

Yves Marrocchi

List of Publications by Year in descending order

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Version: 2024-02-01

83
papers

2,527
citations

186265

28
h-index

223800

46
g-index

85
all docs

85
docs citations

85
times ranked

1764
citing authors

#	ARTICLE	IF	CITATIONS
1	Earth's water may have been inherited from material similar to enstatite chondrite meteorites. <i>Science</i> , 2020, 369, 1110-1113.	12.6	164
2	The Paris meteorite, the least altered CM chondrite so far. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 124, 190-222.	3.9	163
3	Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. <i>Science</i> , 2010, 328, 742-745.	12.6	160
4	Implications of in situ calcification for photosynthesis in a ~3.3Ga-old microbial biofilm from the Barberton greenstone belt, South Africa. <i>Earth and Planetary Science Letters</i> , 2011, 310, 468-479.	4.4	75
5	The Paris <sc>CM</sc> chondrite: Secondary minerals and asteroidal processing. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1232-1249.	1.6	75
6	Oxygen isotope constraints on the alteration temperatures of CM chondrites. <i>Earth and Planetary Science Letters</i> , 2017, 458, 273-281.	4.4	75
7	Pristine extraterrestrial material with unprecedented nitrogen isotopic variation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10522-10527.	7.1	72
8	Formation of CV chondrules by recycling of amoeboid olivine aggregate-like precursors. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 247, 121-141.	3.9	64
9	Deciphering the conditions of tochilinite and cronstedtite formation in <sc>CM</sc> chondrites from low temperature hydrothermal experiments. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1870-1889.	1.6	61
10	Origin and abundance of water in carbonaceous asteroids. <i>Earth and Planetary Science Letters</i> , 2018, 482, 23-32.	4.4	59
11	Oxygen isotopic diversity of chondrule precursors and the nebular origin of chondrules. <i>Earth and Planetary Science Letters</i> , 2018, 496, 132-141.	4.4	58
12	Hydrogen in chondrites: Influence of parent body alteration and atmospheric contamination on primordial components. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 281, 53-66.	3.9	58
13	Early evolution of the solar accretion disk inferred from Cr-Ti-O isotopes in individual chondrules. <i>Earth and Planetary Science Letters</i> , 2020, 551, 116585.	4.4	49
14	Constraints on Neon and Argon Isotopic Fractionation in Solar Wind. <i>Science</i> , 2007, 318, 433-435.	12.6	48
15	Sulfur and sulfides in chondrules. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 119, 117-136.	3.9	47
16	Mineralogical, crystallographic and redox features of the earliest stages of fluid alteration in CM chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 209, 106-122.	3.9	45
17	Synthesis of refractory organic matter in the ionized gas phase of the solar nebula. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 7129-7134.	7.1	43
18	Multiple precursors of secondary mineralogical assemblages in <sc>CM</sc> chondrites. <i>Meteoritics and Planetary Science</i> , 2016, 51, 785-805.	1.6	43

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19	Redox controls during magma ocean degassing. <i>Earth and Planetary Science Letters</i> , 2022, 577, 117255.	4.4	43
20	INWARD RADIAL MIXING OF INTERSTELLAR WATER ICES IN THE SOLAR PROTOPLANETARY DISK. <i>Astrophysical Journal Letters</i> , 2016, 827, L1.	8.3	41
21	Magmatic sulfides in the porphyritic chondrules of EH enstatite chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 195, 84-99.	3.9	37
22	Petrographic and C & O isotopic characteristics of the earliest stages of aqueous alteration of CM chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 213, 271-290.	3.9	35
23	Adsorption of xenon ions onto defects in organic surfaces: Implications for the origin and the nature of organics in primitive meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6255-6266.	3.9	34
24	Structure, composition, and location of organic matter in the enstatite chondrite Sahara 97096 (EH3). <i>Meteoritics and Planetary Science</i> , 2012, 47, 8-29.	1.6	33
25	A systematic for oxygen isotopic variation in meteoritic chondrules. <i>Earth and Planetary Science Letters</i> , 2015, 430, 308-315.	4.4	32
26	Origin of isolated olivine grains in carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 13-33.	1.6	32
27	The Diverse Planetary In-gassing/Outgassing Paths Produced over Billions of Years of Magmatic Activity. <i>Space Science Reviews</i> , 2021, 217, 1.	8.1	32
28	⁵³ Mn- ⁵³ Cr ages of Kaidun carbonates. <i>Meteoritics and Planetary Science</i> , 2011, 46, 275-283.	1.6	31
29	Comprehensive study of carbon and oxygen isotopic compositions, trace element abundances, and cathodoluminescence intensities of calcite in the Murchison CM chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 161, 101-117.	3.9	31
30	Irreversible adsorption of atmospheric helium on olivine: A lobster pot analogy. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 179, 76-88.	3.9	28
31	Collisional and alteration history of the CM parent body. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 239, 213-234.	3.9	28
32	Rapid condensation of the first Solar System solids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 23461-23466.	7.1	28
33	Oxygen fugacity and melt composition controls on nitrogen solubility in silicate melts. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 284, 120-133.	3.9	28
34	Nitrogen isotopic fractionation during abiotic synthesis of organic solid particles. <i>Earth and Planetary Science Letters</i> , 2014, 393, 2-13.	4.4	26
35	Thermal Evolution of Hydrated Asteroids Inferred from Oxygen Isotopes. <i>Astrophysical Journal Letters</i> , 2019, 882, L20.	8.3	26
36	Origin of hydrogen isotopic variations in chondritic water and organics. <i>Earth and Planetary Science Letters</i> , 2021, 567, 117008.	4.4	26

