

Moe Matsuoka

List of Publications by Year in descending order

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Version: 2024-02-01

53
papers

2,524
citations

304743

22
h-index

197818

49
g-index

55
all docs

55
docs citations

55
times ranked

1248
citing authors

#	ARTICLE	IF	CITATIONS
1	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryugu—A spinning top—shaped rubble pile. <i>Science</i> , 2019, 364, 268-272.	12.6	410
2	The geomorphology, color, and thermal properties of Ryugu: Implications for parent-body processes. <i>Science</i> , 2019, 364, 252.	12.6	313
3	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. <i>Science</i> , 2019, 364, 272-275.	12.6	262
4	An artificial impact on the asteroid (162173) Ryugu formed a crater in the gravity-dominated regime. <i>Science</i> , 2020, 368, 67-71.	12.6	183
5	Sample collection from asteroid (162173) Ryugu by Hayabusa2: Implications for surface evolution. <i>Science</i> , 2020, 368, 654-659.	12.6	158
6	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. <i>Nature Astronomy</i> , 2022, 6, 214-220.	10.1	136
7	Boulder size and shape distributions on asteroid Ryugu. <i>Icarus</i> , 2019, 331, 179-191.	2.5	107
8	Highly porous nature of a primitive asteroid revealed by thermal imaging. <i>Nature</i> , 2020, 579, 518-522.	27.8	100
9	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	12.6	97
10	Pebbles and sand on asteroid (162173) Ryugu: In situ observation and particles returned to Earth. <i>Science</i> , 2022, 375, 1011-1016.	12.6	78
11	Pulse-laser irradiation experiments of Murchison CM2 chondrite for reproducing space weathering on C-type asteroids. <i>Icarus</i> , 2015, 254, 135-143.	2.5	72
12	NIRS3: The Near Infrared Spectrometer on Hayabusa2. <i>Space Science Reviews</i> , 2017, 208, 317-337.	8.1	60
13	Mineralogy and petrography of C asteroid regolith: The Sutter's Mill <sc>CM</sc> meteorite. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1997-2016.	1.6	57
14	Thermally altered subsurface material of asteroid (162173) Ryugu. <i>Nature Astronomy</i> , 2021, 5, 246-250.	10.1	47
15	Collisional history of Ryugu's parent body from bright surface boulders. <i>Nature Astronomy</i> , 2021, 5, 39-45.	10.1	42
16	Global photometric properties of (162173) Ryugu. <i>Astronomy and Astrophysics</i> , 2020, 639, A83.	5.1	37
17	The Western Bulge of 162173 Ryugu Formed as a Result of a Rotationally Driven Deformation Process. <i>Astrophysical Journal Letters</i> , 2019, 874, L10.	8.3	30
18	Anomalously porous boulders on (162173) Ryugu as primordial materials from its parent body. <i>Nature Astronomy</i> , 2021, 5, 766-774.	10.1	30

