

# Matthieu Gounelle

## List of Publications by Year in descending order

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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	Impact dynamics of the L chondrites' parent asteroid. <i>Meteoritics and Planetary Science</i> , 2022, 57, 759-775.	1.6	1
2	The micrometeorite flux at Dome C (Antarctica), monitoring the accretion of extraterrestrial dust on Earth. <i>Earth and Planetary Science Letters</i> , 2021, 560, 116794.	4.4	38
3	The astrophysical context of collision processes in meteorites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1406-1421.	1.6	5
4	A 650 km <sup>2</sup> Miocene strewnfield of splash-form impact glasses in the Atacama Desert, Chile. <i>Earth and Planetary Science Letters</i> , 2021, 569, 117049.	4.4	4
5	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
6	Meteorites: International law and regulations. <i>Meteoritics and Planetary Science</i> , 2019, 54, 2887-2901.	1.6	8
7	Thermal Evolution of Hydrated Asteroids Inferred from Oxygen Isotopes. <i>Astrophysical Journal Letters</i> , 2019, 882, L20.	8.3	26
8	The meteorite flux of the past 2 m.y. recorded in the Atacama Desert. <i>Geology</i> , 2019, 47, 673-676.	4.4	22
9	Testing the genetic relationship between fluid alteration and brecciation in <sc>CM</sc> chondrites. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1692-1709.	1.6	18
10	Best practices for the use of meteorite names in publications. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1397-1400.	1.6	2
11	Celebrating the 50th anniversary of <sc>CAI</sc>'s discovery by Mireille Christophe Michelâ€“LÃ©vy. <i>Meteoritics and Planetary Science</i> , 2018, 53, 2427-2429.	1.6	0
12	Collisional and alteration history of the CM parent body. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 239, 213-234.	3.9	28
13	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
14	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
15	Oxygen isotope constraints on the alteration temperatures of CM chondrites. <i>Earth and Planetary Science Letters</i> , 2017, 458, 273-281.	4.4	75
16	Multiple precursors of secondary mineralogical assemblages in <sc>CM</sc> chondrites. <i>Meteoritics and Planetary Science</i> , 2016, 51, 785-805.	1.6	43
17	Northwest Africa 5958: A weakly altered <sc>CM</sc>-related ungrouped chondrite, not a <sc>CI</sc>3. <i>Meteoritics and Planetary Science</i> , 2016, 51, 851-869.	1.6	36
18	Description of a very dense meteorite collection area in western Atacama: Insight into the long-term composition of the meteorite flux to Earth. <i>Meteoritics and Planetary Science</i> , 2016, 51, 468-482.	1.6	26

