

The Gravity Field and Interior Structure of Enceladus

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Citation Report

#	ARTICLE	IF	CITATIONS
2	The effect of planetary illumination on climate modelling of Earth-like exomoons. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 441, 3513-3523.	1.6	38
3	Direct imaging of exoplanets in the habitable zone with adaptive optics. <i>Proceedings of SPIE</i> , 2014, , .	0.8	9
4	Pioneer 10 and 11 orbit determination analysis shows no discrepancy with Newton-Einstein laws of gravity. <i>Physical Review D</i> , 2014, 90, .	1.6	31
5	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
6	How Do Modern Extreme Hydrothermal Environments Inform the Identification of Martian Habitability? The Case of the El Tatio Geysir Field. <i>Challenges</i> , 2014, 5, 430-443.	0.9	12
7	Editorial: Special issue "Planetary evolution and life". <i>Planetary and Space Science</i> , 2014, 98, 1-4.	0.9	3
9	Tidal dissipation in the oceans of icy satellites. <i>Icarus</i> , 2014, 242, 11-18.	1.1	37
10	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
11	Planetary surface photometry and imaging: progress and perspectives. <i>Reports on Progress in Physics</i> , 2014, 77, 104901.	8.1	2
12	Structure and evolution of the lunar Procellarum region as revealed by GRAIL gravity data. <i>Nature</i> , 2014, 514, 68-71.	13.7	85
13	TIDALLY MODULATED ERUPTIONS ON ENCELADUS: CASSINI ISS OBSERVATIONS AND MODELS. <i>Astronomical Journal</i> , 2014, 148, 46.	1.9	66
14	Acoustic in-ice positioning in the Enceladus Explorer project. <i>Annals of Glaciology</i> , 2014, 55, 253-259.	2.8	7
15	Grain-size dynamics beneath mid-ocean ridges: Implications for permeability and melt extraction. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 925-946.	1.0	20
16	Modeling Europa's dust plumes. <i>Geophysical Research Letters</i> , 2015, 42, 10,541.	1.5	24
17	Interiors of Icy Moons from an Astrobiology Perspective: Deep Oceans and Icy Crusts. , 2015, , 459-487.		1
18	Core cracking and hydrothermal circulation can profoundly affect Ceres' geophysical evolution. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 123-154.	1.5	44
19	Gravitational spreading, bookshelf faulting, and tectonic evolution of the South Polar Terrain of Saturn's moon Enceladus. <i>Icarus</i> , 2015, 260, 409-439.	1.1	30
20	Cassini ISS astrometry of the Saturnian satellites: Tethys, Dione, Rhea, Iapetus, and Phoebe 2004-2012. <i>Astronomy and Astrophysics</i> , 2015, 575, A73.	2.1	14

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21	Assessing the Ecophysiology of Methanogens in the Context of Recent Astrobiological and Planetological Studies. <i>Life</i> , 2015, 5, 1652-1686.	1.1	55
22	Hints of hot springs found on Saturnian moon. <i>Nature</i> , 2015, , .	13.7	0
23	Physics of Terrestrial Planets and Moons: An Introduction and Overview. , 2015, , 1-22.		4
24	Cassini INMS measurements of Enceladus plume density. <i>Icarus</i> , 2015, 257, 139-162.	1.1	24
25	Ice collapse over trapped water bodies on Enceladus and Europa. <i>Geophysical Research Letters</i> , 2015, 42, 712-719.	1.5	30
26	Modeling the total dust production of Enceladus from stochastic charge equilibrium and simulations. <i>Planetary and Space Science</i> , 2015, 119, 208-221.	0.9	10
27	On the Use of Microwave Radiometers for Deep Space Mission Applications by Means of a Radiometric-Based Scalar Indicator. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2015, 8, 4336-4344.	2.3	4
28	Possible evidence for a methane source in Enceladus' ocean. <i>Geophysical Research Letters</i> , 2015, 42, 1334-1339.	1.5	65
29	A unified nomenclature for tectonic structures on the surface of Enceladus. <i>Icarus</i> , 2015, 258, 67-81.	1.1	14
30	2D models of gas flow and ice grain acceleration in Enceladus's vents using DSMC methods. <i>Icarus</i> , 2015, 257, 362-376.	1.1	4
31	The fluffy core of Enceladus. <i>Icarus</i> , 2015, 258, 54-66.	1.1	61
32	Linking Europa's plume activity to tides, tectonics, and liquid water. <i>Icarus</i> , 2015, 253, 169-178.	1.1	22
33	TRACKING THE GEYSERS OF ENCELADUS INTO SATURN'S E RING. <i>Astronomical Journal</i> , 2015, 149, 156.	1.9	10
34	Structural mapping of Enceladus and implications for formation of tectonized regions. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 928-950.	1.5	56
35	Ongoing hydrothermal activities within Enceladus. <i>Nature</i> , 2015, 519, 207-210.	13.7	382
36	The pH of Enceladus' ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 202-219.	1.6	205
37	Effect of Enceladus's rapid synchronous spin on interpretation of Cassini gravity. <i>Geophysical Research Letters</i> , 2015, 42, 2137-2143.	1.5	105
38	VISCOELASTIC MODELS OF TIDALLY HEATED EXOMOONS. <i>Astrophysical Journal</i> , 2015, 804, 41.	1.6	41

