Peter R Buseck

List of Publications by Year
in descending order

78 papers	5,633 citations	70961 41 h-index	79541 73 g-index
84 all docs	84 docs citations	84 times ranked	5571 citing authors

#	Article	IF	Citations
1	Fine Ashâ€Bearing Particles as a Major Aerosol Component in Biomass Burning Smoke. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	13
2	Dehydration of Î´-AlOOH in Earthâ€™s Deep Lower Mantle. Minerals (Basel, Switzerland), 2020, 10, 384.	0.8	11
3	Mixing states of Amazon basin aerosol particles transported over long distances using transmission electron microscopy. Atmospheric Chemistry and Physics, 2020, 20, 11923-11939.	1.9	25
4	Rapid evolution of aerosol particles and their optical properties downwind of wildfires in the western US. Atmospheric Chemistry and Physics, 2020, 20, 13319-13341.	1.9	44
5	On the Structure, Magnetic Properties, and Infrared Spectra of Iron Pseudocarbynes in the Interstellar Medium. Astrophysical Journal, 2019, 879, 2.	1.6	11
6	Spherical tarball particles form through rapid chemical and physical changes of organic matter in biomass-burning smoke. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19336-19341.	3.3	70
7	Volume changes upon heating of aerosol particles from biomass burning using transmission electron microscopy. Aerosol Science and Technology, 2018, 52, 46-56.	1.5	23
8	Formation and evolution of tar balls from northwestern US wildfires. Atmospheric Chemistry and Physics, 2018, 18, 11289-11301.	1.9	67
9	Water-bearing, high-pressure Ca-silicates. Earth and Planetary Science Letters, 2017, 469, 148-155.	1.8	11
10	Anthropogenic influences on the physical state of submicron particulate matter over a tropical forest. Atmospheric Chemistry and Physics, 2017, 17, 1759-1773.	1.9	52
11	Pseudocarbynes: Charge-Stabilized Carbon Chains. Journal of Physical Chemistry Letters, 2016, 7, 1675-1681.	2.1	46
12	Changes in shape and composition of sea-salt particles upon aging in an urban atmosphere. Atmospheric Environment, 2015, 100, 1-9.	1.9	52
13	Lonsdaleite is faulted and twinned cubic diamond and does not exist as a discrete material. Nature Communications, 2014, 5, 5447.	5.8	201
14	In-situ high-pressure transmission electron microscopy for Earth and materials sciences. American Mineralogist, 2014, 99, 1521-1527.	0.9	2
15	Ns-Soot: A Material-Based Term for Strongly Light-Absorbing Carbonaceous Particles. Aerosol Science and Technology, 2014, 48, 777-788.	1.5	90
16	Carbon storage at defect sites in mantle mineral analogues. Nature Geoscience, 2013, 6, 875-878.	5.4	11
17	Changes of nsâ€soot mixing states and shapes in an urban area during CalNex. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3723-3730.	1.2	66
18	Atmospheric tar balls from biomass burning in Mexico. Journal of Geophysical Research, 2011, 116, .	3.3	99

