

Paul Hayne

List of Publications by Year in descending order

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74
papers

3,554
citations

172457
29
h-index

133252
59
g-index

75
all docs

75
docs citations

75
times ranked

2226
citing authors

#	ARTICLE	IF	CITATIONS
1	Diviner Lunar Radiometer Observations of Cold Traps in the Moon's South Polar Region. Science, 2010, 330, 479-482.	12.6	385
2	Direct evidence of surface exposed water ice in the lunar polar regions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8907-8912.	7.1	324
3	Lunar equatorial surface temperatures and regolith properties from the Diviner Lunar Radiometer Experiment. Journal of Geophysical Research, 2012, 117, .	3.3	229
4	Global Regolith Thermophysical Properties of the Moon From the Diviner Lunar Radiometer Experiment. Journal of Geophysical Research E: Planets, 2017, 122, 2371-2400.	3.6	193
5	Evidence for exposed water ice in the Moon's south polar regions from Lunar Reconnaissance Orbiter ultraviolet albedo and temperature measurements. Icarus, 2015, 255, 58-69.	2.5	188
6	Global Silicate Mineralogy of the Moon from the Diviner Lunar Radiometer. Science, 2010, 329, 1507-1509.	12.6	154
7	Evidence for surface water ice in the lunar polar regions using reflectance measurements from the Lunar Orbiter Laser Altimeter and temperature measurements from the Diviner Lunar Radiometer Experiment. Icarus, 2017, 292, 74-85.	2.5	119
8	Hydrogen escape from Mars enhanced by deep convection in dust storms. Nature Astronomy, 2018, 2, 126-132.	10.1	112
9	Thermal stability of ice on Ceres with rough topography. Journal of Geophysical Research E: Planets, 2015, 120, 1567-1584.	3.6	93
10	Constraints on the recent rate of lunar ejecta breakdown and implications for crater ages. Geology, 2014, 42, 1059-1062.	4.4	92
11	Lunar surface roughness derived from LRO Diviner Radiometer observations. Icarus, 2015, 248, 357-372.	2.5	92
12	Titan's surface: Search for spectral diversity and composition using the Cassini VIMS investigation. Icarus, 2008, 194, 212-242.	2.5	83
13	Seasonal Polar Temperatures on the Moon. Journal of Geophysical Research E: Planets, 2019, 124, 2505-2521.	3.6	80
14	Carbon dioxide snow clouds on Mars: South polar winter observations by the Mars Climate Sounder. Journal of Geophysical Research, 2012, 117, .	3.3	74
15	Formation of lunar swirls by magnetic field standoff of the solar wind. Nature Communications, 2015, 6, 6189.	12.8	73
16	Variability of the martian seasonal CO2 cap extent over eight Mars Years. Icarus, 2015, 251, 164-180.	2.5	72
17	Diviner Lunar Radiometer Observations of the LCROSS Impact. Science, 2010, 330, 477-479.	12.6	68
18	Micro cold traps on the Moon. Nature Astronomy, 2021, 5, 169-175.	10.1	63

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19	Widespread Shallow Water Ice on Mars at High Latitudes and Midlatitudes. <i>Geophysical Research Letters</i> , 2019, 46, 14290-14298.	4.0	59
20	Lunar cold spots: Granular flow features and extensive insulating materials surrounding young craters. <i>Icarus</i> , 2014, 231, 221-231.	2.5	54
21	The role of snowfall in forming the seasonal ice caps of Mars: Models and constraints from the Mars Climate Sounder. <i>Icarus</i> , 2014, 231, 122-130.	2.5	52
22	Discovery of a widespread low-latitude diurnal CO ₂ frost cycle on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1174-1189.	3.6	50
23	Diurnally Migrating Lunar Water: Evidence From Ultraviolet Data. <i>Geophysical Research Letters</i> , 2019, 46, 2417-2424.	4.0	49
24	Precipitation-induced surface brightenings seen on Titan by Cassini VIMS and ISS. <i>Planetary Science</i> , 2013, 2, .	1.5	45
25	The Young Age of the LAMP-observed Frost in Lunar Polar Cold Traps. <i>Geophysical Research Letters</i> , 2019, 46, 8680-8688.	4.0	41
26	Conditions for Sublimating Water Ice to Supply Ceres' Exosphere. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1984-1995.	3.6	40
27	Extreme detached dust layers near Martian volcanoes: Evidence for dust transport by mesoscale circulations forced by high topography. <i>Geophysical Research Letters</i> , 2015, 42, 3730-3738.	4.0	36
28	Hydrated minerals on Europa's surface: An improved look from the Galileo NIMS investigation. <i>Icarus</i> , 2010, 209, 639-650.	2.5	33
29	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
30	New Constraints on Thermal and Dielectric Properties of Lunar Regolith from LRO Diviner and CE2 Microwave Radiometer. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006130.	3.6	29
31	VIMS spectral mapping observations of Titan during the Cassini prime mission. <i>Planetary and Space Science</i> , 2009, 57, 1950-1962.	1.7	28
32	Compositional and spatial variations in Titan dune and interdune regions from Cassini VIMS and RADAR. <i>Icarus</i> , 2016, 270, 222-237.	2.5	27
33	Lunar Titanium and Frequency-Dependent Microwave Loss Tangent as Constrained by the Chang'E-2 MRM and LRO Diviner Lunar Radiometers. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006405.	3.6	27
34	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.	1.7	26
35	Volatile interactions with the lunar surface. <i>Chemie Der Erde</i> , 2022, 82, 125858.	2.0	26
36	Complex explosive volcanic activity on the Moon within Oppenheimer crater. <i>Icarus</i> , 2016, 273, 296-314.	2.5	24