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39	Tidal resonance in icy satellites with subsurface oceans. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1528-1542.	1.5	35
40	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
41	Timing of water plume eruptions on Enceladus explained by interior viscosity structure. <i>Nature Geoscience</i> , 2015, 8, 601-604.	5.4	41
42	Keeping Enceladus warm. <i>Icarus</i> , 2015, 250, 32-42.	1.1	75
43	The interior and orbital evolution of Charon as preserved in its geologic record. <i>Icarus</i> , 2015, 246, 11-20.	1.1	19
44	Possibility for albedo estimation of exomoons: Why should we care about M dwarfs?. <i>Astronomy and Astrophysics</i> , 2016, 592, A139.	2.1	3
45	Enceladus's internal ocean and ice shell constrained from Cassini gravity, shape, and libration data. <i>Geophysical Research Letters</i> , 2016, 43, 5653-5660.	1.5	141
46	Geophysical controls of chemical disequilibria in Europa. <i>Geophysical Research Letters</i> , 2016, 43, 4871-4879.	1.5	153
47	Controlled boiling on Enceladus. 1. Model of the vapor-driven jets. <i>Icarus</i> , 2016, 272, 309-318.	1.1	30
48	Strategic map for exploring the ocean-world Enceladus. <i>Acta Astronautica</i> , 2016, 126, 52-58.	1.7	20
49	Enceladus's and Dione's floating ice shells supported by minimum stress isostasy. <i>Geophysical Research Letters</i> , 2016, 43, 10,088.	1.5	126
50	Enceladus Life Finder: The search for life in a habitable Moon. , 2016, , .		39
51	Crustal control of dissipative ocean tides in Enceladus and other icy moons. <i>Icarus</i> , 2016, 280, 278-299.	1.1	44
52	The Astrobiology Primer v2.0. <i>Astrobiology</i> , 2016, 16, 561-653.	1.5	133
53	Ocean worlds in the outer solar system. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1378-1399.	1.5	149
54	The gravitational signature of internal flows in giant planets: Comparing the thermal wind approach with barotropic potential-surface methods. <i>Icarus</i> , 2016, 276, 170-181.	1.1	28
55	The diurnal libration and interior structure of Enceladus. <i>Icarus</i> , 2016, 277, 311-318.	1.1	41
56	Tempo-spatial chirogenesis. Limonene-induced mirror symmetry breaking of Si Si bond polymers during aggregation in chiral fluidic media. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2016, 331, 120-129.	2.0	10

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57	THEO concept mission: Testing the Habitability of Enceladus's Ocean. <i>Advances in Space Research</i> , 2016, 58, 1117-1137.	1.2	13
58	Recent tectonic activity on Pluto driven by phase changes in the ice shell. <i>Geophysical Research Letters</i> , 2016, 43, 6775-6782.	1.5	52
59	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
60	Modelling the Interior Structure of Enceladus Based on the 2014's Cassini Gravity Data. <i>Origins of Life and Evolution of Biospheres</i> , 2016, 46, 283-288.	0.8	5
61	Lunar true polar wander inferred from polar hydrogen. <i>Nature</i> , 2016, 531, 480-484.	13.7	90
62	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
63	A 1-D evolutionary model for icy satellites, applied to Enceladus. <i>Icarus</i> , 2016, 268, 1-11.	1.1	17
64	Exomoon climate models with the carbonate-silicate cycle and viscoelastic tidal heating. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 457, 1233-1241.	1.6	36
66	Mechanics of evenly spaced strike-slip faults and its implications for the formation of tiger-stripe fractures on Saturn's moon Enceladus. <i>Icarus</i> , 2016, 266, 204-216.	1.1	16
67	Consequences of large impacts on Enceladus's core shape. <i>Icarus</i> , 2016, 264, 300-310.	1.1	31
68	The obliquity of Enceladus. <i>Icarus</i> , 2016, 268, 12-31.	1.1	52
69	Surface ages of mid-size saturnian satellites. <i>Icarus</i> , 2016, 264, 90-101.	1.1	12
70	Rhea gravity field and interior modeling from Cassini data analysis. <i>Icarus</i> , 2016, 264, 264-273.	1.1	34
71	Enceladus's measured physical libration requires a global subsurface ocean. <i>Icarus</i> , 2016, 264, 37-47.	1.1	289
72	Cassini finds molecular hydrogen in the Enceladus plume: Evidence for hydrothermal processes. <i>Science</i> , 2017, 356, 155-159.	6.0	396
73	Detecting molecular hydrogen on Enceladus. <i>Science</i> , 2017, 356, 132-133.	6.0	7
74	Isostatic equilibrium in spherical coordinates and implications for crustal thickness on the Moon, Mars, Enceladus, and elsewhere. <i>Geophysical Research Letters</i> , 2017, 44, 7695-7705.	1.5	30
75	Alternative Energy: Production of H ₂ by Radiolysis of Water in the Rocky Cores of Icy Bodies. <i>Astrophysical Journal Letters</i> , 2017, 840, L8.	3.0	37

