

H Jay Melosh

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8081817/publications.pdf>

Version: 2024-02-01

62
papers

6,116
citations

109321

35
h-index

118850

62
g-index

66
all docs

66
docs citations

66
times ranked

3597
citing authors

#	ARTICLE	IF	CITATIONS
1	Bombardment history of the Moon constrained by crustal porosity. <i>Nature Geoscience</i> , 2022, 15, 531-535.	12.9	7
2	Feasibility Study of a High-Resolution Shallow Surface Penetration Radar for Space Application. <i>Radio Science</i> , 2021, 56, e2020RS007118.	1.6	1
3	Scaling laws for the geometry of an impact-induced magma ocean. <i>Earth and Planetary Science Letters</i> , 2021, 568, 116983.	4.4	25
4	Pluto's Antipodal Terrains Imply a Thick Subsurface Ocean and Hydrated Core. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091596.	4.0	9
5	Lunar lava tubes: Morphology to structural stability. <i>Icarus</i> , 2020, 338, 113442.	2.5	25
6	The Australasian tektite source crater: Found at last?. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 1252-1253.	7.1	6
7	Why the lunar South Pole-Aitken Basin is not a mascon. <i>Icarus</i> , 2020, 352, 113995.	2.5	16
8	A nonlinear and time-dependent visco-elasto-plastic rheology model for studying shock physics phenomena. <i>Engineering Reports</i> , 2020, 2, e12322.	1.7	7
9	Ceres Crater Degradation Inferred From Concentric Fracturing. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1188-1203.	3.6	15
10	Why the Moon is so like the Earth. <i>Nature Geoscience</i> , 2019, 12, 402-403.	12.9	2
11	Impact Fragmentation and the Development of the Deep Lunar Megaregolith. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 941-957.	3.6	27
12	Deep Structure of the Lunar South Pole-Aitken Basin. <i>Geophysical Research Letters</i> , 2019, 46, 5100-5106.	4.0	22
13	HCN Production via Impact Ejecta Reentry During the Late Heavy Bombardment. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 892-909.	3.6	30
14	Slow Impacts on Strong Targets Bring on the Heat. <i>Geophysical Research Letters</i> , 2018, 45, 2597-2599.	4.0	12
15	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
16	Air penetration enhances fragmentation of entering meteoroids. <i>Meteoritics and Planetary Science</i> , 2018, 53, 493-504.	1.6	12
17	Controls on the Formation of Lunar Multiring Basins. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 3035-3050.	3.6	19
18	Evidence of large empty lava tubes on the Moon using GRAIL gravity. <i>Geophysical Research Letters</i> , 2017, 44, 105-112.	4.0	52

#	ARTICLE	IF	CITATIONS
19	Detection and characterization of buried lunar craters with GRAIL data. <i>Icarus</i> , 2017, 289, 157-172.	2.5	25
20	Detection of Intact Lava Tubes at Marius Hills on the Moon by SELENE (Kaguya) Lunar Radar Sounder. <i>Geophysical Research Letters</i> , 2017, 44, 10,155.	4.0	62
21	Impact geologists, beware!. <i>Geophysical Research Letters</i> , 2017, 44, 8873-8874.	4.0	8
22	The structural stability of lunar lava tubes. <i>Icarus</i> , 2017, 282, 47-55.	2.5	41
23	The reduction of friction in long runout landslides as an emergent phenomenon. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 881-889.	2.8	71
24	HCN production from impact ejecta on the early Earth. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	3
25	Reply to comment by Iverson on "The reduction of friction in long runout landslides as an emergent phenomenon". <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 2243-2246.	2.8	5
26	Formation of the Orientale lunar multiring basin. <i>Science</i> , 2016, 354, 441-444.	12.6	78
27	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. <i>Science</i> , 2016, 354, 438-441.	12.6	38
28	NO _x production and rainout from Chicxulub impact ejecta reentry. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 2152-2168.	3.6	19
29	Preimpact porosity controls the gravity signature of lunar craters. <i>Geophysical Research Letters</i> , 2015, 42, 9711-9716.	4.0	50
30	The fractured Moon: Production and saturation of porosity in the lunar highlands from impact cratering. <i>Geophysical Research Letters</i> , 2015, 42, 6939-6944.	4.0	63
31	Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements. <i>Science Advances</i> , 2015, 1, e1500852.	10.3	173
32	Hydrocode simulation of Ganymede and Europa cratering trends "How thick is Europa's crust?". <i>Icarus</i> , 2014, 231, 394-406.	2.5	49
33	New approaches to the Moon's isotopic crisis. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20130168.	3.4	33
34	The formation of lunar mascon basins from impact to contemporary form. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2378-2397.	3.6	57
35	Lunar interior properties from the GRAIL mission. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1546-1578.	3.6	185
36	Asymmetric Distribution of Lunar Impact Basins Caused by Variations in Target Properties. <i>Science</i> , 2013, 342, 724-726.	12.6	103

