Goro Komatsu

List of Publications by Year
in descending order

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141	5,844	101543	79698
papers	citations	36 h-index	73 g-index

148	148	148	4337
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ancient oceans, ice sheets and the hydrological cycle on Mars. Nature, 1991, 352, 589-594.	27.8	645
2	Red rock and red planet diagenesis: Comparisons of Earth and Mars concretions. GSA Today, 2005, 15, 4.	2.0	641
3	Hayabusa2 arrives at the carbonaceous asteroid 162173 Ryuguâ€”A spinning topâ€“shaped rubble pile. Science, 2019, 364, 268-272.	12.6	410
4	The geomorphology, color, and thermal properties of Ryugu: Implications for parent-body processes. Science, 2019, 364, 252.	12.6	313
5	A possible terrestrial analogue for haematite concretions on Mars. Nature, 2004, 429, 731-734.	27.8	177
6	Channels and valleys on Venus: Preliminary analysis of Magellan data. Journal of Geophysical Research, 1992, 97, 13421-13444.	3.3	158
7	Sample collection from asteroid (162173) Ryugu by Hayabusa2: Implications for surface evolution. Science, 2020, 368, 654-659.	12.6	158
8	Tsunami waves extensively resurfaced the shorelines of an early Martian ocean. Scientific Reports, 2016, 6, 25106.	3.3	121
9	GRS evidence and the possibility of paleooceans on Mars. Planetary and Space Science, 2009, 57, 664-684.	1.7	107
10	Venusian Channels and Valleys: Distribution and Volcanological Implications. Icarus, 1993, 102, 1-25.	2.5	100
11	Paleohydrology and flood geomorphology of Ares Vallis. Journal of Geophysical Research, 1997, 102, 4151-4160.	3.3	99
12	Outflow channel sources, reactivation, and chaos formation, Xanthe Terra, Mars. Icarus, 2005, 175, 36-57.	2.5	93
13	The Volcanology of Venera and VEGA Landing Sites and the Geochemistry of Venus. Icarus, 1993, 103, 253-275.	2.5	80
14	Paleoshoreline geomorphology of BÃ¶Ã¶n Tsagaan Nuur, Tsagaan Nuur and Orog Nuur: the Valley of Lakes, Mongolia. Geomorphology, 2001, 39, 83-98.	2.6	79
15	A new terrestrial analogue site for Mars research: The Qaidam Basin, Tibetan Plateau (NW China). Earth-Science Reviews, 2017, 164, 84-101.	9.1	76
16	Models of iron oxide concretion formation: field, numerical, and laboratory comparisons. Geofluids, 2007, 7, 356-368.	0.7	74
17	Possible pingo fields in the Utopia basin, Mars: Geological and climatical implications. Icarus, 2009, 199, 49-74.	2.5	74
18	Interior layered deposits of Valles Marineris, Mars: analogous subice volcanism related to Baikal Rifting, Southern Siberia. Planetary and Space Science, 2004, 52, 167-187.	1.7	73

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19	Late Pleistocene glaciers in Darhad Basin, northern Mongolia. Quaternary Research, 2008, 69, 169-187.	1.7	73
20	Fluvial geomorphology on Earth-like planetary surfaces: A review. Geomorphology, 2015, 245, 149-182.	2.6	70
21	Combinations of processes responsible for Martian impact crater â€œlayered ejecta structuresâ€• emplacement. Journal of Geophysical Research, 2007, 112, .	3.3	67
22	Stratigraphy and erosional landforms of layered deposits in Valles Marineris, Mars. Journal of Geophysical Research, 1993, 98, 11105-11121.	3.3	65
23	Geological features indicative of processes related to the hematite formation in Meridiani Planum and Aram Chaos, Mars: a comparison with diagenetic hematite deposits in southern Utah, USA. Icarus, 2004, 171, 295-316.	2.5	62
24	Quaternary paleolake formation and cataclysmic flooding along the upper Yenisei River. Geomorphology, 2009, 104, 143-164.	2.6	61
25	Analysis of a new geomorphological inventory of landslides in Valles Marineris, Mars. Earth and Planetary Science Letters, 2014, 405, 156-168.	4.4	59
26	Red rock and red planet diagenesis: Comparisons of Earth and Mars concretions. GSA Today, 2005, 15, 4.	2.0	59
27	RIME: Radar for Icy Moon Exploration. , 2013, , .		57
28	Geological evolution of Ares Vallis on Mars: Formation by multiple events of catastrophic flooding, glacial and periglacial processes. Icarus, 2009, 202, 60-77.	2.5	55
29	Meander properties of Venusian channels. Geology, 1994, 22, 67.	4.4	50
30	Deformation band clusters on Mars and implications for subsurface fluid flow. Bulletin of the Geological Society of America, 2009, 121, 474-482.	3.3	47
31	Canaliâ€type channels on Venus: Some genetic constraints. Geophysical Research Letters, 1992, 19, 1415-1418.	4.0	44
32	An Unusual Spectral Unit in West Candor Chasma: Evidence for Aqueous or Hydrothermal Alteration in the Martian Canyons. Icarus, 1993, 106, 380-391.	2.5	44
33	Control of impact crater fracture systems on subsurface hydrology, ground subsidence, and collapse, Mars. Journal of Geophysical Research, 2005, 110, .	3.3	44
34	Small edifice features in Chryse Planitia, Mars: Assessment of a mud volcano hypothesis. Icarus, 2016, 268, 56-75.	2.5	43
35	Roles of methane and carbon dioxide in geological processes on Mars. Planetary and Space Science, 2011, 59, 169-181.	1.7	39
36	Formation and disruption of aquifers in southwestern Chryse Planitia, Mars. Icarus, 2007, 191, 545-567.	2.5	38

