Joshua P Schwarz

List of Publications by Year
in descending order

124 papers	15,067 citations	30070 54 h-index	20961 115 g-index
180 all docs	180 docs citations	180 times ranked	10072 citing authors

#	Article	IF	Citations
1	Bounding the role of black carbon in the climate system: A scientific assessment. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5380-5552.	3.3	4,319
2	Single-particle measurements of midlatitude black carbon and light-scattering aerosols from the boundary layer to the lower stratosphere. Journal of Geophysical Research, 2006, 111, .	3.3	594
3	Evaluation of black carbon estimations in global aerosol models. Atmospheric Chemistry and Physics, 2009, 9, 9001-9026.	4.9	585
4	Brown carbon and internal mixing in biomass burning particles. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14802-14807.	7.1	394
5	Measurement of the mixing state, mass, and optical size of individual black carbon particles in urban and biomass burning emissions. Geophysical Research Letters, 2008, 35, .	4.0	388
6	Biomass burning in Siberia and Kazakhstan as an important source for haze over the Alaskan Arctic in April 2008. Geophysical Research Letters, 2009, 36, .	4.0	289
7	Evolution of brown carbon in wildfire plumes. Geophysical Research Letters, 2015, 42, 4623-4630.	4.0	284
8	An Inter-Comparison of Instruments Measuring Black Carbon Content of Soot Particles. Aerosol Science and Technology, 2007, 41, 295-314.	3.1	276
9	Coatings and their enhancement of black carbon light absorption in the tropical atmosphere. Journal of Geophysical Research, 2008, 113, .	3.3	266
10	Stratospheric aerosol-Observations, processes, and impact on climate. Reviews of Geophysics, 2016, 54, 278-335.	23.0	265
11	Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic Climate (ARCPAC) Project. Atmospheric Chemistry and Physics, 2011, 11, 2423-2453.	4.9	259
12	A Novel Method for Estimating Light-Scattering Properties of Soot Aerosols Using a Modified Single-Particle Soot Photometer. Aerosol Science and Technology, 2007, 41, 125-135.	3.1	258
13	Soot Particle Studiesâ€"Instrument Inter-Comparisonâ€"Project Overview. Aerosol Science and Technology, 2010, 44, 592-611.	3.1	228
14	Sources, seasonality, and trends of southeast US aerosol: an integrated analysis of surface, aircraft, and satellite observations with the GEOS-Chem chemical transport model. Atmospheric Chemistry and Physics, 2015, 15, 10411-10433.	4.9	217
15	Exploiting simultaneous observational constraints on mass and absorption to estimate the global direct radiative forcing of black carbon and brown carbon. Atmospheric Chemistry and Physics, 2014, 14, 10989-11010.	4.9	213
16	Soot reference materials for instrument calibration and intercomparisons: a workshop summary with recommendations. Atmospheric Measurement Techniques, 2012, 5, 1869-1887.	3.1	197
17	Global budget and radiative forcing of black carbon aerosol: Constraints from poleâ€toâ€pole (HIPPO) observations across the Pacific. Journal of Geophysical Research D: Atmospheres, 2014, 119, 195-206.	3.3	193
18	Gasoline emissions dominate over diesel in formation of secondary organic aerosol mass. Geophysical Research Letters, 2012, 39, .	4.0	189

