

Na Hirata

List of Publications by Year in descending order

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133
papers

7,401
citations

57631

44
h-index

56606

83
g-index

138
all docs

138
docs citations

138
times ranked

2975
citing authors

#	ARTICLE	IF	CITATIONS
1	The Rubble-Pile Asteroid Itokawa as Observed by Hayabusa. <i>Science</i> , 2006, 312, 1330-1334.	6.0	761
2	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryugu—A spinning top—shaped rubble pile. <i>Science</i> , 2019, 364, 268-272.	6.0	410
3	The geomorphology, color, and thermal properties of Ryugu: Implications for parent-body processes. <i>Science</i> , 2019, 364, 252.	6.0	313
4	Regolith Migration and Sorting on Asteroid Itokawa. <i>Science</i> , 2007, 316, 1011-1014.	6.0	271
5	The global distribution of pure anorthosite on the Moon. <i>Nature</i> , 2009, 461, 236-240.	13.7	265
6	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. <i>Science</i> , 2019, 364, 272-275.	6.0	262
7	Detailed Images of Asteroid 25143 Itokawa from Hayabusa. <i>Science</i> , 2006, 312, 1341-1344.	6.0	234
8	Mass and Local Topography Measurements of Itokawa by Hayabusa. <i>Science</i> , 2006, 312, 1344-1347.	6.0	213
9	Characterizing and navigating small bodies with imaging data. <i>Meteoritics and Planetary Science</i> , 2008, 43, 1049-1061.	0.7	209
10	Possible mantle origin of olivine around lunar impact basins detected by SELENE. <i>Nature Geoscience</i> , 2010, 3, 533-536.	5.4	184
11	An artificial impact on the asteroid (162173) Ryugu formed a crater in the gravity-dominated regime. <i>Science</i> , 2020, 368, 67-71.	6.0	183
12	Shape of (101955) Bennu indicative of a rubble pile with internal stiffness. <i>Nature Geoscience</i> , 2019, 12, 247-252.	5.4	179
13	Sample collection from asteroid (162173) Ryugu by Hayabusa2: Implications for surface evolution. <i>Science</i> , 2020, 368, 654-659.	6.0	158
14	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. <i>Nature Astronomy</i> , 2022, 6, 214-220.	4.2	136
15	Long-Lived Volcanism on the Lunar Farside Revealed by SELENE Terrain Camera. <i>Science</i> , 2009, 323, 905-908.	6.0	133
16	Timing and characteristics of the latest mare eruption on the Moon. <i>Earth and Planetary Science Letters</i> , 2011, 302, 255-266.	1.8	133
17	Size-frequency statistics of boulders on global surface of asteroid 25143 Itokawa. <i>Earth, Planets and Space</i> , 2008, 60, 13-20.	0.9	121
18	Boulder size and shape distributions on asteroid Ryugu. <i>Icarus</i> , 2019, 331, 179-191.	1.1	107

