

Shear heating as the origin of the plumes and heat flux

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Unified model of tectonics and heat transport in a frigid Enceladus. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13578-13581.	3.3	40
2	An oceanic composition on early and today's Enceladus. Geophysical Research Letters, 2007, 34, n/a-n/a.	1.5	136
3	The global shape of Europa: Constraints on lateral shell thickness variations. Icarus, 2007, 191, 183-192.	1.1	83
4	Metasomatic clathrate xenoliths as a possible source for the south polar plumes of Enceladus. Icarus, 2007, 191, 743-748.	1.1	29
5	Cracks under stress. Nature, 2007, 447, 276-277.	13.7	6
6	Eruptions arising from tidally controlled periodic openings of rifts on Enceladus. Nature, 2007, 447, 292-294.	13.7	154
7	Association of the jets of Enceladus with the warmest regions on its south-polar fractures. Nature, 2007, 449, 695-697.	13.7	150
8	Unstable extension of Enceladus' lithosphere. Icarus, 2007, 192, 92-105.	1.1	47
9	Tidal heating and the long-term stability of a subsurface ocean on Enceladus. Icarus, 2008, 194, 675-689.	1.1	171
10	Solid tidal friction above a liquid water reservoir as the origin of the south pole hotspot on Enceladus. Icarus, 2008, 196, 642-652.	1.1	124
11	Habitability of Enceladus: Planetary Conditions for Life. Origins of Life and Evolution of Biospheres, 2008, 38, 355-369.	0.8	67
12	Tectonic patterns on reoriented and despun planetary bodies. Icarus, 2008, 195, 459-473.	1.1	53
13	A model for the temperature-dependence of tidal dissipation in convective plumes on icy satellites: Implications for Europa and Enceladus. Icarus, 2008, 195, 758-764.	1.1	37
14	The oxidation state of hydrothermal systems on early Enceladus. Icarus, 2008, 197, 157-163.	1.1	45
15	Tidally driven stress accumulation and shear failure of Enceladus's tiger stripes. Icarus, 2008, 198, 435-451.	1.1	87
16	Active hematite concretion formation in modern acid saline lake sediments, Lake Brown, Western Australia. Earth and Planetary Science Letters, 2008, 268, 52-63.	1.8	56
17	Slow dust in Enceladus' plume from condensation and wall collisions in tiger stripe fractures. Nature, 2008, 451, 685-688.	13.7	162
18	Identification of Saturn's magnetospheric regions and associated plasma processes: Synopsis of Cassini observations during orbit insertion. Reviews of Geophysics, 2008, 46, .	9.0	23

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19	Near-surface heating on Enceladus and the south polar thermal anomaly. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	29
20	Evidence for temporal variability of Enceladus' gas jets: Modeling of Cassini observations. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	78
21	Mobile lid convection beneath Enceladus' south polar terrain. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	59
22	Is Enceladus' plume tidally controlled?. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	16
23	Enceladus-Oasis or Ice Ball?. <i>Science</i> , 2008, 320, 1432-1433.	6.0	17
24	The Possible Origin and Persistence of Life on Enceladus and Detection of Biomarkers in the Plume. <i>Astrobiology</i> , 2008, 8, 909-919.	1.5	166
25	Planetary structural mapping. , 0, , 351-396.		2
26	Physical properties: elasticity, friction and diffusivity. , 0, , 51-76.		0
27	The Communicating Pipe Model for Icy Plumes on Enceladus. <i>Chinese Physics Letters</i> , 2009, 26, 119601.	1.3	1
28	TandEM: Titan and Enceladus mission. <i>Experimental Astronomy</i> , 2009, 23, 893-946.	1.6	77
29	Sodium salts in E-ring ice grains from an ocean below the surface of Enceladus. <i>Nature</i> , 2009, 459, 1098-1101.	13.7	435
30	No sodium in the vapour plumes of Enceladus. <i>Nature</i> , 2009, 459, 1102-1104.	13.7	41
31	Liquid water on Enceladus from observations of ammonia and ^{40}Ar in the plume. <i>Nature</i> , 2009, 460, 487-490.	13.7	470
32	Volcanism in the Solar System. <i>Nature Geoscience</i> , 2009, 2, 389-397.	5.4	49
33	Endogenic heat from Enceladus' south polar fractures: New observations, and models of conductive surface heating. <i>Icarus</i> , 2009, 199, 189-196.	1.1	55
34	Modeling stresses on satellites due to nonsynchronous rotation and orbital eccentricity using gravitational potential theory. <i>Icarus</i> , 2009, 200, 188-206.	1.1	91
35	Origin of ice diapirism, true polar wander, subsurface ocean, and tiger stripes of Enceladus driven by compositional convection. <i>Icarus</i> , 2009, 202, 669-680.	1.1	21
36	Geological implications of a physical libration on Enceladus. <i>Icarus</i> , 2009, 203, 541-552.	1.1	35

