Norbert Schorghofer

List of Publications by Year
in descending order

105	3,533	126907	144013
papers	citations	33 h-index	57 g-index

110	110	110	2213
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Stability and exchange of subsurface ice on Mars. Journal of Geophysical Research, 2005, 110, .	3.3	176
2	Extensive water ice within Ceresâ€™ aqueously altered regolith: Evidence from nuclear spectroscopy. Science, 2017, 355, 55-59.	12.6	169
3	The Lifetime of Ice on Main Belt Asteroids. Astrophysical Journal, 2008, 682, 697-705.	4.5	164
4	Non-gravitational acceleration in the trajectory of 1I/2017 U1 (â€˜Oumuamua). Nature, 2018, 559, 223-226.	27.8	138
5	The geomorphology of Ceres. Science, 2016, 353, .	12.6	109
6	Slope streak formation and dust deposition rates on Mars. Journal of Geophysical Research, 2003, 108, .	3.3	106
7	Three decades of slope streak activity on Mars. Icarus, 2007, 191, 132-140.	2.5	104
8	Subsurface ice on Mars with rough topography. Journal of Geophysical Research, 2006, 111, .	3.3	99
9	Drainage basins and channel incision on Mars. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1780-1783.	7.1	96
10	Spontaneous channelization in permeable ground: theory, experiment, and observation. Journal of Fluid Mechanics, 2004, 503, 357-374.	3.4	94
11	Sporadic formation of slope streaks on Mars. Icarus, 2011, 216, 159-168.	2.5	92
12	Dynamics of ice ages on Mars. Nature, 2007, 449, 192-194.	27.8	87
13	Subsurface migration of H2O at lunar cold traps. Journal of Geophysical Research, 2007, 112, .	3.3	83
14	Geomorphological evidence for ground ice on dwarf planet Ceres. Nature Geoscience, 2017, 10, 338-343.	12.9	83
15	Seasonal Polar Temperatures on the Moon. Journal of Geophysical Research E: Planets, 2019, 124, 2505-2521.	3.6	80
16	Water vapor diffusion in Mars subsurface environments. Journal of Geophysical Research, 2007, 112, .	3.3	79
17	Properties of martian slope streak populations. Icarus, 2013, 225, 194-199.	2.5	79
18	Seasonal surface frost at low latitudes on Mars. Icarus, 2006, 180, 321-334.	2.5	73

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19	Surface water-ice deposits in the northern shadowed regions of Ceres. Nature Astronomy, 2017, 1, .	10.1	70
20	History and anatomy of subsurface ice on Mars. Icarus, 2012, 220, 1112-1120.	2.5	68
21	Micro cold traps on the Moon. Nature Astronomy, 2021, 5, 169-175.	10.1	63
22	Slope streaks on Mars: Correlations with surface properties and the potential role of water. Geophysical Research Letters, 2002, 29, 41-1-41-4.	4.0	60
23	Nonsingular surface quasi-geostrophic flow. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 241, 168-172.	2.1	57
24	Predictions of depth-to-ice on asteroids based on an asynchronous model of temperature, impact stirring, and ice loss. Icarus, 2016, 276, 88-95.	2.5	56
25	The permanently shadowed regions of dwarf planet Ceres. Geophysical Research Letters, 2016, 43, 6783-6789.	4.0	52
26	The main-belt comets: The Pan-STARRS1 perspective. Icarus, 2015, 248, 289-312.	2.5	48
27	Pitted terrains on (1) Ceres and implications for shallow subsurface volatile distribution. Geophysical Research Letters, 2017, 44, 6570-6578.	4.0	48
28	Exposed H2O-rich areas detected on Ceres with the dawn visible and infrared mapping spectrometer. Icarus, 2019, 318, 22-41.	2.5	47
29	THE LUNAR THERMAL ICE PUMP. Astrophysical Journal, 2014, 788, 169.	4.5	44
30	A distinct class of avalanche scars on Mars. Icarus, 2004, 168, 122-130.	2.5	42
31	Measurements of thermal properties of icy Mars regolith analogs. Journal of Geophysical Research, 2012, 117, .	3.3	41
32	Conditions for Sublimating Water Ice to Supply Ceres' Exosphere. Journal of Geophysical Research E: Planets, 2017, 122, 1984-1995.	3.6	40
33	Energy spectra of steady two-dimensional turbulent flows. Physical Review E, 2000, 61, 6572-6577.	2.1	34
34	Elemental composition and mineralogy of Vesta and Ceres: Distribution and origins of hydrogen-bearing species. Icarus, 2019, 318, 42-55.	2.5	34
35	Temperature response of Mars to Milankovitch cycles. Geophysical Research Letters, 2008, 35, .	4.0	33
36	A Global Inventory of Iceâ€Related Morphological Features on Dwarf Planet Ceres: Implications for the Evolution and Current State of the Cryosphere. Journal of Geophysical Research E: Planets, 2019, 124, 1650-1689.	3.6	33

