i> , 2019, 873, 28.	1.6	16



#	ARTICLE	IF	CITATIONS
278	Inelastic cross sections for pentane isomers by positron impact. <i>Molecular Physics</i> , 2019, 117, 2527-2534.	0.8	4
279	Membrane Lipid Composition and Amino Acid Excretion Patterns of <i>Methanothermococcus okinawensis</i> Grown in the Presence of Inhibitors Detected in the Enceladian Plume. <i>Life</i> , 2019, 9, 85.	1.1	12
280	The Emergence of Life. <i>Space Science Reviews</i> , 2019, 215, 1.	3.7	53
281	A Systematic Way to Life Detection: Combining Field, Lab and Space Research in Low Earth Orbit. <i>Advances in Astrobiology and Biogeophysics</i> , 2019, , 111-122.	0.6	4
282	Isotopic ratios of Saturn's rings and satellites: Implications for the origin of water and Phoebe. <i>Icarus</i> , 2019, 321, 791-802.	1.1	29
283	Surface deposition of the Enceladus plume and the zenith angle of emissions. <i>Icarus</i> , 2019, 319, 33-42.	1.1	36
284	Collecting amino acids in the Enceladus plume. <i>International Journal of Astrobiology</i> , 2019, 18, 47-59.	0.9	24
285	Subsurface exolife. <i>International Journal of Astrobiology</i> , 2019, 18, 112-141.	0.9	33
286	Ground-based detection of a cloud of methanol from Enceladus: when is a biomarker not a biomarker?. <i>International Journal of Astrobiology</i> , 2019, 18, 25-32.	0.9	4
287	Titan's ionospheric chemistry, fullerenes, oxygen, galactic cosmic rays and the formation of exobiological molecules on and within its surfaces and lakes. <i>Icarus</i> , 2020, 344, 113246.	1.1	11
288	The composition and structure of Ceres' interior. <i>Icarus</i> , 2020, 335, 113404.	1.1	19
289	Analog Experiments for the Identification of Trace Biosignatures in Ice Grains from Extraterrestrial Ocean Worlds. <i>Astrobiology</i> , 2020, 20, 179-189.	1.5	37
290	The composition and structure of Enceladus' plume from the complete set of Cassini UVIS occultation observations. <i>Icarus</i> , 2020, 344, 113461.	1.1	29
291	Feasibility of Enceladus plume biosignature analysis: Successful capture of organic ice particles in hypervelocity impacts. <i>Meteoritics and Planetary Science</i> , 2020, 55, .	0.7	10
292	Effects of Geochemical and Environmental Parameters on Abiotic Organic Chemistry Driven by Iron Hydroxide Minerals. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006423.	1.5	22
293	Explaining the Galilean Satellites'™ Density Gradient by Hydrodynamic Escape. <i>Astrophysical Journal Letters</i> , 2020, 897, L43.	3.0	16
294	Six "Must-Have"™ Minerals for Life's™ Emergence: Olivine, Pyrrhotite, Bridgmanite, Serpentine, Fougérite and Mackinawite. <i>Life</i> , 2020, 10, 291.	1.1	24
296	Fresh emplacement of hydrated sodium chloride on Ceres from ascending salty fluids. <i>Nature Astronomy</i> , 2020, 4, 786-793.	4.2	60

#	ARTICLE	IF	CITATIONS
297	On the Habitability and Future Exploration of Ocean Worlds. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	36
298	Key Technologies and Instrumentation for Subsurface Exploration of Ocean Worlds. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	18
299	Returning Samples From Enceladus for Life Detection. <i>Frontiers in Astronomy and Space Sciences</i> , 2020, 7, .	1.1	32
300	A bioenergetic model to predict habitability, biomass and biosignatures in astrobiology and extreme conditions. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20200588.	1.5	7
301	The Dual-Rasp Sampling System for an Enceladus Lander. , 2020, , .		3
302	Vacuum ultraviolet photoabsorption spectroscopy of space-related ices: 1 keV electron irradiation of nitrogen- and oxygen-rich ices. <i>Astronomy and Astrophysics</i> , 2020, 641, A154.	2.1	11
