Hideaki Miyamoto

List of Publications by Year
in descending order

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123	6,232	87888 38	69250 77
papers	citations	h-index	g-index

128	128	128	3689
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Rubble-Pile Asteroid Itokawa as Observed by Hayabusa. Science, 2006, 312, 1330-1334.	12.6	761
2	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryuguâ€”A spinning topâ€“shaped rubble pile. Science, 2019, 364, 268-272.	12.6	410
3	Touchdown of the Hayabusa Spacecraft at the Muses Sea on Itokawa. Science, 2006, 312, 1350-1353.	12.6	349
4	The geomorphology, color, and thermal properties of Ryugu: Implications for parent-body processes. Science, 2019, 364, 252.	12.6	313
5	Regolith Migration and Sorting on Asteroid Itokawa. Science, 2007, 316, 1011-1014.	12.6	271
6	The global distribution of pure anorthosite on the Moon. Nature, 2009, 461, 236-240.	27.8	265
7	Detailed Images of Asteroid 25143 Itokawa from Hayabusa. Science, 2006, 312, 1341-1344.	12.6	234
8	Sample collection from asteroid (162173) Ryugu by Hayabusa2: Implications for surface evolution. Science, 2020, 368, 654-659.	12.6	158
9	Fluvial channels on Titan: Initial Cassini RADAR observations. Planetary and Space Science, 2008, 56, 1132-1144.	1.7	151
10	Possible lunar lava tube skylight observed by SELENE cameras. Geophysical Research Letters, 2009, 36, .	4.0	134
11	Long-Lived Volcanism on the Lunar Farside Revealed by SELENE Terrain Camera. Science, 2009, 323, 905-908.	12.6	133
12	Size-frequency statistics of boulders on global surface of asteroid 25143 Itokawa. Earth, Planets and Space, 2008, 60, 13-20.	2.5	121
13	Tsunami waves extensively resurfaced the shorelines of an early Martian ocean. Scientific Reports, 2016, 6, 25106.	3.3	121
14	Transition zone origin of potassic basalts from Wudalianchi volcano, northeast China. Lithos, 2013, 156-159, 1-12.	1.4	118
15	Boulder size and shape distributions on asteroid Ryugu. Icarus, 2019, 331, 179-191.	2.5	107
16	Pole and Global Shape of 25143 Itokawa. Science, 2006, 312, 1347-1349.	12.6	104
17	Simulating lava flows by an improved cellular automata method. Computers and Geosciences, 1997, 23, 283-292.	4.2	98
18	Outflow channel sources, reactivation, and chaos formation, Xanthe Terra, Mars. Icarus, 2005, 175, 36-57.	2.5	93