#	ARTICLE	IF	CITATIONS
37	Recent orbital evolution and the internal structures of Enceladus and Dione. <i>Icarus</i> , 2009, 204, 597-609.	1.1	37
38	Old Faithful model for radiolytic gas-driven cryovolcanism at Enceladus. <i>Planetary and Space Science</i> , 2009, 57, 1607-1620.	0.9	37
39	Velocity-dependent friction on Coulombic shear faults in ice. <i>Acta Materialia</i> , 2009, 57, 4382-4390.	3.8	17
40	Thermodynamics and Mass Transport in Multicomponent, Multiphase H ₂ O Systems of Planetary Interest. <i>Annual Review of Earth and Planetary Sciences</i> , 2009, 37, 449-477.	4.6	31
41	Ocean tides heat Enceladus. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	52
42	Tectonics of the outer planet satellites. , 2009, , 264-350.		30
43	Enceladus Plume Density Modeling and Reconstruction for Cassini Attitude Control System. , 2010, , .		4
44	Implications of Rotation, Orbital States, Energy Sources, and Heat Transport for Internal Processes in Icy Satellites. <i>Space Science Reviews</i> , 2010, 153, 317-348.	3.7	52
45	Surface, Subsurface and Atmosphere Exchanges on the Satellites of the Outer Solar System. <i>Space Science Reviews</i> , 2010, 153, 375-410.	3.7	19
46	Chemical Composition of Icy Satellite Surfaces. <i>Space Science Reviews</i> , 2010, 153, 113-154.	3.7	65
47	Interpretation and analysis of planetary structures. <i>Journal of Structural Geology</i> , 2010, 32, 855-875.	1.0	71
48	Subsurface heat transfer on Enceladus: Conditions under which melting occurs. <i>Icarus</i> , 2010, 206, 594-607.	1.1	58
49	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
50	Enceladus plume variability and the neutral gas densities in Saturn's magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	93
51	Sodium chloride as a geophysical probe of a subsurface ocean on Enceladus. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	25
52	Limits of Enceladus's ice shell thickness from tidally driven tiger stripe shear failure. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	30
53	High heat flow from Enceladus' south polar region measured using 10 ⁻⁶ to 10 ⁻¹ W m ⁻² Cassini/CIRS data. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	145
54	Joule heating of the south polar terrain on Enceladus. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	8

