Adrian Brearley

List of Publications by Year
in descending order

107 papers	6,880 citations	61984 43 h-index	62596 80 g-index
109 all docs	109 docs citations	109 times ranked	3659 citing authors

#	Article	IF	Citations
1	Plagioclase alteration and equilibration in ordinary chondrites: Metasomatism during thermal metamorphism. Geochimica Et Cosmochimica Acta, 2022, 316, 201-229.	3.9	13
2	Fayalite formation through hydrothermal experiments: Insights into early fluidâ€assisted aqueous alteration processes on asteroids. Meteoritics and Planetary Science, 2022, 57, 381-391.	1.6	2
3	A record of low-temperature asteroidal processes of amoeboid olivine aggregates from the Kainsaz CO3.2 chondrite. Geochimica Et Cosmochimica Acta, 2022, 322, 109-128.	3.9	2
4	Smooth rims in Queen Alexandra Range (QUE) 99177: Fluidâ€“chondrule interactions and clues on the geochemical conditions of the primordial fluid that altered CR carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2022, 325, 39-64.	3.9	3
5	Nanophase iron carbides in fineâ€grained rims in CM2 carbonaceous chondrites: Formation of organic material by Fischerâ€“Tropsch catalysis in the solar nebula. Meteoritics and Planetary Science, 2021, 56, 108-126.	1.6	8
6	The formation and alteration history of a forsterite-bearing Type C CAI from Allende: Evidence for a Type B CAI precursor, and implications for fluid-assisted metasomatism on the CV chondrite parent body. Geochimica Et Cosmochimica Acta, 2021, 293, 277-307.	3.9	3
7	The fall of the Murchison meteorite. Meteoritics and Planetary Science, 2021, 56, 8-10.	1.6	1
8	Emerging investigator series: entrapment of uraniumâ€“phosphorus nanocrystals inside root cells of Tamarix plants from a mine waste site. Environmental Sciences: Processes and Impacts, 2021, 23, 73-85.	3.5	2
9	Microstructures of enstatite in fine-grained CAIs from CV3 chondrites: Implications for mechanisms and conditions of formation. Geochimica Et Cosmochimica Acta, 2021, 296, 131-151.	3.9	3
10	Uptake and Toxicity of Respirable Carbon-Rich Uranium-Bearing Particles: Insights into the Role of Particulates in Uranium Toxicity. Environmental Science & Technology, 2021, 55, 9949-9957.	10.0	10
11	An evolutionary condensation sequence revealed by mineralogically-distinct nodules in fine-grained, spinel-rich inclusions from CV3 chondrites: Implications for the genetic links between different types of non-igneous refractory inclusions. Geochimica Et Cosmochimica Acta, 2021, 308, 75-100.	3.9	1
12	Xenoliths in ordinary chondrites and ureilites: Implications for early solar system dynamics. Meteoritics and Planetary Science, 2021, 56, 1949-1987.	1.6	3
13	Crystal Chemistry of Carnotite in Abandoned Mine Wastes. Minerals (Basel, Switzerland), 2020, 10, 883.	2.0	5
14	The effects of secondary processing in the unique carbonaceous chondrite Miller Range 07687. Meteoritics and Planetary Science, 2020, 55, 1228-1256.	1.6	8
15	Amorphous silicates in the matrix of Semarkona: The first evidence for the localized preservation of pristine matrix materials in the most unequilibrated ordinary chondrites. Meteoritics and Planetary Science, 2020, 55, 649-668.	1.6	50
16	Altered primary iron sulfides in <scp>CM</scp>2 and <scp>CR</scp>2 carbonaceous chondrites: Insights into parent body processes. Meteoritics and Planetary Science, 2020, 55, 496-523.	1.6	16
17	Gadolinium-Based Contrast Agent Use, Their Safety, and Practice Evolution. Kidney360, 2020, 1, 561-568.	2.1	59
18	Valence determinations and oxybarometry on FIBâ€sectioned olivine and pyroxene using correlated Ti, V, and Cr microâ€XAFS spectroscopy: Evaluation of ionâ€milling effects and application to Antarctic micrometeorite grains. Meteoritics and Planetary Science, 2020, 55, 2553-2569.	1.6	1