303	Strength Evolution of Ice Plume Deposit Analogs of Enceladus and Europa. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088953.	1.5	10
304	Stagnant lid convection with temperature-dependent thermal conductivity and the thermal evolution of icy worlds. <i>Geophysical Journal International</i> , 2020, 224, 1870-1889.	1.0	4
305	Molecular evolution during hydrothermal reactions from formaldehyde and ammonia simulating aqueous alteration in meteorite parent bodies. <i>Icarus</i> , 2020, 347, 113827.	1.1	18
306	Growth on Carbohydrates from Carbonaceous Meteorites Alters the Immunogenicity of Environment-Derived Bacterial Pathogens. <i>Astrobiology</i> , 2020, 20, 1353-1362.	1.5	3
307	Compositional Measurements of Saturn's Upper Atmosphere and Rings from Cassini INMS. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006427.	1.5	5
308	Chemical and Isotope Composition of Comet 67P/ChuryumovâGerasimenko: The RosettaâPhilae Mission Results Reviewed in the Context of Cosmogony and Cosmochemistry. <i>Solar System Research</i> , 2020, 54, 96-120.	0.3	10
309	Ice-Ocean Exchange Processes in the Jovian and Saturnian Satellites. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	43
310	What Is Lifeâand When Do We Search for It on Other Worlds. <i>Astrobiology</i> , 2020, 20, 163-166.	1.5	12
311	Characterizing organic particle impacts on inert metal surfaces: Foundations for capturing organic molecules during hypervelocity transits of Enceladus plumes. <i>Meteoritics and Planetary Science</i> , 2020, 55, 465-479.	0.7	19
312	Fast and Slow Water Ion Populations in the Enceladus Plume. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027591.	0.8	2
313	Hidden tectonism on Miranda's Elsinore Corona revealed by polygonal impact craters. <i>Icarus</i> , 2020, 343, 113687.	1.1	24
314	Suprathermal Magnetospheric Atomic and Molecular Heavy Ions at and Near Earth, Jupiter, and Saturn: Observations and Identification. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027271.	0.8	7

#	ARTICLE	IF	CITATIONS
315	Microbial Diversity and Biosignatures: An Icy Moons Perspective. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	14
316	Experimental and Simulation Efforts in the Astrobiological Exploration of Exooceans. <i>Space Science Reviews</i> , 2020, 216, 9.	3.7	25
317	The Carbonate Geochemistry of Enceladus' Ocean. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085885.	1.5	64
318	Immune recognition of putative alien microbial structures: Host-pathogen interactions in the age of space travel. <i>PLoS Pathogens</i> , 2020, 16, e1008153.	2.1	7
319	Towards Determining Biosignature Retention in Icy World Plumes. <i>Life</i> , 2020, 10, 40.	1.1	7
320	Processing of 72-K water-rich ices by keV and MeV oxygen ions: implications for the Saturnian moon Enceladus. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 494, 2396-2409.	1.6	7
321	The effect of Europa and Enceladus analog seawater composition on isotopic measurements of volatile CO <sub>2</sub> . <i>Icarus</i> , 2021, 358, 114216.	1.1	1
322	Oxidation processes diversify the metabolic menu on Enceladus. <i>Icarus</i> , 2021, 364, 114248.	1.1	29
323	Development of a compact water activity sensor system for planetary exploration. <i>Planetary and Space Science</i> , 2021, 195, 105132.	0.9	3
324	Science Goals and Mission Objectives for the Future Exploration of Ice Giants Systems: A Horizon 2061 Perspective. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	11