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55	Cryoclastic origin of particles on the surface of Enceladus. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	16
56	A fracture history on Enceladus provides evidence for a global ocean. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	74
57	Does the normal stress parallel to the sliding plane affect the friction of ice upon ice?. <i>Journal of Glaciology</i> , 2011, 57, 949-953.	1.1	1
59	<i>HUBBLE SPACE TELESCOPE</i>/ADVANCED CAMERA FOR SURVEYS OBSERVATIONS OF EUROPA'S ATMOSPHERIC ULTRAVIOLET EMISSION AT EASTERN ELONGATION. <i>Astrophysical Journal</i> , 2011, 738, 153.	1.6	34
60	Watery Enceladus. <i>Physics Today</i> , 2011, 64, 38-44.	0.3	19
61	Return to Europa: Overview of the Jupiter Europa orbiter mission. <i>Advances in Space Research</i> , 2011, 48, 629-650.	1.2	22
62	Tidal dynamical considerations constrain the state of an ocean on Enceladus. <i>Icarus</i> , 2011, 211, 770-779.	1.1	75
63	A salt-water reservoir as the source of a compositionally stratified plume on Enceladus. <i>Nature</i> , 2011, 474, 620-622.	13.7	394
64	Friction of ice on ice. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	87
65	Modeling ammoniaâ€“ammonium aqueous chemistries in the Solar Systemâ€™s icy bodies. <i>Icarus</i> , 2012, 220, 932-946.	1.1	56
66	Tidal control of jet eruptions on Enceladus as observed by Cassini ISS between 2005 and 2007. <i>Icarus</i> , 2012, 220, 896-903.	1.1	22
67	Life in the Saturnian Neighborhood. <i>Cellular Origin and Life in Extreme Habitats</i> , 2012, , 485-522.	0.3	0
68	Effects of anisotropic viscosity and texture development on convection in ice mantles. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	3
69	Enceladus: A hypothesis for bringing both heat and chemicals to the surface. <i>Icarus</i> , 2012, 221, 53-62.	1.1	46
70	Small Habitable Worlds. , 2012, , 201-228.		7
71	The impact of a weak south pole on thermal convection in Enceladusâ€™ ice shell. <i>Icarus</i> , 2012, 218, 320-330.	1.1	24
72	Shell tectonics: A mechanical model for strike-slip displacement on Europa. <i>Icarus</i> , 2012, 218, 297-307.	1.1	29
73	Tidally-induced melting events as the origin of south-pole activity on Enceladus. <i>Icarus</i> , 2012, 219, 655-664.	1.1	60

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74	Ice rheology and tidal heating of Enceladus. <i>Icarus</i> , 2013, 226, 10-19.	1.1	32
75	An observed correlation between plume activity and tidal stresses on Enceladus. <i>Nature</i> , 2013, 500, 182-184.	13.7	136
76	Static strengthening of frictional surfaces of ice. <i>Acta Materialia</i> , 2013, 61, 1616-1623.	3.8	21
77	The Science of Solar System Ices. <i>Astrophysics and Space Science Library</i> , 2013, , .	1.0	35
78	Space-Weathering of Solar System Bodies: A Laboratory Perspective. <i>Chemical Reviews</i> , 2013, 113, 9086-9150.	23.0	130
79	Flanking fractures and the formation of double ridges on Europa. <i>Icarus</i> , 2013, 223, 74-81.	1.1	46
80	Clathrate Hydrates: Implications for Exchange Processes in the Outer Solar System. <i>Astrophysics and Space Science Library</i> , 2013, , 409-454.	1.0	27
81	Atomistic simulations of friction at an ice-ice interface. <i>Friction</i> , 2013, 1, 242-251.	3.4	16
82	The shape of Enceladus as explained by an irregular core: Implications for gravity, libration, and survival of its subsurface ocean. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1775-1788.	1.5	19
83	Impact of tidal heating on the onset of convection in Enceladus's ice shell. <i>Icarus</i> , 2013, 226, 898-904.	1.1	25
84	Flexure on Dione: Investigating subsurface structure and thermal history. <i>Icarus</i> , 2013, 223, 418-422.	1.1	29
85	Enceladus: An Active Ice World in the Saturn System. <i>Annual Review of Earth and Planetary Sciences</i> , 2013, 41, 693-717.	4.6	142
86	Planetary Ices Attenuation Properties. <i>Astrophysics and Space Science Library</i> , 2013, , 183-225.	1.0	17
87	ON THE DIRECT IMAGING OF TIDALLY HEATED EXOMOONS. <i>Astrophysical Journal</i> , 2013, 769, 98.	1.6	70
88	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
90	Geyser. , 2014, , 1-8.		0
91	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
92	Orbital apocenter is not a sufficient condition for HST/STIS detection of Europa's water vapor aurora. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E5123-32.	3.3	65

