Matthieu Gounelle

List of Publications by Year
in descending order

96 papers	7,394 citations	81900 39 h-index	53230 85 g-index
96 all docs	96 docs citations	96 times ranked	4110 citing authors

#	Article	IF	Citations
1	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
2	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. Science, 2006, 314, 1735-1739.	12.6	589
3	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. Science, 2006, 314, 1720-1724.	12.6	519
4	COMETARY ORIGIN OF THE ZODIACAL CLOUD AND CARBONACEOUS MICROMETEORITES. IMPLICATIONS FOR HOT DEBRIS DISKS. Astrophysical Journal, 2010, 713, 816-836.	4.5	422
5	Isotopic Compositions of Cometary Matter Returned by Stardust. Science, 2006, 314, 1724-1728.	12.6	343
6	The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. Astrophysical Journal, 2001, 548, 1029-1050.	4.5	292
7	Contamination of the asteroid belt by primordial trans-Neptunian objects. Nature, 2009, 460, 364-366.	27.8	250
8	Mineralogy of Tagish Lake: An ungrouped type 2 carbonaceous chondrite. Meteoritics and Planetary Science, 2002, 37, 737-761.	1.6	207
9	Extinct Radioactivities and Protosolar Cosmic Rays: Selfâ€Shielding and Light Elements. Astrophysical Journal, 2001, 548, 1051-1070.	4.5	193
10	The classification of micrometeorites. Meteoritics and Planetary Science, 2008, 43, 497-515.	1.6	190
11	Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. Science, 2010, 328, 742-745.	12.6	160
12	Fossilized condensation lines in the Solar System protoplanetary disk. Icarus, 2016, 267, 368-376.	2.5	152
13	A terrestrial origin for sulfate veins in CI1 chondrites. Meteoritics and Planetary Science, 2001, 36, 1321-1329.	1.6	142
14	The Irradiation Origin of Beryllium Radioisotopes and Other Shortâ€lived Radionuclides. Astrophysical Journal, 2006, 640, 1163-1170.	4.5	114
15	Nitrogen and Carbon Isotopic Composition of the Sun Inferred from a High-Temperature Solar Nebular Condensate. Astrophysical Journal, 2007, 656, L33-L36.	4.5	111
16	The orbit and atmospheric trajectory of the Orgueil meteorite from historical records. Meteoritics and Planetary Science, 2006, 41, 135-150.	1.6	104
17	From individual to collective pinning: Effect of long-range elastic interactions. Physical Review E, 1998, 58, 1577-1590.	2.1	100
18	Micrometeorites from Central Antarctic snow: The CONCORDIA collection. Advances in Space Research, 2007, 39, 605-611.	2.6	95