325	Seeding Biochemistry on Other Worlds: Enceladus as a Case Study. <i>Astrobiology</i> , 2021, 21, 177-190.	1.5	10
326	Plausible Emergence of Biochemistry in Enceladus Based on Chemobionics. <i>Chemistry - A European Journal</i> , 2021, 27, 600-604.	1.7	9
327	<i>Astrobiology: An Overview.</i> , 2021, , 737-757.		0
328	Method for detecting and quantitating capture of organic molecules in hypervelocity impacts. <i>MethodsX</i> , 2021, 8, 101239.	0.7	5
329	Identification of Possible Heat Sources for the Thermal Output of Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 29.	1.5	1
330	Formation Conditions of Titan's and Enceladus's Building Blocks in Saturn's Circumplanetary Disk. <i>Planetary Science Journal</i> , 2021, 2, 50.	1.5	2
331	<i>Ocean Worlds: A Roadmap for Science and Exploration.</i> , 2021, 53, .		0
332	Calathus: A sample-return mission to Ceres. <i>Acta Astronautica</i> , 2021, 181, 112-129.	1.7	8

#	ARTICLE	IF	CITATIONS
333	Analytical Chemistry in Astrobiology. <i>Analytical Chemistry</i> , 2021, 93, 5981-5997.	3.2	7
334	The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life. <i>Planetary Science Journal</i> , 2021, 2, 77.	1.5	74
335	Understanding Hypervelocity Sampling of Biosignatures in Space Missions. <i>Astrobiology</i> , 2021, 21, 421-442.	1.5	31
336	Sampling Plume Deposits on Enceladus's Surface to Explore Ocean Materials and Search for Traces of Life or Biosignatures. <i>Planetary Science Journal</i> , 2021, 2, 100.	1.5	8
337	The Science Case for Spacecraft Exploration of the Uranian Satellites: Candidate Ocean Worlds in an Ice Giant System. <i>Planetary Science Journal</i> , 2021, 2, 120.	1.5	19
338	Life on Enceladus? It depends on its origin. <i>Nature Astronomy</i> , 2021, 5, 740-741.	4.2	11
339	Objectives of the Millimetron Space Observatory science program and technical capabilities of its realization. <i>Physics-Usppekhi</i> , 2021, 64, 386-419.	0.8	24
340	Exploration of Enceladus and Titan: investigating ocean worlds's evolution and habitability in the Saturn system. <i>Experimental Astronomy</i> , 2022, 54, 877-910.	1.6	3
341	The Science Case for a Return to Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 132.	1.5	40
342	On the Feasibility of Informative Biosignature Measurements Using an Enceladus Plume Organic Analyzer. <i>Planetary Science Journal</i> , 2021, 2, 163.	1.5	6
343	Orbiting Astronomical Satellite for Investigating Stellar Systems (OASIS): following the water trail from the interstellar medium to oceans. , 2021, , .		8
344	Short lifespans of serpentinization in the rocky core of Enceladus: Implications for hydrogen production. <i>Icarus</i> , 2021, 364, 114461.	1.1	18
345	Complex Brines and Their Implications for Habitability. <i>Life</i> , 2021, 11, 847.	1.1	2
346	Quantitative evaluation of the feasibility of sampling the ice plumes at Enceladus for biomarkers of extraterrestrial life. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	9
347	Tiger: Concept Study for a New Frontiers Enceladus Habitability Mission. <i>Planetary Science Journal</i> , 2021, 2, 195.	1.5	5
348	Enceladus: An Active Cryovolcanic Satellite. , 2009, , 683-724.		65
349	Origin of the Saturn System. , 2009, , 55-74.		3
350	Ultraviolet Properties of Planetary Ices. <i>Astrophysics and Space Science Library</i> , 2013, , 73-105.	1.0	6

#	ARTICLE	IF	CITATIONS
351	Ceres: Its Origin, Evolution and Structure and Dawn's Potential Contribution. , 2011, , 63-76.		31
352	Astrobiology: An Overview. , 2020, , 1-17.		1
353	Titan. , 2015, , 2506-2523.		2