#	Article	IF	Citations
19	Recent geological and hydrological activity on Mars: The Tharsis/Elysium corridor. Planetary and Space Science, 2008, 56, 985-1013.	1.7	92
20	Collisional formation of top-shaped asteroids and implications for the origins of Ryugu and Bennu. Nature Communications, 2020, 11, 2655.	12.8	87
21	The ESA Hera Mission: Detailed Characterization of the DART Impact Outcome and of the Binary Asteroid (65803) Didymos. Planetary Science Journal, 2022, 3, 160.	3.6	82
22	Lack of Exposed Ice Inside Lunar South Pole Shackleton Crater. Science, 2008, 322, 938-939.	12.6	77
23	A survey of possible impact structures on 25143 Itokawa. Icarus, 2009, 200, 486-502.	2.5	75
24	Claritas rise, Mars: Pre-Tharsis magmatism?. Journal of Volcanology and Geothermal Research, 2009, 185, 139-156.	2.1	66
25	Quaternary paleolake formation and cataclysmic flooding along the upper Yenisei River. Geomorphology, 2009, 104, 143-164.	2.6	61
26	Fluid dynamical implications of anastomosing slope streaks on Mars. Journal of Geophysical Research, 2004, 109, .	3.3	56
27	The sedimentology and dynamics of crater-affiliated wind streaks in western Arabia Terra, Mars and Patagonia, Argentina. Geomorphology, 2010, 121, 30-54.	2.6	55
28	Mare volcanism in the lunar farside Moscoviense region: Implication for lateral variation in magma production of the Moon. Geophysical Research Letters, 2009, 36, .	4.0	51
29	Martian moons exploration MMX: sample return mission to Phobos elucidating formation processes of habitable planets. Earth, Planets and Space, 2022, 74, .	2.5	51
30	Formation age of the lunar crater Giordano Bruno. Meteoritics and Planetary Science, 2009, 44, 1115-1120.	1.6	49
31	Control of impact crater fracture systems on subsurface hydrology, ground subsidence, and collapse, Mars. Journal of Geophysical Research, 2005, 110, .	3.3	44
32	Global mapping of the degree of space weathering on asteroid 25143 Itokawa by Hayabusa/AMICA observations. Meteoritics and Planetary Science, 2007, 42, 1791-1800.	1.6	43
33	A macroscopic collisional model for debris-flows simulation. Environmental Modelling and Software, 2007, 22, 1417-1436.	4.5	43
34	Nature and hydrological relevance of the Shalbatana complex underground cavernous system. Geophysical Research Letters, 2003, 30, .	4.0	42
35	First results from the 2009-2010 MU radar head echo observation programme for sporadic and shower meteors: the Orionids 2009. Monthly Notices of the Royal Astronomical Society, 2011, 416, 2550-2559.	4.4	40
36	Numerical simulations of flood basalt lava flows: Roles of parameters on lava flow morphologies. Journal of Geophysical Research, 1998, 103, 27489-27502.	3.3	39

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37	Possible ancient giant basin and related water enrichment in the Arabia Terra province, Mars. Icarus, 2007, 190, 74-92.	2.5	39
38	Asteroid Ryugu before the Hayabusa2 encounter. Progress in Earth and Planetary Science, 2018, 5, .	3.0	39
39	Rock glaciers on Mars: Earth-based clues to Marsâ€™ recent paleoclimatic history. Planetary and Space Science, 2007, 55, 181-192.	1.7	38
40	Dynamics of unusual debris flows on Martian sand dunes. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	36
41	Impact process of boulders on the surface of asteroid 25143 Itokawaâ€”fragments from collisional disruption. Earth, Planets and Space, 2008, 60, 7-12.	2.5	36
42	Putative ice flows on Europa: Geometric patterns and relation to topography collectively constrain material properties and effusion rates. Icarus, 2005, 177, 413-424.	2.5	35
43	Numerical simulations of large-scale cataclysmic floodwater: A simple depth-averaged model and an illustrative application. Geomorphology, 2006, 76, 179-192.	2.6	34
44	Tier-Scalable Reconnaissance Missions For The Autonomous Exploration Of Planetary Bodies. , 2007, , .		32
45	New evidence for a magmatic influence on the origin of Valles Marineris, Mars. Journal of Volcanology and Geothermal Research, 2009, 185, 12-27.	2.1	31
46	A meteor head echo analysis algorithm for the lower VHF band. Annales Geophysicae, 2012, 30, 639-659.	1.6	30
47	The Western Bulge of 162173 Ryugu Formed as a Result of a Rotationally Driven Deformation Process. Astrophysical Journal Letters, 2019, 874, L10.	8.3	30
48	Martian outflow channels: How did their source aquifers form and why did they drain so rapidly?. Scientific Reports, 2015, 5, 13404.	3.3	29
49	Ancient wet aeolian environments on Earth: clues to presence of fossil/live microorganisms on Mars. Icarus, 2004, 171, 39-53.	2.5	28
50	Computer modelling of the water resurge at a marine impact: the Lockne crater, Sweden. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 983-994.	1.4	27
51	Headward growth of chasmata by volatile outbursts, collapse, and drainage: Evidence from Ganges chaos, Mars. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	27
52	Did the martian outflow channels mostly form during the Amazonian Period?. Icarus, 2015, 257, 387-395.	2.5	27
53	Mapping the structure and depth of lava tubes using ground penetrating radar. Geophysical Research Letters, 2005, 32, .	4.0	25
54	Nonstop Mars Sample Return System Using Aerocapture Technologies. , 2009, , .		25