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19	Ironâ€rich olivine in the unequilibrated ordinary chondrite, METÂ00526: Earliest stages of formation. Meteoritics and Planetary Science, 2020, 55, 2652-2669.	1.6	6
20	Mineralogy and oxygen isotope systematics of magnetite grains and a magnetiteâ€dolomite assemblage in hydrated fineâ€grained Antarctic micrometeorites. Meteoritics and Planetary Science, 2019, 54, 1973-1989.	1.6	12
21	New observations on highâ€pressure phases in a shock melt vein in the Villalbeto de la PeÃ±a meteorite: Insights into the shock behavior of diopside. Meteoritics and Planetary Science, 2019, 54, 2845-2863.	1.6	7
22	Aluminum-26 chronology of dust coagulation and early solar system evolution. Science Advances, 2019, 5, eaaw3350.	10.3	18
23	Calcium in Carbonate Water Facilitates the Transport of U(VI) in Brassica juncea Roots and Enables Root-to-Shoot Translocation. ACS Earth and Space Chemistry, 2019, 3, 2190-2196.	2.7	5
24	Origin of 16O-rich fine-grained Ca-Al-rich inclusions of different mineralogy and texture. Chemie Der Erde, 2019, 79, 125543.	2.0	9
25	Respirable Uranyl-Vanadate-Containing Particulate Matter Derived From a Legacy Uranium Mine Site Exhibits Potentiated Cardiopulmonary Toxicity. Toxicological Sciences, 2018, 164, 101-114.	3.1	35
26	Hydrothermal evolution of the morphology, molecular composition, and distribution of organic matter in <scp>CR</scp> (Renazzoâ€type) chondrites. Meteoritics and Planetary Science, 2018, 53, 1006-1029.	1.6	29
27	Halogens in Chondritic Meteorites. Springer Geochemistry, 2018, , 871-958.	0.1	5
28	Effect of Calcium on the Bioavailability of Dissolved Uranium(VI) in Plant Roots under Circumneutral pH. Environmental Science & Technology, 2018, 52, 13089-13098.	10.0	32
29	Primary iron sulfides in <scp>CM</scp> and <scp>CR</scp> carbonaceous chondrites: Insights into nebular processes. Meteoritics and Planetary Science, 2018, 53, 2078-2106.	1.6	29
30	Microstructures and formation history of melilite-rich calciumâ€“aluminum-rich inclusions from the ALHA77307 CO3.0 chondrite. Geochimica Et Cosmochimica Acta, 2017, 201, 136-154.	3.9	15
31	Investigation of Organic Matter at The Micron Scale in Carbonaceous Chondrites: a Spyglass to Study The Early Solar System.. Microscopy and Microanalysis, 2016, 22, 1788-1789.	0.4	1
32	Post Gold King Mine Spill Investigation of Metal Stability in Water and Sediments of the Animas River Watershed. Environmental Science & Technology, 2016, 50, 11539-11548.	10.0	45
33	Microstructural constraints on complex thermal histories of refractory CAI-like objects in an amoeboid olivine aggregate from the ALHA77307 CO3.0 chondrite. Geochimica Et Cosmochimica Acta, 2016, 183, 176-197.	3.9	11
34	Microchondrules in two unequilibrated ordinary chondrites: Evidence for formation by splattering from chondrules during stochastic collisions in the solar nebula. Meteoritics and Planetary Science, 2016, 51, 884-905.	1.6	15
35	Episodic carbonate precipitation in the CM chondrite ALH 84049: An ion microprobe analysis of O and C isotopes. Geochimica Et Cosmochimica Acta, 2016, 175, 195-207.	3.9	24
36	Microstructural evidence for a disequilibrium condensation origin for hiboniteâ€spinel inclusions in the <scp>ALHA</scp>77307 <scp>CO</scp>3.0 chondrite. Meteoritics and Planetary Science, 2015, 50, 2121-2136.	1.6	25

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37	Elevated Concentrations of U and Co-occurring Metals in Abandoned Mine Wastes in a Northeastern Arizona Native American Community. Environmental Science & Technology, 2015, 49, 8506-8514.	10.0	82
38	Widespread oxidized and hydrated amorphous silicates in CR chondrites matrices: Implications for alteration conditions and H2 degassing of asteroids. Earth and Planetary Science Letters, 2015, 420, 162-173.	4.4	107
