John B Nowak

List of Publications by Citations

123 papers	5,024 citations	43 h-index	68 g-index
159 ext. papers	5,770 ext. citations	6.3 avg, IF	4.57 L-index

#	Paper	IF	Citations
123	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	6.8	217
122	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		178
121	Ozone production in transpacific Asian pollution plumes and implications for ozone air quality in California. *Journal of Geophysical Research*, **2004**, 109,		170
120	A criterion for new particle formation in the sulfur-rich Atlanta atmosphere. *Journal of Geophysical Research*, **2005**, 110,		167
119	Unexpected high levels of NO observed at South Pole. *Geophysical Research Letters*, **2001**, 28, 3625-3628	4.9	159
118	Formation of Low Volatility Organic Compounds and Secondary Organic Aerosol from Isoprene Hydroxyhydroperoxide Low-NO Oxidation. *Environmental Science & Technology*, **2015**, 49, 10330-9	10.3	139
117	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	4.4	132
116	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	6.8	119
115	A new interpretation of total column BrO during Arctic spring. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	102
114	Ammonia sources in the California South Coast Air Basin and their impact on ammonium nitrate formation. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	97
113	A chemical ionization mass spectrometry technique for airborne measurements of ammonia. *Journal of Geophysical Research*, **2007**, 112,		94
112	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. *Journal of Geophysical Research*, **2011**, 116,		93
111	The global tropospheric ammonia distribution as seen in the 13-year AIRS measurement record. *Atmospheric Chemistry and Physics*, **2016**, 16, 5467-5479	6.8	91
110	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	4.9	91
109	Measurements of OH, H2SO4, and MSA at the South Pole during ISCAT. *Geophysical Research Letters*, **2001**, 28, 3629-3632	4.9	88
108	Bromine measurements in ozone depleted air over the Arctic Ocean. *Atmospheric Chemistry and Physics*, **2010**, 10, 6503-6514	6.8	86
107	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, n/a-n/a		84

106	CIMS measurements of HNO3 and SO2 at the South Pole during ISCAT 2000. *Atmospheric Environment*, **2004**, 38, 5411-5421	5.3	84
105	Airborne observations of ammonia and ammonium nitrate formation over Houston, Texas. *Journal of Geophysical Research*, **2010**, 115,		80
104	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,		80
103	Particle characteristics following cloud-modified transport from Asia to North America. *Journal of Geophysical Research*, **2004**, 109,		80
102	High levels of molecular chlorine in the Arctic atmosphere. *Nature Geoscience*, **2014**, 7, 91-94	18.3	79
101	An investigation of the chemistry of ship emission plumes during ITCT 2002. *Journal of Geophysical Research*, **2005**, 110,		79
100	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,		76
99	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	11.5	73
98	Variability in ammonium nitrate formation and nitric acid depletion with altitude and location over California. *Journal of Geophysical Research*, **2003**, 108,		72
97	Gas-phase chemical characteristics of Asian emission plumes observed during ITCT 2K2 over the eastern North Pacific Ocean. *Journal of Geophysical Research*, **2004**, 109,		71
96	Reactive nitrogen transport and photochemistry in urban plumes over the North Atlantic Ocean. *Journal of Geophysical Research*, **2006**, 111,		70
95	Towards validation of ammonia (NH₃) measurements from the IASI satellite. *Atmospheric Measurement Techniques*, **2015**, 8, 1575-1591	4	67
94	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	6.8	64
93	An investigation of ammonia and inorganic particulate matter in California during the CalNex campaign. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 1883-1902	4.4	63
92	Air quality implications of the Deepwater Horizon oil spill. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 20280-5	11.5	59
91	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	6.8	59
90	Chemical evolution of atmospheric organic carbon over multiple generations of oxidation. *Nature Chemistry*, **2018**, 10, 462-468	17.6	58
89	Observations of inorganic bromine (HOBr, BrO, and Br2) speciation at Barrow, Alaska, in spring 2009. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		58