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19	INWARD RADIAL MIXING OF INTERSTELLAR WATER ICES IN THE SOLAR PROTOPLANETARY DISK. <i>Astrophysical Journal Letters</i> , 2016, 827, L1.	8.3	41
20	New constraints on the magnetic history of the CV parent body and the solar nebula from the Kaba meteorite. <i>Earth and Planetary Science Letters</i> , 2016, 455, 166-175.	4.4	33
21	Fossilized condensation lines in the Solar System protoplanetary disk. <i>Icarus</i> , 2016, 267, 368-376.	2.5	152
22	The formation conditions of enstatite chondrites: Insights from trace element geochemistry of olivine-bearing chondrules in Sahara 97096 (<sup>EH</sup>3). <i>Meteoritics and Planetary Science</i> , 2015, 50, 1624-1642.	1.6	28
23	Short time interval for condensation of high-temperature silicates in the solar accretion disk. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1298-1303.	7.1	33
24	Trace element geochemistry of ordinary chondrite chondrules: The type I/type II chondrule dichotomy. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 155, 47-67.	3.9	33
25	An early solar system magnetic field recorded in CM chondrites. <i>Earth and Planetary Science Letters</i> , 2015, 410, 62-74.	4.4	57
26	The Orgueil meteorite: 150 years of history. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1769-1794.	1.6	45
27	The Paris <sup>CM</sup> chondrite: Secondary minerals and asteroidal processing. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1232-1249.	1.6	75
28	Mineralogy and petrography of C asteroid regolith: The Sutter's Mill <sup>CM</sup> meteorite. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1997-2016.	1.6	57
29	Short duration thermal metamorphism in CR chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 122, 267-279.	3.9	39
30	Lithium isotopes as indicators of meteorite parent body alteration. <i>Meteoritics and Planetary Science</i> , 2013, 48, 872-878.	1.6	9
31	Trace element geochemistry of <sup>CR</sup> chondrite metal. <i>Meteoritics and Planetary Science</i> , 2013, 48, 1981-1999.	1.6	31
32	VARIABLE AND EXTREME IRRADIATION CONDITIONS IN THE EARLY SOLAR SYSTEM INFERRED FROM THE INITIAL ABUNDANCE OF <sup>10</sup> Be IN ISHEYEVO CAIs. <i>Astrophysical Journal Letters</i> , 2013, 763, L33.	8.3	41
33	Chondrule trace element geochemistry at the mineral scale. <i>Meteoritics and Planetary Science</i> , 2012, 47, 1695-1714.	1.6	38
34	On the aerodynamic redistribution of chondrite components in protoplanetary disks. <i>Icarus</i> , 2012, 220, 162-173.	2.5	54
35	Xenoliths and microxenoliths in H chondrites: Sampling the zodiacal cloud in the asteroid Main Belt. <i>Meteoritics and Planetary Science</i> , 2012, 47, 880-902.	1.6	29
36	Nature of volatile depletion and genetic relationships in enstatite chondrites and aubrites inferred from Zn isotopes. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 297-307.	3.9	85

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37	Evidence for an asteroid-comet continuum from simulations of carbonaceous microxenolith dynamical evolution. <i>Meteoritics and Planetary Science</i> , 2011, 46, 1863-1877.	1.6	19
38	ASTRONOMICAL OXYGEN ISOTOPIC EVIDENCE FOR SUPERNOVA ENRICHMENT OF THE SOLAR SYSTEM BIRTH ENVIRONMENT BY PROPAGATING STAR FORMATION. <i>Astrophysical Journal</i> , 2011, 729, 43.	4.5	26
39	THE CHROMIUM ISOTOPIC COMPOSITION OF THE UNGROUPED CARBONACEOUS CHONDRITE TAGISH LAKE. <i>Astrophysical Journal</i> , 2011, 736, 23.	4.5	33
40	<sup>53</sup> Mn- <sup>53</sup> Cr ages of Kaidun carbonates. <i>Meteoritics and Planetary Science</i> , 2011, 46, 275-283.	1.6	31
41	The densest meteorite collection area in hot deserts: The San Juan meteorite field (Atacama Desert.) <i>Tj ETQq1 1 0.784314 rgBT /Overlo</i>	1.6	38
42	The Asteroid-Comet Continuum: In Search of Lost Primitivity. <i>Elements</i> , 2011, 7, 29-34.	0.5	42
43	Massive stars and short-lived radionuclides in the Solar System. <i>EAS Publications Series</i> , 2011, 51, 289-297.	0.3	0
44	COMETARY ORIGIN OF THE ZODIACAL CLOUD AND CARBONACEOUS MICROMETEORITES. IMPLICATIONS FOR HOT DEBRIS DISKS. <i>Astrophysical Journal</i> , 2010, 713, 816-836.	4.5	422
45	The origin of <sup>60</sup> Fe and other short-lived radionuclides in the early solar system. <i>EAS Publications Series</i> , 2010, 41, 301-311.	0.3	4
46	Sulfur isotopic composition of Fe-Ni sulfide grains in CI and CM carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2010, 45, 885-898.	1.6	27
47	Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. <i>Science</i> , 2010, 328, 742-745.	12.6	160
48	EXTREME <sup>16</sup> O ENRICHMENT IN CALCIUM-ALUMINUM-RICH INCLUSIONS FROM THE ISHEYEVO (CH/CB) CHONDRITE. <i>Astrophysical Journal</i> , 2009, 698, L18-L22.	4.5	40
49	A unique basaltic micrometeorite expands the inventory of solar system planetary crusts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 6904-6909.	7.1	41
50	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
51	Contamination of the asteroid belt by primordial trans-Neptunian objects. <i>Nature</i> , 2009, 460, 364-366.	27.8	250
52	Dmitryivanovite: A new high-pressure calcium aluminum oxide from the Northwest Africa 470 CH3 chondrite characterized using electron backscatter diffraction analysis. <i>American Mineralogist</i> , 2009, 94, 746-750.	1.9	39
53	SUPERNOVA PROPAGATION AND CLOUD ENRICHMENT: A NEW MODEL FOR THE ORIGIN OF <sup>60</sup> Fe IN THE EARLY SOLAR SYSTEM. <i>Astrophysical Journal</i> , 2009, 694, L1-L5.	4.5	54
54	Circumstellar disks in high-mass star environments: the early solar system. <i>Proceedings of the International Astronomical Union</i> , 2009, 5, 746-747.	0.0	0