39	Microstructural evidence for complex formation histories of amoeboid olivine aggregates from the <scp>ALHA</scp>77307 <scp>CO</scp>3.0 chondrite. Meteoritics and Planetary Science, 2015, 50, 904-925.	1.6	22
40	Widespread hydrothermal alteration minerals in the fineâ€grained matrices of the Tieschitz unequilibrated ordinary chondrite. Meteoritics and Planetary Science, 2014, 49, 1323-1349.	1.6	48
41	Chlorine distribution and its isotopic composition in â€œrusty rockâ€•66095. Implications for volatile element enrichments of â€œrusty rockâ€•and lunar soils, origin of â€œrustyâ€•alteration, and volatile element behavior on the Moon. Geochimica Et Cosmochimica Acta, 2014, 139, 411-433.	3.9	52
42	Evolution of organic matter in Orgueil, Murchison and Renazzo during parent body aqueous alteration: In situ investigations. Geochimica Et Cosmochimica Acta, 2014, 131, 368-392.	3.9	149
43	Coordinated NanoSIMS and FIB-TEM analyses of organic matter and associated matrix materials in CR3 chondrites. Geochimica Et Cosmochimica Acta, 2014, 139, 1-25.	3.9	40
44	Relationships between organics, water and early stages of aqueous alteration in the pristine CR3.0 chondrite MET 00426. Geochimica Et Cosmochimica Acta, 2014, 131, 344-367.	3.9	129
45	The chlorine isotope composition of chondrites and Earth. Geochimica Et Cosmochimica Acta, 2013, 107, 189-204.	3.9	112
46	Amorphization and D/H fractionation of kerogens during experimental electron irradiation: Comparison with chondritic organic matter. Icarus, 2013, 226, 101-110.	2.5	39
47	Metasomatism in the Early Solar System: The Record from Chondritic Meteorites. Lecture Notes in Earth System Sciences, 2013, , 659-789.	0.6	61
48	Rapid postâ€mortem maturation of diatom silica oxygen isotope values. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	31
49	Effects of secondary alteration on the composition of free and IOM-derived monocarboxylic acids in carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2011, 75, 2309-2323.	3.9	41
50	Extremely Na- and Cl-rich chondrule from the CV3 carbonaceous chondrite Allende. Geochimica Et Cosmochimica Acta, 2011, 75, 4752-4770.	3.9	22
51	Deciphering the nebular and asteroidal record of silicates and organic material in the matrix of the reduced CV3 chondrite Vigarano. Meteoritics and Planetary Science, 2011, 46, 252-274.	1.6	30
52	Feâ€Mn systematics of type IIA chondrules in unequilibrated CO, CR, and ordinary chondrites. Meteoritics and Planetary Science, 2011, 46, 513-533.	1.6	63
53	Dust particle size evolution. , 2010, , 191-229.		12
54	Early solar system processes recorded in the matrices of two highly pristine CR3 carbonaceous chondrites, MET 00426 and QUE 99177. Geochimica Et Cosmochimica Acta, 2010, 74, 1146-1171.	3.9	193

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55	Structural characterization of terrestrial microbial Mn oxides from Pinal Creek, AZ. Geochimica Et Cosmochimica Acta, 2009, 73, 889-910.	3.9	112
56	Characterization of micronâ€sized Fe,Ni metal grains in fineâ€grained rims in the Yâ€791198 CM2 carbonaceous chondrite: Implications for asteroidal and preaccretionary models for aqueous alteration. Meteoritics and Planetary Science, 2008, 43, 1419-1438.	1.6	14
57	Oxygen Isotopes of Chondritic Components. Reviews in Mineralogy and Geochemistry, 2008, 68, 141-186.	4.8	102
58	Mineralogy, aqueous alteration, and primitive textural characteristics of fine-grained rims in the Y-791198 CM2 carbonaceous chondrite: TEM observations and comparison to ALHA81002. Geochimica Et Cosmochimica Acta, 2008, 72, 602-625.	3.9	99
