

Caleb Fassett

List of Publications by Year in descending order

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101
papers

7,977
citations

44069

48
h-index

48315

88
g-index

105
all docs

105
docs citations

105
times ranked

3696
citing authors

#	ARTICLE	IF	CITATIONS
1	Rock Abundance on the Lunar Mare on Surfaces of Different Age: Implications for Regolith Evolution and Thickness. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	5
2	Constraining the formation of paleolake inlet valleys across crater rims. <i>Icarus</i> , 2022, 378, 114945.	2.5	5
3	Prolonged Rock Exhumation at the Rims of Kilometerâ€Scale Lunar Craters. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006897.	3.6	11
4	In Situ Geochronology for the Next Decade: Mission Designs for the Moon, Mars, and Vesta. <i>Planetary Science Journal</i> , 2021, 2, 145.	3.6	6
5	Limits on Runoff Episode Duration for Early Mars: Integrating Lake Hydrology and Climate Models. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093523.	4.0	5
6	The importance of lake breach floods for valley incision on early Mars. <i>Nature</i> , 2021, 597, 645-649.	27.8	19
7	Age relationships of large-scale troughs and impact basins on Vesta. <i>Icarus</i> , 2021, 366, 114512.	2.5	4
8	Modeling the Hydrodynamics, Sediment Transport, and Valley Incision of Outletâ€Forming Floods From Martian Crater Lakes. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006979.	3.6	6
9	Precipitation and aridity constraints from paleolakes on early Mars. <i>Geology</i> , 2020, 48, 1189-1193.	4.4	20
10	Modification of Caloris ejecta blocks by long-lived mass-wasting: A volatile-driven process?. <i>Earth and Planetary Science Letters</i> , 2020, 549, 116519.	4.4	5
11	Reâ€Examination of the Population, Stratigraphy, and Sequence of Mercurian Basins: Implications for Mercury's Early Impact History and Comparison With the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006212.	3.6	9
12	Incision of paleolake outlet canyons on Mars from overflow flooding. <i>Geology</i> , 2019, 47, 7-10.	4.4	20
13	How Much of the Sediment in Gale Crater's Central Mound Was Fluvially Transported?. <i>Geophysical Research Letters</i> , 2019, 46, 5092-5099.	4.0	6
14	The equilibrium size-frequency distribution of small craters reveals the effects of distal ejecta on lunar landscape morphology. <i>Icarus</i> , 2019, 326, 63-87.	2.5	49
15	Crater Statistics on the Darkâ€Toned, Mafic Floor Unit in Jezero Crater, Mars. <i>Geophysical Research Letters</i> , 2019, 46, 2408-2416.	4.0	40
16	Incision of Licus Vallis, Mars, From Multiple Lake Overflow Floods. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 405-420.	3.6	25
17	The Role of Breccia Lenses in Regolith Generation From the Formation of Small, Simple Craters: Application to the Apollo 15 Landing Site. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 527-543.	3.6	21
18	Ancient Bombardment of the Inner Solar System: Reinvestigation of the â€Fingerprintsâ€ of Different Impactor Populations on the Lunar Surface. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 748-762.	3.6	47