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19	The Origin of Shortâ€lived Radionuclides and the Astrophysical Environment of Solar System Formation. Astrophysical Journal, 2008, 680, 781-792.	4.5	91
20	Accretion of neon, organics, CO2, nitrogen and water from large interplanetary dust particles on the early Earth. Planetary and Space Science, 2000, 48, 1117-1137.	1.7	89
21	Nature of volatile depletion and genetic relationships in enstatite chondrites and aubrites inferred from Zn isotopes. Geochimica Et Cosmochimica Acta, 2011, 75, 297-307.	3.9	85
22	Mineralogy of carbonaceous chondritic microclasts in howardites: identification of C2 fossil micrometeorites. Geochimica Et Cosmochimica Acta, 2003, 67, 507-527.	3.9	81
23	The Paris <scp>CM</scp> chondrite: Secondary minerals and asteroidal processing. Meteoritics and Planetary Science, 2014, 49, 1232-1249.	1.6	75
24	Oxygen isotope constraints on the alteration temperatures of CM chondrites. Earth and Planetary Science Letters, 2017, 458, 273-281.	4.4	75
25	Magnetic classification of stony meteorites: 2. Nonâ€ordinary chondrites. Meteoritics and Planetary Science, 2008, 43, 959-980.	1.6	73
26	Mineralogy and texture of Fe-Ni sulfides in CI1 chondrites: Clues to the extent of aqueous alteration on the CI1 parent body. Geochimica Et Cosmochimica Acta, 2005, 69, 2687-2700.	3.9	72
27	Pristine extraterrestrial material with unprecedented nitrogen isotopic variation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10522-10527.	7.1	72
28	3. Solar System Formation and Early Evolution: the First 100 MillionÂYears. Earth, Moon and Planets, 2006, 98, 39-95.	0.6	64
29	Mineralogy and petrography of C asteroid regolith: The Sutter's Mill <scp>CM</scp> meteorite. Meteoritics and Planetary Science, 2014, 49, 1997-2016.	1.6	57
30	An early solar system magnetic field recorded in CM chondrites. Earth and Planetary Science Letters, 2015, 410, 62-74.	4.4	57
31	SUPERNOVA PROPAGATION AND CLOUD ENRICHMENT: A NEW MODEL FOR THE ORIGIN OF ⁶⁰ Fe IN THE EARLY SOLAR SYSTEM. Astrophysical Journal, 2009, 694, L1-L5.	4.5	54
32	On the aerodynamic redistribution of chondrite components in protoplanetary disks. Icarus, 2012, 220, 162-173.	2.5	54
33	The Orgueil meteorite: 150Âyears of history. Meteoritics and Planetary Science, 2014, 49, 1769-1794.	1.6	45
34	Mineralogical, crystallographic and redox features of the earliest stages of fluid alteration in CM chondrites. Geochimica Et Cosmochimica Acta, 2017, 209, 106-122.	3.9	45
35	Multiple precursors of secondary mineralogical assemblages in <scp>CM</scp> chondrites. Meteoritics and Planetary Science, 2016, 51, 785-805.	1.6	43
36	Andreyivanovite: A second new phosphide from the Kaidun meteorite. American Mineralogist, 2008, 93, 1295-1299.	1.9	42

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37	The Asteroid-Comet Continuum: In Search of Lost Primitivity. Elements, 2011, 7, 29-34.	0.5	42
38	A unique basaltic micrometeorite expands the inventory of solar system planetary crusts. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6904-6909.	7.1	41
39	VARIABLE AND EXTREME IRRADIATION CONDITIONS IN THE EARLY SOLAR SYSTEM INFERRED FROM THE INITIAL ABUNDANCE OF ¹⁰ Be IN ISHEYEVO CAIs. Astrophysical Journal Letters, 2013, 763, L33.	8.3	41
40	INWARD RADIAL MIXING OF INTERSTELLAR WATER ICES IN THE SOLAR PROTOPLANETARY DISK. Astrophysical Journal Letters, 2016, 827, L1.	8.3	41
41	Small Antarctic micrometeorites: A mineralogical and in situ oxygen isotope study. Meteoritics and Planetary Science, 2005, 40, 917-932.	1.6	40
42	On early Solar System chronology: Implications of an heterogeneous spatial distribution of 26Al and 53Mn. Geochimica Et Cosmochimica Acta, 2005, 69, 3129-3144.	3.9	40
43	Magnesium isotopic constraints on the origin of CBb chondrites. Earth and Planetary Science Letters, 2007, 256, 521-533.	4.4	40
44	EXTREME ¹⁶ O ENRICHMENT IN CALCIUM-ALUMINUM-RICH INCLUSIONS FROM THE ISHEYEVO (CH/CB) CHONDRITE. Astrophysical Journal, 2009, 698, L18-L22.	4.5	40
45	Dmitryivanovite: A new high-pressure calcium aluminum oxide from the Northwest Africa 470 CH3 chondrite characterized using electron backscatter diffraction analysis. American Mineralogist, 2009, 94, 746-750.	1.9	39
46	Short duration thermal metamorphism in CR chondrites. Geochimica Et Cosmochimica Acta, 2013, 122, 267-279.	3.9	39
47	The densest meteorite collection area in hot deserts: The San Juan meteorite field (Atacama Desert,) Tj ETQq1 1 0.784314 rgBT /Overlo	1.6	38
48	Chondrule trace element geochemistry at the mineral scale. Meteoritics and Planetary Science, 2012, 47, 1695-1714.	1.6	38
49	The micrometeorite flux at Dome C (Antarctica), monitoring the accretion of extraterrestrial dust on Earth. Earth and Planetary Science Letters, 2021, 560, 116794.	4.4	38
50	The Oxygen Isotopic Composition of the Sun as a Test of the Supernova Origin of ²⁶ Al and ⁴¹ Ca. Astrophysical Journal, 2007, 664, L123-L125.	4.5	36
51	Northwest Africa 5958: A weakly altered <scp>CM</scp>â€related ungrouped chondrite, not a <scp>CI</scp>3. Meteoritics and Planetary Science, 2016, 51, 851-869.	1.6	36
52	Petrographic and C & O isotopic characteristics of the earliest stages of aqueous alteration of CM chondrites. Geochimica Et Cosmochimica Acta, 2017, 213, 271-290.	3.9	35
53	Origin of shortâ€“lived radionuclides. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2001, 359, 1991-2004.	3.4	33
54	Hydrogen isotopic composition of water from fossil micrometeorites in howardites. Geochimica Et Cosmochimica Acta, 2005, 69, 3431-3443.	3.9	33