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19	Pole and Global Shape of 25143 Itokawa. <i>Science</i> , 2006, 312, 1347-1349.	6.0	104
20	Massive layer of pure anorthosite on the Moon. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	102
21	Highly porous nature of a primitive asteroid revealed by thermal imaging. <i>Nature</i> , 2020, 579, 518-522.	13.7	100
22	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	6.0	97
23	AKATSUKI returns to Venus. <i>Earth, Planets and Space</i> , 2016, 68, .	0.9	89
24	Discoveries on the lithology of lunar crater central peaks by SELENE Spectral Profiler. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	87
25	Lunar photometric properties at wavelengths 0.5–1.6 μ m acquired by SELENE Spectral Profiler and their dependency on local albedo and latitudinal zones. <i>Icarus</i> , 2011, 215, 639-660.	1.1	86
26	Small-scale topography of 25143 Itokawa from the Hayabusa laser altimeter. <i>Icarus</i> , 2008, 198, 108-124.	1.1	79
27	Pebbles and sand on asteroid (162173) Ryugu: In situ observation and particles returned to Earth. <i>Science</i> , 2022, 375, 1011-1016.	6.0	78
28	On the origin and evolution of the asteroid Ryugu: A comprehensive geochemical perspective. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , 2022, 98, 227-282.	1.6	77
29	A survey of possible impact structures on 25143 Itokawa. <i>Icarus</i> , 2009, 200, 486-502.	1.1	75
30	Itokawa's cratering record as observed by Hayabusa: Implications for its age and collisional history. <i>Icarus</i> , 2009, 200, 503-513.	1.1	74
31	Overview of Venus orbiter, Akatsuki. <i>Earth, Planets and Space</i> , 2011, 63, 443-457.	0.9	72
32	First compositional analysis of Ryugu samples by the MicrOmega hyperspectral microscope. <i>Nature Astronomy</i> , 2022, 6, 221-225.	4.2	65
33	Development of the Laser Altimeter (LIDAR) for Hayabusa2. <i>Space Science Reviews</i> , 2017, 208, 33-47.	3.7	64
34	Ultramafic impact melt sheet beneath the South Pole–Aitken basin on the Moon. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	61
35	NIRS3: The Near Infrared Spectrometer on Hayabusa2. <i>Space Science Reviews</i> , 2017, 208, 317-337.	3.7	60
36	Initial performance of the radio occultation experiment in the Venus orbiter mission Akatsuki. <i>Earth, Planets and Space</i> , 2017, 69, .	0.9	60

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37	Olivine-rich exposures in the South Pole-Aitken Basin. <i>Icarus</i> , 2012, 218, 331-344.	1.1	57
38	The shape distribution of boulders on Asteroid 25143 Itokawa: Comparison with fragments from impact experiments. <i>Icarus</i> , 2010, 207, 277-284.	1.1	52
39	Mare volcanism in the lunar farside Moscoviense region: Implication for lateral variation in magma production of the Moon. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	51
40	Martian moons exploration MMX: sample return mission to Phobos elucidating formation processes of habitable planets. <i>Earth, Planets and Space</i> , 2022, 74, .	0.9	51
41	Formation age of the lunar crater Giordano Bruno. <i>Meteoritics and Planetary Science</i> , 2009, 44, 1115-1120.	0.7	49
42	Thermophysical properties of the surface of asteroid 162173 Ryugu: Infrared observations and thermal inertia mapping. <i>Icarus</i> , 2020, 348, 113835.	1.1	48
43	Thermally altered subsurface material of asteroid (162173) Ryugu. <i>Nature Astronomy</i> , 2021, 5, 246-250.	4.2	47
44	Compositional evidence for an impact origin of the Moon's Procellarum basin. <i>Nature Geoscience</i> , 2012, 5, 775-778.	5.4	45
45	Scientific Objectives of Small Carry-on Impactor (SCI) and Deployable Camera 3 Digital (DCAM3-D): Observation of an Ejecta Curtain and a Crater Formed on the Surface of Ryugu by an Artificial High-Velocity Impact. <i>Space Science Reviews</i> , 2017, 208, 187-212.	3.7	44
46	The Actual Dynamical Environment About Itokawa. , 2006, , .		43
47	Global mapping of the degree of space weathering on asteroid 25143 Itokawa by Hayabusa/AMICA observations. <i>Meteoritics and Planetary Science</i> , 2007, 42, 1791-1800.	0.7	43
48	Collisional history of Ryugu's parent body from bright surface boulders. <i>Nature Astronomy</i> , 2021, 5, 39-45.	4.2	42
49	The Hayabusa Spacecraft Asteroid Multi-band Imaging Camera (AMICA). <i>Icarus</i> , 2010, 207, 714-731.	1.1	38
50	Cratering experiments on the self armoring of coarse-grained granular targets. <i>Icarus</i> , 2012, 220, 1040-1049.	1.1	38
51	A new type of pyroclastic deposit on the Moon containing Fe-spinel and chromite. <i>Geophysical Research Letters</i> , 2013, 40, 4549-4554.	1.5	38
52	Landmark Navigation Studies and Target Characterization in the Hayabusa Encounter with Itokawa. , 2006, , .		37
53	Global photometric properties of (162173) Ryugu. <i>Astronomy and Astrophysics</i> , 2020, 639, A83.	2.1	37
54	Impact process of boulders on the surface of asteroid 25143 Itokawa's fragments from collisional disruption. <i>Earth, Planets and Space</i> , 2008, 60, 7-12.	0.9	36