#	ARTICLE	IF	CITATIONS
76	Independent Mars spacecraft precise orbit determination software development and its applications. <i>Astrophysics and Space Science</i> , 2017, 362, 1.	0.5	18
77	FIRE - Flyby of Io with Repeat Encounters: A conceptual design for a New Frontiers mission to Io. <i>Advances in Space Research</i> , 2017, 60, 1080-1100.	1.2	1
78	The origin and evolution of a differentiated Mimas. <i>Icarus</i> , 2017, 296, 183-196.	1.1	16
79	Radioisotope power system-based Enceladus smallsat mission concept: Enceladus express. , 2017, , .		0
80	The impact of a pressurized regional sea or global ocean on stresses on Enceladus. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1258-1275.	1.5	12
81	Enceladus: Hot spots on an ice world. <i>Nature Astronomy</i> , 2017, 1, .	4.2	1
82	Spatially resolved near infrared observations of Enceladus's tiger stripe eruptions from Cassini VIMS. <i>Icarus</i> , 2017, 292, 1-12.	1.1	10
83	Thermally anomalous features in the subsurface of Enceladus's south polar terrain. <i>Nature Astronomy</i> , 2017, 1, .	4.2	41
84	Viscoelastic relaxation of Enceladus's ice shell. <i>Icarus</i> , 2017, 291, 31-35.	1.1	17
85	CLASSIFICATION OF SATELLITE RESONANCES IN THE SOLAR SYSTEM. <i>Astronomical Journal</i> , 2017, 153, 17.	1.9	2
86	Chemical Formation of Methanol and Hydrocarbon (œOrganicœ) Derivatives from CO ₂ and H ₂ Carbon Sources for Subsequent Biological Cell Evolution and Life's Origin. <i>Journal of the American Chemical Society</i> , 2017, 139, 566-570.	6.6	26
87	Enceladus Plume Structure and Time Variability: Comparison of Cassini Observations. <i>Astrobiology</i> , 2017, 17, 926-940.	1.5	43
88	Constraints on Ceres' Internal Structure and Evolution From Its Shape and Gravity Measured by the Dawn Spacecraft. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2267-2293.	1.5	117
89	Plume Activity and Tidal Deformation on Enceladus Influenced by Faults and Variable Ice Shell Thickness. <i>Astrobiology</i> , 2017, 17, 941-954.	1.5	35
90	Thermal evolution of trans-Neptunian objects, icy satellites, and minor icy planets in the early solar system. <i>Meteoritics and Planetary Science</i> , 2017, 52, 2470-2490.	0.7	13
91	Brittle ice shell thickness of Enceladus from fracture distribution analysis. <i>Icarus</i> , 2017, 297, 252-264.	1.1	19
92	Interiors and Surfaces of Terrestrial Planets and Major Satellites. , 2017, , 1-25.		0
93	Powering prolonged hydrothermal activity inside Enceladus. <i>Nature Astronomy</i> , 2017, 1, 841-847.	4.2	158

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95	Feasibility of Detecting Bioorganic Compounds in Enceladus Plumes with the Enceladus Organic Analyzer. <i>Astrobiology</i> , 2017, 17, 902-912.	1.5	35
96	Abiotic and Biotic Formation of Amino Acids in the Enceladus Ocean. <i>Astrobiology</i> , 2017, 17, 862-875.	1.5	40
97	Peaks in space crystallography in planetary science: past impacts and future opportunities. <i>Crystallography Reviews</i> , 2017, 23, 74-117.	0.4	2
98	Interpreting the librations of a synchronous satellite How their phase assesses Mimas global ocean. <i>Icarus</i> , 2017, 282, 276-289.	1.1	14
99	Interior thermal state of Enceladus inferred from the viscoelastic state of the ice shell. <i>Icarus</i> , 2017, 284, 387-393.	1.1	25
100	Ocean worlds exploration. <i>Acta Astronautica</i> , 2017, 131, 123-130.	1.7	93
101	Numerically modelling tidal dissipation with bottom drag in the oceans of Titan and Enceladus. <i>Icarus</i> , 2017, 281, 342-356.	1.1	26
102	Upper-twin-peak quasiperiodic oscillation in x-ray binaries and the energy from tidal circularization of relativistic orbits. <i>Physical Review D</i> , 2017, 96, .	1.6	13
103	Seismic Wave Propagation in Icy Ocean Worlds. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 206-232.	1.5	35
104	Halogens on and Within the Ocean Worlds of the Outer Solar System. <i>Springer Geochemistry</i> , 2018, , 997-1016.	0.1	2
105	Water and the Interior Structure of Terrestrial Planets and Icy Bodies. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	33
106	Vital Signs: Seismology of Icy Ocean Worlds. <i>Astrobiology</i> , 2018, 18, 37-53.	1.5	31
107	Radio science investigations with the Asteroid impact mission. <i>Advances in Space Research</i> , 2018, 62, 2273-2289.	1.2	16
108	Cold cases: What we don't know about Saturn's Moons. <i>Planetary and Space Science</i> , 2018, 155, 41-49.	0.9	5
109	Two-phase convection in Ganymede's high-pressure ice layer Implications for its geological evolution. <i>Icarus</i> , 2018, 299, 133-147.	1.1	49
110	Faster paleospin and deep-seated uncompensated mass as possible explanations for Ceres present-day shape and gravity. <i>Icarus</i> , 2018, 299, 430-442.	1.1	18
111	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
112	The When and Where of Water in the History of the Universe. , 2018, , 47-73.		1

