

# Gabriel Tobie

## List of Publications by Year in descending order

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40  
papers

2,746  
citations

186265

28  
h-index

302126

39  
g-index

40  
all docs

40  
docs citations

40  
times ranked

1817  
citing authors

#	ARTICLE	IF	CITATIONS
1	Inferring Io's interior from tidal monitoring. <i>Icarus</i> , 2022, 373, 114737.	2.5	5
2	Enceladus as a potential oasis for life: Science goals and investigations for future explorations. <i>Experimental Astronomy</i> , 2022, 54, 809-847.	3.7	5
3	Geologically rapid aqueous mineral alteration at subfreezing temperatures in icy worlds. <i>Nature Astronomy</i> , 2022, 6, 554-559.	10.1	12
4	Tidally Induced Magmatic Pulses on the Oceanic Floor of Jupiter's Moon Europa. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090077.	4.0	36
5	Titan's Interior Structure and Dynamics After the Cassini-Huygens Mission. <i>Annual Review of Earth and Planetary Sciences</i> , 2021, 49, 579-607.	11.0	17
6	A Recipe for the Geophysical Exploration of Enceladus. <i>Planetary Science Journal</i> , 2021, 2, 157.	3.6	14
7	Cooling patterns in rotating thin spherical shells – Application to Titan's subsurface ocean. <i>Icarus</i> , 2020, 338, 113509.	2.5	28
8	Scaling of heat transfer in stagnant lid convection for the outer shell of icy moons: Influence of rheology. <i>Icarus</i> , 2020, 338, 113448.	2.5	8
9	Ice-Ocean Exchange Processes in the Jovian and Saturnian Satellites. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	43
10	Large Ocean Worlds with High-Pressure Ices. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	62
11	Solid tidal friction in multi-layer planets: Application to Earth, Venus, a Super Earth and the TRAPPIST-1 planets. <i>Astronomy and Astrophysics</i> , 2020, 644, A165.	5.1	24
12	Tidal dissipation in Enceladus' uneven, fractured ice shell. <i>Icarus</i> , 2019, 328, 218-231.	2.5	32
13	Long-term stability of Enceladus' uneven ice shell. <i>Icarus</i> , 2019, 319, 476-484.	2.5	59
14	Tidal response of rocky and ice-rich exoplanets. <i>Astronomy and Astrophysics</i> , 2019, 630, A70.	5.1	21
15	Two-phase convection in Ganymede's high-pressure ice layer – Implications for its geological evolution. <i>Icarus</i> , 2018, 299, 133-147.	2.5	49
16	Geophysical Investigations of Habitability in Ice-Covered Ocean Worlds. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 180-205.	3.6	133
17	Modeling climate diversity, tidal dynamics and the fate of volatiles on TRAPPIST-1 planets. <i>Astronomy and Astrophysics</i> , 2018, 612, A86.	5.1	130
18	Macromolecular organic compounds from the depths of Enceladus. <i>Nature</i> , 2018, 558, 564-568.	27.8	282

#	ARTICLE	IF	CITATIONS
19	Tidal constraints on the interior of Venus. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1338-1352.	3.6	62
20	Heat transport in the high-pressure ice mantle of large icy moons. <i>Icarus</i> , 2017, 285, 252-262.	2.5	47
21	Powering prolonged hydrothermal activity inside Enceladus. <i>Nature Astronomy</i> , 2017, 1, 841-847.	10.1	158
22	Enceladus's internal ocean and ice shell constrained from Cassini gravity, shape, and libration data. <i>Geophysical Research Letters</i> , 2016, 43, 5653-5660.	4.0	141
23	Water generation and transport below Europa's strike-slip faults. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2444-2462.	3.6	36
24	Consequences of large impacts on Enceladus's core shape. <i>Icarus</i> , 2016, 264, 300-310.	2.5	31
25	Timing of water plume eruptions on Enceladus explained by interior viscosity structure. <i>Nature Geoscience</i> , 2015, 8, 601-604.	12.9	41
26	Structure and dynamics of Titan's outer icy shell constrained from Cassini data. <i>Icarus</i> , 2014, 237, 16-28.	2.5	40
27	Shape, topography, gravity anomalies and tidal deformation of Titan. <i>Icarus</i> , 2014, 236, 169-177.	2.5	88
28	Ice melting and downward transport of meltwater by two-phase flow in Europa's ice shell. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 532-549.	3.6	46
29	Impact of tidal heating on the onset of convection in Enceladus's ice shell. <i>Icarus</i> , 2013, 226, 898-904.	2.5	25
30	STRONG TIDAL DISSIPATION IN SATURN AND CONSTRAINTS ON ENCELADUS' THERMAL STATE FROM ASTROMETRY. <i>Astrophysical Journal</i> , 2012, 752, 14.	4.5	163
31	Tidally-induced melting events as the origin of south-pole activity on Enceladus. <i>Icarus</i> , 2012, 219, 655-664.	2.5	60
32	TIDALLY INDUCED THERMAL RUNAWAYS ON EXTRASOLAR EARTHS: IMPACT ON HABITABILITY. <i>Astrophysical Journal</i> , 2011, 728, 89.	4.5	50
33	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.	8.1	52
34	Stability of methane clathrate hydrates under pressure: Influence on outgassing processes of methane on Titan. <i>Icarus</i> , 2010, 205, 581-593.	2.5	107
35	Coupling mantle convection and tidal dissipation: Applications to Enceladus and Earth-like planets. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	46
36	The orbital thermal evolution and global expansion of Ganymede. <i>Icarus</i> , 2009, 200, 207-221.	2.5	63

#	ARTICLE	IF	CITATIONS
37	Tidal dissipation within large icy satellites: Applications to Europa and Titan. <i>Icarus</i> , 2005, 177, 534-549.	2.5	190
38	Tidally heated convection: Constraints on Europa's ice shell thickness. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	177
39	Europa: Tidal heating of upwelling thermal plumes and the origin of lenticulae and chaos melting. <i>Geophysical Research Letters</i> , 2002, 29, 74-1-74-4.	4.0	156
40	Tides and Tidal Heating on Europa. , 0, , 85-118.		7