

# John B Nowak

## List of Publications by Year in descending order

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109  
papers

6,501  
citations

50276

46  
h-index

85541

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. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 2423-2453.	4.9	259
2	Infrared spectroscopy of model tropospheric aerosols as a function of relative humidity: Observation of deliquescence and crystallization. <i>Journal of Geophysical Research</i> , 1997, 102, 18843-18850.	3.3	200
3	Ozone production in transpacific Asian pollution plumes and implications for ozone air quality in California. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	197
4	A criterion for new particle formation in the sulfur-rich Atlanta atmosphere. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	187
5	Unexpected high levels of NO observed at South Pole. <i>Geophysical Research Letters</i> , 2001, 28, 3625-3628.	4.0	183
6	Formation of Low Volatility Organic Compounds and Secondary Organic Aerosol from Isoprene Hydroxyhydroperoxide Low-NO Oxidation. <i>Environmental Science &amp; Technology</i> , 2015, 49, 10330-10339.	10.0	172
7	Quantifying atmospheric methane emissions from the Haynesville, Fayetteville, and northeastern Marcellus shale gas production regions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 2119-2139.	3.3	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 <sub>x</sub> and CO <sub>2</sub> and their impacts. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 3661-3677.	4.9	142
9	The global tropospheric ammonia distribution as seen in the 13-year AIRS measurement record. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 5467-5479.	4.9	127
10	Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9122-9127.	7.1	118
11	A new interpretation of total column BrO during Arctic spring. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	116
12	Ammonia sources in the California South Coast Air Basin and their impact on ammonium nitrate formation. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	110
13	Atmospheric emissions from the Deepwater Horizon spill constrain air-water partitioning, hydrocarbon fate, and leak rate. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	107
14	A chemical ionization mass spectrometry technique for airborne measurements of ammonia. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	106
15	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	105
16	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014, 7, 91-94.	12.9	105
17	An investigation of the chemistry of ship emission plumes during ITCT 2002. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	103
18	Measurements of OH, H <sub>2</sub> SO <sub>4</sub> , and MSA at the South Pole during ISCAT. <i>Geophysical Research Letters</i> , 2001, 28, 3629-3632.	4.0	101

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19	Bromine measurements in ozone depleted air over the Arctic Ocean. Atmospheric Chemistry and Physics, 2010, 10, 6503-6514.	4.9	101
20	Airborne and ground-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 HNO <sub>3</sub> and SO <sub>2</sub> at the South Pole during ISCAT 2000. Atmospheric Environment, 2004, 38, 5411-5421.	4.1	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.	4.9	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.	13.6	92
25	Cleaner burning aviation fuels can reduce contrail cloudiness. Communications Earth & Environment, 2021, 2, .	6.8	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 (NH <sub>3</sub> ) measurements from the IASI satellite. Atmospheric Measurement Techniques, 2015, 8, 1575-1591.	3.1	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 the Deepwater Horizon oil spill. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20280-20285.	7.1	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.	4.9	72
35	Observations of inorganic bromine (HOBr, BrO, and Br <sub>2</sub> ) 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.	3.3	69

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37	Measurement of peroxy-carboxylic nitric anhydrides (PANs) during the ITCT 2K2 aircraft intensive experiment. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	63
38	Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1255-1285.	4.9	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. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 10013-10060.	4.9	62
40	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6721-6744.	4.9	62
41	An investigation of South Pole HO <sub>x</sub> chemistry: Comparison of model results with ISCAT observations. <i>Geophysical Research Letters</i> , 2001, 28, 3633-3636.	4.0	61
42	Size-dependent influence of NO <sub>x</sub> on the growth rates of organic aerosol particles. <i>Science Advances</i> , 2020, 6, eaay4945.	10.3	61
43	Instrumentation and measurement strategy for the NOAA SENEX aircraft campaign as part of the Southeast Atmosphere Study 2013. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 3063-3093.	3.1	58
44	Measurements of pernitric acid at the South Pole during ISCAT 2000. <i>Geophysical Research Letters</i> , 2002, 29, 7-1.	4.0	54
45	Evolution of aerosol properties impacting visibility and direct climate forcing in an ammonia-rich urban environment. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	54
46	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 2575-2596.	4.9	53
47	Fine-scale simulation of ammonium and nitrate over the South Coast Air Basin and San Joaquin Valley of California during CalNex-2010. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 3600-3614.	3.3	51
48	Modeling the weekly cycle of NO <sub>x</sub> and CO emissions and their impacts on O <sub>3</sub> in the Los Angeles-South Coast Air Basin during the CalNex 2010 field campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 1340-1360.	3.3	51
49	Enhanced formation of isoprene-derived organic aerosol in sulfur-rich power plant plumes during Southeast Nexus. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 11,137.	3.3	50
50	Interannual variability of ammonia concentrations over the United States: sources and implications. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 12305-12328.	4.9	48
51	Calibration and Evaluation of Nitric Acid and Ammonia Permeation Tubes by UV Optical Absorption. <i>Environmental Science &amp; Technology</i> , 2003, 37, 2975-2981.	10.0	46
52	HONO emission and production determined from airborne measurements over the Southeast U.S.. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9237-9250.	3.3	46
53	Heterogeneous Interactions of HBr and HOCl with Cold Sulfuric Acid Solutions: Implications for Arctic Boundary Layer Bromine Chemistry. <i>Journal of Physical Chemistry A</i> , 1997, 101, 2131-2137.	2.5	45
54	Observational assessment of the role of nocturnal residual-layer chemistry in determining daytime surface particulate nitrate concentrations. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 14747-14770.	4.9	45

