

# Takanao Saiki

## List of Publications by Year in descending order

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Version: 2024-02-01

62  
papers

2,962  
citations

279798

23  
h-index

182427

51  
g-index

63  
all docs

63  
docs citations

63  
times ranked

1353  
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	Hayabusa2 Mission Overview. <i>Space Science Reviews</i> , 2017, 208, 3-16.	8.1	228
5	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
6	Sample collection from asteroid (162173) Ryugu by Hayabusa2: Implications for surface evolution. <i>Science</i> , 2020, 368, 654-659.	12.6	158
7	Preliminary analysis of the Hayabusa2 samples returned from C-type asteroid Ryugu. <i>Nature Astronomy</i> , 2022, 6, 214-220.	10.1	136
8	Hayabusa2 mission status: Landing, roving and cratering on asteroid Ryugu. <i>Acta Astronautica</i> , 2020, 171, 42-54.	3.2	111
9	Highly porous nature of a primitive asteroid revealed by thermal imaging. <i>Nature</i> , 2020, 579, 518-522.	27.8	100
10	Images from the surface of asteroid Ryugu show rocks similar to carbonaceous chondrite meteorites. <i>Science</i> , 2019, 365, 817-820.	12.6	99
11	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	12.6	97
12	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
13	First compositional analysis of Ryugu samples by the MicrOmega hyperspectral microscope. <i>Nature Astronomy</i> , 2022, 6, 221-225.	10.1	65
14	The Small Carry-on Impactor (SCI) and the Hayabusa2 Impact Experiment. <i>Space Science Reviews</i> , 2017, 208, 165-186.	8.1	58
15	Thermophysical properties of the surface of asteroid 162173 Ryugu: Infrared observations and thermal inertia mapping. <i>Icarus</i> , 2020, 348, 113835.	2.5	48
16	Thermally altered subsurface material of asteroid (162173) Ryugu. <i>Nature Astronomy</i> , 2021, 5, 246-250.	10.1	47
17	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.	8.1	44
18	Collisional history of Ryugu's parent body from bright surface boulders. <i>Nature Astronomy</i> , 2021, 5, 39-45.	10.1	42

#	ARTICLE	IF	CITATIONS
19	Image-based autonomous navigation of Hayabusa2 using artificial landmarks: The design and brief in-flight results of the first landing on asteroid Ryugu. <i>Astrodynamics</i> , 2020, 4, 89-103.	2.4	34
20	Modeling and analysis of Hayabusa2 touchdown. <i>Astrodynamics</i> , 2020, 4, 119-135.	2.4	30
21	Anomalously porous boulders on (162173) Ryugu as primordial materials from its parent body. <i>Nature Astronomy</i> , 2021, 5, 766-774.	10.1	30
22	The spatial distribution of impact craters on Ryugu. <i>Icarus</i> , 2020, 338, 113527.	2.5	25
23	Guidance, navigation, and control of Hayabusa2 touchdown operations. <i>Astrodynamics</i> , 2020, 4, 393-409.	2.4	25
24	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
25	Spectrally blue hydrated parent body of asteroid (162173) Ryugu. <i>Nature Communications</i> , 2021, 12, 5837.	12.8	23
26	Design and Reconstruction of the Hayabusa2 Precision Landing on Ryugu. <i>Journal of Spacecraft and Rockets</i> , 2020, 57, 1033-1060.	1.9	20
27	Hayabusa2 extended mission: New voyage to rendezvous with a small asteroid rotating with a short period. <i>Advances in Space Research</i> , 2021, 68, 1533-1555.	2.6	20
28	Hayabusa2's station-keeping operation in the proximity of the asteroid Ryugu. <i>Astrodynamics</i> , 2020, 4, 349-375.	2.4	19
29	The deep-space multi-object orbit determination system and its application to Hayabusa2's asteroid proximity operations. <i>Astrodynamics</i> , 2020, 4, 377-392.	2.4	19
30	Design and flight results of GNC systems in Hayabusa2 descent operations. <i>Astrodynamics</i> , 2020, 4, 105-117.	2.4	19
31	GNC strategies and flight results of Hayabusa2 first touchdown operation. <i>Acta Astronautica</i> , 2020, 174, 131-147.	3.2	19
32	The MASCOT lander aboard Hayabusa2: The in-situ exploration of NEA (162173) Ryugu. <i>Planetary and Space Science</i> , 2021, 200, 105200.	1.7	18
33	Hayabusa2 Landing Site Selection: Surface Topography of Ryugu and Touchdown Safety. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	17
34	Improving Hayabusa2 trajectory by combining LIDAR data and a shape model. <i>Icarus</i> , 2020, 338, 113574.	2.5	16
35	Hayabusa2's kinetic impact experiment: Operational planning and results. <i>Acta Astronautica</i> , 2020, 175, 362-374.	3.2	14
36	Ballistic deployment of the Hayabusa2 artificial landmarks in the microgravity environment of Ryugu. <i>Icarus</i> , 2021, 358, 114220.	2.5	13