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55	Planned radiometrically calibrated and geometrically corrected products of lunar high-resolution Terrain Camera on SELENE. <i>Advances in Space Research</i> , 2008, 42, 310-316.	1.2	34
56	Ultraviolet imager on Venus orbiter Akatsuki and its initial results. <i>Earth, Planets and Space</i> , 2018, 70, 23.	0.9	34
57	Venus looks different from day to night across wavelengths: morphology from Akatsuki multispectral images. <i>Earth, Planets and Space</i> , 2018, 70, 24.	0.9	31
58	The Western Bulge of 162173 Ryugu Formed as a Result of a Rotationally Driven Deformation Process. <i>Astrophysical Journal Letters</i> , 2019, 874, L10.	3.0	30
59	Anomalously porous boulders on (162173) Ryugu as primordial materials from its parent body. <i>Nature Astronomy</i> , 2021, 5, 766-774.	4.2	30
60	Performance of Akatsuki/IR2 in Venus orbit: the first year. <i>Earth, Planets and Space</i> , 2017, 69, .	0.9	28
61	Characterization of Multiband Imager Aboard SELENE. <i>Space Science Reviews</i> , 2010, 154, 79-102.	3.7	27
62	Timing and duration of mare volcanism in the central region of the northern farside of the Moon. <i>Earth, Planets and Space</i> , 2011, 63, 5-13.	0.9	25
63	The spatial distribution of impact craters on Ryugu. <i>Icarus</i> , 2020, 338, 113527.	1.1	25
64	Resurfacing processes on asteroid (162173) Ryugu caused by an artificial impact of Hayabusa2's Small Carry-on Impactor. <i>Icarus</i> , 2021, 366, 114530.	1.1	24
65	Secondary craters of Tycho: Size-frequency distributions and estimated fragment size-velocity relationships. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	23
66	Spectrally blue hydrated parent body of asteroid (162173) Ryugu. <i>Nature Communications</i> , 2021, 12, 5837.	5.8	23
67	Simulation experiments for shocked primitive materials in the Solar System. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 174, 227-241.	0.7	22
68	Surface morphological features of boulders on Asteroid 25143 Itokawa. <i>Icarus</i> , 2010, 206, 319-326.	1.1	22
69	Young mare volcanism in the Orientale region contemporary with the Procellarum KREEP Terrane (PKT) volcanism peak period $\sim 1/2$ billion years ago. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	22
70	Science operation plan of Phobos and Deimos from the MMX spacecraft. <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	22
71	Absolute calibration of brightness temperature of the Venus disk observed by the Longwave Infrared Camera onboard Akatsuki. <i>Earth, Planets and Space</i> , 2017, 69, .	0.9	21
72	Overview of Akatsuki data products: definition of data levels, method and accuracy of geometric correction. <i>Earth, Planets and Space</i> , 2017, 69, .	0.9	20