59	A TEM study of thermally modified comet 81P/Wild 2 dust particles by interactions with the aerogel matrix during the Stardust capture process. Meteoritics and Planetary Science, 2008, 43, 97-120.	1.6	73
60	8. Oxygen Isotopes of Chondritic Components. , 2008, , 141-186.		34
61	Chlorine isotope homogeneity of the mantle, crust and carbonaceous chondrites. Nature, 2007, 446, 1062-1065.	27.8	166
62	Origin and mechanical significance of honeycomb garnet in high-pressure metasedimentary rocks from the Tauern Window, Eastern Alps. Journal of Metamorphic Geology, 2007, 25, 565-583.	3.4	29
63	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
64	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. Science, 2006, 314, 1735-1739.	12.6	589
65	Experimental aqueous alteration of the Allende meteorite under oxidizing conditions: Constraints on asteroidal alteration. Geochimica Et Cosmochimica Acta, 2006, 70, 1040-1058.	3.9	52
66	The Action of Water. , 2006, , 587-624.		284
67	The onset of metamorphism in ordinary and carbonaceous chondrites. Meteoritics and Planetary Science, 2005, 40, 87-122.	1.6	318
68	Carbonates in Vigarano: Terrestrial, preterrestrial, or both?. Meteoritics and Planetary Science, 2005, 40, 609-625.	1.6	27
69	Mineralogy and petrology of a mullite-bearing pseudotachylyte: Constraints on the temperature of coseismic frictional fusion. American Mineralogist, 2004, 89, 1486-1495.	1.9	22
70	Magnetite in ALH 84001: An origin by shockâ€induced thermal decomposition of iron carbonate. Meteoritics and Planetary Science, 2003, 38, 849-870.	1.6	36
71	Zoned chondrules in Semarkona: Evidence for highâ€and lowâ€temperature processing. Meteoritics and Planetary Science, 2002, 37, 49-73.	1.6	90
72	Aqueous alteration of chondrules in the CM carbonaceous chondrite, Allan Hills 81002: implications for parent body alteration. Geochimica Et Cosmochimica Acta, 2001, 65, 495-518.	3.9	122

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73	Episodic weakening and strengthening during synmetamorphic deformation in a deep-crustal shear zone in the Alps. Geological Society Special Publication, 2001, 186, 141-156.	1.3	22
74	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
75	Bleached chondrules: Evidence for widespread aqueous processes on the parent asteroids of ordinary chondrites. Meteoritics and Planetary Science, 2000, 35, 467-486.	1.6	155
76	Ironâ€rich aureoles in the CM carbonaceous chondrites Murray, Murchison, and Allan Hills 81002: Evidence for in situ aqueous alteration. Meteoritics and Planetary Science, 2000, 35, 1291-1308.	1.6	59
77	Evidence for lowâ€temperature growth of fayalite and hedenbergite in MacAlpine Hills 88107, an ungrouped carbonaceous chondrite related to the CMâ€CO clan. Meteoritics and Planetary Science, 2000, 35, 1365-1386.	1.6	46
78	Origin of Graphitic Carbon and Pentlandite in Matrix Olivines in the Allende Meteorite. Science, 1999, 285, 1380-1382.	12.6	90
79	Mineralogy, petrography, bulk chemical, iodineâ€xenon, and oxygenâ€isotopic compositions of dark inclusions in the reduced CV3 chondrite Efremovka. Meteoritics and Planetary Science, 1999, 34, 67-89.	1.6	60
80	Disordered Biopyriboles, Amphibole, and Talc in the Allende Meteorite: Products of Nebular or Parent Body Aqueous Alteration?. Science, 1997, 276, 1103-1105.	12.6	83
81	Chondrites and the Solar Nebula. Science, 1997, 278, 76-77.	12.6	6
82	Phyllosilicates in the matrix of the unique carbonaceous chondrite Lewis Cliff 85332 and possible implications for the aqueous alteration of CI chondrites. Meteoritics and Planetary Science, 1997, 32, 377-388.	1.6	55
83	Thermal histories of IVA stony-iron and iron meteorites: Evidence for asteroid fragmentation and reaccretion. Geochimica Et Cosmochimica Acta, 1996, 60, 3103-3113.	3.9	48
84	A Critical Evaluation of the Evidence for Hot Accretion. Icarus, 1996, 124, 86-96.	2.5	15