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55	THE CHROMIUM ISOTOPIC COMPOSITION OF THE UNGROUPED CARBONACEOUS CHONDRITE TAGISH LAKE. Astrophysical Journal, 2011, 736, 23.	4.5	33
56	Short time interval for condensation of high-temperature silicates in the solar accretion disk. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1298-1303.	7.1	33
57	Trace element geochemistry of ordinary chondrite chondrules: The type I/type II chondrule dichotomy. Geochimica Et Cosmochimica Acta, 2015, 155, 47-67.	3.9	33
58	New constraints on the magnetic history of the CV parent body and the solar nebula from the Kaba meteorite. Earth and Planetary Science Letters, 2016, 455, 166-175.	4.4	33
59	Nebular and asteroidal modification of the iron isotope composition of chondritic components. Earth and Planetary Science Letters, 2005, 239, 203-218.	4.4	31
60	⁵³Mnâ€⁵³Cr ages of Kaidun carbonates. Meteoritics and Planetary Science, 2011, 46, 275-283.	1.6	31
61	Trace element geochemistry of <scp>CR</scp> chondrite metal. Meteoritics and Planetary Science, 2013, 48, 1981-1999.	1.6	31
62	Xenoliths and microxenoliths in H chondrites: Sampling the zodiacal cloud in the asteroid Main Belt. Meteoritics and Planetary Science, 2012, 47, 880-902.	1.6	29
63	The formation conditions of enstatite chondrites: Insights from trace element geochemistry of olivineâ€bearing chondrules in Sahara 97096 (<scp>EH</scp>3). Meteoritics and Planetary Science, 2015, 50, 1624-1642.	1.6	28
64	Collisional and alteration history of the CM parent body. Geochimica Et Cosmochimica Acta, 2018, 239, 213-234.	3.9	28
65	A primitive dark inclusion with radiationâ€damaged silicates in the Ningqiang carbonaceous chondrite. Meteoritics and Planetary Science, 2003, 38, 305-322.	1.6	27
66	Sulfur isotopic composition of Feâ€Ni sulfide grains in CI and CM carbonaceous chondrites. Meteoritics and Planetary Science, 2010, 45, 885-898.	1.6	27
67	ASTRONOMICAL OXYGEN ISOTOPIC EVIDENCE FOR SUPERNOVA ENRICHMENT OF THE SOLAR SYSTEM BIRTH ENVIRONMENT BY PROPAGATING STAR FORMATION. Astrophysical Journal, 2011, 729, 43.	4.5	26
68	Description of a very dense meteorite collection area in western Atacama: Insight into the longâ€term composition of the meteorite flux to Earth. Meteoritics and Planetary Science, 2016, 51, 468-482.	1.6	26
69	Thermal Evolution of Hydrated Asteroids Inferred from Oxygen Isotopes. Astrophysical Journal Letters, 2019, 882, L20.	8.3	26
70	Laser ablation ICP-MS study of IIIAB irons and pallasites: constraints on the behaviour of highly siderophile elements during and after planetesimal core formation. Chemical Geology, 2004, 208, 5-28.	3.3	25
71	Magnetic anisotropy of HED and Martian meteorites and implications for the crust of Vesta and Mars. Earth and Planetary Science Letters, 2008, 270, 280-289.	4.4	24
72	The meteorite flux of the past 2 m.y. recorded in the Atacama Desert. Geology, 2019, 47, 673-676.	4.4	22