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113	Geophysical Investigations of Habitability in Ice-Covered Ocean Worlds. Journal of Geophysical Research E: Planets, 2018, 123, 180-205.	1.5	133
114	Enceladus's crust as a non-uniform thin shell: I tidal deformations. Icarus, 2018, 302, 145-174.	1.1	36
115	Life in the Universe. , 2018, , .		23
117	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 2855-2877.		2
118	Tidal synchronization of close-in satellites and exoplanets. III. Tidal dissipation revisited and application to Enceladus. Celestial Mechanics and Dynamical Astronomy, 2018, 130, 1.	0.5	15
119	Dust Emission by Active Moons. Space Science Reviews, 2018, 214, 1.	3.7	3
120	Ocean Worlds in the Outer Regions of the Solar System (Review). Solar System Research, 2018, 52, 371-381.	0.3	10
121	Lower-twin-peak quasiperiodic oscillation coherence in x-ray binaries and matter stretched by tides falling onto a compact object. Physical Review D, 2018, 98, .	1.6	6
122	Interiors and Surfaces of Terrestrial Planets and Major Satellites. , 2018, , 141-166.		0
124	Radial velocities. , 0, , 17-80.		0
125	Astrometry. , 0, , 81-102.		0
126	Timing. , 0, , 103-118.		0
127	Microlensing. , 0, , 119-152.		0
129	Host stars. , 0, , 373-428.		0
130	Brown dwarfs and free-floating planets. , 0, , 429-448.		0
131	Formation and evolution. , 0, , 449-558.		0
132	Interiors and atmospheres. , 0, , 559-648.		0
133	The solar system. , 0, , 649-700.		0

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141	Review of Saturn's icy moons following the Cassini mission. Reports on Progress in Physics, 2018, 81, 065901.	8.1	9
142	Low Energy Subsurface Environments as Extraterrestrial Analogs. Frontiers in Microbiology, 2018, 9, 1605.	1.5	37
143	Transits. , 0, , 153-328.		0
144	Power Laws of Topography and Gravity Spectra of the Solar System Bodies. Journal of Geophysical Research E: Planets, 2018, 123, 2038-2064.	1.5	21
145	Resolution optimization of an off-axis lensless digital holographic microscope. Applied Optics, 2018, 57, A172.	0.9	16
146	Follow the High Subcritical Water. Geosciences (Switzerland), 2019, 9, 249.	1.0	3
147	Internal Energy Dissipation in Enceladus's Subsurface Ocean From Tides and Libration and the Role of Inertial Waves. Journal of Geophysical Research E: Planets, 2019, 124, 2198-2212.	1.5	34
148	Icelandic Pit Chains as Planetary Analogs: Using Morphologic Measurements of Pit Chains to Determine Regolith Thickness. Journal of Geophysical Research E: Planets, 2019, 124, 2983-2999.	1.5	8
149	Differentiation of Enceladus and Retention of a Porous Core. Astrophysical Journal, 2019, 882, 47.	1.6	14
150	A solution of Jupiter's gravitational field from Juno data with the orbit14 software. Monthly Notices of the Royal Astronomical Society, 2019, 490, 766-772.	1.6	12
151	Circumplanetary Dust Populations. Space Science Reviews, 2019, 215, 1.	3.7	8
152	Implications of nonsynchronous rotation on the deformational history and ice shell properties in the south polar terrain of Enceladus. Icarus, 2019, 321, 445-457.	1.1	12
153	Cassini-Huygens's exploration of the Saturn system: 13 years of discovery. Science, 2019, 364, 1046-1051.	6.0	35
154	Decomposition of amino acids in water with application to in-situ measurements of Enceladus, Europa and other hydrothermally active icy ocean worlds. Icarus, 2019, 329, 140-147.	1.1	24
155	The habitable zone for Earth-like exomoons orbiting Kepler-1625b. International Journal of Astrobiology, 2019, 18, 510-517.	0.9	1
156	Enceladus: Evidence and Unsolved Questions for an Ice-Covered Habitable World. , 2019, , 399-407.		1
157	Enceladus's ice shell structure as a window on internal heat production. Icarus, 2019, 332, 111-131.	1.1	77
158	Biological Contamination Prevention for Outer Solar System Moons of Astrobiological Interest: What Do We Need to Know?. Astrobiology, 2019, 19, 951-974.	1.5	24