85	Origin and history of impact-melt rocks of enstatite chondrite parentage. Geochimica Et Cosmochimica Acta, 1995, 59, 161-175.	3.9	76
86	Aqueous alteration and brecciation in Bells, an unusual, saponite-bearing, CM chondrite. Geochimica Et Cosmochimica Acta, 1995, 59, 2291-2317.	3.9	105
87	Distribution of moderately volatile trace elements in fine-grained chondrule rims in the unequilibrated CO3 chondrite, ALH A77307. Geochimica Et Cosmochimica Acta, 1995, 59, 4307-4316.	3.9	21
88	Paleomagnetism of the Middle Proterozoic Laramie anorthosite complex and Sherman Granite, southern Laramie Range, Wyoming and Colorado. Journal of Geophysical Research, 1994, 99, 17997-18020.	3.3	35
89	Phase Transitions Between beta and ggr (Mg, Fe)2SiO4 in the Earth's Mantle: Mechanisms and Rheological Implications. Science, 1994, 264, 1445-1448.	12.6	30
90	Transformation mechanisms of San Carlos olivine to (MgFe)2SiO4 Î²-phase under subduction zone conditions. Physics of the Earth and Planetary Interiors, 1994, 86, 45-67.	1.9	26

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91	Matrix and fine-grained rims in the unequilibrated CO3 chondrite, ALHA77307: Origins and evidence for diverse, primitive nebular dust components. Geochimica Et Cosmochimica Acta, 1993, 57, 1521-1550.	3.9	235
92	Occurrence and possible significance of rare Ti oxides (MagnÃ©li phases) in carbonaceous chondrite matrices. Meteoritics, 1993, 28, 590-595.	1.4	34
93	A Sim investigation of REE chemistry of garnet in garnetite associated with the Broken Hill Pb-Zn-Ag orebodies, Australia. Canadian Mineralogist, 1993, 31, 371-379.	1.0	17
94	CI chondrite-like clasts in the Nilpena polymict ureilite: Implications for aqueous alteration processes in CI chondrites. Geochimica Et Cosmochimica Acta, 1992, 56, 1373-1386.	3.9	77
95	Mechanisms of the transformations between the ?, ? and ? polymorphs of Mg2SiO4 at 15 GPa. Physics and Chemistry of Minerals, 1992, 18, 343.	0.8	78
96	Mineralogy and possible origin of an unusual Crâ€rich inclusion in the Los Martinez (L6) chondrite. Meteoritics, 1991, 26, 287-300.	1.4	20
97	Mechanism of the Î³â€“Î² phase transformation of Mg2SiO4 at high temperature and pressure. Nature, 1990, 348, 628-631.	27.8	39
98	Effects of H2O on the Disequilibrium Breakdown of Muscovite+Quartz. Journal of Petrology, 1990, 31, 925-956.	2.8	85
99	Carbon-rich aggregates in type 3 ordinary chondrites: Characterization, origins, and thermal history. Geochimica Et Cosmochimica Acta, 1990, 54, 831-850.	3.9	90
100	The Shallowater aubrite: Evidence for origin by planetesimal impacts. Geochimica Et Cosmochimica Acta, 1989, 53, 3291-3307.	3.9	86
101	Chemical, isotopic and mineralogical evidence for the origin of matrix in ordinary chondrites. Geochimica Et Cosmochimica Acta, 1989, 53, 2081-2093.	3.9	56
102	Nature and origin of matrix in the unique type 3 chondrite, Kakangari. Geochimica Et Cosmochimica Acta, 1989, 53, 2395-2411.	3.9	66
103	The physical isolation and identification of carriers of geologically stable remanent magnetization: paleomagnetic and rock magnetic microanalysis and electron microscopy. Geophysical Research Letters, 1988, 15, 479-482.	4.0	25
104	Chloritoid from Low-Grade Pelitic Rocks in North Wales. Mineralogical Magazine, 1988, 52, 394-396.	1.4	6
105	A natural example of the disequilibrium breakdown of biotite at high temperature: TEM observations and comparison with experimental kinetic data. Mineralogical Magazine, 1987, 51, 93-106.	1.4	51
106	An electron optical study of muscovite breakdown in pelitic xenoliths during pyrometamorphism. Mineralogical Magazine, 1986, 50, 385-397.	1.4	35
107	Magnetite exsolution in almandine garnet. Mineralogical Magazine, 1986, 50, 621-633.	1.4	20