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55	Ozone chemistry in western U.S. wildfire plumes. <i>Science Advances</i> , 2021, 7, eabl3648.	10.3	45
56	Characteristics of tropospheric ozone depletion events in the Arctic spring: analysis of the ARCTAS, ARCPAC, and ARCIONS measurements and satellite BrO observations. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 9909-9922.	4.9	42
57	Controlled nitric oxide production via $O(^1D) + N_2O$ reactions for use in oxidation flow reactor studies. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2283-2298.	3.1	42
58	Chemical ionization mass spectrometry technique for detection of dimethylsulfoxide and ammonia. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 10-1.	3.3	40
59	Observations of ozone transport from the free troposphere to the Los Angeles basin. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	38
60	Emissions of Glyoxal and Other Carbonyl Compounds from Agricultural Biomass Burning Plumes Sampled by Aircraft. <i>Environmental Science &amp; Technology</i> , 2017, 51, 11761-11770.	10.0	38
61	Measurements of OH aboard the NASA P-3 during PEM-Tropics B. <i>Journal of Geophysical Research</i> , 2001, 106, 32657-32666.	3.3	37
62	Using advanced mass spectrometry techniques to fully characterize atmospheric organic carbon: current capabilities and remaining gaps. <i>Faraday Discussions</i> , 2017, 200, 579-598.	3.2	37
63	Relationship between photochemical ozone production and $NO_x$ oxidation in Houston, Texas. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	36
64	Airborne observations of DMSO, DMS, and OH at marine tropical latitudes. <i>Geophysical Research Letters</i> , 2001, 28, 2201-2204.	4.0	34
65	Observation and modeling of the evolution of Texas power plant plumes. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 455-468.	4.9	34
66	WRF-Chem simulation of $NO_x$ and $O_3$ in the L.A. basin during CalNex-2010. <i>Atmospheric Environment</i> , 2013, 81, 421-432.	4.1	34
67	Evaluating ammonia ( $NH_3$ ) predictions in the NOAA National Air Quality Forecast Capability (NAQFC) using in-situ aircraft and satellite measurements from the CalNex2010 campaign. <i>Atmospheric Environment</i> , 2017, 163, 65-76.	4.1	34
68	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 16293-16317.	4.9	34
69	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	6.8	32
70	Validation of TES ammonia observations at the single pixel scale in the San Joaquin Valley during DISCOVER-AQ. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 5140-5154.	3.3	31
71	Using Short-Term $CO/CO_2$ Ratios to Assess Air Mass Differences Over the Korean Peninsula During KORUS-AQ. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 10951-10972.	3.3	31
72	Ammonia and methane dairy emission plumes in the San Joaquin Valley of California from individual feedlot to regional scales. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 9718-9738.	3.3	30

