

Alexander G Hayes

List of Publications by Year in descending order

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118
papers

8,429
citations

57758

44
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45317

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120
docs citations

120
times ranked

4811
citing authors

#	ARTICLE	IF	CITATIONS
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	12.6	687
2	Mars's Surface Radiation Environment Measured with the Mars Science Laboratory's Curiosity Rover. <i>Science</i> , 2014, 343, 1244797.	12.6	475
3	Mineralogy at Meridiani Planum from the Mini-TES Experiment on the Opportunity Rover. <i>Science</i> , 2004, 306, 1733-1739.	12.6	370
4	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	12.6	367
5	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	12.6	327
6	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
7	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	12.6	323
8	Mars Exploration Rover Athena Panoramic Camera (Pancam) investigation. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	247
9	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	12.6	246
10	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
11	The NASA Roadmap to Ocean Worlds. <i>Astrobiology</i> , 2019, 19, 1-27.	3.0	209
12	Titan's inventory of organic surface materials. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	184
13	Rapid and Extensive Surface Changes Near Titan's Equator: Evidence of April Showers. <i>Science</i> , 2011, 331, 1414-1417.	12.6	184
14	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the Curiosity rover investigations at Gale crater, Mars. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4245-4250.	7.1	172
15	Pancam Multispectral Imaging Results from the Spirit Rover at Gusev Crater. <i>Science</i> , 2004, 305, 800-806.	12.6	153
16	An asymmetric distribution of lakes on Titan as a possible consequence of orbital forcing. <i>Nature Geoscience</i> , 2009, 2, 851-854.	12.9	153
17	Evidence from Opportunity's Microscopic Imager for Water on Meridiani Planum. <i>Science</i> , 2004, 306, 1727-1730.	12.6	146
18	Pancam Multispectral Imaging Results from the Opportunity Rover at Meridiani Planum. <i>Science</i> , 2004, 306, 1703-1709.	12.6	135

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19	The Petrochemistry of Jake_M: A Martian Mugearite. <i>Science</i> , 2013, 341, 1239463.	12.6	134
20	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. <i>Science</i> , 2004, 305, 824-826.	12.6	130
21	Athena Microscopic Imager investigation. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	129
22	The bathymetry of a Titan sea. <i>Geophysical Research Letters</i> , 2014, 41, 1432-1437.	4.0	119
23	The Lakes and Seas of Titan. <i>Annual Review of Earth and Planetary Sciences</i> , 2016, 44, 57-83.	11.0	118
24	Transient surface liquid in Titan's polar regions from Cassini. <i>Icarus</i> , 2011, 211, 655-671.	2.5	113
25	The origin and evolution of the Peace Vallis fan system that drains to the Curiosity landing area, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 705-728.	3.6	112
26	Low Upper Limit to Methane Abundance on Mars. <i>Science</i> , 2013, 342, 355-357.	12.6	103
27	Organic sedimentary deposits in Titan's dry lakebeds: Probable evaporite. <i>Icarus</i> , 2011, 216, 136-140.	2.5	96
28	Science Goals and Objectives for the Dragonfly Titan Rotorcraft Relocatable Lander. <i>Planetary Science Journal</i> , 2021, 2, 130.	3.6	80
29	Titan's surface at 2.18-cm wavelength imaged by the Cassini RADAR radiometer: Results and interpretations through the first ten years of observation. <i>Icarus</i> , 2016, 270, 443-459.	2.5	79
30	Titan's Topography and Shape at the End of the Cassini Mission. <i>Geophysical Research Letters</i> , 2017, 44, 11,754.	4.0	78
31	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. <i>Space Science Reviews</i> , 2021, 217, 24.	8.1	76
32	Cassini SAR, radiometry, scatterometry and altimetry observations of Titan's dune fields. <i>Icarus</i> , 2011, 213, 608-624.	2.5	74
33	Observations of Titan's Northern lakes at 5 μ m: Implications for the organic cycle and geology. <i>Icarus</i> , 2012, 221, 768-786.	2.5	72
34	Sequence and relative timing of large lakes in Gale crater (Mars) after the formation of Mount Sharp. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 472-496.	3.6	72
35	The sustainability of habitability on terrestrial planets: Insights, questions, and needed measurements from Mars for understanding the evolution of Earth-like worlds. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1927-1961.	3.6	72
36	A global topographic map of Titan. <i>Icarus</i> , 2013, 225, 367-377.	2.5	70

