John B Nowak

List of Publications by Year in descending order

109 papers	6,501 citations	50170 46 h-index	85405 71 g-index
159 all docs	159 docs citations	159 times ranked	5873 citing authors

#	Article	IF	Citations
1	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.	1.9	259
2	Infrared spectroscopy of model tropospheric aerosols as a function of relative humidity: Observation of deliquescence and crystallization. Journal of Geophysical Research, 1997, 102, 18843-18850.	3.3	200
3	Ozone production in transpacific Asian pollution plumes and implications for ozone air quality in California. Journal of Geophysical Research, 2004, 109, .	3.3	197
4	A criterion for new particle formation in the sulfur-rich Atlanta atmosphere. Journal of Geophysical Research, 2005, 110, .	3.3	187
5	Unexpected high levels of NO observed at South Pole. Geophysical Research Letters, 2001, 28, 3625-3628.	1.5	183
6	Formation of Low Volatility Organic Compounds and Secondary Organic Aerosol from Isoprene Hydroxyhydroperoxide Low-NO Oxidation. Environmental Science & Technology, 2015, 49, 10330-10339.	4.6	172
7	Quantifying atmospheric methane emissions from the Haynesville, Fayetteville, and northeastern Marcellus shale gas production regions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2119-2139.	1.2	164
8	Top-down estimate of surface flux in the Los Angeles Basin using a mesoscale inverse modeling technique: assessing anthropogenic emissions of CO, NO_x and CO₂ and their impacts. Atmospheric Chemistry and Physics, 2013, 13, 3661-3677.	1.9	142
9	The global tropospheric ammonia distribution as seen in the 13-year AIRS measurement record. Atmospheric Chemistry and Physics, 2016, 16, 5467-5479.	1.9	127
10	Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9122-9127.	3.3	118
11	A new interpretation of total column BrO during Arctic spring. Geophysical Research Letters, 2010, 37, .	1.5	116
12	Ammonia sources in the California South Coast Air Basin and their impact on ammonium nitrate formation. Geophysical Research Letters, 2012, 39, .	1.5	110
13	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.	1.5	107
14	A chemical ionization mass spectrometry technique for airborne measurements of ammonia. Journal of Geophysical Research, 2007, 112, .	3.3	106
15	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. Journal of Geophysical Research, 2011, 116, .	3.3	105
16	High levels of molecular chlorine in the Arctic atmosphere. Nature Geoscience, 2014, 7, 91-94.	5.4	105
17	An investigation of the chemistry of ship emission plumes during ITCT 2002. Journal of Geophysical Research, 2005, 110, .	3.3	103
18	Measurements of OH, H2SO4, and MSA at the South Pole during ISCAT. Geophysical Research Letters, 2001, 28, 3629-3632.	1.5	101

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19	Bromine measurements in ozone depleted air over the Arctic Ocean. Atmospheric Chemistry and Physics, 2010, 10, 6503-6514.	1.9	101
20	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
21	CIMS measurements of HNO3 and SO2 at the South Pole during ISCAT 2000. Atmospheric Environment, 2004, 38, 5411-5421.	1.9	96
22	Analysis of ozone and nitric acid in spring and summer Arctic pollution using aircraft, ground-based, satellite observations and MOZART-4 model: source attribution and partitioning. Atmospheric Chemistry and Physics, 2012, 12, 237-259.	1.9	96
23	Analysis of urban gas phase ammonia measurements from the 2002 Atlanta Aerosol Nucleation and Real-Time Characterization Experiment (ANARChE). Journal of Geophysical Research, 2006, 111, .	3.3	95
24	Chemical evolution of atmospheric organic carbon over multiple generations of oxidation. Nature Chemistry, 2018, 10, 462-468.	6.6	92
25	Cleaner burning aviation fuels can reduce contrail cloudiness. Communications Earth & Environment, 2021, 2, .	2.6	92
26	Airborne observations of ammonia and ammonium nitrate formation over Houston, Texas. Journal of Geophysical Research, 2010, 115, .	3.3	91
27	Towards validation of ammonia (NH₃) measurements from the IASI satellite. Atmospheric Measurement Techniques, 2015, 8, 1575-1591.	1.2	90
28	Chemical composition of air masses transported from Asia to the U.S. West Coast during ITCT 2K2: Fossil fuel combustion versus biomass-burning signatures. Journal of Geophysical Research, 2004, 109, .	3.3	89
29	Particle characteristics following cloud-modified transport from Asia to North America. Journal of Geophysical Research, 2004, 109, .	3.3	86
30	Variability in ammonium nitrate formation and nitric acid depletion with altitude and location over California. Journal of Geophysical Research, 2003, 108, .	3.3	84
31	Reactive nitrogen transport and photochemistry in urban plumes over the North Atlantic Ocean. Journal of Geophysical Research, 2006, 111, .	3.3	83
32	Gas-phase chemical characteristics of Asian emission plumes observed during ITCT 2K2 over the eastern North Pacific Ocean. Journal of Geophysical Research, 2004, 109, .	3.3	80
33	Air quality implications of theDeepwater Horizonoil spill. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20280-20285.	3.3	79
34	Nucleation and growth of sulfate aerosol in coal-fired power plant plumes: sensitivity to background aerosol and meteorology. Atmospheric Chemistry and Physics, 2012, 12, 189-206.	1.9	72
35	Observations of inorganic bromine (HOBr, BrO, and Br₂) speciation at Barrow, Alaska, in spring 2009. Journal of Geophysical Research, 2012, 117, .	3.3	71
36	An investigation of ammonia and inorganic particulate matter in California during the CalNex campaign. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1883-1902.	1.2	69