88	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	6.8	55
87	Measurement of peroxycarboxylic nitric anhydrides (PANs) during the ITCT 2K2 aircraft intensive experiment. *Journal of Geophysical Research*, **2004**, 109,		54
86	An investigation of South Pole HOx chemistry: Comparison of model results with ISCAT observations. *Geophysical Research Letters*, **2001**, 28, 3633-3636	4.9	54
85	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. *Atmospheric Chemistry and Physics*, **2015**, 15, 6721-6744	6.8	52
84	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	4	50
83	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	6.8	49
82	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	4.4	46
81	Measurements of pernitric acid at the South Pole during ISCAT 2000. *Geophysical Research Letters*, **2002**, 29, 7-1	4.9	45
80	Evolution of aerosol properties impacting visibility and direct climate forcing in an ammonia-rich urban environment. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		43
79	Modeling the weekly cycle of NOx and CO emissions and their impacts on O3 in the Los Angeles-South Coast Air Basin during the CalNex 2010 field campaign. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 1340-1360	4.4	43
78	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol. *Atmospheric Chemistry and Physics*, **2016**, 16, 2575-2596	6.8	41
77	Calibration and evaluation of nitric acid and ammonia permeation tubes by UV optical absorption. *Environmental Science & Technology*, **2003**, 37, 2975-81	10.3	40
76	Heterogeneous Interactions of HBr and HOCl with Cold Sulfuric Acid Solutions:´Implications for Arctic Boundary Layer Bromine Chemistry. *Journal of Physical Chemistry A*, **1997**, 101, 2131-2137	2.8	39
75	Enhanced formation of isoprene-derived organic aerosol in sulfur-rich power plant plumes during Southeast Nexus. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 11,137-11,153	4.4	38
74	Controlled nitric oxide production via O(¹D) + N₂O reactions for use in oxidation flow reactor studies. *Atmospheric Measurement Techniques*, **2017**, 10, 2283-2298	4	35
73	HONO emission and production determined from airborne measurements over the Southeast U.S.. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 9237-9250	4.4	34
72	Interannual variability of ammonia concentrations over the United States: sources and implications. *Atmospheric Chemistry and Physics*, **2016**, 16, 12305-12328	6.8	34
71	Chemical ionization mass spectrometry technique for detection of dimethylsulfoxide and ammonia. *Journal of Geophysical Research*, **2002**, 107, ACH 10-1		34

70	Observations of ozone transport from the free troposphere to the Los Angeles basin. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		33
69	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	6.8	33
68	Measurements of OH aboard the NASA P-3 during PEM-Tropics B. *Journal of Geophysical Research*, **2001**, 106, 32657-32666		30
67	Observation and modeling of the evolution of Texas power plant plumes. *Atmospheric Chemistry and Physics*, **2012**, 12, 455-468	6.8	29
66	Relationship between photochemical ozone production and NOx oxidation in Houston, Texas. *Journal of Geophysical Research*, **2009**, 114,		29
65	Using advanced mass spectrometry techniques to fully characterize atmospheric organic carbon: current capabilities and remaining gaps. *Faraday Discussions*, **2017**, 200, 579-598	3.6	28
64	Size-dependent influence of NO on the growth rates of organic aerosol particles. *Science Advances*, **2020**, 6, eaay4945	14.3	28
63	Airborne observations of DMSO, DMS, and OH at marine tropical latitudes. *Geophysical Research Letters*, **2001**, 28, 2201-2204	4.9	28
62	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	5.3	27
61	WRF-Chem simulation of NOx and O3 in the L.A. basin during CalNex-2010. *Atmospheric Environment*, **2013**, 81, 421-432	5.3	27
60	Emissions of Glyoxal and Other Carbonyl Compounds from Agricultural Biomass Burning Plumes Sampled by Aircraft. *Environmental Science & Technology*, **2017**, 51, 11761-11770	10.3	25
59	Observational assessment of the role of nocturnal residual-layer chemistry in determining daytime surface particulate nitrate concentrations. *Atmospheric Chemistry and Physics*, **2017**, 17, 14747-14770	6.8	25
58	Decadal changes in summertime reactive oxidized nitrogen and surface ozone over the Southeast United States. *Atmospheric Chemistry and Physics*, **2018**, 18, 2341-2361	6.8	24
57	Validation of TES ammonia observations at the single pixel scale in the San Joaquin Valley during DISCOVER-AQ. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 5140-5154	4.4	23
56	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	4.4	22
55	Pollutant transport among California regions. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 6750-6763	4.4	22
54	Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS. *Atmospheric Chemistry and Physics*, **2012**, 12, 1327-1338	6.8	22
53	Relationship between OH measurements on two different NASA aircraft during PEM Tropics B. *Journal of Geophysical Research*, **2001**, 106, 32683-32689		22

52	Using Short-Term CO/CO2 Ratios to Assess Air Mass Differences Over the Korean Peninsula During KORUS-AQ. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 10951-10972	4.4	21
51	Impacts of the Denver Cyclone on regional air quality and aerosol formation in the Colorado Front Range during FRAPP2014. *Atmospheric Chemistry and Physics*, **2016**, 16, 12039-12058	6.8	19
50	Effects of NOxcontrol and plume mixing on nighttime chemical processing of plumes from coal-fired power plants. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		19
49	Multispecies Assessment of Factors Influencing Regional CO2 and CH4 Enhancements During the Winter 2017 ACT-America Campaign. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031339	4.4	17
48	Cleaner burning aviation fuels can reduce contrail cloudiness. *Communications Earth & Environment*, **2021**, 2,	6.1	17
47	The NASA Carbon Airborne Flux Experiment (CARAFE): instrumentation and methodology. *Atmospheric Measurement Techniques*, **2018**, 11, 1757-1776	4	17
46	Modeling NHNO Over the San Joaquin Valley During the 2013 DISCOVER-AQ Campaign. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 4727-4745	4.4	15
45	Airborne measurements of the atmospheric emissions from a fuel ethanol refinery. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 4385-4397	4.4	14
44	Changes in nitrogen oxides emissions in California during 20052010 indicated from top-down and bottom-up emission estimates. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 12,928-12,952	4.4	14
43	Ozone and alkyl nitrate formation from the Deepwater Horizon oil spill atmospheric emissions. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		13
42	Inorganic and black carbon aerosols in the Los Angeles Basin during CalNex. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 1777-1803	4.4	13
41	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	4.4	11
40	Modeling the diurnal variability of agricultural ammonia in Bakersfield, California, during the CalNex campaign. *Atmospheric Chemistry and Physics*, **2017**, 17, 2721-2739	6.8	11
39	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	4.9	11
38	Aerosol optical extinction during the Front Range Air Pollution and Photochemistry xperiment (FRAPP2014 summertime field campaign, Colorado, USA. *Atmospheric Chemistry and Physics*, **2016**, 16, 11207-11217	6.8	10
37	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations		10
36	The global tropospheric ammonia distribution as seen in the 13 year AIRS measurement record		10
35	Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic climate (ARCPAC) project		9

