

Shane Byrne

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

5,676
citations

66343

42
h-index

74163

75
g-index

83
all docs

83
docs citations

83
times ranked

2603
citing authors

#	ARTICLE	IF	CITATIONS
1	Seasonal Flows on Warm Martian Slopes. <i>Science</i> , 2011, 333, 740-743.	12.6	451
2	Distribution of Mid-Latitude Ground Ice on Mars from New Impact Craters. <i>Science</i> , 2009, 325, 1674-1676.	12.6	279
3	Recurring slope lineae in equatorial regions of Mars. <i>Nature Geoscience</i> , 2014, 7, 53-58.	12.9	248
4	Seasonal Erosion and Restoration of Mars's Northern Polar Dunes. <i>Science</i> , 2011, 331, 575-578.	12.6	205
5	Seasonal activity and morphological changes in martian gullies. <i>Icarus</i> , 2012, 220, 124-143.	2.5	195
6	The current martian cratering rate. <i>Icarus</i> , 2013, 225, 506-516.	2.5	177
7	Exposed subsurface ice sheets in the Martian mid-latitudes. <i>Science</i> , 2018, 359, 199-201.	12.6	174
8	A Sublimation Model for Martian South Polar Ice Features. <i>Science</i> , 2003, 299, 1051-1053.	12.6	172
9	Cryovolcanism on Ceres. <i>Science</i> , 2016, 353, .	12.6	164
10	The High Resolution Imaging Science Experiment (HiRISE) during MRO's Primary Science Phase (PSP). <i>Icarus</i> , 2010, 205, 2-37.	2.5	153
11	Sublimation of Mars's southern seasonal CO ₂ ice cap and the formation of spiders. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	137
12	The Polar Deposits of Mars. <i>Annual Review of Earth and Planetary Sciences</i> , 2009, 37, 535-560.	11.0	129
13	Detection of local H ₂ O exposed at the surface of Ceres. <i>Science</i> , 2016, 353, .	12.6	128
14	Widespread excess ice in Arcadia Planitia, Mars. <i>Geophysical Research Letters</i> , 2015, 42, 6566-6574.	4.0	126
15	The Colour and Stereo Surface Imaging System (CaSSIS) for the ExoMars Trace Gas Orbiter. <i>Space Science Reviews</i> , 2017, 212, 1897-1944.	8.1	111
16	Observations of the northern seasonal polar cap on Mars: I. Spring sublimation activity and processes. <i>Icarus</i> , 2013, 225, 881-897.	2.5	109
17	The geomorphology of Ceres. <i>Science</i> , 2016, 353, .	12.6	109
18	New and recent gully activity on Mars as seen by HiRISE. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	105

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19	Seasonality of present-day Martian dune-gully activity. <i>Geology</i> , 2010, 38, 1047-1050.	4.4	104
20	Meter-Scale Morphology of the North Polar Region of Mars. <i>Science</i> , 2007, 317, 1711-1715.	12.6	102
21	HiRISE observations of new impact craters exposing Martian ground ice. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 109-127.	3.6	98
22	Granular flows at recurring slope lineae on Mars indicate a limited role for liquid water. <i>Nature Geoscience</i> , 2017, 10, 903-907.	12.9	96
23	HiRISE observations of Recurring Slope Lineae (RSL) during southern summer on Mars. <i>Icarus</i> , 2014, 231, 365-376.	2.5	90
24	HiRISE observations of gas sublimation-driven activity in Mars's southern polar regions: I. Erosion of the surface. <i>Icarus</i> , 2010, 205, 283-295.	2.5	84
25	Geomorphological evidence for ground ice on dwarf planet Ceres. <i>Nature Geoscience</i> , 2017, 10, 338-343.	12.9	83
26	Modeling sublimation of ice exposed by new impacts in the martian mid-latitudes. <i>Icarus</i> , 2010, 206, 716-728.	2.5	81
27	Stratigraphy and evolution of the buried CO ₂ deposit in the Martian south polar cap. <i>Geophysical Research Letters</i> , 2016, 43, 4172-4179.	4.0	71
28	Surface water-ice deposits in the northern shadowed regions of Ceres. <i>Nature Astronomy</i> , 2017, 1, .	10.1	70
29	The morphology of small fresh craters on Mars and the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2620-2639.	3.6	66
30	South Polar Layered Deposits of Mars: The cratering record. <i>Journal of Geophysical Research</i> , 2002, 107, 10-1-10-10.	3.3	65
31	Reading the climate record of the martian polar layered deposits. <i>Icarus</i> , 2012, 221, 405-419.	2.5	65
32	Agents of change on Mars's northern dunes: CO ₂ ice and wind. <i>Icarus</i> , 2015, 251, 264-274.	2.5	63
33	Modeling the development of martian sublimation thermokarst landforms. <i>Icarus</i> , 2015, 262, 154-169.	2.5	60
34	The vanishing cryovolcanoes of Ceres. <i>Geophysical Research Letters</i> , 2017, 44, 1243-1250.	4.0	56
35	Preservation of Midlatitude Ice Sheets on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2250-2266.	3.6	55
36	Enumeration of Mars years and seasons since the beginning of telescopic exploration. <i>Icarus</i> , 2015, 251, 332-338.	2.5	54