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19	Modelled radiative forcing of the direct aerosol effect with multi-observation evaluation. Atmospheric Chemistry and Physics, 2009, 9, 1365-1392.	4.9	187
20	Globalâ€scale black carbon profiles observed in the remote atmosphere and compared to models. Geophysical Research Letters, 2010, 37, .	4.0	172
21	An important contribution to springtime Arctic aerosol from biomass burning in Russia. Geophysical Research Letters, 2010, 37, .	4.0	172
22	Top-of-atmosphere radiative forcing affected by brown carbon in the upper troposphere. Nature Geoscience, 2017, 10, 486-489.	12.9	168
23	Organic Aerosol Formation Downwind from the Deepwater Horizon Oil Spill. Science, 2011, 331, 1295-1299.	12.6	162
24	Modelled black carbon radiative forcing and atmospheric lifetime in AeroCom Phase II constrained by aircraft observations. Atmospheric Chemistry and Physics, 2014, 14, 12465-12477.	4.9	157
25	Single Particle Soot Photometer intercomparison at the AIDA chamber. Atmospheric Measurement Techniques, 2012, 5, 3077-3097.	3.1	152
26	The Detection Efficiency of the Single Particle Soot Photometer. Aerosol Science and Technology, 2010, 44, 612-628.	3.1	151
27	Globalâ€scale seasonally resolved black carbon vertical profiles over the Pacific. Geophysical Research Letters, 2013, 40, 5542-5547.	4.0	124
28	Exploring the observational constraints on the simulation of brown carbon. Atmospheric Chemistry and Physics, 2018, 18, 635-653.	4.9	121
29	Black carbon aerosol size in snow. Scientific Reports, 2013, 3, 1356.	3.3	115
30	Atmospheric emissions from the Deepwater Horizon spill constrain air-water partitioning, hydrocarbon fate, and leak rate. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	107
31	Intercomparison of modal and sectional aerosol microphysics representations within the same 3-D global chemical transport model. Atmospheric Chemistry and Physics, 2012, 12, 4449-4476.	4.9	101
32	Airborne and groundâ€based observations of a weekend effect in ozone, precursors, and oxidation products in the California South Coast Air Basin. Journal of Geophysical Research, 2012, 117, .	3.3	97
33	Assessing Single Particle Soot Photometer and Integrating Sphere/Integrating Sandwich Spectrophotometer measurement techniques for quantifying black carbon concentration in snow. Atmospheric Measurement Techniques, 2012, 5, 2581-2592.	3.1	96
34	Brown carbon aerosol in the North American continental troposphere: sources, abundance, and radiative forcing. Atmospheric Chemistry and Physics, 2015, 15, 7841-7858.	4.9	96
35	Airborne observations of regional variation in fluorescent aerosol across the United States. Journal of Geophysical Research D: Atmospheres, 2015, 120, 1153-1170.	3.3	93
36	Agricultural fires in the southeastern U.S. during SEAC⁴RS: Emissions of trace gases and particles and evolution of ozone, reactive nitrogen, and organic aerosol. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7383-7414.	3.3	93

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37	Strong impact of wildfires on the abundance and aging of black carbon in the lowermost stratosphere. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11595-E11603.	7.1	89
38	Aerosol optical properties in the southeastern United States in summer â€“ PartÂ1: Hygroscopic growth. Atmospheric Chemistry and Physics, 2016, 16, 4987-5007.	4.9	88
39	Cloud condensation nuclei as a modulator of ice processes in Arctic mixed-phase clouds. Atmospheric Chemistry and Physics, 2011, 11, 8003-8015.	4.9	84
40	Constraints on aerosol processes in climate models from vertically-resolved aircraft observations of black carbon. Atmospheric Chemistry and Physics, 2013, 13, 5969-5986.	4.9	79
41	Observations of the chemical composition of stratospheric aerosol particles. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1269-1278.	2.7	79
42	Lifecycle of light-absorbing carbonaceous aerosols in the atmosphere. Npj Climate and Atmospheric Science, 2020, 3, .	6.8	77
43	Methane, Black Carbon, and Ethane Emissions from Natural Gas Flares in the Bakken Shale, North Dakota. Environmental Science & Technology, 2017, 51, 5317-5325.	10.0	74
44	Revealing important nocturnal and dayâ€toâ€day variations in fire smoke emissions through a multiplatform inversion. Geophysical Research Letters, 2015, 42, 3609-3618.	4.0	73
45	A light-weight, high-sensitivity particle spectrometer for PM2.5 aerosol measurements. Aerosol Science and Technology, 2016, 50, 88-99.	3.1	71
46	Absorbing aerosol in the troposphere of the Western Arctic during the 2008 ARCTAS/ARCPAC airborne field campaigns. Atmospheric Chemistry and Physics, 2011, 11, 7561-7582.	4.9	70
47	Aircraft observations of enhancement and depletion of black carbon mass in the springtime Arctic. Atmospheric Chemistry and Physics, 2010, 10, 9667-9680.	4.9	68
48	Airborne characterization of subsaturated aerosol hygroscopicity and dry refractive index from the surface to 6.5â€‰km during the SEAC⁴RS campaign. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4188-4210.	3.3	67
49	How emissions uncertainty influences the distribution and radiative impacts of smoke from fires in North America. Atmospheric Chemistry and Physics, 2020, 20, 2073-2097.	4.9	67
50	A Free-Fall Determination of the Newtonian Constant of Gravity. Science, 1998, 282, 2230-2234.	12.6	66
51	Characterization of organic aerosol across the global remote troposphere: a comparison of ATom measurements and global chemistry models. Atmospheric Chemistry and Physics, 2020, 20, 4607-4635.	4.9	66
52	MADE-in: a new aerosol microphysics submodel for global simulation of insoluble particles and their mixing state. Geoscientific Model Development, 2011, 4, 325-355.	3.6	61
53	Global Measurements of Brown Carbon and Estimated Direct Radiative Effects. Geophysical Research Letters, 2020, 47, e2020GL088747.	4.0	61
54	Empirical correlations between black carbon aerosol and carbon monoxide in the lower and middle troposphere. Geophysical Research Letters, 2008, 35, .	4.0	60