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37	Exobiological implications of potential sedimentary deposits on Mars. Planetary and Space Science, 2000, 48, 1043-1052.	1.7	37
38	Drainage systems of Lonar Crater, India: Contributions to Lonar Lake hydrology and crater degradation. Planetary and Space Science, 2014, 95, 45-55.	1.7	36
39	Channels in the Solar System. Planetary and Space Science, 1996, 44, 801-815.	1.7	34
40	Numerical simulations of large-scale cataclysmic floodwater: A simple depth-averaged model and an illustrative application. Geomorphology, 2006, 76, 179-192.	2.6	34
41	Depth profiles of venusian sinuous rilles and valley networks. Icarus, 2009, 199, 250-263.	2.5	34
42	Middle and Late Quaternary glacial lake-outburst floods, drainage diversions and reorganization of fluvial systems in northwestern Eurasia. Earth-Science Reviews, 2020, 201, 103069.	9.1	34
43	Impact craters with ejecta flows and central pits on Mercury. Planetary and Space Science, 2013, 82-83, 62-78.	1.7	33
44	Tier-Scalable Reconnaissance Missions For The Autonomous Exploration Of Planetary Bodies. , 2007, , .		32
45	Hydrogeologic processes of large-scale tectonomagmatic complexes in Mongoliaâ€“southern Siberia and on Mars. Geology, 2004, 32, 325.	4.4	31
46	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
47	Geomorphology of subglacial volcanoes in the Azas Plateau, the Tuva Republic, Russia. Geomorphology, 2007, 88, 312-328.	2.6	30
48	Paleolakes, paleofloods, and depressions in Aurorae and Ophir Plana, Mars: Connectivity of surface and subsurface hydrological systems. Icarus, 2009, 201, 474-491.	2.5	30
49	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
50	Jupiter ICY moon explorer (JUICE): Advances in the design of the radar for Icy Moons (RIME). , 2015, , .		29
51	Catastrophic flooding, palaeolakes, and late Quaternary drainage reorganization in northern Eurasia. International Geology Review, 2016, 58, 1693-1722.	2.1	29
52	Ancient wet aeolian environments on Earth: clues to presence of fossil/live microorganisms on Mars. Icarus, 2004, 171, 39-53.	2.5	28
53	Rivers in the Solar System: Water Is Not the Only Fluid Flow on Planetary Bodies. Geography Compass, 2007, 1, 480-502.	2.7	28
54	Martian paleolacustrine environments and their geological constrains on drilling operations for exobiological research. Planetary and Space Science, 2000, 48, 1027-1034.	1.7	27