#	ARTICLE	IF	CITATIONS
159	Future of Planetary Atmospheric, Surface, and Interior Science Using Radio and Laser Links. <i>Radio Science</i> , 2019, 54, 365-377.	0.8	11
160	Evolution of Saturn's mid-sized moons. <i>Nature Astronomy</i> , 2019, 3, 543-552.	4.2	58
161	Tidal dissipation in Enceladus' uneven, fractured ice shell. <i>Icarus</i> , 2019, 328, 218-231.	1.1	32
162	Trajectories of a spacecraft aiming to approach at a near-regular cadence of the Enceladus and Dione moons. <i>Journal of Physics: Conference Series</i> , 2019, 1365, 012018.	0.3	0
163	Nonlinear tidal dissipation in the subsurface oceans of Enceladus and other icy satellites. <i>Icarus</i> , 2019, 319, 68-85.	1.1	41
164	Measurement and implications of Saturn's gravity field and ring mass. <i>Science</i> , 2019, 364, .	6.0	148
165	The NASA Roadmap to Ocean Worlds. <i>Astrobiology</i> , 2019, 19, 1-27.	1.5	209
166	Long-term stability of Enceladus' uneven ice shell. <i>Icarus</i> , 2019, 319, 476-484.	1.1	59
167	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
168	Collecting amino acids in the Enceladus plume. <i>International Journal of Astrobiology</i> , 2019, 18, 47-59.	0.9	24
169	Protein Stability in Titan's Subsurface Water Ocean. <i>Astrobiology</i> , 2020, 20, 190-198.	1.5	1
170	Ceres: Astrobiological Target and Possible Ocean World. <i>Astrobiology</i> , 2020, 20, 269-291.	1.5	43
171	Cascading parallel fractures on Enceladus. <i>Nature Astronomy</i> , 2020, 4, 234-239.	4.2	18
172	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
173	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
174	Tectonics of Enceladus' South Pole: Block Rotation of the Tiger Stripes. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006471.	1.5	8
175	Heat Production and Tidally Driven Fluid Flow in the Permeable Core of Enceladus. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006209.	1.5	18
176	Key Technologies and Instrumentation for Subsurface Exploration of Ocean Worlds. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	18

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177	Returning Samples From Enceladus for Life Detection. <i>Frontiers in Astronomy and Space Sciences</i> , 2020, 7, .	1.1	32
178	Advanced Pointing Imaging Camera (APIC) for planetary science and mission opportunities. <i>Planetary and Space Science</i> , 2020, 194, 105095.	0.9	10
179	Strength Evolution of Ice Plume Deposit Analogs of Enceladus and Europa. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088953.	1.5	10
180	Microbial Component Detection in Enceladus Snowing Phenomenon. <i>Astrophysical Bulletin</i> , 2020, 75, 166-175.	0.3	2
181	Relict Ocean Worlds: Ceres. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	14
182	Spontaneous formation of geysers at only one pole on Enceladus's ice shell. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 14764-14768.	3.3	16
183	Resonance locking in giant planets indicated by the rapid orbital expansion of Titan. <i>Nature Astronomy</i> , 2020, 4, 1053-1058.	4.2	87
184	The formation of Enceladus' Tiger Stripe Fractures from eccentricity tides. <i>Earth and Planetary Science Letters</i> , 2020, 544, 116389.	1.8	11
185	Ice-Ocean Exchange Processes in the Jovian and Saturnian Satellites. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	43
186	A GPU-based phase tracking method for planetary radio science applications. <i>Measurement Science and Technology</i> , 2020, 31, 045902.	1.4	3
187	Tides in subsurface oceans with meridional varying thickness. <i>Icarus</i> , 2020, 343, 113711.	1.1	10
188	The gravity field and interior structure of Dione. <i>Icarus</i> , 2020, 345, 113713.	1.1	31
189	Experimental and Simulation Efforts in the Astrobiological Exploration of Exooceans. <i>Space Science Reviews</i> , 2020, 216, 9.	3.7	25
190	The Carbonate Geochemistry of Enceladus' Ocean. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085885.	1.5	64
191	Exo-Ocean Exploration with Deep-Sea Sensor and Platform Technologies. <i>Astrobiology</i> , 2020, 20, 897-915.	1.5	15
192	Reducing Doppler noise with multi-station tracking: The Cassini test case. <i>Acta Astronautica</i> , 2020, 173, 45-52.	1.7	4
193	The effect of Europa and Enceladus analog seawater composition on isotopic measurements of volatile CO ₂ . <i>Icarus</i> , 2021, 358, 114216.	1.1	1
194	Oxidation processes diversify the metabolic menu on Enceladus. <i>Icarus</i> , 2021, 364, 114248.	1.1	29