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19	Shapes of internally mixed hygroscopic aerosol particles after deliquescence, and their effect on light scattering. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	41
20	Fluctuation electron microscopy of medium-range order in ion-irradiated zircon. Philosophical Magazine, 2010, 90, 4661-4677.	0.7	8
21	Nature and Climate Effects of Individual Tropospheric Aerosol Particles. Annual Review of Earth and Planetary Sciences, 2010, 38, 17-43.	4.6	177
22	Shapes of soot aerosol particles and implications for their effects on climate. Journal of Geophysical Research, 2010, 115, .	3.3	326
23	Internally mixed atmospheric aerosol particles: Hygroscopic growth and light scattering. Journal of Geophysical Research, 2010, 115, .	3.3	51
24	Hosted and Free-Floating Metal-Bearing Atmospheric Nanoparticles in Mexico City. Environmental Science & Technology, 2010, 44, 2299-2304.	4.6	63
25	Tubular symplectic inclusions in olivine from the Fukang pallasite. Meteoritics and Planetary Science, 2010, 45, 899-910.	0.7	7
26	Hygroscopic behavior and liquidâ€layer composition of aerosol particles generated from natural and artificial seawater. Journal of Geophysical Research, 2009, 114, .	3.3	54
27	Deliquescence and Efflorescence of Potassium Salts Relevant to Biomass-Burning Aerosol Particles. Aerosol Science and Technology, 2009, 43, 799-807.	1.5	90
28	Scanning electron microscopical and cross sectional analysis of extraterrestrial carbonaceous nanoglobules. Meteoritics and Planetary Science, 2008, 43, 899-903.	0.7	21
29	Water Uptake by NaCl Particles Prior to Deliquescence and the Phase Rule. Aerosol Science and Technology, 2008, 42, 281-294.	1.5	84
30	Magnetite (Fe3O4) and Greigite (Fe3S4) Crystals in Multicellular Magnetotactic Prokaryotes. Geomicrobiology Journal, 2007, 24, 43-50.	1.0	76
31	The White Angel: A unique wollastoniteâ€bearing, massâ€fractionated refractory inclusion from the Leoville CV3 carbonaceous chondrite. Meteoritics and Planetary Science, 2007, 42, 1159-1182.	0.7	8
32	Prebiotic carbon in clays from Orgueil and Ivuna (CI), and Tagish Lake (C2 ungrouped) meteorites. Meteoritics and Planetary Science, 2007, 42, 2111-2117.	0.7	41
33	Hygroscopic behavior of NaCl-bearing natural aerosol particles using environmental transmission electron microscopy. Journal of Geophysical Research, 2007, 112, .	3.3	72
34	Fractal parameters of individual soot particles determined using electron tomography: Implications for optical properties. Journal of Geophysical Research, 2007, 112, .	3.3	126
35	Hygroscopic behavior of aerosol particles from biomass fires using environmental transmission electron microscopy. Journal of Atmospheric Chemistry, 2007, 56, 259-273.	1.4	76
36	Does antigorite really contain 4- and 8-membered rings of tetrahedra?. American Mineralogist, 2006, 91, 1831-1838.	0.9	8

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37	Carbonaceous materials in the acid residue from the Orgueil carbonaceous chondrite meteorite. Meteoritics and Planetary Science, 2006, 41, 633-642.	0.7	45
38	Polyhedral serpentine grains in CM chondrites. Meteoritics and Planetary Science, 2006, 41, 681-688.	0.7	36
39	Phase Transitions of Single Salt Particles Studied Using a Transmission Electron Microscope with an Environmental Cell. Aerosol Science and Technology, 2005, 39, 849-856.	1.5	118
40	Crystal-size and shape distributions of magnetite from uncultured magnetotactic bacteria as a potential biomarker. American Mineralogist, 2005, 90, 1233-1240.	0.9	61
41	Aerosol particles from tropical convective systems: 2. Cloud bases. Journal of Geophysical Research, 2005, 110, .	3.3	19
42	Electron tomography of nanoparticle clusters: Implications for atmospheric lifetimes and radiative forcing of soot. Geophysical Research Letters, 2005, 32, .	1.5	94
43	Atmospheric tar balls: Particles from biomass and biofuel burning. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	303
44	Aerosol particles from tropical convective systems: Cloud tops and cirrus anvils. Journal of Geophysical Research, 2004, 109, .	3.3	48
45	Lizardite-chlorite structural relationships and an inferred high-pressure lizardite polytype. American Mineralogist, 2004, 89, 1631-1639.	0.9	8
46	Displacement and strain fields around a [100] dislocation in olivine measured to sub-angstrom accuracy. American Mineralogist, 2004, 89, 1374-1379.	0.9	15
47	Unoccupied states of pyrite probed by electron energy-loss spectroscopy (EELS). American Mineralogist, 2004, 89, 485-491.	0.9	15
48	TEM study of aerosol particles from clean and polluted marine boundary layers over the North Atlantic. Journal of Geophysical Research, 2003, 108, .	3.3	94
49	Individual aerosol particles from biomass burning in southern Africa: 1. Compositions and size distributions of carbonaceous particles. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	365
50	Individual aerosol particles from biomass burning in southern Africa: 2, Compositions and aging of inorganic particles. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	378
51	Evolution of biomass burning aerosol properties from an agricultural fire in southern Africa. Geophysical Research Letters, 2003, 30, .	1.5	150
52	Opaque minerals in chondrules and fineâ€grained chondrule rims in the Bishunpur (LL3.1) chondrite. Meteoritics and Planetary Science, 2003, 38, 59-79.	0.7	22
53	Sealed Environmental Cell Microscopy. Microscopy and Microanalysis, 2003, 9, 902-903.	0.2	3
54	Revised structure models for antigorite: An HRTEM study. American Mineralogist, 2002, 87, 1443-1457.	0.9	38