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37	Measurement of peroxycarboxylic nitric anhydrides (PANs) during the ITCT 2K2 aircraft intensive experiment. Journal of Geophysical Research, 2004, 109, .	3.3	63
38	Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC. Atmospheric Chemistry and Physics, 2012, 12, 1255-1285.	1.9	63
39	Modeling regional aerosol and aerosol precursor variability over California and its sensitivity to emissions and long-range transport during the 2010 CalNex and CARES campaigns. Atmospheric Chemistry and Physics, 2014, 14, 10013-10060.	1.9	62
40	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. Atmospheric Chemistry and Physics, 2015, 15, 6721-6744.	1.9	62
41	An investigation of South Pole HOxchemistry: Comparison of model results with ISCAT observations. Geophysical Research Letters, 2001, 28, 3633-3636.	1.5	61
42	Size-dependent influence of NO _x on the growth rates of organic aerosol particles. Science Advances, 2020, 6, eaay4945.	4.7	61
43	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.	1.2	58
44	Measurements of pernitric acid at the South Pole during ISCAT 2000. Geophysical Research Letters, 2002, 29, 7-1.	1.5	54
45	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
46	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol. Atmospheric Chemistry and Physics, 2016, 16, 2575-2596.	1.9	53
47	Fine-scale simulation of ammonium and nitrate over the South Coast Air Basin and San Joaquin Valley of California during CalNex-2010. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3600-3614.	1.2	51
48	Modeling the weekly cycle of NO_x and CO emissions and their impacts on O₃ in the Los Angelesâ€South Coast Air Basin during the CalNex 2010 field campaign. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1340-1360.	1.2	51
49	Enhanced formation of isopreneâ€derived organic aerosol in sulfurâ€rich power plant plumes during Southeast Nexus. Journal of Geophysical Research D: Atmospheres, 2016, 121, 11,137.	1.2	50
50	Interannual variability of ammonia concentrations over the United States: sources and implications. Atmospheric Chemistry and Physics, 2016, 16, 12305-12328.	1.9	48
51	Calibration and Evaluation of Nitric Acid and Ammonia Permeation Tubes by UV Optical Absorption. Environmental Science & Technology, 2003, 37, 2975-2981.	4.6	46
52	HONO emission and production determined from airborne measurements over the Southeast U.S.. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9237-9250.	1.2	46
53	Heterogeneous Interactions of HBr and HOCl with Cold Sulfuric Acid Solutions:Â Implications for Arctic Boundary Layer Bromine Chemistry. Journal of Physical Chemistry A, 1997, 101, 2131-2137.	1.1	45
54	Observational assessment of the role of nocturnal residual-layer chemistry in determining daytime surface particulate nitrateÂconcentrations. Atmospheric Chemistry and Physics, 2017, 17, 14747-14770.	1.9	45