#	ARTICLE	IF	CITATIONS
195	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
196	Repeated impact-driven plume formation on Enceladus over megayear timescales. <i>Icarus</i> , 2021, 357, 114281.	1.1	2
197	Updated Europa gravity field and interior structure from a reanalysis of Galileo tracking data. <i>Icarus</i> , 2021, 358, 114187.	1.1	24
199	Resonance in Chirogenesis and Photochirogenesis: Colloidal Polymers Meet Chiral Optofluidics. <i>Symmetry</i> , 2021, 13, 199.	1.1	3
200	Method for detecting and quantitating capture of organic molecules in hypervelocity impacts. <i>MethodsX</i> , 2021, 8, 101239.	0.7	5
201	Endogenic origin of the Martian hemispheric dichotomy. , 2021, , 499-522.		0
202	Isostasy with Love $\hat{\epsilon}$ I: elastic equilibrium. <i>Geophysical Journal International</i> , 2021, 225, 2157-2193.	1.0	6
203	Identification of Possible Heat Sources for the Thermal Output of Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 29.	1.5	1
204	Ceres, a wet planet: The view after Dawn. <i>Chemie Der Erde</i> , 2022, 82, 125745.	0.8	1
205	Blocks Size Frequency Distribution in the Enceladus Tiger Stripes Area: Implications on Their Formative Processes. <i>Universe</i> , 2021, 7, 82.	0.9	9
206	Exobiology Extant Life Surveyor (EELS). , 2021, , .		0
207	Persephone: A Pluto-system Orbiter and Kuiper Belt Explorer. <i>Planetary Science Journal</i> , 2021, 2, 75.	1.5	7
208	Analytical Chemistry in Astrobiology. <i>Analytical Chemistry</i> , 2021, 93, 5981-5997.	3.2	7
209	Environments, needs and opportunities for future space photovoltaic power generation: A review. <i>Applied Energy</i> , 2021, 290, 116757.	5.1	41
210	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
211	Breaking the symmetry by breaking the ice shell: An impact origin for the south polar terrain of Enceladus. <i>Icarus</i> , 2021, 359, 114302.	1.1	8
212	Isostasy with Love: II Airy compensation arising from viscoelastic relaxation. <i>Geophysical Journal International</i> , 2021, 227, 693-716.	1.0	2
213	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

#	ARTICLE	IF	CITATIONS
214	The Science Case for a Return to Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 132.	1.5	40
215	Improved Determination of Europa's Long-Wavelength Topography Using Stellar Occultations. <i>Earth and Space Science</i> , 2021, 8, e2020EA001586.	1.1	2
216	Exploration of Icy Ocean Worlds Using Geophysical Approaches. <i>Planetary Science Journal</i> , 2021, 2, 150.	1.5	14
217	On the Feasibility of Informative Biosignature Measurements Using an Enceladus Plume Organic Analyzer. <i>Planetary Science Journal</i> , 2021, 2, 163.	1.5	6
218	Introduction—First Billion Years: Habitability. <i>Astrobiology</i> , 2021, 21, 893-905.	1.5	2
219	Short lifespans of serpentinization in the rocky core of Enceladus: Implications for hydrogen production. <i>Icarus</i> , 2021, 364, 114461.	1.1	18
220	UMaMI: A New Frontiers-style Mission Concept to Explore the Uranian System. <i>Planetary Science Journal</i> , 2021, 2, 174.	1.5	11
221	A Recipe for the Geophysical Exploration of Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 157.	1.5	14
222	Enceladus' Tiger Stripes as Frictional Faults: Effect on Stress and Heat Production. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094849.	1.5	5
223	Laboratory exploration of mineral precipitates from Europa's subsurface ocean. <i>Journal of Applied Crystallography</i> , 2021, 54, 1455-1479.	1.9	1
224	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
225	Tiger: Concept Study for a New Frontiers Enceladus Habitability Mission. <i>Planetary Science Journal</i> , 2021, 2, 195.	1.5	5
226	Microbes and space travel — hope and hazards. <i>Future Microbiology</i> , 2021, 16, 1023-1028.	1.0	1
227	Solving the Laplace Tidal Equations using Freely Available, Easily Extensible Finite Element Software. <i>Computers and Geosciences</i> , 2021, 155, 104865.	2.0	1
228	Knowledge Inventory of Foundational Data Products in Planetary Science. <i>Planetary Science Journal</i> , 2021, 2, 18.	1.5	11
229	Heating of Enceladus due to the dissipation of ocean tides. <i>Icarus</i> , 2020, 348, 113821.	1.1	16
231	Macromolecular organic compounds from the depths of Enceladus. <i>Nature</i> , 2018, 558, 564-568.	13.7	282
232	New constraints on the location of P9 obtained with the INPOP19a planetary ephemeris. <i>Astronomy and Astrophysics</i> , 2020, 640, A6.	2.1	22