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55	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
56	Valley networks on Venus. Geomorphology, 2001, 37, 225-240.	2.6	26
57	Geomorphic knobs of Candor Chasma, Mars: New Mars Reconnaissance Orbiter data and comparisons to terrestrial analogs. Icarus, 2010, 205, 138-153.	2.5	26
58	Present-day aeolian activity in Herschel Crater, Mars. Icarus, 2016, 265, 139-148.	2.5	26
59	The influence of local topography for wind direction on Mars: two examples of dune fields in crater basins. Earth Surface Processes and Landforms, 2012, 37, 1437-1443.	2.5	25
60	Large rock slides in impact craters on the Moon and Mercury. Icarus, 2015, 260, 289-300.	2.5	24
61	Geological and hydrological histories of the Argyre province, Mars. Icarus, 2015, 253, 66-98.	2.5	24
62	Four climate regimes on a land planet with wet surface: Effects of obliquity change and implications for ancient Mars. Icarus, 2005, 178, 27-39.	2.5	23
63	Cataclysmic Scabland flooding: Insights from a simple depth-averaged numerical model. Environmental Modelling and Software, 2007, 22, 1400-1408.	4.5	23
64	The search for life beyond Earth through fuzzy expert systems. Planetary and Space Science, 2008, 56, 448-472.	1.7	23
65	Geological Features and Evolution of Yardangs in the Qaidam Basin, Tibetan Plateau (NW China): A Terrestrial Analogue for Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2336-2364.	3.6	23
66	Plains Tectonism on Venus: Inferences from Canali Longitudinal Profiles. Icarus, 1994, 110, 275-286.	2.5	20
67	The Sirente crater field, Italy. Meteoritics and Planetary Science, 2002, 37, 1507-1521.	1.6	20
68	Ultrastructural Study of Iron Oxide Precipitates: Implications for the Search for Biosignatures in the Meridiani Hematite Concretions, Mars. Astrobiology, 2006, 6, 527-545.	3.0	20
69	The Channeled Scabland: Back to Bretz?: Comment and Reply. Geology, 2000, 28, 573.	4.4	19
70	Newly Discovered Ringâ€Moat Dome Structures in the Lunar Maria: Possible Origins and Implications. Geophysical Research Letters, 2017, 44, 9216-9224.	4.0	18
71	The Polygonal Surface Structures in the Dalangtan Playa, Qaidam Basin, NW China: Controlling Factors for Their Formation and Implications for Analogous Martian Landforms. Journal of Geophysical Research E: Planets, 2018, 123, 1910-1933.	3.6	17
72	A catastrophe remembered: a meteorite impact of the fifth century AD in the Abruzzo, central Italy. Antiquity, 2003, 77, 313-320.	1.0	16

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73	Hydrodynamics of impact-induced tsunami over the Martian ocean. Planetary and Space Science, 2014, 95, 33-44.	1.7	16
74	A global inventory of central pit craters on the Moon: Distribution, morphology, and geometry. Icarus, 2014, 227, 195-201.	2.5	16
75	Formation and geomorphologic history of the <scp>L</scp>onar impact crater deduced from in situ cosmogenic ¹⁰<scp>B</scp>e and ²⁶<scp>A</scp>l. Geochemistry, Geophysics, Geosystems, 2014, 15, 3190-3197.	2.5	16
76	Further evidence for an impact origin of the Tsenkher structure in the Gobi-Altai, Mongolia: geology of a 3.7 km crater with a well-preserved ejecta blanket. Geological Magazine, 2019, 156, 1-24.	1.5	16
77	Groundwater influence on the aeolian sequence stratigraphy of the Mechertateâ€“Chritaâ€“Sidi El Hani system, Tunisian Sahel: Analogies to the wetâ€“dry aeolian sequence stratigraphy at Meridiani Planum, Terby crater, and Gale crater, Mars. Planetary and Space Science, 2014, 95, 56-78.	1.7	15
78	Mars Orbiter Camera observation of linear and curvilinear features in the Hellas basin: Indications for multiple processes of formation. Journal of Geophysical Research, 2003, 108, .	3.3	14
79	Luminescence dating of scoria fall and lahar deposits from Sommaâ€“Vesuvius, Italy. Quaternary Geochronology, 2014, 20, 39-50.	1.4	14
80	Climate-Driven Changes in Lake Areas for the Last Half Century in the Valley of Lakes, Govi Region, Southern Mongolia. Natural Science, 2018, 10, 263-277.	0.4	14
81	Geological and geochemical data from the proposed Sirente crater field: New age dating and evidence for heating of target. Meteoritics and Planetary Science, 2006, 41, 1331-1345.	1.6	13
82	Origin of glacialâ€“fluvial landforms in the Azas Plateau volcanic field, the Tuva Republic, Russia: Role of iceâ€“magma interaction. Geomorphology, 2007, 88, 352-366.	2.6	12
83	Geomorphic imprints of repeated tsunami waves in a coastal valley in northeastern Japan. Geomorphology, 2015, 242, 3-10.	2.6	12
84	Dynamique de la sÃ©dimentation Ã l'HolocÃ¨ne moyen et final et ses implications palÃ©oclimatiques dans le bassin du lac Ulaan, sud de la Mongolie. Geomorphologie Relief, Processus, Environnement, 2018, 24, 351-363.	0.4	12
85	An inventory of potentially habitable environments on Mars: Geological and biological perspectives. , 2011, , .		11
86	The Tsenkher structure in the Gobi-Altai, Mongolia: Geomorphological hints of an impact origin. Geomorphology, 2006, 74, 164-180.	2.6	10
87	Playa environments on Earth: possible analogs for Mars. , 0, , 322-348.		10
88	Models of Formation and Activity of Spring Mounds in the Mechertate-Chrita-Sidi El Hani System, Eastern Tunisia: Implications for the Habitability of Mars. Life, 2014, 4, 386-432.	2.4	10
89	Spreading vs. Rifting as modes of extensional tectonics on the globally expanded Ganymede. Icarus, 2017, 288, 148-159.	2.5	10
90	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