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55	Constraints on martian lobate debris apron evolution and rheology from numerical modeling of ice flow. Icarus, 2011, 214, 246-257.	2.5	24
56	Geological and hydrological histories of the Argyre province, Mars. Icarus, 2015, 253, 66-98.	2.5	24
57	Extraterrestrial hydrogeology. Hydrogeology Journal, 2005, 13, 51-68.	2.1	23
58	Cataclysmic Scabland flooding: Insights from a simple depth-averaged numerical model. Environmental Modelling and Software, 2007, 22, 1400-1408.	4.5	23
59	The search for life beyond Earth through fuzzy expert systems. Planetary and Space Science, 2008, 56, 448-472.	1.7	23
60	Surface morphological features of boulders on Asteroid 25143 Itokawa. Icarus, 2010, 206, 319-326.	2.5	22
61	Dust levitation as a major resurfacing process on the surface of a saturnian icy satellite, Atlas. Icarus, 2012, 220, 106-113.	2.5	22
62	Evidence for Middle Amazonian catastrophic flooding and glaciation on Mars. Icarus, 2014, 242, 202-210.	2.5	22
63	Science operation plan of Phobos and Deimos from the MMX spacecraft. Earth, Planets and Space, 2021, 73, .	2.5	22
64	Asteroid Surface Geophysics. , 2015, , .		21
65	Nature and characteristics of the flows that carved the Simud and Tiu outflow channels, Mars. Geophysical Research Letters, 2006, 33, .	4.0	20
66	Distribution, morphology, and morphometry of circular mounds in the elongated basin of northern Terra Sirenum, Mars. Progress in Earth and Planetary Science, 2017, 4, .	3.0	20
67	The MMX rover: performing in situ surface investigations on Phobos. Earth, Planets and Space, 2022, 74, .	2.5	20
68	The Channeled Scabland: Back to Bretz?: Comment and Reply. Geology, 2000, 28, 573.	4.4	19
69	Infiltration of Martian outflow channel floodwaters into lowland cavernous systems. Geophysical Research Letters, 2012, 39, .	4.0	19
70	Groundwater flow induced collapse and flooding in Noctis Labyrinthus, Mars. Planetary and Space Science, 2016, 124, 1-14.	1.7	18
71	Meteorites at Meridiani Planum provide evidence for significant amounts of surface and nearâ€surface water on early Mars. Meteoritics and Planetary Science, 2011, 46, 1832-1841.	1.6	17
72	High-Resolution Topographic Analyses of Mounds in Southern Acidalia Planitia, Mars: Implications for Possible Mud Volcanism in Submarine and Subaerial Environments. Geosciences (Switzerland), 2018, 8, 152.	2.2	17