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55	Aerosol size distributions during the Atmospheric Tomography Mission (ATom): methods, uncertainties, and data products. Atmospheric Measurement Techniques, 2019, 12, 3081-3099.	3.1	59
56	Black carbon aerosol characterization in a remote area of Qinghaiâ€“Tibetan Plateau, western China. Science of the Total Environment, 2014, 479-480, 151-158.	8.0	58
57	Instrumentation and measurement strategy for the NOAA SENEX aircraft campaign as part of the Southeast Atmosphere Study 2013. Atmospheric Measurement Techniques, 2016, 9, 3063-3093.	3.1	58
58	Short Black Carbon lifetime inferred from a global set of aircraft observations. Npj Climate and Atmospheric Science, 2018, 1, .	6.8	57
59	Evolution of aerosol properties impacting visibility and direct climate forcing in an ammoniaâ€rich urban environment. Journal of Geophysical Research, 2012, 117, .	3.3	54
60	Black carbon measurements in the Pearl River Delta region of China. Journal of Geophysical Research, 2011, 116, .	3.3	53
61	The Global Aerosol Synthesis and Science Project (GASSP): Measurements and Modeling to Reduce Uncertainty. Bulletin of the American Meteorological Society, 2017, 98, 1857-1877.	3.3	52
62	Biogenic VOC oxidation and organic aerosol formation in an urban nocturnal boundary layer: aircraft vertical profiles in Houston, TX. Atmospheric Chemistry and Physics, 2013, 13, 11317-11337.	4.9	51
63	Airborne observations of methane emissions from rice cultivation in the Sacramento Valley of California. Journal of Geophysical Research, 2012, 117, .	3.3	50
64	In situ vertical profiles of aerosol extinction, mass, and composition over the southeast United States during SENEX and SEAC⁴RS: observations of a modest aerosol enhancement aloft. Atmospheric Chemistry and Physics, 2015, 15, 7085-7102.	4.9	50
65	Black Carbon Emissions from the Bakken Oil and Gas Development Region. Environmental Science and Technology Letters, 2015, 2, 281-285.	8.7	49
66	Microphysics-based black carbon aging in a global CTM: constraints from HIPPO observations and implications for global black carbon budget. Atmospheric Chemistry and Physics, 2016, 16, 3077-3098.	4.9	48
67	Efficient Inâ€Cloud Removal of Aerosols by Deep Convection. Geophysical Research Letters, 2019, 46, 1061-1069.	4.0	48
68	Aerosol optical properties in the southeastern United States in summer â€“ PartÂ2: Sensitivity of aerosol optical depth to relative humidity and aerosol parameters. Atmospheric Chemistry and Physics, 2016, 16, 5009-5019.	4.9	44
69	Investigation of factors controlling PM2.5 variability across the South Korean Peninsula during KORUS-AQ. Elementa, 2020, 8, .	3.2	44
70	Pollution and its Impacts on the South American Cryosphere. Earth's Future, 2015, 3, 345-369.	6.3	42
71	Technique and theoretical approach for quantifying the hygroscopicity of black-carbon-containing aerosol using a single particle soot photometer. Journal of Aerosol Science, 2015, 81, 110-126.	3.8	41
72	The NASA Atmospheric Tomography (ATom) Mission: Imaging the Chemistry of the Global Atmosphere. Bulletin of the American Meteorological Society, 2022, 103, E761-E790.	3.3	39