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93	Transient Water Vapor at Europa's South Pole. <i>Science</i> , 2014, 343, 171-174.	6.0	401
94	Planetary habitability: lessons learned from terrestrial analogues. <i>International Journal of Astrobiology</i> , 2014, 13, 81-98.	0.9	107
95	Structural and tidal models of Titan and inferences on cryovolcanism. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1013-1036.	1.5	41
96	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
97	Structure and evolution of the lunar Procellarum region as revealed by GRAIL gravity data. <i>Nature</i> , 2014, 514, 68-71.	13.7	85
98	Formation, Habitability, and Detection of Extrasolar Moons. <i>Astrobiology</i> , 2014, 14, 798-835.	1.5	120
99	Comparative estimates of the heat generated by ocean tides on icy satellites in the outer Solar System. <i>Icarus</i> , 2014, 243, 358-385.	1.1	47
100	TIDALLY MODULATED ERUPTIONS ON ENCELADUS: CASSINI ISS OBSERVATIONS AND MODELS. <i>Astronomical Journal</i> , 2014, 148, 46.	1.9	66
101	Non-steady state tidal heating of Enceladus. <i>Icarus</i> , 2014, 235, 75-85.	1.1	24
102	Self-consistent generation of single-plume state for Enceladus using non-Newtonian rheology. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 416-439.	1.5	13
103	Constraining the heat flux between Enceladus' tiger stripes: Numerical modeling of funicular plains formation. <i>Icarus</i> , 2015, 260, 232-245.	1.1	27
104	Thermal Contraction Crack Polygons (Permafrost). , 2015, , 2126-2130.		0
105	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
106	Earth's rotation variability triggers explosive eruptions in subduction zones. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	13
107	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
108	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
109	Interiors and Evolution of Icy Satellites. , 2015, , 605-635.		24
110	A unified nomenclature for tectonic structures on the surface of Enceladus. <i>Icarus</i> , 2015, 258, 67-81.	1.1	14

#	ARTICLE	IF	CITATIONS
111	Linking Europa's plume activity to tides, tectonics, and liquid water. <i>Icarus</i> , 2015, 253, 169-178.	1.1	22
112	On understanding the physics of the Enceladus south polar plume via numerical simulation. <i>Icarus</i> , 2015, 253, 205-222.	1.1	34
113	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
114	The pH of Enceladus' ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 202-219.	1.6	205
115	Timing of water plume eruptions on Enceladus explained by interior viscosity structure. <i>Nature Geoscience</i> , 2015, 8, 601-604.	5.4	41
116	ENCELADUS' GEYSERS: RELATION TO GEOLOGICAL FEATURES. <i>Astronomical Journal</i> , 2015, 150, 96.	1.9	27
117	Spatial distribution of ice blocks on Enceladus and implications for their origin and emplacement. <i>Icarus</i> , 2015, 245, 162-176.	1.1	20
118	Multiplication of microbes below 0.690 water activity: implications for terrestrial and extraterrestrial life. <i>Environmental Microbiology</i> , 2015, 17, 257-277.	1.8	131
119	Tectonic activity on Pluto after the Charon-forming impact. <i>Icarus</i> , 2015, 246, 146-155.	1.1	25
120	The interior and orbital evolution of Charon as preserved in its geologic record. <i>Icarus</i> , 2015, 246, 11-20.	1.1	19
121	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
122	An apparatus to measure frictional, anelastic, and viscous behavior in ice at temperate and planetary conditions. <i>Review of Scientific Instruments</i> , 2016, 87, 055112.	0.6	11
123	The distribution and characterization of strike-slip faults on Enceladus. <i>Geophysical Research Letters</i> , 2016, 43, 2456-2464.	1.5	19
124	Controlled boiling on Enceladus. 1. Model of the vapor-driven jets. <i>Icarus</i> , 2016, 272, 309-318.	1.1	30
125	On the restoration of strength through stress-driven healing of faults in ice. <i>Acta Materialia</i> , 2016, 117, 306-310.	3.8	2
126	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
127	New friction mechanisms revealed by ice crushing-friction tests on high-roughness surfaces. <i>Cold Regions Science and Technology</i> , 2016, 131, 1-9.	1.6	9
128	Enceladus' Environment and the Design of the Enceladus Ice-Probe Navigation System. , 2016, , .		2