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91	Local stratigraphic relations at Sandel crater, Venus: Possible evidence for recent volcano-tectonic activity in Imdr Regio. Earth and Planetary Science Letters, 2020, 546, 116410.	4.4	10
92	Idunn Mons: Evidence for Ongoing Volcano-tectonic Activity and Atmospheric Implications on Venus. Planetary Science Journal, 2021, 2, 215.	3.6	10
93	Harmakhis Vallis Source Region, Mars: Insights into the recent geothermal history based on geological mapping. Planetary and Space Science, 2011, 59, 1179-1194.	1.7	9
94	Morphometric analysis of a Hesperian aged Martian lobate scarp using high-resolution data. Journal of Structural Geology, 2018, 113, 1-9.	2.3	9
95	The 1997 Mars Pathfinder Spacecraft Landing Site: Spillover Deposits from an Early Mars Inland Sea. Scientific Reports, 2019, 9, 4045.	3.3	9
96	The Young Volcanic Rises on Venus: a Key Scientific Target for Future Orbital and in-situ Measurements on Venus. Solar System Research, 2021, 55, 315-323.	0.7	9
97	Nature park establishment and environmental conflicts in coastal areas: The case of the Costa Teatina National Park in central Italy. Ocean and Coastal Management, 2019, 182, 104947.	4.4	8
98	Formation of valleys and cataclysmic flood channels on Earth and Mars. , 0, , 297-321.		7
99	Magnetometer survey of the proposed Sirente meteorite crater field, central Italy: Evidence for uplifted crater rims and buried meteorites. Meteoritics and Planetary Science, 2007, 42, 211-222.	1.6	7
100	Characteristics of Erosional Morphology Formed by Tsunami Waves along the Sanriku Coast, Northeastern Japan. Journal of Geography (Chigaku Zasshi), 2015, 124, 241-258.	0.3	7
101	Timings of early crustal activity in southern highlands of Mars: Periods of crustal stretching and shortening. Geoscience Frontiers, 2019, 10, 1029-1037.	8.4	7
102	The Geologically Supervised Spectral Investigation as a Key Methodology for Identifying Volcanically Active Areas on Venus. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006909.	3.6	7
103	The volcanology of Idunn Mons, Venus: The complex evolution of a possible active volcano. Journal of Volcanology and Geothermal Research, 2022, 421, 107428.	2.1	7
104	Large-Scale and Deep-Seated Gravitational Slope Deformations on Mars: A Review. Geosciences (Switzerland), 2021, 11, 174.	2.2	5
105	Ryuguâ€™s observed volatile loss did not arise from impact heating alone. Communications Earth & Environment, 2021, 2, .	6.8	5
106	Recent boulder falls within the Finsen crater on the lunar far side: An assessment of the possible triggering rationale. Icarus, 2022, 377, 114904.	2.5	5
107	Geophysical survey of the proposed Tsenkher impact structure, Gobi Altai, Mongolia. Meteoritics and Planetary Science, 2010, 45, 373-382.	1.6	4
108	Utah's geologic and geomorphic analogs to Marsâ€”An overview for planetary exploration. , 2011, , .		4