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19	Distribution and Characteristics of Boulder Halos at High Latitudes on Mars: Ground Ice and Surface Processes Drive Surface Reworking. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 322-334.	3.6	9
20	Stratigraphy and paleohydrology of delta channel deposits, Jezero crater, Mars. <i>Icarus</i> , 2018, 301, 58-75.	2.5	83
21	Temporal Evolution of S&B Circular Polarization Ratios of Kilometer&Scale Craters on the Lunar Maria. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 3133-3143.	3.6	11
22	Impact Cratering of Mercury. , 2018, , 217-248.		10
23	No Change in the Recent Lunar Impact Flux Required Based on Modeling of Impact Glass Spherule Age Distributions. <i>Geophysical Research Letters</i> , 2018, 45, 6805-6813.	4.0	16
24	Lunar impact history constrained by GRAIL-derived basin relaxation measurements. <i>Icarus</i> , 2018, 314, 50-63.	2.5	20
25	An analytical model of crater count equilibrium. <i>Icarus</i> , 2017, 289, 134-143.	2.5	26
26	Matrix Effects in Quantitative Analysis of Laser-Induced Breakdown Spectroscopy (LIBS) of Rock Powders Doped with Cr, Mn, Ni, Zn, and Co. <i>Applied Spectroscopy</i> , 2017, 71, 600-626.	2.2	38
27	Revised constraints on absolute age limits for Mercury's Kuiperian and Mansurian stratigraphic systems. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1010-1020.	3.6	34
28	Heterogeneous impact transport on the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1158-1180.	3.6	41
29	Candidate volcanic and impact-induced ice depressions on Mars. <i>Icarus</i> , 2017, 285, 185-194.	2.5	14
30	Sedimentological evidence for a deltaic origin of the western fan deposit in Jezero crater, Mars and implications for future exploration. <i>Earth and Planetary Science Letters</i> , 2017, 458, 357-365.	4.4	128
31	Evidence for rapid topographic evolution and crater degradation on Mercury from simple crater morphometry. <i>Geophysical Research Letters</i> , 2017, 44, 5326-5335.	4.0	28
32	Insights into surface runoff on early Mars from paleolake basin morphology and stratigraphy. <i>Geology</i> , 2016, 44, 419-422.	4.4	72
33	Widespread effusive volcanism on Mercury likely ended by about 3.5&Ga. <i>Geophysical Research Letters</i> , 2016, 43, 7408-7416.	4.0	98
34	Analysis of impact crater populations and the geochronology of planetary surfaces in the inner solar system. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1900-1926.	3.6	81
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	Ames stereo pipeline-derived digital terrain models of Mercury from MESSENGER stereo imaging. <i>Planetary and Space Science</i> , 2016, 134, 19-28.	1.7	19

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37	Enhanced erosion rates on Mars during Amazonian glaciation. <i>Icarus</i> , 2016, 264, 213-219.	2.5	19
38	Valley Network (Mars). , 2015, , 2226-2233.		0
39	Re-examining the main asteroid belt as the primary source of ancient lunar craters. <i>Icarus</i> , 2015, 247, 172-190.	2.5	49
40	Classification and analysis of candidate impact crater-hosted closed-basin lakes on Mars. <i>Icarus</i> , 2015, 260, 346-367.	2.5	91
41	Extent, age, and resurfacing history of the northern smooth plains on Mercury from MESSENGER observations. <i>Icarus</i> , 2015, 250, 602-622.	2.5	71
42	Age dating of an extensive thrust system on Mercury: implications for the planet's thermal evolution. <i>Geological Society Special Publication</i> , 2015, 401, 291-311.	1.3	9
43	Assessing the mineralogy of the watershed and fan deposits of the Jezero crater paleolake system, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 775-808.	3.6	193
44	Glaciofluvial Valley. , 2015, , 868-870.		0
45	Friable Layered Deposits. , 2015, , 821-828.		0
46	Friable Layered Deposits. , 2014, , 1-9.		0
47	The relationship between radar scattering and surface roughness of lunar volcanic features. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2331-2348.	3.6	15
48	An extended period of episodic northern mid-latitude glaciation on Mars during the Middle to Late Amazonian: Implications for long-term obliquity history. <i>Geology</i> , 2014, 42, 763-766.	4.4	39
49	The variability of crater identification among expert and community crater analysts. <i>Icarus</i> , 2014, 234, 109-131.	2.5	135
50	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	12.6	687
51	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	12.6	508
52	Timescales of fluvial activity and intermittency in Milna Crater, Mars. <i>Icarus</i> , 2014, 241, 130-147.	2.5	26
53	Sequestered glacial ice contribution to the global Martian water budget: Geometric constraints on the volume of remnant, midlatitude debris-covered glaciers. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2188-2196.	3.6	78
54	Crater degradation on the lunar maria: Topographic diffusion and the rate of erosion on the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2255-2271.	3.6	162