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55	Ozone chemistry in western U.S. wildfire plumes. Science Advances, 2021, 7, eabl3648.	4.7	45
56	Characteristics of tropospheric ozone depletion events in the Arctic spring: analysis of the ARCTAS, ARCPAC, and ARCIONS measurements and satellite BrO observations. Atmospheric Chemistry and Physics, 2012, 12, 9909-9922.	1.9	42
57	Controlled nitric oxide production via O(¹D)â€¯+â€¯N₂O reactions for use in oxidation flow reactor studies. Atmospheric Measurement Techniques, 2017, 10, 2283-2298.	1.2	42
58	Chemical ionization mass spectrometry technique for detection of dimethylsulfoxide and ammonia. Journal of Geophysical Research, 2002, 107, ACH 10-1.	3.3	40
59	Observations of ozone transport from the free troposphere to the Los Angeles basin. Journal of Geophysical Research, 2012, 117, .	3.3	38
60	Emissions of Glyoxal and Other Carbonyl Compounds from Agricultural Biomass Burning Plumes Sampled by Aircraft. Environmental Science & Technology, 2017, 51, 11761-11770.	4.6	38
61	Measurements of OH aboard the NASA P-3 during PEM-Tropics B. Journal of Geophysical Research, 2001, 106, 32657-32666.	3.3	37
62	Using advanced mass spectrometry techniques to fully characterize atmospheric organic carbon: current capabilities and remaining gaps. Faraday Discussions, 2017, 200, 579-598.	1.6	37
63	Relationship between photochemical ozone production and NO_x oxidation in Houston, Texas. Journal of Geophysical Research, 2009, 114, .	3.3	36
64	Airborne observations of DMSO, DMS, and OH at marine tropical latitudes. Geophysical Research Letters, 2001, 28, 2201-2204.	1.5	34
65	Observation and modeling of the evolution of Texas power plant plumes. Atmospheric Chemistry and Physics, 2012, 12, 455-468.	1.9	34
66	WRF-Chem simulation of NOx and O3 in the L.A. basin during CalNex-2010. Atmospheric Environment, 2013, 81, 421-432.	1.9	34
67	Evaluating ammonia (NH3) predictions in the NOAA National Air Quality Forecast Capability (NAQFC) using in-situ aircraft and satellite measurements from the CalNex2010 campaign. Atmospheric Environment, 2017, 163, 65-76.	1.9	34
68	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. Atmospheric Chemistry and Physics, 2021, 21, 16293-16317.	1.9	34
69	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. Communications Earth & Environment, 2021, 2, .	2.6	32
70	Validation of TES ammonia observations at the single pixel scale in the San Joaquin Valley during DISCOVERâ€AQ. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5140-5154.	1.2	31
71	Using Shortâ€Term CO/CO₂ Ratios to Assess Air Mass Differences Over the Korean Peninsula During KORUSâ€AQ. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10951-10972.	1.2	31
72	Ammonia and methane dairy emission plumes in the San Joaquin Valley of California from individual feedlot to regional scales. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9718-9738.	1.2	30

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73	Decadal changes in summertime reactive oxidized nitrogen and surface ozone over the Southeast United States. Atmospheric Chemistry and Physics, 2018, 18, 2341-2361.	1.9	30
74	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.	1.5	30
75	The NASA Carbon Airborne Flux Experiment (CARAFE): instrumentation and methodology. Atmospheric Measurement Techniques, 2018, 11, 1757-1776.	1.2	29
76	Validation of IASI Satellite Ammonia Observations at the Pixel Scale Using In Situ Vertical Profiles. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033475.	1.2	28
77	Rapid cloud removal of dimethyl sulfide oxidation products limits SO ₂ and cloud condensation nuclei production in the marine atmosphere. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	28
78	Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS. Atmospheric Chemistry and Physics, 2012, 12, 1327-1338.	1.9	27
79	Pollutant transport among California regions. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6750-6763.	1.2	26
80	Impacts of the Denver Cyclone on regional air quality and aerosol formation in the Colorado Front Range during FRAPPÃ‰Â2014. Atmospheric Chemistry and Physics, 2016, 16, 12039-12058.	1.9	24
81	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). Atmospheric Chemistry and Physics, 2021, 21, 18319-18331.	1.9	24
82	Relationship between OH measurements on two different NASA aircraft during PEM Tropics B. Journal of Geophysical Research, 2001, 106, 32683-32689.	3.3	23
83	Multispecies Assessment of Factors Influencing Regional CO₂ and CH₄ Enhancements During the Winter 2017 ACTâ€America Campaign. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031339.	1.2	23
84	Characteristics and evolution of brown carbon in western United States wildfires. Atmospheric Chemistry and Physics, 2022, 22, 8009-8036.	1.9	21
85	Effects of NO_xcontrol and plume mixing on nighttime chemical processing of plumes from coalâ€fired power plants. Journal of Geophysical Research, 2012, 117, .	3.3	20
86	Spatial heterogeneity in CO₂, CH₄, and energy fluxes: insights from airborne eddy covariance measurements over the Mid-Atlantic region. Environmental Research Letters, 2020, 15, 035008.	2.2	19
87	Modeling NH 4 NO 3 Over the San Joaquin Valley During the 2013 DISCOVERâ€AQ Campaign. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4727-4745.	1.2	18
88	Evidence of New Particle Formation Within Etna and Stromboli Volcanic Plumes and Its Parameterization From Airborne In Situ Measurements. Journal of Geophysical Research D: Atmospheres, 2019, 124, 5650-5668.	1.2	18
89	Aircraft-based observation of meteoric material in lower-stratospheric aerosol particles between 15 and 68Â°â€‰N. Atmospheric Chemistry and Physics, 2021, 21, 989-1013.	1.9	18
90	Ozone and alkyl nitrate formation from the Deepwater Horizon oil spill atmospheric emissions. Journal of Geophysical Research, 2012, 117, .	3.3	16