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129	Ocean worlds in the outer solar system. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1378-1399.	1.5	149
130	Effect of the tiger stripes on the deformation of Saturn's moon Enceladus. <i>Geophysical Research Letters</i> , 2016, 43, 7417-7423.	1.5	26
131	Saturn's icy satellites investigated by Cassini-VIMS. IV. Daytime temperature maps. <i>Icarus</i> , 2016, 271, 292-313.	1.1	23
132	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
133	A 1-D evolutionary model for icy satellites, applied to Enceladus. <i>Icarus</i> , 2016, 268, 1-11.	1.1	17
134	Consequences of large impacts on Enceladus's core shape. <i>Icarus</i> , 2016, 264, 300-310.	1.1	31
135	The implications of tides on the Mimas ocean hypothesis. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 400-410.	1.5	16
136	Ceres interaction with the solar wind. <i>Geophysical Research Letters</i> , 2017, 44, 2070-2077.	1.5	9
137	Active Cryovolcanism on Europa?. <i>Astrophysical Journal Letters</i> , 2017, 839, L18.	3.0	125
138	Linear permeability evolution of expanding conduits due to feedback between flow and fast phase change. <i>Geophysical Research Letters</i> , 2017, 44, 4116-4123.	1.5	12
139	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
140	Deciphering sub-micron ice particles on Enceladus surface. <i>Icarus</i> , 2017, 290, 183-200.	1.1	22
141	Spatially resolved near infrared observations of Enceladus's tiger stripe eruptions from Cassini VIMS. <i>Icarus</i> , 2017, 292, 1-12.	1.1	10
142	Pit chains on Enceladus signal the recent tectonic dissection of the ancient cratered terrains. <i>Icarus</i> , 2017, 294, 209-217.	1.1	20
143	Thermally anomalous features in the subsurface of Enceladus's south polar terrain. <i>Nature Astronomy</i> , 2017, 1, .	4.2	41
144	Tidal synchronization of an anelastic multi-layered body: Titan's synchronous rotation. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2017, 129, 359-396.	0.5	10
145	The Main Belt Comets and ice in the Solar System. <i>Astronomy and Astrophysics Review</i> , 2017, 25, 1.	9.1	60
146	Vital Signs: Seismology of Icy Ocean Worlds. <i>Astrobiology</i> , 2018, 18, 37-53.	1.5	31

#	ARTICLE	IF	CITATIONS
147	Cold cases: What we don't know about Saturn's Moons. <i>Planetary and Space Science</i> , 2018, 155, 41-49.	0.9	5
148	Sea ice, extremophiles and life on extra-terrestrial ocean worlds. <i>International Journal of Astrobiology</i> , 2018, 17, 1-16.	0.9	62
149	Enceladus's near-surface CO ₂ gas pockets and surface frost deposits. <i>Icarus</i> , 2018, 302, 18-26.	1.1	8
150	Enceladus's crust as a non-uniform thin shell: I tidal deformations. <i>Icarus</i> , 2018, 302, 145-174.	1.1	36
151	Life in the Universe. , 2018, , .		23
153	Ocean Worlds in the Outer Regions of the Solar System (Review). <i>Solar System Research</i> , 2018, 52, 371-381.	0.3	10
154	Experimenting with Mixtures of Water Ice and Dust as Analogues for Icy Planetary Material. <i>Space Science Reviews</i> , 2019, 215, 1.	3.7	29
155	Peptide Synthesis under the Alkaline Hydrothermal Conditions on Enceladus. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 2559-2568.	1.2	20
156	Differentiation of Enceladus and Retention of a Porous Core. <i>Astrophysical Journal</i> , 2019, 882, 47.	1.6	14
157	Implications of nonsynchronous rotation on the deformational history and ice shell properties in the south polar terrain of Enceladus. <i>Icarus</i> , 2019, 321, 445-457.	1.1	12
158	Convection in Thin Shells of Icy Satellites: Effects of Latitudinal Surface Temperature Variations. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 2029-2053.	1.5	7
159	Organic Molecules: Is It Possible to Distinguish Aromatics from Aliphatics Collected by Space Missions in High Speed Impacts?. <i>Sci</i> , 2019, 1, 53.	1.8	4
160	Long-term stability of Enceladus's uneven ice shell. <i>Icarus</i> , 2019, 319, 476-484.	1.1	59
161	Tidal stress modeling of Ganymede: Strike-slip tectonism and Coulomb failure. <i>Icarus</i> , 2019, 319, 99-120.	1.1	13
162	Catastrophic disruption of icy bodies with sub-surface oceans. <i>Icarus</i> , 2020, 336, 113457.	1.1	2
163	Scaling of heat transfer in stagnant lid convection for the outer shell of icy moons: Influence of rheology. <i>Icarus</i> , 2020, 338, 113448.	1.1	8
164	Rapid falling of an orbiting moon to its parent planet due to tidal-seismic resonance. <i>Planetary and Space Science</i> , 2020, 182, 104796.	0.9	1
165	Cascading parallel fractures on Enceladus. <i>Nature Astronomy</i> , 2020, 4, 234-239.	4.2	18

