Matthew Izawa

List of Publications by Year in descending order

57 papers	1,736 citations	361413 20 h-index	289244 40 g-index
57 all docs	57 docs citations	57 times ranked	2451 citing authors

#	Article	IF	Citations
1	The unexpected surface of asteroid (101955) Bennu. Nature, 2019, 568, 55-60.	27.8	364
2	Impact-generated hydrothermal systems on Earth and Mars. Icarus, 2013, 224, 347-363.	2.5	219
3	Sublimation in bright spots on (1) Ceres. Nature, 2015, 528, 237-240.	27.8	116
4	Validation of the Atmospheric Chemistry Experiment (ACE) version 2.2 temperature using ground-based and space-borne measurements. Atmospheric Chemistry and Physics, 2008, 8, 35-62.	4.9	68
5	Chelyabinsk meteorite explains unusual spectral properties of Baptistina Asteroid Family. Icarus, 2014, 237, 116-130.	2.5	54
6	Spectral reflectance â€œdeconstructionâ€•of the Murchison CM2 carbonaceous chondrite and implications for spectroscopic investigations of dark asteroids. Icarus, 2018, 305, 203-224.	2.5	52
7	Microâ€Xâ€ray diffraction assessment of shock stage in enstatite chondrites. Meteoritics and Planetary Science, 2011, 46, 638-651.	1.6	51
8	Evidence for methane in Martian meteorites. Nature Communications, 2015, 6, 7399.	12.8	47
9	Composition and evolution of the early oceans: Evidence from the Tagish Lake meteorite. Earth and Planetary Science Letters, 2010, 298, 443-449.	4.4	46
10	Infrared Spectroscopic Characterization of Organic Matter Associated with Microbial Bioalteration Textures in Basaltic Glass. Astrobiology, 2011, 11, 585-599.	3.0	43
11	SURFACE ALBEDO AND SPECTRAL VARIABILITY OF CERES. Astrophysical Journal Letters, 2016, 817, L22.	8.3	42
12	Zinc and germanium in the sedimentary rocks of Gale Crater on Mars indicate hydrothermal enrichment followed by diagenetic fractionation. Journal of Geophysical Research E: Planets, 2017, 122, 1747-1772.	3.6	42
13	Spectral reflectance properties of magnetites: Implications for remote sensing. Icarus, 2019, 319, 525-539.	2.5	40
14	Mineralogical and spectroscopic investigation of the Tagish Lake carbonaceous chondrite by X-ray diffraction and infrared reflectance spectroscopy. Meteoritics and Planetary Science, 2010, 45, 675-698.	1.6	38
15	Basaltic glass as a habitat for microbial life: Implications for astrobiology and planetary exploration. Planetary and Space Science, 2010, 58, 583-591.	1.7	34
16	Exploring exogenic sources for the olivine on Asteroid (4) Vesta. Icarus, 2015, 258, 483-499.	2.5	33
17	Ultraviolet spectral reflectance of carbonaceous materials. Icarus, 2018, 307, 40-82.	2.5	31
18	Molecular preservation in haliteâ€•and perchlorateâ€•rich hypersaline subsurface deposits in the Salar Grande basin (Atacama Desert, Chile): Implications for the search for molecular biomarkers on Mars. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 922-939.	3.0	30

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19	Carbonate precipitation under bulk acidic conditions as a potential biosignature for searching life on Mars. Earth and Planetary Science Letters, 2012, 351-352, 13-26.	4.4	23
20	Biogeochemical Cycling of Silver in Acidic, Weathering Environments. Minerals (Basel, Switzerland), 2017, 7, 218.	2.0	22
21	Mineralogical and spectroscopic investigation of enstatite chondrites by Xâ€ray diffraction and infrared reflectance spectroscopy. Journal of Geophysical Research, 2010, 115, .	3.3	20
22	Spectral reflectance (0.35â€“2.5â€¯Âµm) properties of garnets: Implications for remote sensing detection and characterization. Icarus, 2018, 300, 392-410.	2.5	17
23	Characterization of the acidic cold seep emplaced jarositic Golden Deposit, NWT, Canada, as an analogue for jarosite deposition on Mars. Icarus, 2013, 224, 382-398.	2.5	16
24	The Canadian space agency planetary analogue materials suite. Planetary and Space Science, 2015, 119, 155-172.	1.7	16
25	Oxalate formation under the hyperarid conditions of the Atacama desert as a mineral marker to provide clues to the source of organic carbon on Mars. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1593-1604.	3.0	16
26	Compositional Constraints for Lucy Mission Trojan Asteroids via Near-infrared Spectroscopy. Astronomical Journal, 2019, 158, 204.	4.7	16
27	Multi-technique investigation reveals new mineral, chemical, and textural heterogeneity in the Tagish Lake C2 chondrite. Planetary and Space Science, 2010, 58, 1347-1364.	1.7	15
28	Nitrogen Concentrations and Isotopic Compositions of Seafloor-Altered Terrestrial Basaltic Glass: Implications for Astrobiology. Astrobiology, 2018, 18, 330-342.	3.0	15
29	Variability, absorption features, and parent body searches in â€œspectrally featurelessâ€•meteorite reflectance spectra: Case study â€“ Tagish Lake. Icarus, 2015, 254, 324-332.	2.5	14
30	Spectral properties and geology of bright and dark material on dwarf planet Ceres. Meteoritics and Planetary Science, 2018, 53, 1961-1982.	1.6	13
31	Weathering of Post-Impact Hydrothermal Deposits from the Haughton Impact Structure: Implications for Microbial Colonization and Biosignature Preservation. Astrobiology, 2011, 11, 537-550.	3.0	12
32	Fitting the curve in ExcelÂ®: Systematic curve fitting of laboratory and remotely sensed planetary spectra. Computers and Geosciences, 2017, 100, 103-114.	4.2	12
33	Reflectance Spectroscopy of Chondrites. , 2018, , 273-343.		12
34	Link between the potentially hazardous Asteroid (86039) 1999 NC43 and the Chelyabinsk meteoroid tenuous. Icarus, 2015, 252, 129-143.	2.5	11
35	Effects of viewing geometry, aggregation state, and particle size on reflectance spectra of the Murchison CM2 chondrite deconvolved to Dawn FC band passes. Icarus, 2016, 266, 235-248.	2.5	11
36	Reflectance spectroscopy of ilmenites and related Ti and Ti Fe oxides (200 to 2500Ânm): Spectralâ€“compositionalâ€“structural relationships. Icarus, 2021, 362, 114423.	2.5	11