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73	Mars Dust Counter. Earth, Planets and Space, 1998, 50, 241-245.	2.5	16
74	Acquisition of ground penetrating radar data to detect lava tubes: preliminary results on the Komoriana cave at Fuji volcano in Japan. Bulletin of Engineering Geology and the Environment, 2003, 62, 281-288.	3.5	16
75	Surface environment of Phobos and Phobos simulant UTPS. Earth, Planets and Space, 2021, 73, .	2.5	15
76	Rheology and topography control the path of a lava flow: Insight from numerical simulations over a preexisting topography. Geophysical Research Letters, 2004, 31, .	4.0	14
77	Lunar core structure investigation: Implication of GRAIL gravity field model. Advances in Space Research, 2015, 55, 1721-1727.	2.6	13
78	Fundamentally distinct outcomes of asteroid collisional evolution: Itokawa and Eros. Geophysical Research Letters, 2007, 34, .	4.0	12
79	Two Different Supply Styles of Crater Outflow Materials on Venus Inferred from Numerical Simulations over DEMs. Icarus, 2000, 145, 533-545.	2.5	11
80	An inventory of potentially habitable environments on Mars: Geological and biological perspectives. , 2011, , .		11
81	MMX geodesy investigations: science requirements and observation strategy. Earth, Planets and Space, 2021, 73, .	2.5	11
82	Modelling, computer-assisted simulations, and mapping of dangerous phenomena for hazard assessment. Environmental Modelling and Software, 2007, 22, 1389-1391.	4.5	10
83	Particle deposition on the saturnian satellites from ephemeral cryovolcanism on Enceladus. Geophysical Research Letters, 2014, 41, 4135-4141.	4.0	10
84	Generic identification and classification of morphostructures in the Noachis-Sabaea region, southern highlands of Mars. Journal of Maps, 2017, 13, 755-766.	2.0	10
85	Evidence for multiple 4.0â€“3.7ÂGa impact events within the Apollo 16 collection. Meteoritics and Planetary Science, 2019, 54, 675-698.	1.6	10
86	Geologic History and Crater Morphology of Asteroid (162173) Ryugu. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006572.	3.6	10
87	Mineralogy, chemistry and biological contingents of an early-middle Miocene Antarctic paleosol and its relevance as a Martian analogue. Planetary and Space Science, 2014, 104, 253-269.	1.7	8
88	Granular processes on Itokawa, a small near-Earth asteroid: implications for resource utilization. Proceedings of SPIE, 2008, , .	0.8	7
89	Unconsolidated boulders on the surface of Itokawa. Planetary and Space Science, 2014, 95, 94-102.	1.7	7
90	Rayed craters on Dione: Implication for the dominant surface alteration process. Icarus, 2016, 274, 116-121.	2.5	7

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91	New insights into the Late Amazonian zonal shrinkage of the martian south polar plateau. Icarus, 2015, 248, 407-411.	2.5	6
92	Cluster analysis on the bulk elemental compositions of Antarctic stony meteorites. Meteoritics and Planetary Science, 2016, 51, 906-919.	1.6	6
93	Simplified Simulated Materials of Asteroid Ryugu for Spacecraft Operations and Scientific Evaluations. Natural Resources Research, 2021, 30, 3035-3044.	4.7	6
94	Continuous microfluidic solvent extraction of cobalt from mimicked and real asteroid leaching solutions. Separation and Purification Technology, 2021, 260, 118238.	7.9	6
95	Development of image texture analysis technique for boulder distribution measurements: Applications to asteroids Ryugu and Itokawa. Planetary and Space Science, 2021, 204, 105249.	1.7	6
96	Morphology and Morphometry of Sub-kilometer Craters on the Nearside of Phobos and Implications for Regolith Properties. Transactions of the Japan Society for Aeronautical and Space Sciences, 2020, 63, 124-131.	0.7	6
97	A simplified two-component model for the lateral growth of pahoehoe lobes. Journal of Volcanology and Geothermal Research, 2006, 157, 331-342.	2.1	5
98	Impact cratering experiments in brittle targets with variable thickness: Implications for deep pit craters on Mars. Planetary and Space Science, 2014, 96, 71-80.	1.7	5
99	An Automatic Deconvolution Method for Modified Gaussian Model using the Exchange Monte Carlo Method: Application to Reflectance Spectra of Synthetic Clinopyroxene. Journal of Geology & Geophysics, 2016, 05, .	0.1	5
100	Several Geological Issues of SchrÃ¶dinger Basin Exposed by CE-2 CELMS Data. Advances in Astronomy, 2019, 2019, 1-13.	1.1	5
101	Observation of interplanetary and interstellar dust particles by Mars Dust Counter (MDC) on board NOZOMI. Advances in Space Research, 2002, 29, 1145-1153.	2.6	4
102	Geomorphological View of the Environmental History of Mars and Candidate Habitable Environments. Journal of Geography (Chigaku Zasshi), 2016, 125, 171-184.	0.3	4
103	The Argyre Region as a Prime Target forin situAstrobiological Exploration of Mars. Astrobiology, 2016, 16, 143-158.	3.0	4
104	Small-scale topographic irregularities on Phobos: image and numerical analyses for MMX mission. Earth, Planets and Space, 2021, 73, .	2.5	4
105	Geomorphological Indication of Ancient, Recent, and Possibly Present-day Aqueous Activity on Mars. Journal of Geography (Chigaku Zasshi), 2016, 125, 121-132.	0.3	3
106	Reflectance spectra of Asteroids and Meteorites: their classifications and statistical comparisons. Journal of Physics: Conference Series, 2018, 1036, 012003.	0.4	3
107	Formation of Martian gullies by avalenches of seasonal CO2 frost. Journal of the Japanese Society of Snow and Ice, 2005, 67, 123-132.	0.1	3
108	Fluidâ€“structure interaction analysis of flexible flapping wing in the Martian environment. Acta Astronautica, 2022, 193, 138-151.	3.2	3