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73	Evidence in biomass burning smoke for a light-absorbing aerosol with properties intermediate between brown and black carbon. Aerosol Science and Technology, 2019, 53, 976-989.	3.1	37
74	Aircraft measurements of black carbon vertical profiles show upper tropospheric variability and stability. Geophysical Research Letters, 2017, 44, 1132-1140.	4.0	36
75	Characteristics of black carbon aerosol from a surface oil burn during the Deepwater Horizon oil spill. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	34
76	Causes of variability in light absorption by particles in snow at sites in Idaho and Utah. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4751-4768.	3.3	34
77	Inter-comparison of black carbon measurement methods for simulated open biomass burning emissions. Atmospheric Environment, 2019, 206, 156-169.	4.1	34
78	CCN Spectra, Hygroscopicity, and Droplet Activation Kinetics of Secondary Organic Aerosol Resulting from the 2010 Deepwater Horizon Oil Spill. Environmental Science & Technology, 2012, 46, 3093-3100.	10.0	32
79	Evaluation of a Method to Measure Black Carbon Particles Suspended in Rainwater and Snow Samples. Aerosol Science and Technology, 2013, 47, 1073-1082.	3.1	32
80	Measurements of light-absorbing particles on the glaciers in the Cordillera Blanca, Peru. Cryosphere, 2015, 9, 331-340.	3.9	31
81	High Temporal Resolution Satellite Observations of Fire Radiative Power Reveal Link Between Fire Behavior and Aerosol and Gas Emissions. Geophysical Research Letters, 2020, 47, e2020GL090707.	4.0	30
82	Calculations of solar shortwave heating rates due to black carbon and ozone absorption using in situ measurements. Journal of Geophysical Research, 2008, 113, .	3.3	28
83	Impacts of coal dust from an active mine on the spectral reflectance of Arctic surface snow in Svalbard, Norway. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1767-1778.	3.3	28
84	Status of the metas watt balance experiment. IEEE Transactions on Instrumentation and Measurement, 2003, 52, 626-630.	4.7	25
85	Inferring ice formation processes from globalâ€scale black carbon profiles observed in the remote atmosphere and model simulations. Journal of Geophysical Research, 2012, 117, .	3.3	25
86	Ambient observations of hygroscopic growth factor and <i>f</i>(RH) below 1: Case studies from surface and airborne measurements. Journal of Geophysical Research D: Atmospheres, 2016, 121, 661-677.	3.3	25
87	Direct Measurements of Dry and Wet Deposition of Black Carbon Over a Grassland. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,277.	3.3	25
88	A High-Sensitivity Low-Cost Optical Particle Counter Design. Aerosol Science and Technology, 2013, 47, 137-145.	3.1	24
89	Estimating Source Region Influences on Black Carbon Abundance, Microphysics, and Radiative Effect Observed Over South Korea. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13,527.	3.3	24
90	Hygroscopicity of materials internally mixed with black carbon measured in Tokyo. Journal of Geophysical Research D: Atmospheres, 2016, 121, 362-381.	3.3	23

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91	Strong Contrast in Remote Black Carbon Aerosol Loadings Between the Atlantic and Pacific Basins. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13,386.	3.3	22
92	A new determination of the Newtonian constant of gravity using the free fall method. Measurement Science and Technology, 1999, 10, 478-486.	2.6	21
93	Optimized detection of particulates from liquid samples in the aerosol phase: Focus on black carbon. Aerosol Science and Technology, 2017, 51, 543-553.	3.1	21
94	In situ measurements of water uptake by black carbonâ€containing aerosol in wildfire plumes. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1086-1097.	3.3	21
95	Fluorescence calibration method for single-particle aerosol fluorescence instruments. Atmospheric Measurement Techniques, 2017, 10, 1755-1768.	3.1	21
96	Characteristics and evolution of brown carbon in western United States wildfires. Atmospheric Chemistry and Physics, 2022, 22, 8009-8036.	4.9	21
97	Nearâ€Surface Refractory Black Carbon Observations in the Atmosphere and Snow in the McMurdo Dry Valleys, Antarctica, and Potential Impacts of Foehn Winds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2877-2887.	3.3	20
98	Investigating biomass burning aerosol morphology using a laser imaging nephelometer. Atmospheric Chemistry and Physics, 2018, 18, 1879-1894.	4.9	20
99	Hysteresis and related error mechanisms in the NIST watt balance experiment. Journal of Research of the National Institute of Standards and Technology, 2001, 106, 627.	1.2	18
100	Understanding and improving model representation of aerosol optical properties for a Chinese haze event measured during KORUS-AQ. Atmospheric Chemistry and Physics, 2020, 20, 6455-6478.	4.9	18
101	Heating rates and surface dimming due to black carbon aerosol absorption associated with a major U.S. city. Geophysical Research Letters, 2009, 36, .	4.0	17
102	Corrigendum to "Evaluation of black carbon estimations in global aerosol models" published in Atmos. Chem. Phys., 9, 9001-9026, 2009. Atmospheric Chemistry and Physics, 2010, 10, 79-81.	4.9	17
103	Scales of variability of black carbon plumes over the Pacific Ocean. Geophysical Research Letters, 2012, 39, .	4.0	17
104	An intercomparison of aerosol absorption measurements conducted during the SEAC⁴RS campaign. Aerosol Science and Technology, 2018, 52, 1012-1027.	3.1	17
105	Global aerosol modeling with MADE3 (v3.0) in EMAC (based on v2.53): model description and evaluation. Geoscientific Model Development, 2019, 12, 541-579.	3.6	17
106	Surface dimming by the 2013 Rim Fire simulated by a sectional aerosol model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7079-7087.	3.3	16
107	Ambient aerosol properties in the remote atmosphere from global-scale in situ measurements. Atmospheric Chemistry and Physics, 2021, 21, 15023-15063.	4.9	15
108	HCOOH in the Remote Atmosphere: Constraints from Atmospheric Tomography (ATom) Airborne Observations. ACS Earth and Space Chemistry, 2021, 5, 1436-1454.	2.7	13