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37	A mineralogical archive of the biogeochemical sulfur cycle preserved in the subsurface of the RÃo Tinto system. American Mineralogist, 2018, 103, 394-411.	1.9	10
38	Revisiting the Rochechouart impact structure, France. Meteoritics and Planetary Science, 2014, 49, 2152-2168.	1.6	9
39	Laboratory spectroscopic detection of hydration in pristine lunar regolith. Earth and Planetary Science Letters, 2014, 390, 157-164.	4.4	9
40	Reflectance spectroscopy of oxalate minerals and relevance to Solar System carbon inventories. Icarus, 2016, 278, 7-30.	2.5	9
41	Constraining the Regolith Composition of Asteroid (16) Psyche via Laboratory Visible Near-infrared Spectroscopy. Planetary Science Journal, 2021, 2, 95.	3.6	9
42	QUE 94204: A primitive enstatite achondrite produced by the partial melting of an E chondriteâ€like protolith. Meteoritics and Planetary Science, 2011, 46, 1742-1753.	1.6	8
43	PRESERVATION OF MICROBIAL ICHNOFOSSILS IN BASALTIC GLASS BY TITANITE MINERALIZATION. Canadian Mineralogist, 2010, 48, 1255-1265.	1.0	7
44	Reflectance spectroscopy (200â€“2500nm) of highly-reduced phases under oxygen- and water-free conditions. Icarus, 2013, 226, 1612-1617.	2.5	7
45	Evidence for life in the isotopic analysis of surface sulphates in the Haughton impact structure, and potential application on Mars. International Journal of Astrobiology, 2012, 11, 93-101.	1.6	6
46	Ceresâ€™ spectral link to carbonaceous chondritesâ€”Analysis of the dark background materials. Meteoritics and Planetary Science, 2018, 53, 1925-1945.	1.6	6
47	Spectral parameters for Dawn FC color data: Carbonaceous chondrites and aqueous alteration products as potential cerean analog materials. Icarus, 2016, 265, 149-160.	2.5	5
48	Illuminating the dark side of the asteroid population: Visible near-infrared (0.7â€“2.45ÂÎ¼m) surface mineralogy modeling of D-type asteroids using Shkuratov theory. Icarus, 2021, 354, 114043.	2.5	5
49	Same family, different neighborhoods: Visible near-infrared (0.7â€“2.45ÂÎ¼m) spectral distinctions of D-type asteroids at different heliocentric distances. Icarus, 2021, 363, 114295.	2.5	5
50	Formation of ironâ€rich shelled structures by microbial communities. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 147-168.	3.0	4
51	Chemical alteration and preservation of sedimentary/organic nitrogen isotope signatures in a 2.7 Ga seafloor volcanic sequence. International Journal of Astrobiology, 2019, 18, 235-250.	1.6	4
52	Characterization of green clay concretions from the Tonggao Formation, South China: Mineralogy, petrogenesis and paleoenvironmental implications¹National Natural Science Foundation of China 40825006.. Canadian Journal of Earth Sciences, 2012, 49, 1018-1026.	1.3	3
53	Characterization of Microbial Communities Hosted in Quartzofeldspathic and Serpentinite Lithologies in Jeffrey Mine, Canada. Astrobiology, 2018, 18, 1008-1022.	3.0	2
54	Round up the unusual suspects: Near-Earth Asteroid 17274 (2000 LC16) a plausible D-type parent body of the Tagish Lake meteorite. Icarus, 2021, 361, 114349.	2.5	2

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55	Complex Water-ice Mixtures on NII Nereid: Constraints from NIR Reflectance. Planetary Science Journal, 2021, 2, 143.	3.6	2
56	Spectral calibration for deriving surface mineralogy of Asteroid (25143) Itokawa from Hayabusa Near-Infrared Spectrometer (NIRS) data. Icarus, 2015, 262, 124-130.	2.5	1
57	Mineralogical Criteria for the Parent Asteroid of the â€œCarbonaceousâ€•Achondrite NWA 6704. Astronomical Journal, 2020, 159, 107.	4.7	1