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	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
2	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
3	Shapes of soot aerosol particles and implications for their effects on climate. Journal of Geophysical Research, 2010, 115, .	3.3	326
4	Atmospheric tar balls: Particles from biomass and biofuel burning. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	303
5	Icosahedral packing of B12 icosahedra in boron suboxide (B6O). Nature, 1998, 391, 376-378.	13.7	242
6	Reaction Sequence of Iron Sulfide Minerals in Bacteria and Their Use as Biomarkers. Science, 1998, 280, 880-883.	6.0	207
7	Lonsdaleite is faulted and twinned cubic diamond and does not exist as a discrete material. Nature Communications, 2014, 5, 5447.	5.8	201
8	Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite. Clays and Clay Minerals, 2000, 48, 111-119.	0.6	194
9	Nature and Climate Effects of Individual Tropospheric Aerosol Particles. Annual Review of Earth and Planetary Sciences, 2010, 38, 17-43.	4.6	177
10	Evolution of biomass burning aerosol properties from an agricultural fire in southern Africa. Geophysical Research Letters, 2003, 30, .	1.5	150
11	Structure of synthetic 2-line ferrihydrite by electron nanodiffraction. American Mineralogist, 2000, 85, 1180-1187.	0.9	128
12	Fractal parameters of individual soot particles determined using electron tomography: Implications for optical properties. Journal of Geophysical Research, 2007, 112, .	3.3	126
13	High-Pressure, High-Temperature Synthesis and Characterization of Boron Suboxide (B6O). Chemistry of Materials, 1998, 10, 1530-1537.	3.2	121
14	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
15	Wet and dry sizes of atmospheric aerosol particles: An AFM-TEM Study. Geophysical Research Letters, 1998, 25, 1907-1910.	1.5	107
16	Atmospheric tar balls from biomass burning in Mexico. Journal of Geophysical Research, 2011, 116, .	3.3	99
17	Compositional variations of sea-salt-mode aerosol particles from the North Atlantic. Journal of Geophysical Research, 1995, 100, 23063.	3.3	98
18	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

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19	Electron tomography of nanoparticle clusters: Implications for atmospheric lifetimes and radiative forcing of soot. Geophysical Research Letters, 2005, 32, .	1.5	94
20	Structure of synthetic 6-line ferrihydrite by electron nanodiffraction. American Mineralogist, 2001, 86, 327-335.	0.9	90
21	Deliquescence and Efflorescence of Potassium Salts Relevant to Biomass-Burning Aerosol Particles. Aerosol Science and Technology, 2009, 43, 799-807.	1.5	90
22	Ns-Soot: A Material-Based Term for Strongly Light-Absorbing Carbonaceous Particles. Aerosol Science and Technology, 2014, 48, 777-788.	1.5	90
23	Water Uptake by NaCl Particles Prior to Deliquescence and the Phase Rule. Aerosol Science and Technology, 2008, 42, 281-294.	1.5	84
24	Magnetite (Fe3O4) and Greigite (Fe3S4) Crystals in Multicellular Magnetotactic Prokaryotes. Geomicrobiology Journal, 2007, 24, 43-50.	1.0	76
25	Hygroscopic behavior of aerosol particles from biomass fires using environmental transmission electron microscopy. Journal of Atmospheric Chemistry, 2007, 56, 259-273.	1.4	76
26	Constituents of a remote pacific marine aerosol: A tem study. Atmospheric Environment, 1994, 28, 1747-1756.	1.9	73
27	Hygroscopic behavior of NaCl-bearing natural aerosol particles using environmental transmission electron microscopy. Journal of Geophysical Research, 2007, 112, .	3.3	72
28	Minerals in the Air: An Environmental Perspective. International Geology Review, 2000, 42, 577-593.	1.1	71
29	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
30	Formation and evolution of tar balls from northwestern US wildfires. Atmospheric Chemistry and Physics, 2018, 18, 11289-11301.	1.9	67
31	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
32	Hosted and Free-Floating Metal-Bearing Atmospheric Nanoparticles in Mexico City. Environmental Science & Technology, 2010, 44, 2299-2304.	4.6	63
33	Crystal-size and shape distributions of magnetite from uncultured magnetotactic bacteria as a potential biomarker. American Mineralogist, 2005, 90, 1233-1240.	0.9	61
34	Hygroscopic behavior and liquidâ€layer composition of aerosol particles generated from natural and artificial seawater. Journal of Geophysical Research, 2009, 114, .	3.3	54
35	Changes in shape and composition of sea-salt particles upon aging in an urban atmosphere. Atmospheric Environment, 2015, 100, 1-9.	1.9	52
36	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