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166	Heat and charge transport in H ₂ O at ice-giant conditions from ab initio molecular dynamics simulations. <i>Nature Communications</i> , 2020, 11, 3605.	5.8	20
167	Tectonics of Enceladus's South Pole: Block Rotation of the Tiger Stripes. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006471.	1.5	8
168	On the Habitability and Future Exploration of Ocean Worlds. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	36
169	Organic Molecules: Is It Possible to Distinguish Aromatics from Aliphatics Collected by Space Missions in High-Speed Impacts?. <i>Sci</i> , 2020, 2, 56.	1.8	3
170	Organic Molecules: Is It Possible To Distinguish Aromatics From Aliphatics Collected By Space Missions in High-Speed Impacts. <i>Sci</i> , 2020, 2, 12.	1.8	0
171	Ganymede, Then and Now: How Past Eccentricity May Have Altered Tidally Driven Coulomb Failure. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE005995.	1.5	5
172	Forecasting Rates of Volcanic Activity on Terrestrial Exoplanets and Implications for Cryovolcanic Activity on Extrasolar Ocean Worlds. <i>Publications of the Astronomical Society of the Pacific</i> , 2020, 132, 084402.	1.0	19
173	The formation of Enceladus' Tiger Stripe Fractures from eccentricity tides. <i>Earth and Planetary Science Letters</i> , 2020, 544, 116389.	1.8	11
174	Organic Molecules: Is It Possible to Distinguish Aromatics from Aliphatics Collected by Space Missions in High-Speed Impacts?. <i>Sci</i> , 2020, 2, 41.	1.8	0
175	Estimating the Magnitude of Cyclic Slip on Strike-slip faults on Europa. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, no.	1.5	10
176	Identification of Possible Heat Sources for the Thermal Output of Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 29.	1.5	1
177	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
178	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
179	Propagation of Vertical Fractures through Planetary Ice Shells: The Role of Basal Fractures at the Ice-Ocean Interface and Proximal Cracks. <i>Planetary Science Journal</i> , 2021, 2, 135.	1.5	8
180	Salt grains in hypervelocity impacts in the laboratory: Methods to sample plumes from the ice worlds Enceladus and Europa. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1652-1668.	0.7	4
181	Convection in a mushy layer along a vertical heated wall. <i>Journal of Fluid Mechanics</i> , 2021, 926, .	1.4	3
182	Tiger: Concept Study for a New Frontiers Enceladus Habitability Mission. <i>Planetary Science Journal</i> , 2021, 2, 195.	1.5	5
183	Strike-slip faulting on Titan: Modeling tidal stresses and shear failure conditions due to pore fluid interactions. <i>Icarus</i> , 2022, 371, 114700.	1.1	3