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37	A post-Cassini view of Titan's methane-based hydrologic cycle. <i>Nature Geoscience</i> , 2018, 11, 306-313.	12.9	59
38	Shoreline retreat at Titan's Ontario Lacus and Arrakis Planitia from Cassini Imaging Science Subsystem observations. <i>Icarus</i> , 2011, 212, 957-959.	2.5	56
39	Growth mechanisms and dune orientation on Titan. <i>Geophysical Research Letters</i> , 2014, 41, 6093-6100.	4.0	52
40	Uranus and Neptune missions: A study in advance of the next Planetary Science Decadal Survey. <i>Planetary and Space Science</i> , 2019, 177, 104680.	1.7	50
41	Spectrophotometric properties of materials observed by Pancam on the Mars Exploration Rovers: 1. Spirit. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	49
42	Bathymetry and absorptivity of Titan's Ontario Lacus. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	49
43	Geomorphologic mapping of Titan's polar terrains: Constraining surface processes and landscape evolution. <i>Icarus</i> , 2017, 282, 214-236.	2.5	46
44	A global geomorphologic map of Saturn's moon Titan. <i>Nature Astronomy</i> , 2020, 4, 228-233.	10.1	46
45	Nature, distribution, and origin of Titan's Undifferentiated Plains. <i>Icarus</i> , 2016, 270, 162-182.	2.5	45
46	Composition, seasonal change, and bathymetry of Ligeia Mare, Titan, derived from its microwave thermal emission. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 233-251.	3.6	44
47	Transient features in a Titan sea. <i>Nature Geoscience</i> , 2014, 7, 493-496.	12.9	43
48	Topographic Constraints on the Evolution and Connectivity of Titan's Lacustrine Basins. <i>Geophysical Research Letters</i> , 2017, 44, 11,745.	4.0	43
49	Wind driven capillary-gravity waves on Titan's lakes: Hard to detect or non-existent?. <i>Icarus</i> , 2013, 225, 403-412.	2.5	42
50	Simulations of Titan's paleoclimate. <i>Icarus</i> , 2014, 243, 264-273.	2.5	39
51	Electrification of sand on Titan and its influence on sediment transport. <i>Nature Geoscience</i> , 2017, 10, 260-265.	12.9	39
52	Reconstruction of eolian bed forms and paleocurrents from cross-bedded strata at Victoria Crater, Meridiani Planum, Mars. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	38
53	Bathymetry and composition of Titan's Ontario Lacus derived from Monte Carlo-based waveform inversion of Cassini RADAR altimetry data. <i>Icarus</i> , 2018, 300, 203-209.	2.5	38
54	Latitudinal and altitudinal controls of Titan's dune field morphometry. <i>Icarus</i> , 2012, 217, 231-242.	2.5	37