#	ARTICLE	IF	CITATIONS
233	Analysis of <i>Cassini</i> radio tracking data for the construction of INPOP19a: A new estimate of the Kuiper belt mass. <i>Astronomy and Astrophysics</i> , 2020, 640, A7.	2.1	16
234	Growth of <i>Bacillus pumilus</i> and <i>Halomonas halodurans</i> in sulfates: prospects for life on Europa. <i>Boletin De La Sociedad Geologica Mexicana</i> , 2015, 67, 367-375.	0.1	5
235	The Geochemistry of Enceladus: Composition and Controls. , 2018, , .		35
236	Geophysics and Tidal-Thermal Evolution of Enceladus. , 2018, , .		5
237	A LIBRATION MODEL FOR ENCELADUS BASED ON GEODETIC CONTROL POINT NETWORK ANALYSIS. <i>International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives</i> , 0, XLI-B4, 459-462.	0.2	5
238	ENCELADUS GEODETIC FRAMEWORK. <i>International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives</i> , 0, XLII-3/W1, 113-118.	0.2	3
239	Instantaneous Habitable Windows in the Parameter Space of Enceladus' Ocean. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006951.	1.5	10
240	Icy Enceladus hides a watery ocean. <i>Nature</i> , 0, , .	13.7	1
241	Wonder of the Solar System: Icy Geysers and Liquid Water on Enceladus. , 2016, , 37-44.		0
242	Die Ursprünge des Lebendigen. , 2017, , 153-220.		0
243	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 1-23.		0
244	Water and the Interior Structure of Terrestrial Planets and Icy Bodies. <i>Space Sciences Series of ISSI</i> , 2018, , 343-375.	0.0	0
245	Ursprung und Evolution des Lebendigen. , 2019, , 193-279.		0
246	An investigation of libration heating and the thermal state of Enceladus's ice shell. <i>Icarus</i> , 2022, 373, 114769.	1.1	0
247	Periodic orbits for interferometric and tomographic radar imaging of Saturn's moon Enceladus. <i>Acta Astronautica</i> , 2022, 191, 326-345.	1.7	2
248	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
249	Enceladus and Titan: emerging worlds of the Solar System. <i>Experimental Astronomy</i> , 0, , 1.	1.6	1
250	Cryovolcanism. , 2022, , 161-234.		3

#	ARTICLE	IF	CITATIONS
251	Gravity Investigation of Saturn's Inner System with the Innovative Skimmer Concept. Planetary Science Journal, 2022, 3, 19.	1.5	1
252	Refractive Index and Extinction Coefficient of Vapor-deposited Water Ice in the UV-vis Range. Astrophysical Journal, 2022, 925, 179.	1.6	6
253	A perturbation method for evaluating the magnetic field induced from an arbitrary, asymmetric ocean world analytically. Icarus, 2022, 376, 114840.	1.1	9
254	Developing technological synergies between deep-sea and space research. Elementa, 2022, 10, .	1.1	8
255	Science Drivers for the Future Exploration of Ceres: From Solar System Evolution to Ocean World Science. Planetary Science Journal, 2022, 3, 64.	1.5	4
256	Probing the Icy Shell Structure of Ocean Worlds with Gravity-Topography Admittance. Planetary Science Journal, 2022, 3, 53.	1.5	5
257	The Detection of Seismicity on Icy Ocean Worlds by Single-Station and Small-Aperture Seismometer Arrays. Earth and Space Science, 2022, 9, .	1.1	3
258	Science Objectives for Flagship-Class Mission Concepts for the Search for Evidence of Life at Enceladus. Astrobiology, 2022, 22, 685-712.	1.5	21
259	Geologically rapid aqueous mineral alteration at subfreezing temperatures in icy worlds. Nature Astronomy, 2022, 6, 554-559.	4.2	12
260	Librations of a body composed of a deformable mantle and a fluid core. Celestial Mechanics and Dynamical Astronomy, 2022, 134, 1.	0.5	1
262	Ceres' Internal Evolution. , 2022, , 159-172.		0
263	The Relative Motion and Shapes of Pluto and Charon. Vestnik St Petersburg University: Mathematics, 2021, 54, 289-299.	0.1	0
264	Interiors of Earth-Like Planets and Satellites of the Solar System. Surveys in Geophysics, 0, , 1.	2.1	5
267	Extremophiles in Earth's Deep Seas: A View Toward Life in Exo-Oceans. Astrobiology, 2022, 22, 1009-1028.	1.5	3
268	Creep tide theory: equations for differentiated bodies with aligned layers. Celestial Mechanics and Dynamical Astronomy, 2022, 134, .	0.5	1
269	Ice Shell Structure and Composition of Ocean Worlds: Insights from Accreted Ice on Earth. Astrobiology, 2022, 22, 937-961.	1.5	15
270	On computing viscoelastic Love numbers for general planetary models: the ALMA3 code. Geophysical Journal International, 2022, 231, 1502-1517.	1.0	6
271	How does salinity shape ocean circulation and ice geometry on Enceladus and other icy satellites?. Science Advances, 2022, 8, .	4.7	31