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73	An overview of the LIDAR observations of asteroid 25143 Itokawa. <i>Advances in Space Research</i> , 2007, 40, 187-192.	1.2	18
74	The widespread occurrence of high-calcium pyroxene in bright-ray craters on the Moon and implications for lunar-crust composition. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	18
75	Initial products of Akatsuki 1- $\hat{1}$ /4m camera. <i>Earth, Planets and Space</i> , 2018, 70, .	0.9	17
76	Hayabusa2 Landing Site Selection: Surface Topography of Ryugu and Touchdown Safety. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	17
77	Improving Hayabusa2 trajectory by combining LIDAR data and a shape model. <i>Icarus</i> , 2020, 338, 113574.	1.1	16
78	Vis-NIR disk-integrated photometry of asteroid 25143 Itokawa around opposition by AMICA/Hayabusa. <i>Icarus</i> , 2018, 311, 175-196.	1.1	15
79	Multivariable statistical analysis of spectrophotometry and spectra of (162173) Ryugu as observed by JAXA Hayabusa2 mission. <i>Astronomy and Astrophysics</i> , 2019, 629, A13.	2.1	15
80	Rotational states and shapes of Ryugu and Bennu: Implications for interior structure and strength. <i>Planetary and Space Science</i> , 2021, 204, 105268.	0.9	15
81	Surface environment of Phobos and Phobos simulant UTPS. <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	15
82	Global occurrence trend of high-Ca pyroxene on lunar highlands and its implications. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 831-848.	1.5	13
83	Featureless spectra on the Moon as evidence of residual lunar primordial crust. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 2190-2205.	1.5	13
84	Albedo Observation by Hayabusa2 LIDAR: Instrument Performance and Error Evaluation. <i>Space Science Reviews</i> , 2017, 208, 49-64.	3.7	13
85	Ballistic deployment of the Hayabusa2 artificial landmarks in the microgravity environment of Ryugu. <i>Icarus</i> , 2021, 358, 114220.	1.1	13
86	Fundamentally distinct outcomes of asteroid collisional evolution: Itokawa and Eros. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	12
87	Differential impact cratering of Saturn's satellites by heliocentric impactors. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 111-117.	1.5	12
88	Crater depth-to-diameter ratios on asteroid 162173 Ryugu. <i>Icarus</i> , 2021, 354, 114016.	1.1	12
89	Size of particles ejected from an artificial impact crater on asteroid 162173 Ryugu. <i>Astronomy and Astrophysics</i> , 2021, 647, A43.	2.1	12
90	Collisional disruption of weakly sintered porous targets at low-impact velocities. <i>Earth, Planets and Space</i> , 2007, 59, 319-324.	0.9	11

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91	Variation of the lunar highland surface roughness at baseline 0.15â€“100â€“%km and the relationship to relative age. <i>Geophysical Research Letters</i> , 2014, 41, 1444-1451.	1.5	11
92	Dynamic precise orbit determination of Hayabusa2 using laser altimeter (LIDAR) and image tracking data sets. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	11
93	MMX geodesy investigations: science requirements and observation strategy. <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	11
94	Scientific exploration of lunar surface using a rover in Japanese future lunar mission. <i>Advances in Space Research</i> , 2002, 30, 1921-1926.	1.2	10
95	An Automated Method for Crater Counting Using Rotational Pixel Swapping Method. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2017, 55, 4384-4397.	2.7	10
96	A generalised methodology for analytic construction of 1:1 resonances around irregular bodies: Application to the asteroid Ryuguâ€™s ejecta dynamics. <i>Planetary and Space Science</i> , 2020, 180, 104740.	0.9	10
97	Geologic History and Crater Morphology of Asteroid (162173) Ryugu. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006572.	1.5	10
98	Estimation of the lunar reflectance by ground-based observation using a tunable liquid-crystal filter telescope. <i>Earth, Planets and Space</i> , 2008, 60, 417-424.	0.9	9
99	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.	1.1	9
100	Hayabusa2 pinpoint touchdown near the artificial crater on Ryugu: Trajectory design and guidance performance. <i>Advances in Space Research</i> , 2021, 68, 3093-3140.	1.2	9
101	Initiation of a lightning search using the lightning and airglow camera onboard the Venus orbiter Akatsuki. <i>Earth, Planets and Space</i> , 2018, 70, 88.	0.9	8
102	Global classification of lunar reflectance spectra obtained by Kaguya (SELENE): Implication for hidden basaltic materials. <i>Icarus</i> , 2019, 321, 407-425.	1.1	8
103	Rayed craters on Dione: Implication for the dominant surface alteration process. <i>Icarus</i> , 2016, 274, 116-121.	1.1	7
104	Collisional disruption of porous sintered glass beads at low impact velocities. <i>Advances in Space Research</i> , 2007, 40, 252-257.	1.2	6
105	Rotational Pixel Swapping Method for Detection of Circular Features in Binary Images. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2015, 53, 710-723.	2.7	5
106	Rotational effect as the possible cause of the east-west asymmetric crater rims on Ryugu observed by LIDAR data. <i>Icarus</i> , 2021, 354, 114073.	1.1	5
107	Ejecta distribution from impact craters on Ryugu: Possible origin of the bluer units. <i>Icarus</i> , 2021, 364, 114474.	1.1	5
108	Ejecta emplacement as the possible origin of Ryugu's equatorial ridge. <i>Icarus</i> , 2021, 367, 114590.	1.1	5