#	ARTICLE	IF	CITATIONS
37	Credit for Impact Theory. <i>Science</i> , 2013, 342, 1445-1446.	12.6	38
38	Ancient Igneous Intrusions and Early Expansion of the Moon Revealed by GRAIL Gravity Gradiometry. <i>Science</i> , 2013, 339, 675-678.	12.6	177
39	Gravity Field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) Mission. <i>Science</i> , 2013, 339, 668-671.	12.6	389
40	The Crust of the Moon as Seen by GRAIL. <i>Science</i> , 2013, 339, 671-675.	12.6	726
41	Projectile remnants in central peaks of lunar impact craters. <i>Nature Geoscience</i> , 2013, 6, 435-437.	12.9	60
42	The Origin of Lunar Mascon Basins. <i>Science</i> , 2013, 340, 1552-1555.	12.6	174
43	Antipodal terrains created by the Rheasilvia basin forming impact on asteroid 4 Vesta. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1821-1834.	3.6	22
44	On the origin of graben and ridges within and near volcanically buried craters and basins in Mercury's northern plains. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	30
45	Impact spherules as a record of an ancient heavy bombardment of Earth. <i>Nature</i> , 2012, 485, 75-77.	27.8	114
46	The Impact-Cratering Process. <i>Elements</i> , 2012, 8, 25-30.	0.5	66
47	Self-shielding of thermal radiation by Chicxulub impact ejecta: Firestorm or fizzle?. <i>Geology</i> , 2009, 37, 1135-1138.	4.4	57
48	A hydrocode equation of state for SiO ₂ . <i>Meteoritics and Planetary Science</i> , 2007, 42, 2079-2098.	1.6	256
49	Meteor Crater formed by low-velocity impact. <i>Nature</i> , 2005, 434, 157-157.	27.8	49
50	Modeling damage and deformation in impact simulations. <i>Meteoritics and Planetary Science</i> , 2004, 39, 217-231.	1.6	384
51	Shock viscosity and rise time of explosion waves in geologic media. <i>Journal of Applied Physics</i> , 2003, 94, 4320-4325.	2.5	13
52	Tectonics of mascon loading: Resolution of the strike-slip faulting paradox. <i>Journal of Geophysical Research</i> , 2001, 106, 20603-20620.	3.3	74
53	Hydrocode modeling of oblique impacts: The fate of the projectile. <i>Meteoritics and Planetary Science</i> , 2000, 35, 117-130.	1.6	187
54	Understanding Oblique Impacts from Experiments, Observations, and Modeling. <i>Annual Review of Earth and Planetary Sciences</i> , 2000, 28, 141-167.	11.0	236

#	ARTICLE	IF	CITATIONS
55	IMPACT CRATER COLLAPSE. Annual Review of Earth and Planetary Sciences, 1999, 27, 385-415.	11.0	428
56	Hydrocode simulation of the Chicxulub impact event and the production of climatically active gases. Journal of Geophysical Research, 1998, 103, 28607-28625.	3.3	182
57	Dynamic fragmentation in impacts: Hydrocode simulation of laboratory impacts. Journal of Geophysical Research, 1992, 97, 14735-14759.	3.3	270
58	The origin of the Moon and the single-impact hypothesis III. Icarus, 1989, 81, 113-131.	2.5	353
59	Drainage pits in cohesionless materials: Implications for the surface of Phobos. Journal of Geophysical Research, 1989, 94, 12433-12441.	3.3	61
60	Ejection of rock fragments from planetary bodies. Geology, 1985, 13, 144.	4.4	119
61	A simple mechanical model of Valhalla Basin, Callisto. Journal of Geophysical Research, 1982, 87, 1880-1890.	3.3	33
62	The mechanics of ringed basin formation. Geophysical Research Letters, 1978, 5, 985-988.	4.0	98