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37	H layering in the top meter of Mars. Icarus, 2008, 196, 409-421.	2.5	32
38	Laboratory experiments and models of diffusive emplacement of ground ice on Mars. Journal of Geophysical Research, 2009, 114, .	3.3	32
39	Acausal relations between topographic slope and drainage area. Geophysical Research Letters, 2002, 29, 11-1.	4.0	30
40	Migration calculations for water in the exosphere of the Moon: Duskâ€dawn asymmetry, heterogeneous trapping, and D/H fractionation. Geophysical Research Letters, 2014, 41, 4888-4893.	4.0	29
41	Ceres's obliquity history and its implications for the permanently shadowed regions. Geophysical Research Letters, 2017, 44, 2652-2661.	4.0	29
42	A physical mechanism for long-term survival of ground ice in Beacon Valley, Antarctica. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	25
43	Fast numerical method for growth and retreat of subsurface ice on Mars. Icarus, 2010, 208, 598-607.	2.5	23
44	Mapping of Ice Storage Processes on the Moon with Time-dependent Temperatures. Planetary Science Journal, 2020, 1, 54.	3.6	23
45	How the viscous subrange determines inertial range properties in turbulence shell models. Physica D: Nonlinear Phenomena, 1995, 88, 40-54.	2.8	21
46	Inelastic collapse of rotating spheres. Physical Review E, 1996, 54, 5511-5515.	2.1	21
47	The Temporal and Geographic Extent of Seasonal Cold Trapping on the Moon. Journal of Geophysical Research E: Planets, 2019, 124, 1935-1944.	3.6	21
48	Spectrophotometric modeling and mapping of Ceres. Icarus, 2019, 322, 144-167.	2.5	21
49	Slope, elevation, and thermal inertia trends of martian recurring slope lineae initiation and termination points: Multiple possible processes occurring on coarse, sandy slopes. Icarus, 2020, 338, 113536.	2.5	21
50	Water Group Exospheres and Surface Interactions on the Moon, Mercury, and Ceres. Space Science Reviews, 2021, 217, 1.	8.1	21
51	Water Vapor Contribution to Ceres' Exosphere From Observed Surface Ice and Postulated Iceâ€Exposing Impacts. Journal of Geophysical Research E: Planets, 2019, 124, 61-75.	3.6	20
52	Carbon Dioxide Cold Traps on the Moon. Geophysical Research Letters, 2021, 48, .	4.0	20
53	The Putative Cerean Exosphere. Astrophysical Journal, 2017, 850, 85.	4.5	19
54	A roadmap for planetary caves science and exploration. Nature Astronomy, 2021, 5, 524-525.	10.1	19

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55	Scaling and linear response in the GOY turbulence model. Physica D: Nonlinear Phenomena, 1997, 100, 165-186.	2.8	17
56	Front formation in an active scalar equation. Physical Review E, 1999, 60, 2858-2863.	2.1	17
57	Theory of ground ice stability in sublimation environments. Physical Review E, 2007, 75, 041201.	2.1	16
58	Landslides on Ceres: Inferences Into Ice Content and Layering in the Upper Crust. Journal of Geophysical Research E: Planets, 2019, 124, 1512-1524.	3.6	16
59	Cryogenic Minerals in Hawaiian Lava Tubes: A Geochemical and Microbiological Exploration. Geomicrobiology Journal, 2018, 35, 227-241.	2.0	15
60	Dynamic and isotopic evolution of ice reservoirs on Mars. Icarus, 2019, 324, 1-7.	2.5	15
61	Potential Themis-family Asteroid Contribution to the Jupiter-family Comet Population. Astronomical Journal, 2020, 159, 179.	4.7	15
62	Basins of attraction on random topography. Physical Review E, 2001, 63, 026112.	2.1	13
63	Dynamic Landmarking for Surface Feature Identification and Change Detection. ACM Transactions on Intelligent Systems and Technology, 2012, 3, 1-22.	4.5	13
64	Massive Ice Loss from the Mauna Loa Icecave, Hawaii. Arctic, Antarctic, and Alpine Research, 2016, 48, 33-43.	1.1	13
65	Theoretical time variability of mobile water on the Moon and its geographic pattern. Icarus, 2017, 298, 111-116.	2.5	13
66	Ice Loss From the Interior of Small Airless Bodies According to an Idealized Model. Journal of Geophysical Research E: Planets, 2018, 123, 2322-2335.	3.6	13
67	Universality of probability distributions among two-dimensional turbulent flows. Physical Review E, 2000, 61, 6568-6571.	2.1	12
68	Two-dimensional description of surface-bounded exospheres with application to the migration of water molecules on the Moon. Physical Review E, 2015, 91, 052154.	2.1	10
69	Highâ€Resolution Thermal Environment of Recurring Slope Lineae in Palikir Crater, Mars, and Its Implications for Volatiles. Journal of Geophysical Research E: Planets, 2019, 124, 2852-2862.	3.6	10
70	State of Highâ€Altitude Permafrost on Tropical Maunakea Volcano, Hawaii. Permafrost and Periglacial Processes, 2017, 28, 685-697.	3.4	9
71	Equilibrium Temperatures and Directional Emissivity of Sunlit Airless Surfaces With Applications to the Moon. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006377.	3.6	9
72	Mars: Quantitative Evaluation of Crocus Melting behind Boulders. Astrophysical Journal, 2020, 890, 49.	4.5	9