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55	Valley network (Mars). , 2014, , 1-10.		0
56	Valley Network (Mars). , 2014, , 1-10.		0
57	Pacing early Mars river activity: Embedded craters in the Aeolis Dorsa region imply river activity spanned $\sim 3(1\text{--}20)$ Myr. <i>Icarus</i> , 2013, 225, 850-855.	2.5	49
58	Valleys in pit craters on Mars: Characteristics, distribution, and formation mechanisms. <i>Icarus</i> , 2013, 225, 272-282.	2.5	16
59	Scaling relationships and concavity of small valley networks on Mars. <i>Planetary and Space Science</i> , 2013, 75, 105-116.	1.7	29
60	Impact bombardment of the terrestrial planets and the early history of the Solar System. <i>Nature Geoscience</i> , 2013, 6, 520-524.	12.9	66
61	Global resurfacing of Mercury 4.0–4.1 billion years ago by heavy bombardment and volcanism. <i>Nature</i> , 2013, 499, 59-61.	27.8	154
62	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
63	Constraints on the volatile distribution within Shackleton crater at the lunar south pole. <i>Nature</i> , 2012, 486, 378-381.	27.8	159
64	Recent high-latitude resurfacing by a climate-related latitude-dependent mantle: Constraining age of emplacement from counts of small craters. <i>Planetary and Space Science</i> , 2012, 69, 49-61.	1.7	36
65	Lunar impact basins: Stratigraphy, sequence and ages from superposed impact crater populations measured from Lunar Orbiter Laser Altimeter (LOLA) data. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	114
66	Constraints on the history of open-basin lakes on Mars from the composition and timing of volcanic resurfacing. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	46
67	Large impact basins on Mercury: Global distribution, characteristics, and modification history from MESSENGER orbital data. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	68
68	An analysis of open-basin lake deposits on Mars: Evidence for the nature of associated lacustrine deposits and post-lacustrine modification processes. <i>Icarus</i> , 2012, 219, 211-229.	2.5	105
69	Patterns of accumulation and flow of ice in the mid-latitudes of Mars during the Amazonian. <i>Icarus</i> , 2012, 219, 723-732.	2.5	57
70	An overfilled lacustrine system and progradational delta in Jezero crater, Mars: Implications for Noachian climate. <i>Planetary and Space Science</i> , 2012, 67, 28-45.	1.7	138
71	Hollows on Mercury: MESSENGER Evidence for Geologically Recent Volatile-Related Activity. <i>Science</i> , 2011, 333, 1856-1859.	12.6	136
72	The global population of large craters on Mercury and comparison with the Moon. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	75

