Christopher D K Herd

List of Publications by Year
in descending order

76 papers	3,756 citations	147801 31 h-index	128289 60 g-index
84 all docs	84 docs citations	84 times ranked	3081 citing authors

#	Article	IF	Citations
1	The Provenances of Asteroids, and Their Contributions to the Volatile Inventories of the Terrestrial Planets. Science, 2012, 337, 721-723.	12.6	511
2	Oxygen fugacity and geochemical variations in the martian basalts: implications for martian basalt petrogenesis and the oxidation state of the upper mantle of Mars. Geochimica Et Cosmochimica Acta, 2002, 66, 2025-2036.	3.9	257
3	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	8.1	239
4	Origin and Evolution of Prebiotic Organic Matter As Inferred from the Tagish Lake Meteorite. Science, 2011, 332, 1304-1307.	12.6	189
5	A Reduced Organic Carbon Component in Martian Basalts. Science, 2012, 337, 212-215.	12.6	182
6	The oxygen fugacity of olivineâ€phyric martian basalts and the components within the mantle and crust of Mars. Meteoritics and Planetary Science, 2003, 38, 1793-1805.	1.6	139
7	Oxygen fugacity of martian basalts from electron microprobe oxygen and TEM-EELS analyses of Fe-Ti oxides. American Mineralogist, 2001, 86, 1015-1024.	1.9	125
8	Unusual nonterrestrial <scp>l</scp>â€proteinogenic amino acid excesses in the Tagish Lake meteorite. Meteoritics and Planetary Science, 2012, 47, 1347-1364.	1.6	106
9	Tissint Martian Meteorite: A Fresh Look at the Interior, Surface, and Atmosphere of Mars. Science, 2012, 338, 785-788.	12.6	100
10	Crystallization, melt inclusion, and redox history of a Martian meteorite: Olivine-phyric shergottite Larkman Nunatak 06319. Geochimica Et Cosmochimica Acta, 2010, 74, 4543-4576.	3.9	89
11	Spinels and oxygen fugacity in olivineâ€phyric and lherzolitic shergottites. Meteoritics and Planetary Science, 2003, 38, 1773-1792.	1.6	85
12	Elemental, isotopic, and structural changes in Tagish Lake insoluble organic matter produced by parent body processes. Meteoritics and Planetary Science, 2014, 49, 503-525.	1.6	75
13	What Martian Meteorites Reveal About the Interior and Surface of Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006523.	3.6	74
14	The potential science and engineering value of samples delivered to Earth by Mars sample return. Meteoritics and Planetary Science, 2019, 54, S3.	1.6	73
15	Basalts as Probes of Planetary Interior Redox State. Reviews in Mineralogy and Geochemistry, 2008, 68, 527-553.	4.8	72
16	The sustainability of habitability on terrestrial planets: Insights, questions, and needed measurements from Mars for understanding the evolution of Earthâ€like worlds. Journal of Geophysical Research E: Planets, 2016, 121, 1927-1961.	3.6	72
17	Insights into the redox history of the NWA 1068/1110 martian basalt from mineral equilibria and vanadium oxybarometry. American Mineralogist, 2006, 91, 1616-1627.	1.9	64
18	Petrography, mineral chemistry, and crystallization history of olivineâ€phyric shergottite NWA 6234: A new melt composition. Meteoritics and Planetary Science, 2013, 48, 854-871.	1.6	61