354	Clean In Situ Subsurface Exploration of Icy Environments in the Solar System. Cellular Origin and Life in Extreme Habitats, 2013, , 367-397.	0.3	7
355	Water in the Earth's Interior: Distribution and Origin. Space Sciences Series of ISSI, 2017, , 83-150.	0.0	2
356	Heating of Enceladus due to the dissipation of ocean tides. Icarus, 2020, 348, 113821.	1.1	16
357	A <i>limbus mundi</i> elucidation of habitability: the Goldilocks Edge. International Journal of Astrobiology, 2020, 19, 320-329.	0.9	3
358	Guest Partitioning in Carbon Monoxide Hydrate by Raman Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 13798-13802.	1.5	22
359	Subglacial environments and the search for life beyond the Earth. Geophysical Monograph Series, 2011, , 129-148.	0.1	10
360	Macromolecular organic compounds from the depths of Enceladus. Nature, 2018, 558, 564-568.	13.7	282
361	Measuring the level of interstellar inheritance in the solar protoplanetary disk. Meteoritics and Planetary Science, 2017, 52, 1797-1821.	0.7	39
362	Life in Ice on Other Worlds. , 0, , 290-304.		3
363	Chapter 9 Sample Handling and Instruments for the In Situ Exploration of Ice-Rich Planets. , 2016, , 229-270.		1
364	Nitrate and Nitrite Variability at the Seafloor of an Oxygen Minimum Zone Revealed by a Novel Microfluidic In-Situ Chemical Sensor. PLoS ONE, 2015, 10, e0132785.	1.1	28
365	Detection of Biomarkers in Gas Plumes Using a Multi-Spectral Camera in the Proposed Enceladus Orbiter Mission (NASA). , 2017, 21, 35-44.	0.1	2
366	Exploration of Enceladus's Water-Rich Plumes toward Understanding of Chemistry and Biology of the Interior Ocean. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2014, 12, Tk_7-Tk_11.	0.1	5
367	Origin of Earth's oceans: An assessment of the total amount, history and supply of water. Geochemical Journal, 2016, 50, 27-42.	0.5	54
368	The Compositional Structure of the Asteroid Belt. , 2015, , .		249

#	ARTICLE	IF	CITATIONS
369	The Dynamical Evolution of the Asteroid Belt. , 2015, , .		23
370	The Geochemistry of Enceladus: Composition and Controls. , 2018, , .		35
371	Instantaneous Habitable Windows in the Parameter Space of Enceladus' Ocean. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006951.	1.5	10
373	Chemical Composition of Icy Satellite Surfaces. Space Sciences Series of ISSI, 2010, , 111-152.	0.0	0
374	Radiolysis and Photolysis of Icy Satellite Surfaces: Experiments and Theory. Space Sciences Series of ISSI, 2010, , 297-313.	0.0	0
375	The Worlds Out There. Astronomy and Astrophysics Library, 2010, , 289-335.	0.2	0
376	Subsurface Water Oceans on Icy Satellites: Chemical Composition and Exchange Processes. Space Sciences Series of ISSI, 2010, , 483-508.	0.0	1
377	Spectroscopy of Icy Moon Surface Materials. Space Sciences Series of ISSI, 2010, , 217-245.	0.0	0
378	Satellites of Planets in the Solar System. Astrophysics and Space Science Library, 2011, , 71-103.	1.0	0
380	Titan. , 2014, , 1-19.		0
381	Geyser. , 2015, , 835-841.		0
382	Water and Volatiles in the Outer Solar System. Space Sciences Series of ISSI, 2017, , 191-231.	0.0	0
383	Cometary Isotopic Measurements. , 2017, , 47-83.		0
384	Particle Radiation Sources, Propagation and Interactions in Deep Space, at Earth, the Moon, Mars, and Beyond: Examples of Radiation Interactions and Effects. Space Sciences Series of ISSI, 2017, , 257-294.	0.0	0
385	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. , 2017, , 297-342.		0
386	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 1-23.		0
387	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. Space Sciences Series of ISSI, 2018, , 35-81.	0.0	0