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73	Primordial water and dust of the Solar System: Insights from in situ oxygen measurements of CI chondrites. Geochimica Et Cosmochimica Acta, 2020, 269, 451-464.	3.9	21
74	Short-lived radioactive nuclides in meteorites and early solar system processes. Comptes Rendus - Geoscience, 2007, 339, 872-884.	1.2	19
75	Evidence for an asteroidâ€“comet continuum from simulations of carbonaceous microxenolith dynamical evolution. Meteoritics and Planetary Science, 2011, 46, 1863-1877.	1.6	19
76	Testing the genetic relationship between fluid alteration and brecciation in <scp>CM</scp> chondrites. Meteoritics and Planetary Science, 2019, 54, 1692-1709.	1.6	18
77	The meteorite fall at Lâ€™Aigle and the Biot report: exploring the cradle of meteoritics. Geological Society Special Publication, 2006, 256, 73-89.	1.3	16
78	Formation of the binary near-Earth object 1996 FG₃: Can binary NEOs be the source of short-CRE meteorites?. Meteoritics and Planetary Science, 2006, 41, 874-887.	1.6	15
79	The origin of short-lived radionuclides in the solar system. New Astronomy Reviews, 2006, 50, 596-599.	12.8	15
80	Cross sections relevant toÎ³-ray line emission in solar flares:3He-induced reactions on16Onuclei. Physical Review C, 2003, 68, .	2.9	11
81	Irradiation in the early solar system and the origin of short-lived radionuclides. Comptes Rendus - Geoscience, 2007, 339, 885-894.	1.2	9
82	Lithium isotopes as indicators of meteorite parent body alteration. Meteoritics and Planetary Science, 2013, 48, 872-878.	1.6	9
83	NWA 1152 and Sahara 00182: New primitive carbonaceous chondrites with affinities to the CR and CV groups. Meteoritics and Planetary Science, 2004, 39, 2009-2032.	1.6	8
84	Meteorites: International law and regulations. Meteoritics and Planetary Science, 2019, 54, 2887-2901.	1.6	8
85	The astrophysical context of collision processes in meteorites. Meteoritics and Planetary Science, 2021, 56, 1406-1421.	1.6	5
86	The origin of60Fe and other short-lived radionuclides in the early solar system. EAS Publications Series, 2010, 41, 301-311.	0.3	4
87	A 650 km2 Miocene strewnfield of splash-form impact glasses in the Atacama Desert, Chile. Earth and Planetary Science Letters, 2021, 569, 117049.	4.4	4
88	Best practices for the use of meteorite names in publications. Meteoritics and Planetary Science, 2019, 54, 1397-1400.	1.6	2
89	A compensated optical profilometer for wavefront control of Virgo gravitational wave antenna optics. Measurement Science and Technology, 1996, 7, 1032-1037.	2.6	1
90	Impact dynamics of the L chondrites' parent asteroid. Meteoritics and Planetary Science, 2022, 57, 759-775.	1.6	1

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91	Obsidian and mafic volcanic glasses from the Philippines and Vietnam found in the Paris Museum Australasian tektite collection. Meteoritics and Planetary Science, 0, , .	1.6	1
92	Circumstellar disks in high-mass star environments: the early solar system. Proceedings of the International Astronomical Union, 2009, 5, 746-747.	0.0	0
93	Astronomical constraints on the emergence of life. , 0, , 118-135.		0
94	Massive stars and short-lived radionuclides in the Solar System. EAS Publications Series, 2011, 51, 289-297.	0.3	0
95	Celebrating the 50th anniversary of <scp>CAI</scp>s discovery by Mireille Christophe Michelâ€“LÃ©vy. Meteoritics and Planetary Science, 2018, 53, 2427-2429.	1.6	0
96	The Micrometeorite Program at Dome C. EAS Publications Series, 2005, 14, 51-56.	0.3	0