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55	Fineâ€grained rims in the Allan Hills 81002 and Lewis Cliff 90500 CM2 meteorites: Their origin and modification. Meteoritics and Planetary Science, 2002, 37, 229-244.	0.7	31
56	Structure of synthetic 6-line ferrihydrite by electron nanodiffraction. American Mineralogist, 2001, 86, 327-335.	0.9	90
57	TEM and SFM of exsolution and twinning in an alkali feldspar. American Mineralogist, 2000, 85, 509-513.	0.9	7
58	Structure of synthetic 2-line ferrihydrite by electron nanodiffraction. American Mineralogist, 2000, 85, 1180-1187.	0.9	128
59	Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite. Clays and Clay Minerals, 2000, 48, 111-119.	0.6	194
60	Geological Applications of Electron Energy-Loss Spectroscopy. Microscopy and Microanalysis, 2000, 6, 168-169.	0.2	1
61	Minerals in the Air: An Environmental Perspective. International Geology Review, 2000, 42, 577-593.	1.1	71
62	ATMOSPHERIC SCIENCE:Absorbing Phenomena. Science, 2000, 288, 989-990.	6.0	25
63	Unusual forms of magnetite in the Orgueil carbonaceous chondrite. Meteoritics and Planetary Science, 1999, 34, A187.	0.7	1
64	Interstratification of carbonaceous material within illite. American Mineralogist, 1999, 84, 1967-1970.	0.9	19
65	Icosahedral packing of B12 icosahedra in boron suboxide (B6O). Nature, 1998, 391, 376-378.	13.7	242
66	Unusual forms of magnetite in the Orgueil carbonaceous chondrite. Meteoritics and Planetary Science, 1998, 33, A215.	0.7	37
67	Wet and dry sizes of atmospheric aerosol particles: An AFM-TEM Study. Geophysical Research Letters, 1998, 25, 1907-1910.	1.5	107
68	Reaction Sequence of Iron Sulfide Minerals in Bacteria and Their Use as Biomarkers. Science, 1998, 280, 880-883.	6.0	207
69	High-Pressure, High-Temperature Synthesis and Characterization of Boron Suboxide (B6O). Chemistry of Materials, 1998, 10, 1530-1537.	3.2	121
70	Fe-tourmaline synthesis under different T and f_{O2}conditions. American Mineralogist, 1998, 83, 525-534.	0.9	50
71	Improved powder X-ray data for Cancrinites III: Davyne. Powder Diffraction, 1997, 12, 99-102.	0.4	2
72	Fullerenes and Polymers Produced by the Chemical Vapor Deposition Method. ACS Symposium Series, 1997, , 51-60.	0.5	8

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73	Transmission Electron Microscopy of Native Copper Inclusions in Illite. Clays and Clay Minerals, 1997, 45, 295-297.	0.6	19
74	Cobaltâ€rich, nickelâ€poor metal (wairauite) in the Ningqiang carbonaceous chondrite. Meteoritics, 1995, 30, 106-109.	1.5	35
75	Fullerene formation during production of chemical vapor deposited diamond. Applied Physics Letters, 1995, 66, 430-432.	1.5	28
76	Compositional variations of sea-salt-mode aerosol particles from the North Atlantic. Journal of Geophysical Research, 1995, 100, 23063.	3.3	98
77	Constituents of a remote pacific marine aerosol: A tem study. Atmospheric Environment, 1994, 28, 1747-1756.	1.9	73
78	Response : The Formation of Fullerenes. Science, 1992, 258, 1718-1719.	6.0	0