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55	Titan's "Magic Islands": Transient features in a hydrocarbon sea. <i>Icarus</i> , 2016, 271, 338-349.	2.5	37
56	Spectrophotometric properties of materials observed by Pancam on the Mars Exploration Rovers: 2. Opportunity. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	36
57	Alluvial Fan Morphology, distribution and formation on Titan. <i>Icarus</i> , 2016, 270, 238-247.	2.5	36
58	Production and global transport of Titan's sand particles. <i>Planetary Science</i> , 2015, 4, .	1.5	35
59	Titan as Revealed by the Cassini Radar. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	34
60	A radar map of Titan Seas: Tidal dissipation and ocean mixing through the throat of Kraken. <i>Icarus</i> , 2014, 237, 9-15.	2.5	33
61	Exposure age of Saturn's A and B rings, and the Cassini Division as suggested by their non-icy material content. <i>Icarus</i> , 2017, 294, 14-42.	2.5	33
62	Liquid-filled canyons on Titan. <i>Geophysical Research Letters</i> , 2016, 43, 7887-7894.	4.0	32
63	Cassini/VIMS observes rough surfaces on Titan's Punga Mare in specular reflection. <i>Planetary Science</i> , 2014, 3, 3.	1.5	31
64	Cassini microwave observations provide clues to the origin of Saturn's C ring. <i>Icarus</i> , 2017, 281, 297-321.	2.5	31
65	Pre-Flight Calibration of the Mars 2020 Rover Mastcam Zoom (Mastcam-Z) Multispectral, Stereoscopic Imager. <i>Space Science Reviews</i> , 2021, 217, 29.	8.1	31
66	The lakes and seas of Titan. <i>Eos</i> , 2007, 88, 569-570.	0.1	30
67	Deep and methane-rich lakes on Titan. <i>Nature Astronomy</i> , 2019, 3, 535-542.	10.1	30
68	The growth of wind-waves in Titan's hydrocarbon seas. <i>Icarus</i> , 2012, 219, 468-475.	2.5	29
69	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
70	Radiometric Calibration Targets for the Mastcam-Z Camera on the Mars 2020 Rover Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	27
71	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
72	Meridional variation in tropospheric methane on Titan observed with AO spectroscopy at Keck and VLT. <i>Icarus</i> , 2016, 270, 376-388.	2.5	24

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73	Morphological evidence that Titan's southern hemisphere basins are paleoseas. <i>Icarus</i> , 2018, 310, 140-148.	2.5	24
74	Geomorphology of comet 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S50-S67.	4.4	23
75	Hypsometry of Titan. <i>Icarus</i> , 2011, 211, 699-706.	2.5	22
76	Surface roughness of Titan's hydrocarbon seas. <i>Earth and Planetary Science Letters</i> , 2017, 474, 20-24.	4.4	21
77	Titan: Earth-like on the Outside, Ocean World on the Inside. <i>Planetary Science Journal</i> , 2021, 2, 112.	3.6	21
78	Cassini radar observation of Punga Mare and environs: Bathymetry and composition. <i>Earth and Planetary Science Letters</i> , 2018, 496, 89-95.	4.4	20
79	Constraining the physical properties of Titan's empty lake basins using nadir and off-nadir Cassini RADAR backscatter. <i>Icarus</i> , 2016, 270, 57-66.	2.5	19
80	Titan Science with the James Webb Space Telescope. <i>Publications of the Astronomical Society of the Pacific</i> , 2016, 128, 018007.	3.1	19
81	Insights into Titan's geology and hydrology based on enhanced image processing of Cassini RADAR data. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2149-2166.	3.6	18
82	Variations in Titan's dune orientations as a result of orbital forcing. <i>Icarus</i> , 2016, 270, 197-210.	2.5	16
83	Electromagnetic models and inversion techniques for Titan's Ontario Lacus depth estimation from Cassini RADAR data. <i>Icarus</i> , 2012, 221, 960-969.	2.5	13
84	Raised Rims Around Titan's Sharp Edged Depressions. <i>Geophysical Research Letters</i> , 2019, 46, 5846-5854.	4.0	13
85	Spectral and emissivity analysis of the raised ramparts around Titan's northern lakes. <i>Icarus</i> , 2020, 344, 113338.	2.5	13
86	Double ridges on Europa accommodate some of the missing surface contraction. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 395-403.	3.6	12
87	The fate of ethane in Titan's hydrocarbon lakes and seas. <i>Icarus</i> , 2016, 270, 37-40.	2.5	10
88	Migrating Scarps as a Significant Driver for Cometary Surface Evolution. <i>Geophysical Research Letters</i> , 2019, 46, 12794-12804.	4.0	10
89	The Bathymetry of Moray Sinus at Titan's Kraken Mare. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006558.	3.6	10
90	Spectrophotometric properties of materials observed by Pancam on the Mars Exploration Rovers: 4. Final mission observations. <i>Icarus</i> , 2021, 357, 114261.	2.5	10