388	Astrobiology: An Overview. , 2019, , 1-17.		0

#	ARTICLE	IF	CITATIONS
390	Chemical reaction of the reduced carbon and hydrogen species and effect on phase relation of the silicate minerals under the interior of the Earth. <i>Gansekai Kobutsu Kagaku</i> , 2020, 49, 28-34.	0.1	0
391	Biomolecules in Space: The Way to Search for Life on Mars. <i>SpringerBriefs in Space Life Sciences</i> , 2020, , 1-39.	0.1	1
392	Evidence of Electron Density Enhancements in the Postâ€œApoapsis Sector of Enceladus' Orbit. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, .	0.8	0
394	Habitability Tests in Low Earth Orbit. <i>SpringerBriefs in Space Life Sciences</i> , 2020, , 41-61.	0.1	0
395	Enceladus as a potential oasis for life: Science goals and investigations for future explorations. <i>Experimental Astronomy</i> , 2022, 54, 809-847.	1.6	5
396	Assessing JUICE's ability of in situ plume detection in Europa's atmosphere. <i>Planetary and Space Science</i> , 2022, 210, 105375.	0.9	3
397	Enceladus and Titan: emerging worlds of the Solar System. <i>Experimental Astronomy</i> , 0, , 1.	1.6	1
398	Cryovolcanism. , 2022, , 161-234.		3
399	Out of Thin Air? Astrobiology and Atmospheric Chemotrophy. <i>Astrobiology</i> , 2022, , .	1.5	5
400	Radar sounding survey over Devon Ice Cap indicates the potential for a diverse hypersaline subglacial hydrological environment. <i>Cryosphere</i> , 2022, 16, 379-395.	1.5	4
401	The tidalâ€œthermal evolution of the Plutoâ€œCharon system. <i>Icarus</i> , 2022, 376, 114871.	1.1	5
403	Chirality in Organic and Mineral Systems: A Review of Reactivity and Alteration Processes Relevant to Prebiotic Chemistry and Life Detection Missions. <i>Symmetry</i> , 2022, 14, 460.	1.1	15
404	Modeling the complete set of Cassiniâ€™s UVIS occultation observations of Enceladusâ€™ plume. <i>Icarus</i> , 2022, 383, 114918.	1.1	1
405	Ceresâ€™ Surface Composition. , 2022, , 105-120.		0
406	Science Objectives for Flagship-Class Mission Concepts for the Search for Evidence of Life at Enceladus. <i>Astrobiology</i> , 2022, 22, 685-712.	1.5	21
407	Analytical Chemistry Throughout This Solar System. <i>Annual Review of Analytical Chemistry</i> , 2022, 15, 197-219.	2.8	2
408	Ammonia on Ceres. , 2022, , 134-142.		0
412	Compositional Measurements of Saturn's Upper Atmosphere and Rings From Cassini INMS: An Extended Analysis of Measurements From Cassini's Grand Finale Orbits. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	7

#	ARTICLE	IF	CITATIONS
413	Is the Ocean of Enceladus in a Primitive Evolutionary Stage?. , 0, , .		0
414	Low-Temperature High-Pressure Chemistry of Ammonia and Methanol Aqueous Solutions in the Presence of Different Carbon Sources: Application to Icy Bodies. ACS Earth and Space Chemistry, 2022, 6, 1482-1494.	1.2	0
415	Habitability in the Solar System beyond the Earth and the search for life. , 2022, , 167-177.		2
416	Standards of evidence in the search for extraterrestrial life. , 2022, , 1-17.		0
417	The Role of Radial Transport in Forming Minor Bodies of the Outer Solar System. Solar System Research, 2022, 56, 168-182.	0.3	2
418	Ice Shell Structure and Composition of Ocean Worlds: Insights from Accreted Ice on Earth. Astrobiology, 2022, 22, 937-961.	1.5	15
419	Solar System Science with the Orbiting Astronomical Satellite Investigating Stellar Systems (OASIS) Observatory. Space Science Reviews, 2022, 218, .	3.7	1
420	Geoelectrochemistry-driven alteration of amino acids to derivative organics in carbonaceous chondrite parent bodies. Nature Communications, 2022, 13, .	5.8	3