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37	Low-pressure adsorption of Ar, Kr, and Xe on carbonaceous materials (kerogen and carbon blacks), ferrihydrite, and montmorillonite: Implications for the trapping of noble gases onto meteoritic matter. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 2419-2430.	3.9	25
38	Interlayer trapping of noble gases in insoluble organic matter of primitive meteorites. <i>Earth and Planetary Science Letters</i> , 2005, 236, 569-578.	4.4	25
39	Chondrule heritage and thermal histories from trace element and oxygen isotope analyses of chondrules and amoeboid olivine aggregates. <i>Meteoritics and Planetary Science</i> , 2017, 52, 2672-2694.	1.6	24
40	Nanostructural and Geochemical Features of the Jurassic Isocrinid Columnal Ossicles. <i>Acta Palaeontologica Polonica</i> , 2009, 54, 69-75.	0.4	22
41	Experimental determination of argon solubility in silicate melts: An assessment of the effects of liquid composition and temperature. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 5765-5776.	3.9	21
42	Early scattering of the solar protoplanetary disk recorded in meteoritic chondrules. <i>Science Advances</i> , 2016, 2, e1601001.	10.3	21
43	Primordial water and dust of the Solar System: Insights from in situ oxygen measurements of CI chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 269, 451-464.	3.9	21
44	Triple Oxygen Isotope Measurements by Multi-Collector Secondary Ion Mass Spectrometry. <i>Frontiers in Earth Science</i> , 2021, 8, .	1.8	21
45	Nitrogen solubility in basaltic silicate melt - Implications for degassing processes. <i>Chemical Geology</i> , 2021, 573, 120192.	3.3	21
46	The role of grain boundaries in the storage and transport of noble gases in the mantle. <i>Earth and Planetary Science Letters</i> , 2015, 430, 260-270.	4.4	20
47	The Tarda Meteorite: A Window into the Formation of D-type Asteroids. <i>Astrophysical Journal Letters</i> , 2021, 913, L9.	8.3	20
48	Experimental determination of the xenon isotopic fractionation during adsorption. <i>Geophysical Research Letters</i> , 2013, 40, 4165-4170.	4.0	19
49	Plume-ridge interaction along the Galapagos Spreading Center: discerning between gas loss and source effects using neon isotopic compositions and $4\text{He}/^{40}\text{Ar}$ - $^{13}\text{C}/^{12}\text{C}$ relative abundances. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 1145-1160.	3.9	18
50	Testing the genetic relationship between fluid alteration and brecciation in <i>CM</i> chondrites. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1692-1709.	1.6	18
51	Silicon isotopic compositions of chondrule silicates in carbonaceous chondrites and the formation of primordial solids in the accretion disk. <i>Earth and Planetary Science Letters</i> , 2020, 542, 116318.	4.4	17
52	Cronstedtite polytypes in the Paris meteorite. <i>European Journal of Mineralogy</i> , 2018, 30, 349-354.	1.3	16
53	Multiple carriers of Q noble gases in primitive meteorites. <i>Geophysical Research Letters</i> , 2015, 42, 2093-2099.	4.0	15
54	Primordial heavy noble gases in the pristine Paris carbonaceous chondrite. <i>Meteoritics and Planetary Science</i> , 2019, 54, 395-414.	1.6	15