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37	Expanded secondary craters in the Arcadia Planitia region, Mars: Evidence for tens of Myr-old shallow subsurface ice. <i>Icarus</i> , 2015, 248, 190-204.	2.5	49
38	Changes in blast zone albedo patterns around new martian impact craters. <i>Icarus</i> , 2016, 267, 86-105.	2.5	49
39	Seasonally active frost-dust avalanches on a north polar scarp of Mars captured by HiRISE. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	48
40	Crater population and resurfacing of the Martian north polar layered deposits. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	48
41	Exposed H ₂ O-rich areas detected on Ceres with the dawn visible and infrared mapping spectrometer. <i>Icarus</i> , 2019, 318, 22-41.	2.5	47
42	The formation of gullies on Mars today. <i>Geological Society Special Publication</i> , 2019, 467, 67-94.	1.3	45
43	Evaluating the meaning of "layer" in the martian north polar layered deposits and the impact on the climate connection. <i>Icarus</i> , 2010, 205, 269-282.	2.5	42
44	A revised surface age for the North Polar Layered Deposits of Mars. <i>Geophysical Research Letters</i> , 2016, 43, 3060-3068.	4.0	42
45	Bright carbonate surfaces on Ceres as remnants of salt-rich water fountains. <i>Icarus</i> , 2019, 320, 39-48.	2.5	42
46	Integrating radar stratigraphy with high resolution visible stratigraphy of the north polar layered deposits, Mars. <i>Icarus</i> , 2013, 226, 1241-1251.	2.5	40
47	Conditions for Sublimating Water Ice to Supply Ceres' Exosphere. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1984-1995.	3.6	40
48	Louth crater: Evolution of a layered water ice mound. <i>Icarus</i> , 2008, 196, 433-445.	2.5	38
49	Cryovolcanic rates on Ceres revealed by topography. <i>Nature Astronomy</i> , 2018, 2, 946-950.	10.1	38
50	Internal structure of the Martian south polar layered deposits. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	36
51	Signals of astronomical climate forcing in the exposure topography of the North Polar Layered Deposits of Mars. <i>Geophysical Research Letters</i> , 2017, 44, 62-70.	4.0	36
52	Interannual and seasonal behavior of Martian residual ice-cap albedo. <i>Planetary and Space Science</i> , 2008, 56, 194-211.	1.7	33
53	The Holy Grail: A road map for unlocking the climate record stored within Mars' polar layered deposits. <i>Planetary and Space Science</i> , 2020, 184, 104841.	1.7	30
54	Martian north polar cap summer water cycle. <i>Icarus</i> , 2016, 277, 401-415.	2.5	29

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55	Widespread Exposures of Extensive Clean Shallow Ice in the Midlatitudes of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006617.	3.6	29
56	Stratigraphy of the north polar layered deposits of Mars from high-resolution topography. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1445-1471.	3.6	28
57	A Wunda-full world? Carbon dioxide ice deposits on Umbriel and other Uranian moons. <i>Icarus</i> , 2017, 290, 1-13.	2.5	28
58	Evidence for ice flow prior to trough formation in the martian north polar layered deposits. <i>Icarus</i> , 2008, 195, 90-105.	2.5	27
59	Transient bright "halos" on the South Polar Residual Cap of Mars: Implications for mass-balance. <i>Icarus</i> , 2015, 251, 211-225.	2.5	26
60	Viscous flow rates of icy topography on the north polar layered deposits of Mars. <i>Geophysical Research Letters</i> , 2016, 43, 541-549.	4.0	26
61	First high-resolution stratigraphic column of the Martian north polar layered deposits. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	24
62	Image Simulation and Assessment of the Colour and Spatial Capabilities of the Colour and Stereo Surface Imaging System (CaSSIS) on the ExoMars Trace Gas Orbiter. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	24
63	Water Vapor Contribution to Ceres' Exosphere From Observed Surface Ice and Postulated Ice-Exposing Impacts. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 61-75.	3.6	20
64	The Putative Cerean Exosphere. <i>Astrophysical Journal</i> , 2017, 850, 85.	4.5	19
65	Active Mars: A Dynamic World. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006876.	3.6	17
66	Landslides on Ceres: Inferences Into Ice Content and Layering in the Upper Crust. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1512-1524.	3.6	16
67	A Migration Model for the Polar Spiral Troughs of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1020-1043.	3.6	15
68	Lunar Surface and Buried Rock Abundance Retrieved from Chang'e-2 Microwave and Diviner Data. <i>Planetary Science Journal</i> , 2020, 1, 56.	3.6	15
69	Landslides on Ceres: Diversity and Geologic Context. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3329-3343.	3.6	14
70	On the icy edge at Louth and Korolev craters. <i>Icarus</i> , 2018, 308, 15-26.	2.5	11
71	Revealing Active Mars with HiRISE Digital Terrain Models. <i>Remote Sensing</i> , 2022, 14, 2403.	4.0	11
72	Physical and Chemical Evolution of Lunar Mare Regolith. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006634.	3.6	10

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73	Introduction to the fifth Mars Polar Science special issue: Key questions, needed observations, and recommended investigations. <i>Icarus</i> , 2013, 225, 864-868.	2.5	9
74	Thermophysical Properties of the North Polar Residual Cap using Mars Global Surveyor Thermal Emission Spectrometer. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1315-1330.	3.6	8
75	Islands of ice on Mars and Pluto. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 2522-2542.	3.6	7
76	A Bayesian Approach to Subkilometer Crater Shape Analysis Using Individual HiRISE Images. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 5802-5812.	6.3	6
77	Orbital Forcing of Martian Climate Revealed in a South Polar Outlier Ice Deposit. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	6
78	Models of high velocity impacts into dust-covered ice: Application to Martian northern lowlands. <i>Planetary and Space Science</i> , 2010, 58, 1160-1168.	1.7	5
79	Sparse subsurface radar reflectors in Hellas Planitia, Mars. <i>Icarus</i> , 2020, 348, 113847.	2.5	4
80	A New Method to Evaluate and Modify Chang'e-2 Microwave Radiometer Low-Frequency Data Constrained From Diviner Thermal Measurements. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2022, 60, 1-13.	6.3	2
81	Martian Ice Revealed by Modeling of Simple Terraced Crater Formation. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006108.	3.6	1