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37	Internally mixed atmospheric aerosol particles: Hygroscopic growth and light scattering. Journal of Geophysical Research, 2010, 115, .	3.3	51
38	Fe-tourmaline synthesis under different T and f_{O2}conditions. American Mineralogist, 1998, 83, 525-534.	0.9	50
39	Aerosol particles from tropical convective systems: Cloud tops and cirrus anvils. Journal of Geophysical Research, 2004, 109, .	3.3	48
40	Pseudocarbynes: Charge-Stabilized Carbon Chains. Journal of Physical Chemistry Letters, 2016, 7, 1675-1681.	2.1	46
41	Carbonaceous materials in the acid residue from the Orgueil carbonaceous chondrite meteorite. Meteoritics and Planetary Science, 2006, 41, 633-642.	0.7	45
42	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
43	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
44	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
45	Revised structure models for antigorite: An HRTEM study. American Mineralogist, 2002, 87, 1443-1457.	0.9	38
46	Unusual forms of magnetite in the Orgueil carbonaceous chondrite. Meteoritics and Planetary Science, 1998, 33, A215.	0.7	37
47	Polyhedral serpentine grains in CM chondrites. Meteoritics and Planetary Science, 2006, 41, 681-688.	0.7	36
48	Cobaltâ€rich, nickelâ€poor metal (wairauite) in the Ningqiang carbonaceous chondrite. Meteoritics, 1995, 30, 106-109.	1.5	35
49	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
50	Fullerene formation during production of chemical vapor deposited diamond. Applied Physics Letters, 1995, 66, 430-432.	1.5	28
51	ATMOSPHERIC SCIENCE:Absorbing Phenomena. Science, 2000, 288, 989-990.	6.0	25
52	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
53	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
54	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

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55	Scanning electron microscopical and cross sectional analysis of extraterrestrial carbonaceous nanoglobules. Meteoritics and Planetary Science, 2008, 43, 899-903.	0.7	21
56	Transmission Electron Microscopy of Native Copper Inclusions in Illite. Clays and Clay Minerals, 1997, 45, 295-297.	0.6	19
57	Aerosol particles from tropical convective systems: 2. Cloud bases. Journal of Geophysical Research, 2005, 110, .	3.3	19
58	Interstratification of carbonaceous material within illite. American Mineralogist, 1999, 84, 1967-1970.	0.9	19
59	Displacement and strain fields around a [100] dislocation in olivine measured to sub-angstrom accuracy. American Mineralogist, 2004, 89, 1374-1379.	0.9	15
60	Unoccupied states of pyrite probed by electron energy-loss spectroscopy (EELS). American Mineralogist, 2004, 89, 485-491.	0.9	15
61	Fine Ashâ€Bearing Particles as a Major Aerosol Component in Biomass Burning Smoke. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	13
62	Carbon storage at defect sites in mantle mineral analogues. Nature Geoscience, 2013, 6, 875-878.	5.4	11
63	Water-bearing, high-pressure Ca-silicates. Earth and Planetary Science Letters, 2017, 469, 148-155.	1.8	11
64	On the Structure, Magnetic Properties, and Infrared Spectra of Iron Pseudocarbynes in the Interstellar Medium. Astrophysical Journal, 2019, 879, 2.	1.6	11
65	Dehydration of Î´-AlOOH in Earthâ€™s Deep Lower Mantle. Minerals (Basel, Switzerland), 2020, 10, 384.	0.8	11
66	Fullerenes and Polymers Produced by the Chemical Vapor Deposition Method. ACS Symposium Series, 1997, , 51-60.	0.5	8
67	Lizardite-chlorite structural relationships and an inferred high-pressure lizardite polytype. American Mineralogist, 2004, 89, 1631-1639.	0.9	8
68	Does antigorite really contain 4- and 8-membered rings of tetrahedra?. American Mineralogist, 2006, 91, 1831-1838.	0.9	8
69	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
70	Fluctuation electron microscopy of medium-range order in ion-irradiated zircon. Philosophical Magazine, 2010, 90, 4661-4677.	0.7	8
71	TEM and SFM of exsolution and twinning in an alkali feldspar. American Mineralogist, 2000, 85, 509-513.	0.9	7
72	Tubular symplectic inclusions in olivine from the Fukang pallasite. Meteoritics and Planetary Science, 2010, 45, 899-910.	0.7	7

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73	Sealed Environmental Cell Microscopy. Microscopy and Microanalysis, 2003, 9, 902-903.	0.2	3
74	Improved powder X-ray data for Cancrinites III: Davyne. Powder Diffraction, 1997, 12, 99-102.	0.4	2
75	In-situ high-pressure transmission electron microscopy for Earth and materials sciences. American Mineralogist, 2014, 99, 1521-1527.	0.9	2
76	Unusual forms of magnetite in the Orgueil carbonaceous chondrite. Meteoritics and Planetary Science, 1999, 34, A187.	0.7	1
77	Geological Applications of Electron Energy-Loss Spectroscopy. Microscopy and Microanalysis, 2000, 6, 168-169.	0.2	1
78	Response : The Formation of Fullerenes. Science, 1992, 258, 1718-1719.	6.0	0