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55	Conditions of chondrule formation in ordinary chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 313, 295-312.	3.9	15
56	Hydrogen isotopic composition of water in CV-type carbonaceous chondrites. <i>Earth and Planetary Science Letters</i> , 2018, 504, 64-71.	4.4	14
57	The isotopic composition of volatiles in the unique Bench Crater carbonaceous chondrite impactor found in the Apollo 12 regolith. <i>Earth and Planetary Science Letters</i> , 2020, 540, 116265.	4.4	14
58	Processes of noble gas elemental and isotopic fractionations in plasma-produced organic solids: Cosmochemical implications. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 217, 219-230.	3.9	13
59	Constraints on Planetesimal Accretion Inferred from Particle-size Distribution in CO Chondrites. <i>Astrophysical Journal Letters</i> , 2021, 917, L25.	8.3	13
60	High-temperature Ionization-induced Synthesis of Biologically Relevant Molecules in the Protosolar Nebula. <i>Astrophysical Journal</i> , 2018, 859, 142.	4.5	12
61	High-precision <i>in situ</i> silicon isotopic analyses by multi-collector secondary ion mass spectrometry in olivine and low-calcium pyroxene. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 1589-1597.	1.5	12
62	Syneruptive incorporation of martian surface sulphur in the nakhlite lava flows revealed by S and Os isotopes and highly siderophile elements: implication for mantle sources in Mars. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 266, 416-434.	3.9	12
63	The Piancaldoli meteorite: A forgotten primitive LL3.10 ordinary chondrite. <i>Meteoritics and Planetary Science</i> , 2020, 55, .	1.6	11
64	Sectioning effects of porphyritic chondrules: Implications for the PP/POP/PO classification and correcting modal abundances of mineralogically zoned chondrules. <i>Meteoritics and Planetary Science</i> , 2020, 55, 993-999.	1.6	11
65	Helium incorporation and diffusion in polycrystalline olivine. <i>Chemical Geology</i> , 2018, 488, 105-124.	3.3	10
66	¹⁶ O-rich anhydrous silicates in CI chondrites: Implications for the nature and dynamics of dust in the solar accretion disk. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 332, 203-219.	3.9	10
67	Isotopic evidence for two chondrule generations in CR chondrites and their relationships to other carbonaceous chondrites. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117683.	4.4	10
68	Oxygen isotopic and chemical composition of chromites in micrometeorites: Evidence of ordinary chondrite precursors. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1347-1361.	1.6	9
69	A roadmap for a European extraterrestrial sample curation facility – the EURO CARES project. , 2021, , 249-268.		8
70	Apatite halogen and hydrogen isotope constraints on the conditions of hydrothermal alteration in carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 809-828.	1.6	8
71	Heterogeneous nature of the carbonaceous chondrite breccia Aguas Zarcas – Cosmochemical characterization and origin of new carbonaceous chondrite lithologies. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 334, 155-186.	3.9	7
72	Young asteroid mixing revealed in ordinary chondrites: The case of <i>NWA</i> 5764, a polymict <i>LL</i> breccia with L clasts. <i>Meteoritics and Planetary Science</i> , 2017, 52, 2289-2304.	1.6	6

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73	Argon storage and diffusion in Earth's upper mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 253, 1-18.	3.9	6
74	Formation of chondrule fine-grained rims from local nebular reservoirs. <i>Meteoritics and Planetary Science</i> , 2022, 57, 1004-1017.	1.6	6
75	In-situ O-isotope analysis of relict spinel and forsterite in small (<200µm) Antarctic micrometeorites – Samples of chondrules & CAls from carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 325, 1-24.	3.9	6
76	The astrophysical context of collision processes in meteorites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1406-1421.	1.6	5
77	Oxygen isotope systematics of chondrules in Rumuruti chondrites: Formation conditions and genetic link with ordinary chondrites. <i>Meteoritics and Planetary Science</i> , 2022, 57, 122-135.	1.6	5
78	Spinel in CV chondrules: Investigating precursor legacy and chondrule thermal histories. <i>Meteoritics and Planetary Science</i> , 2022, 57, 1018-1037.	1.6	4
79	Comment on “Hydrothermal preparation of analogous matrix minerals of CM carbonaceous chondrites from metal alloy particles” by Y. Peng and Y. Jing [<i>Earth Planet. Sci. Lett.</i> 408 (2014) 252–262]. <i>Earth and Planetary Science Letters</i> , 2015, 428, 304-306.	4.4	3
80	The tumultuous childhood of the Solar System. <i>Nature Astronomy</i> , 2019, 3, 889-890.	10.1	2
81	Effect of deformation on helium storage and diffusion in polycrystalline forsterite. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 273, 226-243.	3.9	2
82	The Pecora Escarpment (PCA) 91020 EL3 chondrite and deformation on the EL3 asteroid. <i>Meteoritics and Planetary Science</i> , 2021, 56, 2144-2154.	1.6	1
83	An unusual compound object in Yamato 793408 (H3.2): The missing link between compound chondrules and macrochondrules?. <i>Meteoritics and Planetary Science</i> , 2020, 55, 1458-1470.	1.6	0