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73	Thickness of proximal ejecta from the Orientale Basin from Lunar Orbiter Laser Altimeter (LOLA) data: Implications for multi-ring basin formation. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	68
74	Flood Volcanism in the Northern High Latitudes of Mercury Revealed by MESSENGER. <i>Science</i> , 2011, 333, 1853-1856.	12.6	225
75	Integrating advanced visualization technology into the planetary Geoscience workflow. <i>Planetary and Space Science</i> , 2011, 59, 1273-1279.	1.7	7
76	Mercury crater statistics from MESSENGER flybys: Implications for stratigraphy and resurfacing history. <i>Planetary and Space Science</i> , 2011, 59, 1960-1967.	1.7	64
77	The transition from complex crater to peak-ring basin on the Moon: New observations from the Lunar Orbiter Laser Altimeter (LOLA) instrument. <i>Icarus</i> , 2011, 214, 377-393.	2.5	74
78	History of tectonic deformation in the interior plains of the Caloris basin, mercury. <i>Solar System Research</i> , 2011, 45, 471-497.	0.7	12
79	Sequence and timing of conditions on early Mars. <i>Icarus</i> , 2011, 211, 1204-1214.	2.5	140
80	Evidence for paleolakes in Erythraea Fossa, Mars: Implications for an ancient hydrological cycle. <i>Icarus</i> , 2011, 213, 104-115.	2.5	13
81	Global Distribution of Large Lunar Craters: Implications for Resurfacing and Impactor Populations. <i>Science</i> , 2010, 329, 1504-1507.	12.6	210
82	Supraglacial and proglacial valleys on Amazonian Mars. <i>Icarus</i> , 2010, 208, 86-100.	2.5	90
83	Formation of an eroded lava channel within an Elysium Planitia impact crater: Distinguishing between a mechanical and thermal origin. <i>Icarus</i> , 2010, 210, 626-634.	2.5	39
84	Evidence for Young Volcanism on Mercury from the Third MESSENGER Flyby. <i>Science</i> , 2010, 329, 668-671.	12.6	118
85	Unique chronostratigraphic marker in depositional fan stratigraphy on Mars: Evidence for ca. 1.25 Ma gully activity and surficial meltwater origin. <i>Geology</i> , 2009, 37, 207-210.	4.4	98
86	Volcanism on Mercury: Evidence from the first MESSENGER flyby for extrusive and explosive activity and the volcanic origin of plains. <i>Earth and Planetary Science Letters</i> , 2009, 285, 227-242.	4.4	135
87	Evidence for intrusive activity on Mercury from the first MESSENGER flyby. <i>Earth and Planetary Science Letters</i> , 2009, 285, 251-262.	4.4	67
88	Caloris impact basin: Exterior geomorphology, stratigraphy, morphometry, radial sculpture, and smooth plains deposits. <i>Earth and Planetary Science Letters</i> , 2009, 285, 297-308.	4.4	84
89	Amazonian-aged fluvial valley systems in a climatic microenvironment on Mars: Melting of ice deposits on the interior of Lyot Crater. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	61
90	Evolution of the Rembrandt Impact Basin on Mercury. <i>Science</i> , 2009, 324, 618-621.	12.6	46

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91	The timing of martian valley network activity: Constraints from buffered crater counting. <i>Icarus</i> , 2008, 195, 61-89.	2.5	375
92	Valley network-fed, open-basin lakes on Mars: Distribution and implications for Noachian surface and subsurface hydrology. <i>Icarus</i> , 2008, 198, 37-56.	2.5	385
93	Clay minerals in delta deposits and organic preservation potential on Mars. <i>Nature Geoscience</i> , 2008, 1, 355-358.	12.9	293
94	Mineralogy of the Nili Fossae region with OMEGA/Mars Express data: 1. Ancient impact melt in the Isidis Basin and implications for the transition from the Noachian to Hesperian. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	130
95	Layered mantling deposits in northeast Arabia Terra, Mars: Noachian-Hesperian sedimentation, erosion, and terrain inversion. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	55
96	Valley formation on martian volcanoes in the Hesperian: Evidence for melting of summit snowpack, caldera lake formation, drainage and erosion on Ceraunius Tholus. <i>Icarus</i> , 2007, 189, 118-135.	2.5	56
97	Adviser: immersive field work for planetary geoscientists. <i>IEEE Computer Graphics and Applications</i> , 2006, 26, 46-54.	1.2	9
98	Valleys on Hecates Tholus, Mars: origin by basal melting of summit snowpack. <i>Planetary and Space Science</i> , 2006, 54, 370-378.	1.7	108
99	Fluvial sedimentary deposits on Mars: Ancient deltas in a crater lake in the Nili Fossae region. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	226
100	Star Formation Associated with the X-ray Jet in Centaurus A. <i>Astrophysical Journal</i> , 2002, 575, 712-720.	4.5	11
101	Age, Evolution, and Dispersion of the Loose Groups of Blue Stars in the Northeast Radio Lobe of Centaurus A. <i>Astrophysical Journal</i> , 2000, 538, 594-607.	4.5	19