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73	Buffering of sublimation loss of subsurface ice by percolating snowmelt: a theoretical analysis. Permafrost and Periglacial Processes, 2009, 20, 309-313.	3.4	8
74	Recent Climate Variations. , 2017, , 497-525.		8
75	The Coldest Places in Hawaii: The Ice-Preserving Microclimates of High-Altitude Craters and Caves on Tropical Island Volcanoes. Bulletin of the American Meteorological Society, 2018, 99, 2313-2324.	3.3	8
76	Freezeâ€“thaw cycles and snow impact at arid permafrost region in Chajnantor Volcano, Atacama, northern Chile. Arctic, Antarctic, and Alpine Research, 2021, 53, 60-66.	1.1	7
77	Statistics of velocity gradients in two-dimensional Navier-Stokes and ocean turbulence. Physical Review E, 2002, 65, 026307.	2.1	6
78	Erosion of Volatiles by Micrometeoroid Bombardment on Ceres and Comparison to the Moon and Mercury. Planetary Science Journal, 2021, 2, 85.	3.6	6
79	CaSSIS color and multi-angular observations of Martian slope streaks. Planetary and Space Science, 2021, 209, 105373.	1.7	6
80	Subsurface architecture of two tropical alpine desert cinder cones that hold water. Journal of Geophysical Research F: Earth Surface, 2016, 121, 1148-1160.	2.8	5
81	Preservation of polar ice on near-Earth asteroids originating in the outer main belt: A model study with dynamical trajectories. Icarus, 2020, 348, 113865.	2.5	5
82	Two vortex rings produce chaos. Europhysics Letters, 2000, 52, 399-405.	2.0	4
83	Stratigraphic and Isotopic Evolution of the Martian Polar Caps From Paleoâ€Climate Models. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	4
84	Subsurface air flow on Mars. Nature Physics, 2014, 10, 14-15.	16.7	3
85	Ice caves on Mars: Hoarfrost and microclimates. Icarus, 2021, 357, 114271.	2.5	3
86	Gradual Sequestration of Water at Lunar Polar Conditions due to Temperature Cycles. Astrophysical Journal Letters, 2022, 927, L34.	8.3	3
87	Regular and chaotic streamlines of two vortex rings. Fluid Dynamics Research, 2001, 29, 295-311.	1.3	2
88	Solar-System-Wide Significance of Mars Polar Science. , 2021, 53, .		2
89	New Approaches to Lunar Ice Detection and Mapping. , 2021, 53, .		2
90	Replenishment of Nearâ€Surface Water Ice by Impacts Into Ceres' Volatileâ€Rich Crust: Observations by Dawn's Gamma Ray and Neutron Detector. Geophysical Research Letters, 2021, 48, e2021GL094223.	4.0	2

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91	Lunar Atmosphere, Transport and Storage of Volatiles. , 2017, , 1-4.		2
92	Expressions for tidal conversion at seafloor topography using physical space integrals. Fluid Dynamics Research, 2010, 42, 065503.	1.3	1
93	Snow cover in Hawaiâ€˜i (1893â€“1953) and its effect on ground temperature. Arctic, Antarctic, and Alpine Research, 2019, 51, 148-154.	1.1	1
94	GANGOTRI mission concept on the glacial key to the Amazonian climate of Mars. , 2021, 53, .		1
95	Statistical Thermodynamics of Surface-Bounded Exospheres. Earth, Moon and Planets, 2022, 126, 1.	0.6	1
96	Equipartition in a Model of Turbulence. EPJ Direct, 2000, 1, 1-5.	0.1	0
97	Slope Streak (Mars). , 2014, , 1-8.		0
98	Science Opportunities offered by Mercuryâ€™s Ice-Bearing Polar Deposits. , 2021, 53, .		0
99	Robot Technology Advancements for In-Situ Exploration of Subsurface Environments. , 2021, 53, .		0
100	Slope Streak (Mars). , 2015, , 1980-1986.		0
101	Triangular Scar (Mars). , 2015, , 2192-2194.		0
102	THE GEOMORPHOLOGY OF CERES. , 2016, , .		0
103	ELEMENTAL CONSTRAINTS ON CERES' EVOLUTION. , 2016, , .		0
104	PERMAFROST AND PERCHED GROUNDWATER ON THE SUMMIT PLATEAU OF MAUNAKEA VOLCANO, HAWAII. , 2017, , .		0
105	HIDDEN ICE ON DWARF PLANET CERES: RESULTS FROM THE DAWN MISSION. , 2017, , .		0