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73	Decadal changes in summertime reactive oxidized nitrogen and surface ozone over the Southeast United States. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2341-2361.	4.9	30
74	High Temporal Resolution Satellite Observations of Fire Radiative Power Reveal Link Between Fire Behavior and Aerosol and Gas Emissions. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL090707.	4.0	30
75	The NASA Carbon Airborne Flux Experiment (CARAFE): instrumentation and methodology. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 1757-1776.	3.1	29
76	Validation of IASI Satellite Ammonia Observations at the Pixel Scale Using In Situ Vertical Profiles. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033475.	3.3	28
77	Rapid cloud removal of dimethyl sulfide oxidation products limits SO <sub>2</sub> and cloud condensation nuclei production in the marine atmosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	28
78	Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1327-1338.	4.9	27
79	Pollutant transport among California regions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 6750-6763.	3.3	26
80	Impacts of the Denver Cyclone on regional air quality and aerosol formation in the Colorado Front Range during FRAPP <sup>2</sup> 2014. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 12039-12058.	4.9	24
81	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18319-18331.	4.9	24
82	Relationship between OH measurements on two different NASA aircraft during PEM Tropics B. <i>Journal of Geophysical Research</i> , 2001, 106, 32683-32689.	3.3	23
83	Multispecies Assessment of Factors Influencing Regional CO <sub>2</sub> and CH <sub>4</sub> Enhancements During the Winter 2017 ACT <sup>2</sup> America Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031339.	3.3	23
84	Characteristics and evolution of brown carbon in western United States wildfires. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 8009-8036.	4.9	21
85	Effects of NO <sub>x</sub> control and plume mixing on nighttime chemical processing of plumes from coal-fired power plants. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	20
86	Spatial heterogeneity in CO <sub>2</sub> , CH <sub>4</sub> , and energy fluxes: insights from airborne eddy covariance measurements over the Mid-Atlantic region. <i>Environmental Research Letters</i> , 2020, 15, 035008.	5.2	19
87	Modeling NH <sub>4</sub> NO <sub>3</sub> Over the San Joaquin Valley During the 2013 DISCOVER <sup>3</sup> AQ Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4727-4745.	3.3	18
88	Evidence of New Particle Formation Within Etna and Stromboli Volcanic Plumes and Its Parameterization From Airborne In Situ Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 5650-5668.	3.3	18
89	Aircraft-based observation of meteoric material in lower-stratospheric aerosol particles between 15 and 68°N. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 989-1013.	4.9	18
90	Ozone and alkyl nitrate formation from the Deepwater Horizon oil spill atmospheric emissions. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	16

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91	Changes in nitrogen oxides emissions in California during 2005–2010 indicated from top-down and bottom-up emission estimates. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 12,928.	3.3	16
92	Airborne measurements of the atmospheric emissions from a fuel ethanol refinery. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 4385-4397.	3.3	16
93	Airborne Measurements of Contrail Ice Properties—Dependence on Temperature and Humidity. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092166.	4.0	16
94	Inorganic and black carbon aerosols in the Los Angeles Basin during CalNex. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 1777-1803.	3.3	15
95	Atmospheric Carbon and Transport – America (ACT–America) Data Sets: Description, Management, and Delivery. <i>Earth and Space Science</i> , 2021, 8, e2020EA001634.	2.6	15
96	Airborne Emission Rate Measurements Validate Remote Sensing Observations and Emission Inventories of Western U.S. Wildfires. <i>Environmental Science &amp; Technology</i> , 2022, 56, 7564-7577.	10.0	15
97	Modeling the diurnal variability of agricultural ammonia in Bakersfield, California, during the CalNex campaign. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 2721-2739.	4.9	14
98	Aerosol optical extinction during the Front Range Air Pollution and Photochemistry Experiment (FRAPP) 2014 summertime field campaign, Colorado, USA. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 11207-11217.	4.9	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. <i>Environmental Science &amp; Technology</i> , 2021, 55, 15646-15657.	10.0	11
101	Reconciling Assumptions in Bottom-Up and Top-Down Approaches for Estimating Aerosol Emission Rates From Wildland Fires Using Observations From FIREX–AQ. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, .	3.3	10
102	Hydrocarbon Removal in Power Plant Plumes Shows Nitrogen Oxide Dependence of Hydroxyl Radicals. <i>Geophysical Research Letters</i> , 2019, 46, 7752-7760.	4.0	9
103	Modeling air quality in the San Joaquin valley of California during the 2013 Discover-AQ field campaign. <i>Atmospheric Environment: X</i> , 2020, 5, 100067.	1.4	9
104	Cold Air Outbreaks Promote New Particle Formation Off the U.S. East Coast. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	9
105	Fossil Versus Nonfossil CO Sources in the US: New Airborne Constraints From ACT–America and GEM. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093361.	4.0	8
106	Seasonal Variability in Local Carbon Dioxide Biomass Burning Sources Over Central and Eastern US Using Airborne In Situ Enhancement Ratios. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034525.	3.3	8
107	Biomass burning in Siberia as a source of BrO to the Arctic free troposphere. <i>Atmospheric Environment</i> , 2012, 62, 416-423.	4.1	6
108	Coupling an online ion conductivity measurement with the particle-into-liquid sampler: Evaluation and modeling using laboratory and field aerosol data. <i>Aerosol Science and Technology</i> , 2020, 54, 1542-1555.	3.1	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.	4.9	3