34	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	6.8	8
33	Rapid cloud removal of dimethyl sulfide oxidation products limits SO and cloud condensation nuclei production in the marine atmosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	7
32	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. *Communications Earth & Environment*, **2021**, 2,	6.1	7
31	Atmospheric Carbon and Transport - America (ACT-America) Data Sets: Description, Management, and Delivery. *Earth and Space Science*, **2021**, 8, e2020EA001634	3.1	7
30	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	6.2	6
29	Towards validation of ammonia (NH₃) measurements from the IASI satellite **2014**,		6
28	Biomass burning in Siberia as a source of BrO to the Arctic free troposphere. *Atmospheric Environment*, **2012**, 62, 416-423	5.3	6
27	Ozone chemistry in western U.S. wildfire plumes. *Science Advances*, **2021**, 7, eabl3648	14.3	6
26	Bromine measurements in ozone depleted air over the Arctic Ocean		6
25	Instrumentation and Measurement Strategy for the NOAA SENEX Aircraft Campaign as Part of the Southeast Atmosphere Study 2013		6
24	Hydrocarbon Removal in Power Plant Plumes Shows Nitrogen Oxide Dependence of Hydroxyl Radicals. *Geophysical Research Letters*, **2019**, 46, 7752-7760	4.9	5
23	Aircraft-based observation of meteoric material in lower-stratospheric aerosol particles between 15 and 68° N. *Atmospheric Chemistry and Physics*, **2021**, 21, 989-1013	6.8	5
22	Summary of the High Ice Water Content (HIWC) RADAR Flight Campaigns		4
21	Validation of IASI Satellite Ammonia Observations at the Pixel Scale Using In Situ Vertical Profiles. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD033475	4.4	4
20	Modeling air quality in the San Joaquin valley of California during the 2013 Discover-AQ field campaign. *Atmospheric Environment: X*, **2020**, 5, 100067	2.8	3
19	High Temporal Resolution Satellite Observations of Fire Radiative Power Reveal Link Between Fire Behavior and Aerosol and Gas Emissions		3
18	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		3
17	Fossil Versus Nonfossil CO Sources in the US: New Airborne Constraints From ACT-America and GEM. *Geophysical Research Letters*, **2021**, 48, e2021GL093361	4.9	3

16	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	6.8	3
15	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. *Environmental Science & Technology*, **2021**, 55, 15646-15657	10.3	2
14	Aerosol Optical Extinction during the Front Range Air Pollution and Photochemistry Experiment (FRAPPÉ) 2014 Summertime Field Campaign, Colorado U.S.A.		2
13	Impacts of the Denver Cyclone on Regional Air Quality and Aerosol Formation in the Colorado Front Range during FRAPPÉ 2014		2
12	Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS		2
11	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol		2
10	Seasonal Variability in Local Carbon Dioxide Combustion Sources over the Central and Eastern US using Airborne In-Situ Enhancement Ratios		2
9	Airborne Emission Rate Measurements Validate Remote Sensing Observations and Emission Inventories of Western U.S. Wildfires.. *Environmental Science & Technology*, **2022**,	10.3	2
8	Modeling the Diurnal Variability of Agricultural Ammonia in Bakersfield, California during CalNex **2016**,		1
7	Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC		1
6	Modeling regional aerosol variability over California and its sensitivity to emissions and long-range transport during the 2010 CalNex and CARES campaigns		1
5	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	3.4	1
4	Investigation of several proxies to estimate sulfuric acid concentration under volcanic plume conditions. *Atmospheric Chemistry and Physics*, **2021**, 21, 4541-4560	6.8	1
3	Airborne Measurements of Contrail Ice Properties Dependence on Temperature and Humidity. *Geophysical Research Letters*, **2021**, 48, e2020GL092166	4.9	1
2	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	4.4	0
1	Cold Air Outbreaks Promote New Particle Formation Off the U.S. East Coast. *Geophysical Research Letters*, **2022**, 49,	4.9	0