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109	Geomorphological View of the Environmental History of Mars and Candidate Habitable Environments. Journal of Geography (Chigaku Zasshi), 2016, 125, 171-184.	0.3	4
110	The Argyre Region as a Prime Target forin situAstrobiological Exploration of Mars. Astrobiology, 2016, 16, 143-158.	3.0	4
111	Shock Vaporization/Devolatilization of Evaporitic Minerals, Halite and Gypsum, in an Open System Investigated by a Twoâ€Stage Light Gas Gun. Geophysical Research Letters, 2019, 46, 7258-7267.	4.0	4
112	Diagenetic analogs to hematite regions on Mars: examples from Jurassic sandstones of southern Utah, USA. , 2004, , .		3
113	Application of GIS to Geomorphological Research on Mars. Journal of Geography (Chigaku Zasshi), 2008, 117, 401-411.	0.3	3
114	Pleistocene Lake Bonneville as an Analog for Extraterrestrial Lakes and Oceans. Developments in Earth Surface Processes, 2016, 20, 570-597.	2.8	3
115	The Goshogake mud volcano field, Tohoku, northern Japan: An acidic, high-temperature system related to magmatic volcanism. Geomorphology, 2019, 329, 32-45.	2.6	3
116	Effects of Tsunami Wave Erosion on Natural Landscapes: Examples from the 2011 Tohoku-oki Tsunami. Advances in Natural and Technological Hazards Research, 2014, , 243-253.	1.1	3
117	Methane on Mars. Journal of the Geological Society of Japan, 2012, 118, 664-674.	0.6	2
118	Planetary geology and terrestrial analogs in Asia. Eos, 2012, 93, 164-164.	0.1	2
119	Reprint of: Impact craters with ejecta flows and central pits on Mercury. Planetary and Space Science, 2014, 95, 103-119.	1.7	2
120	The status of Mars exploration: the importance of terrestrial analogs and the role of geologists. Journal of the Geological Society of Japan, 2012, 118, 597-605.	0.6	1
121	GIS analyses of Martian satellite imageries and topographic data. Journal of the Geological Society of Japan, 2012, 118, 683-688.	0.6	1
122	Sinuous Rille. , 2015, , 1957-1963.		1
123	The evolution of gullies in steppe and forest-steppe landscapes of the Minusinskaya intermountain depression, Siberia: a case study in the central part of the Krasnoyarsk water reservoir. Physical Geography, 2015, 36, 305-321.	1.4	1
124	Displacement and delormalion of the sliding materials No.4. Journal of the Japan Landslide Society, 2004, 41, 430-433.	0.1	1
125	Planetary Research as a Practical Way to Learn Geology and the Process of Science. Journal of Geoscience Education, 1996, 44, 262-265.	1.4	1
126	Utilization of the VoronoÃ¯ tessellation for improved planetary age determination: A case study of a large rampart crater in Thaumasia Planum (Mars). Planetary and Space Science, 2022, 217, 105503.	1.7	1

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127	Outcrop investigation in Mars geology. Journal of the Geological Society of Japan, 2012, 118, VII-VIII.	0.6	0
128	A proposal for rover geological exploration on Mars. Journal of the Geological Society of Japan, 2012, 118, 606-617.	0.6	0
129	The comparative planetary geology of oceans, lakes and outflow channels on Mars. Journal of the Geological Society of Japan, 2012, 118, 618-631.	0.6	0
130	Canali (Venus). , 2014, , 1-8.		0
131	Amphitheater-Headed Valley (Venus). , 2014, , 1-3.		0
132	Evidence of regionally distributed tectonoâ€volcanism in a floor fractured crater of Northâ€Central Arabia Terra, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006748.	3.6	0
133	The Channeled Scabland: Back to Bretz?: Comment and Reply. Geology, 2000, 28, 573-576.	4.4	0
134	Fluvioâ€“Lacustrine Sedimentation and Tectonic Influence, Lunae Planum (Mars). Springer Geology, 2014, , 355-359.	0.3	0
135	Sinuous Rille. , 2014, , 1-9.		0
136	Valley Network (Venus). , 2014, , 1-4.		0
137	Outflow Channel (Venus). , 2015, , 1496-1498.		0
138	Valley Network (Venus). , 2015, , 2236-2239.		0
139	Canali (Venus). , 2015, , 212-217.		0
140	Amphitheater-Headed Valley (Venus). , 2015, , 71-73.		0
141	Thermodynamics of Shock Vaporization/Devolatilization of Volatile-Bearing Rocks and its Experimental Investigation. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2021, 31, 140-148.	0.0	0