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19	Non-basaltic asteroidal magmatism during the earliest stages of solar system evolution: A view from Antarctic achondrites Graves Nunatak 06128 and 06129. Geochimica Et Cosmochimica Acta, 2010, 74, 1172-1199.	3.9	59
20	The Northwest Africa 8159 martian meteorite: Expanding the martian sample suite to the early Amazonian. Geochimica Et Cosmochimica Acta, 2017, 218, 1-26.	3.9	58
21	Primitive olivineâ€phyric shergottite NWA 5789: Petrography, mineral chemistry, and cooling history imply a magma similar to Yamatoâ€980459. Meteoritics and Planetary Science, 2011, 46, 116-133.	1.6	57
22	Symplectites derived from metastable phases in martian basaltic meteorites. American Mineralogist, 2002, 87, 1351-1359.	1.9	55
23	The Meteoritical Bulletin, No. 102. Meteoritics and Planetary Science, 2015, 50, 1662-1662.	1.6	53
24	Advanced Curation of Astromaterials for Planetary Science. Space Science Reviews, 2019, 215, 1.	8.1	50
25	Testing variations within the Tagish Lake meteoriteâ€"I: Mineralogy and petrology of pristine samples. Meteoritics and Planetary Science, 2014, 49, 473-502.	1.6	45
26	Geochronology of the Martian meteorite Zagami revealed by Uâ€“Pb ion probe dating of accessory minerals. Earth and Planetary Science Letters, 2013, 374, 156-163.	4.4	43
27	Isotopic and petrographic evidence for young Martian basalts. Geochimica Et Cosmochimica Acta, 2008, 72, 5819-5837.	3.9	41
28	The behavior of Li and B during planetary basalt crystallization. American Mineralogist, 2004, 89, 832-840.	1.9	40
29	Northwest Africa 4797: A strongly shocked ultramafic poikilitic shergottite related to compositionally intermediate Martian meteorites. Meteoritics and Planetary Science, 2012, 47, 1449-1474.	1.6	39
30	Light lithophile elements in martian basalts: Evaluating the evidence for magmatic water degassing. Geochimica Et Cosmochimica Acta, 2005, 69, 2431-2440.	3.9	35
31	Localized shock melting in lherzolitic shergottite Northwest Africa 1950: Comparison with Allan Hills 77005. Meteoritics and Planetary Science, 2007, 42, 63-80.	1.6	33
32	The Meteoritical Bulletin, No. 96, September 2009. Meteoritics and Planetary Science, 2009, 44, 1355-1397.	1.6	32
33	Soluble organic compounds in the Tagish Lake meteorite. Meteoritics and Planetary Science, 2014, 49, 526-549.	1.6	31
34	Experimental petrology of the Tissint meteorite: Redox estimates, crystallization curves, and evaluation of petrogenetic models. Meteoritics and Planetary Science, 2017, 52, 125-146.	1.6	28
35	Dynamic crystallization of shock melts in Allan Hills 77005: Implications for melt pocket formation in Martian meteorites. Geochimica Et Cosmochimica Acta, 2007, 71, 5267-5285.	3.9	27
36	Experimental investigation into the effects of oxidation during petrogenesis of the Tissint meteorite. Meteoritics and Planetary Science, 2018, 53, 1341-1363.	1.6	27

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37	The Whitecourt meteorite impact crater, Alberta, Canada. Meteoritics and Planetary Science, 2010, 45, 1429-1445.	1.6	26
38	Water abundance in the Tagish Lake meteorite from <scp>TGA</scp> and <scp>IR</scp> spectroscopy: Evaluation of aqueous alteration. Meteoritics and Planetary Science, 2019, 54, 1951-1972.	1.6	25
39	The behavior of Co and Ni in olivine in planetary basalts: An experimental investigation. American Mineralogist, 2009, 94, 244-255.	1.9	24
40	Combining meteorites and missions to explore Mars. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19159-19164.	7.1	23
41	An experimental and petrographic investigation of Elephant Moraine 79001 lithology A: Implications for its petrogenesis and the partitioning of chromium and vanadium in a martian basalt. Meteoritics and Planetary Science, 2002, 37, 987-1000.	1.6	22
42	Experimental study of polybaric REE partitioning between olivine, pyroxene and melt of the Yamato 980459 composition: Insights into the petrogenesis of depleted shergottites. Geochimica Et Cosmochimica Acta, 2009, 73, 3471-3492.	3.9	22
43	Reflectance spectroscopy of insoluble organic matter (IOM) and carbonaceous meteorites. Meteoritics and Planetary Science, 2019, 54, 1051-1068.	1.6	22
44	Light lithophile elements in pyroxenes of Northwest Africa (NWA) 817 and other Martian meteorites: Implications for water in Martian magmas. Geochimica Et Cosmochimica Acta, 2006, 70, 2919-2934.	3.9	21
45	The Meteoritical Bulletin, No. 97. Meteoritics and Planetary Science, 2010, 45, 449-493.	1.6	21
46	Anatomy of a young impact event in central Alberta, Canada: Prospects for the missing Holocene impact record. Geology, 2008, 36, 955.	4.4	20
47	The Meteoritical Bulletin, No. 101. Meteoritics and Planetary Science, 2015, 50, 1661-1661.	1.6	20
48	Cold curation of pristine astromaterials: Insights from the Tagish Lake meteorite. Meteoritics and Planetary Science, 2016, 51, 499-519.	1.6	20
49	Martian regolith in Elephant Moraine 79001 shock melts? Evidence from major element composition and sulfur speciation. Geochimica Et Cosmochimica Acta, 2010, 74, 4829-4843.	3.9	17
50	Testing variations within the Tagish Lake meteoriteâ€”<scp>II</scp>: Wholeâ€rock geochemistry of pristine samples. Meteoritics and Planetary Science, 2014, 49, 1100-1118.	1.6	16
51	New insights into the heterogeneity of the Tagish Lake meteorite: Soluble organic compositions of variously altered specimens. Meteoritics and Planetary Science, 2019, 54, 1283-1302.	1.6	16
52	MGSâ€TES Spectra Suggest a Basaltic Component in the Regolith of Phobos. Journal of Geophysical Research E: Planets, 2018, 123, 2467-2484.	3.6	14
53	Evidence of impact melting and post-impact decomposition of sedimentary target rocks from the Steen River impact structure, Alberta, Canada. Earth and Planetary Science Letters, 2019, 515, 173-186.	4.4	14
54	The Meteoritical Bulletin, No. 98, September 2010. Meteoritics and Planetary Science, 2010, 45, 1530-1551.	1.6	13