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55	Magnetic anisotropy of HED and Martian meteorites and implications for the crust of Vesta and Mars. <i>Earth and Planetary Science Letters</i> , 2008, 270, 280-289.	4.4	24
56	The classification of micrometeorites. <i>Meteoritics and Planetary Science</i> , 2008, 43, 497-515.	1.6	190
57	Magnetic classification of stony meteorites: 2. Non-ordinary chondrites. <i>Meteoritics and Planetary Science</i> , 2008, 43, 959-980.	1.6	73
58	Andreyivanovite: A second new phosphide from the Kaidun meteorite. <i>American Mineralogist</i> , 2008, 93, 1295-1299.	1.9	42
59	The Origin of Short-lived Radionuclides and the Astrophysical Environment of Solar System Formation. <i>Astrophysical Journal</i> , 2008, 680, 781-792.	4.5	91
60	The Oxygen Isotopic Composition of the Sun as a Test of the Supernova Origin of <sup>26</sup> Al and <sup>41</sup> Ca. <i>Astrophysical Journal</i> , 2007, 664, L123-L125.	4.5	36
61	Nitrogen and Carbon Isotopic Composition of the Sun Inferred from a High-Temperature Solar Nebular Condensate. <i>Astrophysical Journal</i> , 2007, 656, L33-L36.	4.5	111
62	Magnesium isotopic constraints on the origin of CBB chondrites. <i>Earth and Planetary Science Letters</i> , 2007, 256, 521-533.	4.4	40
63	Short-lived radioactive nuclides in meteorites and early solar system processes. <i>Comptes Rendus - Geoscience</i> , 2007, 339, 872-884.	1.2	19
64	Irradiation in the early solar system and the origin of short-lived radionuclides. <i>Comptes Rendus - Geoscience</i> , 2007, 339, 885-894.	1.2	9
65	Micrometeorites from Central Antarctic snow: The CONCORDIA collection. <i>Advances in Space Research</i> , 2007, 39, 605-611.	2.6	95
66	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
67	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. <i>Science</i> , 2006, 314, 1735-1739.	12.6	589
68	The orbit and atmospheric trajectory of the Orgueil meteorite from historical records. <i>Meteoritics and Planetary Science</i> , 2006, 41, 135-150.	1.6	104
69	Formation of the binary near-Earth object 1996 FG <sub>3</sub> : Can binary NEOs be the source of short-CRE meteorites?. <i>Meteoritics and Planetary Science</i> , 2006, 41, 874-887.	1.6	15
70	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. <i>Science</i> , 2006, 314, 1720-1724.	12.6	519
71	The Irradiation Origin of Beryllium Radioisotopes and Other Short-lived Radionuclides. <i>Astrophysical Journal</i> , 2006, 640, 1163-1170.	4.5	114
72	The origin of short-lived radionuclides in the solar system. <i>New Astronomy Reviews</i> , 2006, 50, 596-599.	12.8	15