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37	Titan's surface composition and atmospheric transmission with solar occultation measurements by Cassini VIMS. <i>Icarus</i> , 2014, 243, 158-172.	2.5	23
38	Origin of the anomalously rocky appearance of Tsiolkovskiy crater. <i>Icarus</i> , 2016, 273, 237-247.	2.5	23
39	Young lunar volcanic features: Thermophysical properties and formation. <i>Icarus</i> , 2017, 290, 224-237.	2.5	23
40	Lunar Cold Spots and Crater Production on the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2380-2392.	3.6	23
41	Coevolution of Mars's atmosphere and massive south polar CO ₂ ice deposit. <i>Nature Astronomy</i> , 2020, 4, 364-371.	10.1	22
42	Moon Diver: A Discovery Mission Concept for Understanding the History of Secondary Crusts through the Exploration of a Lunar Mare Pit. , 2019, , .		21
43	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
44	Evidence for ultra-cold traps and surface water ice in the lunar south polar crater Amundsen. <i>Icarus</i> , 2019, 332, 1-13.	2.5	19
45	Asymmetries in Snowfall, Emissivity, and Albedo of Mars' Seasonal Polar Caps: Mars Climate Sounder Observations. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006150.	3.6	19
46	Lunar Flashlight: Illuminating the Lunar South Pole. <i>IEEE Aerospace and Electronic Systems Magazine</i> , 2020, 35, 46-52.	1.3	16
47	Spatial Distribution and Thermal Diversity of Surface Volatile Cold Traps at the Lunar Poles. <i>Planetary Science Journal</i> , 2022, 3, 39.	3.6	16
48	Thermal and Illumination Environments of Lunar Pits and Caves: Models and Observations From the Diviner Lunar Radiometer Experiment. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	16
49	Ongoing resurfacing of KBO Eris by volatile transport in local, collisional, sublimation atmosphere regime. <i>Icarus</i> , 2019, 334, 52-61.	2.5	15
50	How dielectric breakdown may contribute to the global weathering of regolith on the moon. <i>Icarus</i> , 2019, 319, 785-794.	2.5	14
51	Polar Ice Accumulation from Volcanically Induced Transient Atmospheres on the Moon. <i>Planetary Science Journal</i> , 2022, 3, 99.	3.6	13
52	The Subsurface Coherent Rock Content of the Moon as Revealed by Cold-Spot Craters. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3373-3384.	3.6	10
53	Impacts on the Moon: Analysis methods and size distribution of impactors. <i>Planetary and Space Science</i> , 2021, 200, 105201.	1.7	10
54	Titan's surface geology. , 2014, , 63-101.		8

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55	Paleotectonics of a complex Miocene half graben formed above a detachment fault: The Diligencia basin, Orocochia Mountains, southern California. <i>Lithosphere</i> , 2014, 6, 157-176.	1.4	8
56	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
57	The spectral radiance of indirectly illuminated surfaces in regions of permanent shadow on the Moon. <i>Acta Astronautica</i> , 2021, 180, 25-34.	3.2	7
58	A novel technology for measuring the eruption temperature of silicate lavas with remote sensing: Application to Io and other planets. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 343, 1-16.	2.1	6
59	Surface Roughness Evolution and Implications for the Age of the North Polar Residual Cap of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006570.	3.6	6
60	Design and Characterization of the Multi-Band SWIR Receiver for the Lunar Flashlight CubeSat Mission. <i>Remote Sensing</i> , 2019, 11, 440.	4.0	5
61	Small Penetrator Instrument Concept for the Advancement of Lunar Surface Science. <i>Planetary Science Journal</i> , 2021, 2, 38.	3.6	5
62	The Effects of Terrain Properties Upon the Small Crater Population Distribution at Giordano Bruno: Implications for Lunar Chronology. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5
63	Thermophysical Properties of Lunar Irregular Mare Patches From LRO Diviner Radiometer Data. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	4
64	Changâ€™s Rover Spectra Revealing Microscale Surface Thermophysical Properties of the Moon. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL089226.	4.0	3
65	Europa's hemispheric color dichotomy as a constraint on non-synchronous rotation. <i>Icarus</i> , 2021, 364, 114438.	2.5	3
66	The case for a Themis asteroid family spacecraft mission. <i>Planetary and Space Science</i> , 2022, 212, 105413.	1.7	3
67	CIRiS, a CubeSat-compatible, imaging radiometer for earth science and planetary missions. , 2019, , .		2
68	Temperatures of the Lacus Mortis Region of the Moon. <i>Earth and Space Science</i> , 2022, 9, .	2.6	2
69	Abandoned frontier. <i>Nature Geoscience</i> , 2013, 6, 155-156.	12.9	1
70	The Importance of the Climate Record in the Martian Polar Layered Deposits. , 2021, 53, .		1
71	The Lunar Flashlight CubeSat instrument: A compact SWIR laser reflectometer to quantify and map water ice on the surface of the Moon. , 2018, , .		1
72	Composition and possible origins of dark crater ejecta on Europa. <i>Icarus</i> , 2022, 385, 115037.	2.5	1

#	ARTICLE	IF	CITATIONS
73	Design and characterization of a low cost CubeSat multi-band optical receiver to map water ice on the lunar surface for the Lunar Flashlight mission. , 2017, , .		0
74	Optical and mechanical designs of the multi-band SWIR receiver for the Lunar Flashlight CubeSat mission. , 2018, , .		0