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91	Changes in nitrogen oxides emissions in California during 2005â€“2010 indicated from topâ€down and bottomâ€up emission estimates. Journal of Geophysical Research D: Atmospheres, 2014, 119, 12,928.	1.2	16
92	Airborne measurements of the atmospheric emissions from a fuel ethanol refinery. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4385-4397.	1.2	16
93	Airborne Measurements of Contrail Ice Propertiesâ€”Dependence on Temperature and Humidity. Geophysical Research Letters, 2021, 48, e2020GL092166.	1.5	16
94	Inorganic and black carbon aerosols in the Los Angeles Basin during CalNex. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1777-1803.	1.2	15
95	Atmospheric Carbon and Transport â€“ America (ACTâ€America) Data Sets: Description, Management, and Delivery. Earth and Space Science, 2021, 8, e2020EA001634.	1.1	15
96	Airborne Emission Rate Measurements Validate Remote Sensing Observations and Emission Inventories of Western U.S. Wildfires. Environmental Science & Technology, 2022, 56, 7564-7577.	4.6	15
97	Modeling the diurnal variability of agricultural ammonia in Bakersfield, California, during the CalNex campaign. Atmospheric Chemistry and Physics, 2017, 17, 2721-2739.	1.9	14
98	Aerosol optical extinction during the Front Range Air Pollution and Photochemistry Ã‰xperiment (FRAPPÃ‰) 2014 summertime field campaign, Colorado, USA. Atmospheric Chemistry and Physics, 2016, 16, 11207-11217.	1.9	12
99	Summary of the High Ice Water Content (HIWC) RADAR Flight Campaigns. , 0, , .		12
100	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. Environmental Science & Technology, 2021, 55, 15646-15657.	4.6	11
101	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, .	1.2	10
102	Hydrocarbon Removal in Power Plant Plumes Shows Nitrogen Oxide Dependence of Hydroxyl Radicals. Geophysical Research Letters, 2019, 46, 7752-7760.	1.5	9
103	Modeling air quality in the San Joaquin valley of California during the 2013 Discover-AQ field campaign. Atmospheric Environment: X, 2020, 5, 100067.	0.8	9
104	Cold Air Outbreaks Promote New Particle Formation Off the U.S. East Coast. Geophysical Research Letters, 2022, 49, .	1.5	9
105	Fossil Versus Nonfossil CO Sources in the US: New Airborne Constraints From ACTâ€America and GEM. Geophysical Research Letters, 2021, 48, e2021GL093361.	1.5	8
106	Seasonal Variability in Local Carbon Dioxide Biomass Burning Sources Over Central and Eastern US Using Airborne In Situ Enhancement Ratios. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034525.	1.2	8
107	Biomass burning in Siberia as a source of BrO to the Arctic free troposphere. Atmospheric Environment, 2012, 62, 416-423.	1.9	6
108	Coupling an online ion conductivity measurement with the particle-into-liquid sampler: Evaluation and modeling using laboratory and field aerosol data. Aerosol Science and Technology, 2020, 54, 1542-1555.	1.5	5

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109	Investigation of several proxies to estimate sulfuric acid concentration under volcanic plume conditions. Atmospheric Chemistry and Physics, 2021, 21, 4541-4560.	1.9	3