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109	Ray craters on Ganymede: Implications for cratering apex-antapex asymmetry and surface modification processes. Icarus, 2017, 295, 140-148.	2.5	2
110	Dataâ€driven taxonomy matching of asteroid and meteorite. Meteoritics and Planetary Science, 2020, 55, 193-206.	1.6	2
111	Cold-based glaciation of Pavonis Mons, Mars: evidence for moraine deposition during glacial advance. Progress in Earth and Planetary Science, 2020, 7, 13.	3.0	2
112	Prospects of engineering applications of submarine-groundwater-discharge research in Japan. , 2003, , 61-75.		1
113	Optimizing Change Detection for Planetary Remote Sensing Datasets. Journal of Physics: Conference Series, 2018, 1036, 012004.	0.4	1
114	Experimental Study to Determine the Best Compression Ratio of High-Resolution Images of Small Bodies for the Martian Moons eXploration Mission. Transactions of the Japan Society for Aeronautical and Space Sciences, 2020, 63, 212-221.	0.7	1
115	Three-axial shape distributions of pebbles, cobbles and boulders smaller than a few meters on asteroid Ryugu. Icarus, 2022, 381, 115007.	2.5	1
116	Mars dust counter (MDC) on board NOZOMI: Initial results. COSPAR Colloquia Series, 2002, 15, 176-180.	0.2	0
117	Significance of the gravitational relaxation on a plume-driven surface uplift: Dynamic calculations using the Boundary Element Method. Environmental Modelling and Software, 2007, 22, 1482-1487.	4.5	0
118	Robotic resource exploration is a key to human expansion through the cosmos. , 2008, , .		0
119	Taxonomy matching between asteroids and meteorites: supervised clustering approach. Journal of Physics: Conference Series, 2018, 1036, 012005.	0.4	0
120	Spatial Distribution of Ray Craters on Callisto: Implications for Ray Retention and Impactor Sources on Jovian Satellites. Journal of Geophysical Research E: Planets, 2019, 124, 1717-1727.	3.6	0
121	Results of Solar System Explorations and Their Implications to the Utilization of Space Resources. Resources Processing, 2021, 68, 3-9.	0.4	0
122	The Channeled Scabland: Back to Bretz?: Comment and Reply. Geology, 2000, 28, 573-576.	4.4	0
123	Stray Light Analysis by Ray Tracing Simulation for the Wide-Angle Multiband Camera OROCHI onboard the Martian Moons Exploration (MMX) Spacecraft. Advances in Space Research, 2021, 69, 1236-1236.	2.6	0