#	ARTICLE	IF	CITATIONS
272	Different Ice-shell Geometries on Europa and Enceladus due to Their Different Sizes: Impacts of Ocean Heat Transport. <i>Astrophysical Journal</i> , 2022, 934, 116.	1.6	12
273	Microfluidic Chromatography for Enhanced Amino Acid Detection at Ocean Worlds. <i>Astrobiology</i> , 2022, 22, 1116-1128.	1.5	3
274	Planetary Protection Assessment of Radioisotope Thermoelectric Generator (RTG)â€“Powered Landed Missions to Ocean Worlds: Application to Enceladus. <i>Astrobiology</i> , 2022, 22, 1047-1060.	1.5	4
275	Callisto and Europa Gravity Measurements from JUICE 3GM Experiment Simulation. <i>Planetary Science Journal</i> , 2022, 3, 199.	1.5	8
276	On Icy Ocean Worlds, Size Controls Ice Shell Geometry. <i>Astrophysical Journal</i> , 2022, 935, 103.	1.6	6
277	Probe lifetime around natural satellites with obliquity. <i>Astrodynamic</i> , 2022, 6, 429-439.	1.5	4
278	Tidal insights into rocky and icy bodies: an introduction and overview. <i>Advances in Geophysics</i> , 2022, , 231-320.	1.1	12
279	Abundant phosphorus expected for possible life in Enceladusâ€™s ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	16
280	Ocean dynamics and tracer transport over the south pole geysers of Enceladus. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 517, 3485-3494.	1.6	9
281	The Orbits of the Main Saturnian Satellites, the Saturnian System Gravity Field, and the Orientation of Saturnâ€™s Pole*. <i>Astronomical Journal</i> , 2022, 164, 199.	1.9	18
282	Topographic response to ocean heat flux anomaly on the icy moons of Jupiter and Saturn. <i>Icarus</i> , 2023, 391, 115337.	1.1	2
283	The role of ocean circulation in driving hemispheric symmetry breaking of the ice shell of Enceladus. <i>Earth and Planetary Science Letters</i> , 2022, 599, 117845.	1.8	5
284	From science questions to Solar System exploration. , 2023, , 65-175.		0
285	Enabling technologies for planetary exploration. , 2023, , 249-329.		0
286	Complementary Mass Spectral Analysis of Isomeric O-bearing Organic Compounds and Fragmentation Differences through Analog Techniques for Spaceborne Mass Spectrometers. <i>Planetary Science Journal</i> , 2022, 3, 254.	1.5	5
287	Measurements of regolith thicknesses on Enceladus: Uncovering the record of plume activity. <i>Icarus</i> , 2023, 392, 115369.	1.1	5
288	Moonraker: Enceladus Multiple Flyby Mission. <i>Planetary Science Journal</i> , 2022, 3, 268.	1.5	5
289	The ETNA mission concept: Assessing the habitability of an active ocean world. <i>Frontiers in Astronomy and Space Sciences</i> , 0, 9, .	1.1	2

#	ARTICLE	IF	CITATIONS
290	Putative Methanogenic Biosphere in Enceladus's Deep Ocean: Biomass, Productivity, and Implications for Detection. <i>Planetary Science Journal</i> , 2022, 3, 270.	1.5	10
291	Highlight Advances in Planetary Physics in the Solar System: In Situ Detection Over the Past 20 Years. <i>Space: Science & Technology</i> , 2023, 3, .	1.0	0
292	Estimating the 3D structure of the Enceladus ice shell from Flexural and Cray waves using seismic simulations. <i>Earth and Planetary Science Letters</i> , 2023, 603, 117984.	1.8	1
293	Terrestrial analogs & submarine hydrothermal ventsâ€”their roles in exploring ocean worlds, habitability, and life beyond earth. , 2023, , 311-358.		0
294	Could near-Earth watery asteroid Ceres be a likely ocean world and habitable?. , 2023, , 523-544.		0
295	An ocean and volcanic seafloor hiding below the icy crust of Jupiterâ€™s Moon Europaâ€™ Plumes of water vapor rising over 160 km above its surface. , 2023, , 545-582.		0
296	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
297	Dispersion of Bacteria by Low-Pressure Boiling: Life Detection in Enceladus' Plume Material. <i>Astrobiology</i> , 2023, 23, 269-279.	1.5	3
298	Estimates for Tethys' Moment of Inertia, Heat Flux Distribution, and Interior Structure From Its Longâ€Wavelength Topography. <i>Journal of Geophysical Research E: Planets</i> , 2023, 128, .	1.5	1
299	Spectroscopic Detection of Biosignatures in Natural Ice Samples as a Proxy for Icy Moons. <i>Life</i> , 2023, 13, 478.	1.1	0
300	Particle entrainment and rotating convection in Enceladusâ€™ ocean. <i>Communications Earth & Environment</i> , 2023, 4, .	2.6	4
301	Regional Variations in the Spreadingâ€Rate Dependence of Abyssal Hill Roughness as Indicators of Mantle Heterogeneity. <i>Geophysical Research Letters</i> , 2023, 50, .	1.5	1
310	Editorial: The links between space plasma physics and planetary science. <i>Frontiers in Astronomy and Space Sciences</i> , 0, 10, .	1.1	0
330	Evaluation of Landing Accuracy on Planetary Moons in Circular-Restricted Three Body Problem. , 2024, , .		0
338	Interiors and Surfaces of Terrestrial Planets and Major Satellites. , 2024, , 1-26.		0