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109	Fine Ashâ€Bearing Particles as a Major Aerosol Component in Biomass Burning Smoke. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	13
110	Seasonal variability of black carbon mass in the tropical tropopause layer. Geophysical Research Letters, 2011, 38, .	4.0	12
111	Observations of high level of ozone at Qinghai Lake basin in the northeastern Qinghai-Tibetan Plateau, western China. Journal of Atmospheric Chemistry, 2015, 72, 19-26.	3.2	12
112	Global-scale constraints on light-absorbing anthropogenic iron oxide aerosols. Npj Climate and Atmospheric Science, 2021, 4, .	6.8	12
113	Evaluation of a Perpendicular Inlet for Airborne Sampling of Interstitial Submicron Black-Carbon Aerosol. Aerosol Science and Technology, 2013, 47, 1066-1072.	3.1	11
114	Complex refractive indices in the ultraviolet and visible spectral region for highly absorbing non-spherical biomass burning aerosol. Atmospheric Chemistry and Physics, 2021, 21, 7235-7252.	4.9	11
115	Reconciling Assumptions in Bottomâ€Up and Topâ€Down Approaches for Estimating Aerosol Emission Rates From Wildland Fires Using Observations From FIREXâ€AQ. Journal of Geophysical Research D: Atmospheres, 2021, 126, .	3.3	10
116	Light-absorption enhancement of black carbon in the Asian outflow inferred from airborne SP2 and in-situ measurements during KORUS-AQ. Science of the Total Environment, 2021, 773, 145531.	8.0	9
117	Correction to â€œGlobal-scale black carbon profiles observed in the remote atmosphere and compared to modelsâ€• Geophysical Research Letters, 2010, 37, n/a-n/a.	4.0	7
118	Identifying chemical aerosol signatures using optical suborbital observations: how much can optical properties tell us about aerosol composition?. Atmospheric Chemistry and Physics, 2022, 22, 3713-3742.	4.9	6
119	Extrapolation of single particle soot photometer incandescent signal data. Aerosol Science and Technology, 2019, 53, 911-920.	3.1	3
120	Comparison of Modeled and Measured Ice Nucleating Particle Composition in a Cirrus Cloud. Journals of the Atmospheric Sciences, 2019, 76, 1015-1029.	1.7	3
121	Technical note: Sea salt interference with black carbon quantification in snow samples using the single particle soot photometer. Atmospheric Chemistry and Physics, 2021, 21, 9329-9342.	4.9	3
122	Corrigendum to "In situ vertical profiles of aerosol extinction, mass, and composition over the southeast United States during SENEX and SEAC⁴RS: observations of a modest aerosol enhancement aloft" published in Atmos. Chem. Phys., 15, 7085â€“7102, 2015. Atmospheric Chemistry and Physics, 2015, 15, 8455-8455.	4.9	1
123	Limited impact of sulfate-driven chemistry on black carbon aerosol aging in power plant plumes. AIMS Environmental Science, 2018, 5, 195-215.	1.4	1
124	â€œInvisible biasâ€•in the single particle soot photometer due to trigger deadtime. Aerosol Science and Technology, 2022, 56, 623-635.	3.1	1