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73	Isotopic Compositions of Cometary Matter Returned by Stardust. <i>Science</i> , 2006, 314, 1724-1728.	12.6	343
74	3. Solar System Formation and Early Evolution: the First 100 Million Years. <i>Earth, Moon and Planets</i> , 2006, 98, 39-95.	0.6	64
75	The meteorite fall at Aigle and the Biot report: exploring the cradle of meteoritics. <i>Geological Society Special Publication</i> , 2006, 256, 73-89.	1.3	16
76	Small Antarctic micrometeorites: A mineralogical and in situ oxygen isotope study. <i>Meteoritics and Planetary Science</i> , 2005, 40, 917-932.	1.6	40
77	On early Solar System chronology: Implications of an heterogeneous spatial distribution of $^{26}\text{Al}$ and $^{53}\text{Mn}$ . <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 3129-3144.	3.9	40
78	Hydrogen isotopic composition of water from fossil micrometeorites in howardites. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 3431-3443.	3.9	33
79	Mineralogy and texture of Fe-Ni sulfides in CI1 chondrites: Clues to the extent of aqueous alteration on the CI1 parent body. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 2687-2700.	3.9	72
80	Nebular and asteroidal modification of the iron isotope composition of chondritic components. <i>Earth and Planetary Science Letters</i> , 2005, 239, 203-218.	4.4	31
81	The Micrometeorite Program at Dome C. <i>EAS Publications Series</i> , 2005, 14, 51-56.	0.3	0
82	Laser ablation ICP-MS study of IIIAB irons and pallasites: constraints on the behaviour of highly siderophile elements during and after planetesimal core formation. <i>Chemical Geology</i> , 2004, 208, 5-28.	3.3	25
83	NWA 1152 and Sahara 00182: New primitive carbonaceous chondrites with affinities to the CR and CV groups. <i>Meteoritics and Planetary Science</i> , 2004, 39, 2009-2032.	1.6	8
84	A primitive dark inclusion with radiation-damaged silicates in the Ningqiang carbonaceous chondrite. <i>Meteoritics and Planetary Science</i> , 2003, 38, 305-322.	1.6	27
85	Mineralogy of carbonaceous chondritic microclasts in howardites: identification of C2 fossil micrometeorites. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 507-527.	3.9	81
86	Cross sections relevant to $^{3}\text{He}$ -ray line emission in solar flares: $^3\text{He}$ -induced reactions on $^{16}\text{O}$ nuclei. <i>Physical Review C</i> , 2003, 68, .	2.9	11
87	Mineralogy of Tagish Lake: An ungrouped type 2 carbonaceous chondrite. <i>Meteoritics and Planetary Science</i> , 2002, 37, 737-761.	1.6	207
88	A terrestrial origin for sulfate veins in CI1 chondrites. <i>Meteoritics and Planetary Science</i> , 2001, 36, 1321-1329.	1.6	142
89	The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. <i>Astrophysical Journal</i> , 2001, 548, 1029-1050.	4.5	292
90	Origin of short-lived radionuclides. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2001, 359, 1991-2004.	3.4	33

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91	Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. <i>Astrophysical Journal</i> , 2001, 548, 1051-1070.	4.5	193
92	Accretion of neon, organics, CO <sub>2</sub> , nitrogen and water from large interplanetary dust particles on the early Earth. <i>Planetary and Space Science</i> , 2000, 48, 1117-1137.	1.7	89
93	From individual to collective pinning: Effect of long-range elastic interactions. <i>Physical Review E</i> , 1998, 58, 1577-1590.	2.1	100
94	A compensated optical profilometer for wavefront control of Virgo gravitational wave antenna optics. <i>Measurement Science and Technology</i> , 1996, 7, 1032-1037.	2.6	1
95	Astronomical constraints on the emergence of life. , 0, , 118-135.		0
96	Obsidian and mafic volcanic glasses from the Philippines and Vietnam found in the Paris Museum Australasian tektite collection. <i>Meteoritics and Planetary Science</i> , 0, , .	1.6	1