#	ARTICLE	IF	CITATIONS
184	Hydrothermal Processes and Systems on Other Planets and Satellites: Clues for the Search of Extraterrestrial Life. , 2009, , 1131-1211.		1
185	Icy Satellites: Geological Evolution and Surface Processes. , 2009, , 637-681.		34
186	Enceladus: An Active Cryovolcanic Satellite. , 2009, , 683-724.		65
187	Origin of the Saturn System. , 2009, , 55-74.		3
189	Moons of Exoplanets: Habitats for Life?. , 2008, , 285-303.		24
191	Two-dimensional Wrinkle Resonators for Random Lasing in Organic Glasses. Scientific Reports, 2020, 10, 2434.	1.6	8
192	Exploring Deep-Sea Brines as Potential Terrestrial Analogues of Oceans in the Icy Moons of the Outer Solar System. Current Issues in Molecular Biology, 2020, 38, 123-162.	1.0	16
193	Geodynamics of Europa's Icy Shell. , 0, , 381-404.		5
194	Exploration of Enceladus' 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
195	The Geochemistry of Enceladus: Composition and Controls. , 2018, , .		35
196	Implications of Rotation, Orbital States, Energy Sources, and Heat Transport for Internal Processes in Icy Satellites. Space Sciences Series of ISSI, 2010, , 315-346.	0.0	0
197	Chemical Composition of Icy Satellite Surfaces. Space Sciences Series of ISSI, 2010, , 111-152.	0.0	0
198	Surface, Subsurface and Atmosphere Exchanges on the Satellites of the Outer Solar System. Space Sciences Series of ISSI, 2010, , 373-408.	0.0	1
199	Tiger Stripe Fractures (Enceladus). , 2014, , 1-4.		0
200	Tiger Stripe Fractures (Enceladus). , 2015, , 2148-2150.		0
201	Geyser. , 2015, , 835-841.		0
202	Evidence of Electron Density Enhancements in the Post-Apoapsis Sector of Enceladus' Orbit. Journal of Geophysical Research: Space Physics, 2020, 125, .	0.8	0
203	UV exploration of the solar system. Experimental Astronomy, 2022, 54, 1169-1186.	1.6	1

#	ARTICLE	IF	CITATIONS
204	Do Oceanic Convection and Clathrate Dissociation Drive Europa's Geysers?. Planetary Science Journal, 2021, 2, 221.	1.5	3
205	Enceladus as a potential oasis for life: Science goals and investigations for future explorations. Experimental Astronomy, 2022, 54, 809-847.	1.6	5
206	Saturn's icy satellites investigated by Cassini - VIMS. V. Spectrophotometry. Icarus, 2022, 375, 114803.	1.1	3
207	Single- and Multi-Pass Magnetometric Subsurface Ocean Detection and Characterization in Icy Worlds Using Principal Component Analysis (PCA): Application to Triton. Earth and Space Science, 2022, 9, .	1.1	9
208	Cryovolcanism. , 2022, , 161-234.		3
209	Oscillatory Loading Can Alter the Velocity Dependence of Ice-Rock Friction. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	2
210	VIS spectroscopy of NaCl - water ice mixtures irradiated with 1 and 5 keV electrons under Europa's conditions: Formation of colour centres and Na colloids. Icarus, 2022, 379, 114977.	1.1	0
211	Catastrophic disruption by hypervelocity impact of multi-layered spherical ice targets. International Journal of Impact Engineering, 2022, 168, 104294.	2.4	1
212	Chemical Fractionation Modeling of Plumes Indicates a Gas-rich, Moderately Alkaline Enceladus Ocean. Planetary Science Journal, 2022, 3, 191.	1.5	15
213	Tidal drag in exoplanet oceans. , 2023, , 417-439.		0
214	Tidal insights into rocky and icy bodies: an introduction and overview. Advances in Geophysics, 2022, , 231-320.	1.1	12
215	Ocean dynamics and tracer transport over the south pole geysers of Enceladus. Monthly Notices of the Royal Astronomical Society, 2022, 517, 3485-3494.	1.6	9
216	Surviving in Ocean Worlds: Experimental Characterization of Fiber Optic Tethers across Europa-like Ice Faults and Unraveling the Sliding Behavior of Ice. Planetary Science Journal, 2023, 4, 1.	1.5	3
217	Simulating spatial variations of lithospheric folding in the south polar terrain of Enceladus. Icarus, 2023, 394, 115431.	1.1	0
218	Salty ocean and submarine hydrothermal vents on Saturn's Moon Enceladus - Tall plume of gas, jets of water vapor & organic-enriched ice particles spewing from its south pole. , 2023, , 583-616.		0
219	Study of the eruption mechanism of Saturn's moon Enceladus plume using the mathematical model of a geyser (periodic bubbling spring). , 2022, , .		0