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91	VLA multi-wavelength microwave observations of Saturn's C and B rings. <i>Icarus</i> , 2019, 317, 518-548.	2.5	9
92	Titan's surface geology. , 2014, , 63-101.		8
93	Numerical study of tides in Ontario Lacus, a hydrocarbon lake on the surface of the Saturnian moon Titan. <i>Ocean Dynamics</i> , 2016, 66, 461-482.	2.2	8
94	Dunes across the Solar System. <i>Science</i> , 2018, 360, 960-961.	12.6	7
95	Geomorphological map of the South Belet Region of Titan. <i>Icarus</i> , 2021, 366, 114516.	2.5	7
96	Textures of the Soils and Rocks at Gusev Crater from Spirit's Microscopic Imager. <i>Science</i> , 2004, 305, 824-826.	12.6	7
97	The MIT Lincoln Laboratory optical systems test facility. , 2006, 6208, 620801.		6
98	The root of anomalously specular reflections from solid surfaces on Saturn's moon Titan. <i>Nature Communications</i> , 2020, 11, 2829.	12.8	6
99	Hypotheses for Triton's plumes: New analyses and future remote sensing tests. <i>Icarus</i> , 2022, 375, 114835.	2.5	6
100	Spectrophotometry from Mars Hand Lens Imager goniometer measurements: Kimberley region, Gale crater. <i>Icarus</i> , 2020, 335, 113361.	2.5	5
101	Pluto's Haze Abundance and Size Distribution from Limb Scatter Observations by MVIC. <i>Planetary Science Journal</i> , 2021, 2, 91.	3.6	5
102	Science goals and new mission concepts for future exploration of Titan's atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). <i>Experimental Astronomy</i> , 2022, 54, 911-973.	3.7	5
103	Generation of photoclinometric DTMs for application to transient changes on the surface of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2019, 630, A10.	5.1	4
104	Modeling transmission windows in Titan's lower troposphere: Implications for infrared spectrometers aboard future aerial and surface missions. <i>Icarus</i> , 2021, 357, 114228.	2.5	3
105	Exploration of Enceladus and Titan: investigating ocean worlds' evolution and habitability in the Saturn system. <i>Experimental Astronomy</i> , 2022, 54, 877-910.	3.7	3
106	Tracking Short-term Variations in the Haze Distribution of Titan's Atmosphere with SINFONI VLT. <i>Planetary Science Journal</i> , 2021, 2, 180.	3.6	3
107	Titan Stratospheric Haze Bands Observed in Cassini VIMS as Tracers of Meridional Circulation. <i>Planetary Science Journal</i> , 2022, 3, 114.	3.6	3
108	The Standoff Aerosol Active Signature Testbed (SAAST) at MIT Lincoln Laboratory. , 2006, , .		2

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109	Active Range of the Optical Systems Test Facility at MIT Lincoln Laboratory. , 2006, , .		2
110	Titan's surface and atmosphere. Icarus, 2016, 270, 1.	2.5	2
111	Fluvial Features on Titan and Earth: Lessons from Planform Images in Low-resolution SAR. Planetary Science Journal, 2021, 2, 142.	3.6	2
112	Diffraction-limited Titan Surface Imaging from Orbit Using Near-infrared Atmospheric Windows. Planetary Science Journal, 2020, 1, 24.	3.6	2
113	Diverse evolution of mountains and hummocks on Titan as observed by the Cassini RADAR altimeter. Icarus, 2022, 374, 114775.	2.5	2
114	The seeker experimental system at MIT Lincoln Laboratory. , 2006, , .		1
115	Spectral radiant emission of dynamic resistive arrays. , 2007, , .		1
116	Characterization and comparison of 128x128 element nuclear optical dynamic display system resistive arrays. , 2006, , .		0
117	Lacustrine Features (Titan). , 2014, , 1-14.		0
118	Lacustrine Features (Titan). , 2015, , 1094-1105.		0