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37	Size of particles ejected from an artificial impact crater on asteroid 162173 Ryugu. <i>Astronomy and Astrophysics</i> , 2021, 647, A43.	5.1	12
38	Dynamic precise orbit determination of Hayabusa2 using laser altimeter (LIDAR) and image tracking data sets. <i>Earth, Planets and Space</i> , 2020, 72, .	2.5	11
39	Hayabusa2's superior solar conjunction mission operations: planning and post-operation results. <i>Astrodynamics</i> , 2020, 4, 265-288.	2.4	10
40	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
41	Hayabusa2 pinpoint touchdown near the artificial crater on Ryugu: Trajectory design and guidance performance. <i>Advances in Space Research</i> , 2021, 68, 3093-3140.	2.6	9
42	Simulation of Seismic Wave Propagation on Asteroid Ryugu Induced by The Impact Experiment of The Hayabusa2 Mission: Limited Mass Transport by Low Yield Strength of Porous Regolith. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006594.	3.6	8
43	Motion reconstruction of the small carry-on impactor aboard Hayabusa2. <i>Astrodynamics</i> , 2020, 4, 289-308.	2.4	7
44	High-resolution observations of bright boulders on asteroid Ryugu: 2. Spectral properties. <i>Icarus</i> , 2021, 369, 114591.	2.5	5
45	Ground-based low altitude hovering technique of Hayabusa2. <i>Astrodynamics</i> , 2020, 4, 331-347.	2.4	4
46	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
47	Alignment determination of the Hayabusa2 laser altimeter (LIDAR). <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	3
48	Hayabusa2 operation for MASCOT delivery to Ryugu surface. <i>Planetary and Space Science</i> , 2021, 205, 105288.	1.7	3
49	Mission objectives, planning, and achievements of Hayabusa2. , 2022, , 5-23.		3
50	High-resolution observations of bright boulders on asteroid Ryugu: 1. Size frequency distribution and morphology. <i>Icarus</i> , 2021, 369, 114529.	2.5	2
51	Initial Achievements of Hayabusa2 in Asteroid Proximity Phase. <i>Transactions of the Japan Society for Aeronautical and Space Sciences</i> , 2020, 63, 115-123.	0.7	2
52	Hayabusa2 spacecraft dynamics and operational design of final descent and touchdown in sampling mission. , 2020, , .		1
53	Extended mission of Hayabusa2. , 2022, , 557-571.		1
54	Target markers for image-based autonomous navigation. , 2022, , 341-357.		1

#	ARTICLE	IF	CITATIONS
55	Sensitivity degradation of optical navigation camera and attempts for dust removal. , 2022, , 415-431.		1
56	Overview of the Hayabusa2 asteroid proximity operations. , 2022, , 113-136.		1
57	NIRS3 spectral analysis of the artificial Omusubi-Kororin crater on Ryugu. Monthly Notices of the Royal Astronomical Society, 2022, 514, 6173-6182.	4.4	1
58	Orbit determination for Hayabusa2. , 2022, , 73-94.		0
59	GNC design and results of Hayabusa2's initial remote sensing operations. , 2022, , 137-175.		0
60	MASCOT lander release operation. , 2022, , 229-240.		0
61	Landing site selection for the Hayabusa2 mission: Pre-arrival training and post-arrival analyses. , 2022, , 189-208.		0
62	Hayabusa2's kinetic impact experiment. , 2022, , 291-312.		0