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55	A previously unrecognized high-temperature impactite from the Steen River impact structure, Alberta, Canada. Geology, 2017, 45, 291-294.	4.4	11
56	An igneous-textured clast in the Peace River meteorite: insights into accretion and metamorphism of asteroids in the early solar system. Canadian Journal of Earth Sciences, 2013, 50, 14-25.	1.3	10
57	19. Basalts as Probes of Planetary Interior Redox State. , 2008, , 527-554.		10
58	Martian low-temperature alteration materials in shock-melt pockets in Tissint: Constraints on their preservation in shergottite meteorites. Geochimica Et Cosmochimica Acta, 2017, 210, 228-246.	3.9	9
59	Aqueous Alteration on Asteroids Simplifies Soluble Organic Matter Mixtures. Astrophysical Journal Letters, 2021, 920, L39.	8.3	9
60	The Northwest Africa 8159 (NWA 8159) Martian Meteorite Part 2. Spinel-orthopyroxene intergrowths. A record of fO2 and crust-basalt interactions. Geochimica Et Cosmochimica Acta, 2019, 258, 242-257.	3.9	7
61	Hydrous olivine alteration on Mars and Earth. Meteoritics and Planetary Science, 2020, 55, 1011-1030.	1.6	7
62	A laser probe ⁴⁰ Ar/ ³⁹ Ar investigation of poikilitic shergottite NWA 4797: implications for the timing of shock metamorphism. Geological Society Special Publication, 2014, 378, 317-332.	1.3	6
63	Mineralogy, petrology, and distribution of meteorites at the Whitecourt crater, Alberta, Canada. Meteoritics and Planetary Science, 2015, 50, 305-317.	1.6	5
64	Investigation of impact melt in allochthonous craterâ€fill deposits of the Steen River impact structure, Alberta, Canada. Meteoritics and Planetary Science, 2018, 53, 2285-2305.	1.6	5
65	Organic contamination on the surface of meteorites as a function of space and time: A case study of the Buzzard Coulee H4 chondrite. Meteoritics and Planetary Science, 2020, 55, .	1.6	5
66	In situ analysis of platinum group elements in equilibrated ordinary chondrite kamacite and taenite. Meteoritics and Planetary Science, 2020, 55, 679-702.	1.6	5
67	Effects of aqueous alteration on primordial noble gases and presolar SiC in the carbonaceous chondrite Tagish Lake. Meteoritics and Planetary Science, 2020, 55, 1257-1280.	1.6	4
68	DISTINGUISHING BETWEEN TERRESTRIAL AND EXTRATERRESTRIAL ORGANIC COMPOUNDS IN THE CM2 AGUAS ZARCAS CARBONACEOUS CHONDRITE: IMPLICATIONS FOR INTRINSIC ORGANIC MATTER. , 2020, , .		3
69	Distinguishing between terrestrial and extraterrestrial organic compounds in the CM2 Aguas Zarcas carbonaceous chondrite: Implications for intrinsic organic matter. Meteoritics and Planetary Science, 2022, 57, 883-911.	1.6	3
70	Organic compounds in the Tarda C2 ungrouped carbonaceous chondrite: Evaluating the sources of contamination in a desert fall. Meteoritics and Planetary Science, 2022, 57, 850-865.	1.6	3
71	Reply to comment on â€œGeochronology of the Martian meteorite Zagami revealed by Uâ€“Pb ion probe dating of accessory mineralsâ€• Earth and Planetary Science Letters, 2014, 385, 218-220.	4.4	2
72	Best practices for the use of meteorite names in publications. Meteoritics and Planetary Science, 2019, 54, 1397-1400.	1.6	2

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73	Petrographic controls on baddeleyite occurrence in a suite of eight basaltic shergottites. Meteoritics and Planetary Science, 2021, 56, 1502-1530.	1.6	2
74	Hyperspectral imaging of drill core from the Steen River impact structure, Canada: Implications for hydrothermal activity and formation of sueviteâ€like breccias. Meteoritics and Planetary Science, 2020, 55, 1564-1580.	1.6	1
75	3D Nanoscale Analysis Using Focused Ion Beam Tomography of Carbonaceous Nanoglobules in Matrix Materials from the Tagish Lake Meterorite. Microscopy and Microanalysis, 2014, 20, 318-319.	0.4	0
76	Feâ€Ni sulfides in Tagish Lake: Implications for nebular and parent body conditions of formation. Meteoritics and Planetary Science, 2022, 57, 1267-1287.	1.6	0