421	Planetary Protection Assessment of Radioisotope Thermoelectric Generator (RTG)â€‘Powered Landed Missions to Ocean Worlds: Application to Enceladus. Astrobiology, 2022, 22, 1047-1060.	1.5	4
422	Chemical Fractionation Modeling of Plumes Indicates a Gas-rich, Moderately Alkaline Enceladus Ocean. Planetary Science Journal, 2022, 3, 191.	1.5	15
423	Detection of Biosignatures by Capillary Electrophoresis Mass Spectrometry in the Presence of Salts Relevant to Ocean Worlds Missions. Astrobiology, 2022, 22, 914-925.	1.5	11
424	Advances in Mass Spectrometers for Flyby Space Missions for the Analysis of Biosignatures and Other Complex Molecules. Universe, 2022, 8, 416.	0.9	3
426	Abundant phosphorus expected for possible life in Enceladusâ€™s ocean. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	16
427	Detecting Lipids on Planetary Surfaces with Laser Desorption Ionization Mass Spectrometry. Planetary Science Journal, 2022, 3, 241.	1.5	1
428	Analytical performances of the LAB-CosmOrbitrap mass spectrometer for astrobiology. Planetary and Space Science, 2023, 225, 105607.	0.9	1
429	The ETNA mission concept: Assessing the habitability of an active ocean world. Frontiers in Astronomy and Space Sciences, 0, 9, .	1.1	2
430	Effect of Salts on the Formation and Hypervelocity-Induced Fragmentation of Icy Clusters with Embedded Amino Acids. ACS Earth and Space Chemistry, 2023, 7, 168-181.	1.2	5
431	Laser desorption mass spectrometry with an Orbitrap analyser for in situ astrobiology. Nature Astronomy, 2023, 7, 359-365.	4.2	3



#	ARTICLE	IF	CITATIONS
432	Surviving in Ocean Worlds: Experimental Characterization of Fiber Optic Tethers across Europa-like Ice Faults and Unraveling the Sliding Behavior of Ice. <i>Planetary Science Journal</i> , 2023, 4, 1.	1.5	3
433	Terrestrial analogs & submarine hydrothermal ventsâ€™their roles in exploring ocean worlds, habitability, and life beyond earth. , 2023, , 311-358.		0
434	Salty ocean and submarine hydrothermal vents on Saturnâ€™s Moon Enceladusâ€™Tall plume of gas, jets of water vapor & organic-enriched ice particles spewing from its south pole. , 2023, , 583-616.		0
435	Dispersion of Bacteria by Low-Pressure Boiling: Life Detection in Enceladus' Plume Material. <i>Astrobiology</i> , 2023, 23, 269-279.	1.5	3
436	The Fermi Paradox and Astrobiology. , 2023, , 209-266.		0
437	Current progress in positive and negative ion modes of a laser ionization mass spectrometer equipped with CosmOrbitrap development - applicability to in situ analysis of ocean worlds. <i>Planetary and Space Science</i> , 2023, 230, 105675.	0.9	0
438	Early Stages of Galilean Moon Formation in a Water-depleted Environment. <i>Astrophysical Journal Letters</i> , 2023, 944, L37.	3.0	3
439	Circumplanetary disk ices. <i>Astronomy and Astrophysics</i> , 2023, 672, A142.	2.1	0
440	Mass Spectrometric Fingerprints of Organic Compounds in NaCl-Rich Ice Grains from Europa and Enceladus. <i>ACS Earth and Space Chemistry</i> , 2023, 7, 735-752.	1.2	7
441	Tethysâ€™s Heat Fluxes Varied with Time in the Ithaca Chasma and Telemus Basin Region. <i>Planetary Science Journal</i> , 2023, 4, 57.	1.5	1
442	Evaluating the abiotic synthesis potential and the stability of building blocks of life beneath an impact-induced steam atmosphere. <i>Frontiers in Microbiology</i> , 0, 14, .	1.5	1
443	Earth shaped by primordial H2 atmospheres. <i>Nature</i> , 2023, 616, 306-311.	13.7	16
444	Instrumentation for Planetary Exploration. , 2023, , 277-307.		0
450	Ultra-Long Baseline Time-of-Flight Mass Spectrometry with the AMIGAS Multi-Spacecraft Concept. , 2023, , .		0