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19	Space Weathering Simulation with Low-energy Laser Irradiation of Murchison CM Chondrite for Reproducing Micrometeoroid Bombardments on C-type Asteroids. <i>Astrophysical Journal Letters</i> , 2020, 890, L23.	8.3	27
20	The spatial distribution of impact craters on Ryugu. <i>Icarus</i> , 2020, 338, 113527.	2.5	25
21	Resurfacing processes on asteroid (162173) Ryugu caused by an artificial impact of Hayabusa2's Small Carry-on Impactor. <i>Icarus</i> , 2021, 366, 114530.	2.5	24
22	Spectrally blue hydrated parent body of asteroid (162173) Ryugu. <i>Nature Communications</i> , 2021, 12, 5837.	12.8	23
23	The descent and bouncing path of the Hayabusa2 lander MASCOT at asteroid (162173) Ryugu. <i>Astronomy and Astrophysics</i> , 2019, 632, L3.	5.1	18
24	Hayabusa2 Landing Site Selection: Surface Topography of Ryugu and Touchdown Safety. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	17
25	Multivariable statistical analysis of spectrophotometry and spectra of (162173) Ryugu as observed by JAXA Hayabusa2 mission. <i>Astronomy and Astrophysics</i> , 2019, 629, A13.	5.1	15
26	Crater depth-to-diameter ratios on asteroid 162173 Ryugu. <i>Icarus</i> , 2021, 354, 114016.	2.5	12
27	Opposition Observations of 162173 Ryugu: Normal Albedo Map Highlights Variations in Regolith Characteristics. <i>Planetary Science Journal</i> , 2021, 2, 177.	3.6	12
28	Surface roughness of asteroid (162173) Ryugu and comet 67P/Churyumov-Gerasimenko inferred from <i>in situ</i> observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 500, 3178-3193.	4.4	11
29	Post-arrival calibration of Hayabusa2's optical navigation cameras (ONCs): Severe effects from touchdown events. <i>Icarus</i> , 2021, 360, 114353.	2.5	11
30	Geologic History and Crater Morphology of Asteroid (162173) Ryugu. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006572.	3.6	10
31	The MASCOT landing area on asteroid (162173) Ryugu: Stereo-photogrammetric analysis using images of the ONC onboard the Hayabusa2 spacecraft. <i>Astronomy and Astrophysics</i> , 2019, 632, L4.	5.1	9
32	Characterization of the Ryugu surface by means of the variability of the near-infrared spectral slope in NIRS3 data. <i>Icarus</i> , 2020, 351, 113959.	2.5	9
33	Improved method of hydrous mineral detection by latitudinal distribution of 0.7-1.4µm surface reflectance absorption on the asteroid Ryugu. <i>Icarus</i> , 2021, 360, 114348.	2.5	9
34	Diverse space weathering effects on asteroid surfaces as inferred via laser irradiation of meteorites. <i>Astronomy and Astrophysics</i> , 2022, 659, A78.	5.1	8
35	Spectral characterization of the craters of Ryugu as observed by the NIRS3 instrument on-board Hayabusa2. <i>Icarus</i> , 2021, 357, 114253.	2.5	7
36	Hydrogen abundance estimation model and application to (162173) Ryugu. <i>Astronomy and Astrophysics</i> , 2021, 649, L16.	5.1	6

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37	Spectral and mineralogical alteration process of naturally-heated CM and CY chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 316, 150-167.	3.9	6
38	Development of image texture analysis technique for boulder distribution measurements: Applications to asteroids Ryugu and Itokawa. <i>Planetary and Space Science</i> , 2021, 204, 105249.	1.7	6
39	Resurfacing processes constrained by crater distribution on Ryugu. <i>Icarus</i> , 2022, 377, 114911.	2.5	6
40	High-resolution observations of bright boulders on asteroid Ryugu: 2. Spectral properties. <i>Icarus</i> , 2021, 369, 114591.	2.5	5
41	An evaluation method of reflectance spectra to be obtained by Hayabusa2 Near-Infrared Spectrometer (NIRS3) based on laboratory measurements of carbonaceous chondrites. <i>Earth, Planets and Space</i> , 2017, 69, .	2.5	4
42	UV-visible-infrared spectral survey of Antarctic carbonaceous chondrite chips. <i>Polar Science</i> , 2021, 29, 100723.	1.2	4
43	Site selection for the Hayabusa2 artificial cratering and subsurface material sampling on Ryugu. <i>Planetary and Space Science</i> , 2022, 219, 105519.	1.7	4
44	Alignment determination of the Hayabusa2 laser altimeter (LIDAR). <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	3
45	Spectrophotometric Properties of 162173 Ryugu's Surface from the NIRS3 Opposition Observations. <i>Planetary Science Journal</i> , 2021, 2, 178.	3.6	3
46	High-resolution observations of bright boulders on asteroid Ryugu: 1. Size frequency distribution and morphology. <i>Icarus</i> , 2021, 369, 114529.	2.5	2
47	Observations of Phobos and Deimos with SpeX at NASA infrared telescope facility. <i>Icarus</i> , 2022, 371, 114691.	2.5	2
48	Analysis Based on Onboard Lamp and Lunar Vicarious Calibrations for Sensitivity Degradation of a Hyperspectral Sensor. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2022, 60, 1-12.	6.3	1
49	Three-axial shape distributions of pebbles, cobbles and boulders smaller than a few meters on asteroid Ryugu. <i>Icarus</i> , 2022, 381, 115007.	2.5	1
50	Clustering analysis of high spatial resolution spectra of asteroid (162173) Ryugu from Hayabusa2/NIRS3. <i>Planetary and Space Science</i> , 2022, 219, 105530.	1.7	1
51	NIRS3 spectral analysis of the artificial Omusubi-Kororin crater on Ryugu. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 514, 6173-6182.	4.4	1
52	In-Situ Planetary Spectroscopy. , 2021, , 194-206.		0
53	Trip To An Asteroid: Hayabusa 2 Is Now Traveling Toward C-type Asteroid Ryugu. , 2017, , .		0