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109	YORP Effect on Asteroid 162173 Ryugu: Implications for the Dynamical History. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006863.	1.5	4
110	Site selection for the Hayabusa2 artificial cratering and subsurface material sampling on Ryugu. <i>Planetary and Space Science</i> , 2022, 219, 105519.	0.9	4
111	Timing of the faulting on the Wispy Terrain of Dione based on stratigraphic relationships with impact craters. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2325-2334.	1.5	3
112	Alignment determination of the Hayabusa2 laser altimeter (LIDAR). <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	3
113	Extraction of craters as concentric circle patterns of contours on the lunar digital terrain model. , 2011, , .		2
114	Ray craters on Ganymede: Implications for cratering apex-antapex asymmetry and surface modification processes. <i>Icarus</i> , 2017, 295, 140-148.	1.1	2
115	NIRS3: The Near Infrared Spectrometer on Hayabusa2. , 2017, , 317-337.		2
116	Construction of Lunar Nomenclature Search System. <i>Transactions of the Japan Society for Aeronautical and Space Sciences Space Technology Japan</i> , 2009, 7, Tk_43-Tk_47.	0.2	2
117	COMPUTATIONAL GEOLOGY FOR LUNAR DATA ANALYSIS FROM LISM ON KAGUYA. , 0, , 77-88.		1
118	Geometric correction for thermographic images of asteroid 162173 Ryugu by TIR (thermal infrared) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.9	1
119	Development of the Laser Altimeter (LIDAR) for Hayabusa2. , 2016, , 33-47.		1
120	Exploring Structural and Dimensional Similarities Withinâ€”Lunar Nomenclature System Using Query Interfaces. , 2007, , 48-53.		1
121	Three-axial shape distributions of pebbles, cobbles and boulders smaller than a few meters on asteroid Ryugu. <i>Icarus</i> , 2022, 381, 115007.	1.1	1
122	NIRS3 spectral analysis of the artificial Omusubi-Kororin crater on Ryugu. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 514, 6173-6182.	1.6	1
123	Online conference system for collaborative work to make thematic maps. , 2008, , .		0
124	Automatic tracking of impact fragments. <i>World Review of Science, Technology and Sustainable Development</i> , 2010, 7, 181.	0.3	0
125	Development of online discussion system: Combination of Google Earth and Twitter. , 2012, , .		0
126	HARMONICS: A Visualization Tool for <i>Hayabusa</i> and <i>Hayabusa 2</i> Missions. <i>Transactions of the Japan Society for Aeronautical and Space Sciences</i> , 2017, 60, 132-136.	0.4	0

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127	Spatial Distribution of Ray Craters on Callisto: Implications for Ray Retention and Impactor Sources on Jovian Satellites. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1717-1727.	1.5	0
128	WISE-CAPS: Web-Based Interactive Secure Environment for Collaborative Analysis of Planetary Science. <i>Lecture Notes in Computer Science</i> , 2010, , 58-68.	1.0	0
129	Image Search System for Data Sets of Small Body Exploration with a 3D Polygon Shape Model. <i>Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan</i> , 2012, 10, Tk_7-Tk_14.	0.1	0
130	WISE-CAPS: Overcoming Information Gathering Challenges in Lunar Surface Exploration. <i>Lecture Notes in Computer Science</i> , 2014, , 266-273.	1.0	0
131	Scientific Objectives of Small Carry-on Impactor (SCI) and Deployable Camera 3 Digital (DCAM3-D): Observation of an Ejecta Curtain and a Crater Formed on the Surface of Ryugu by an Artificial High-Velocity Impact. , 2016, , 187-212.		0
132	Albedo Observation by Hayabusa2 LIDAR: Instrument Performance and Error Evaluation. , 2016, , 49-64.		0
133	Acceleration of Gravitation Field Analysis for Asteroids by GPU Computation. , 2021, , .		0