Andreas Richter

List of Publications by Year
in descending order

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484 papers	46,707 citations	1792 103 h-index	3312 184 g-index
622 all docs	622 docs citations	622 times ranked	34125 citing authors

#	Article	IF	Citations
1	Increase in tropospheric nitrogen dioxide over China observed from space. Nature, 2005, 437, 129-132.	13.7	1,300
2	The boundless carbon cycle. Nature Geoscience, 2009, 2, 598-600.	5.4	1,223
3	The Global Ozone Monitoring Experiment (GOME): Mission Concept and First Scientific Results. Journals of the Atmospheric Sciences, 1999, 56, 151-175.	0.6	1,105
4	Environmental and stoichiometric controls on microbial carbonâ€use efficiency in soils. New Phytologist, 2012, 196, 79-91.	3.5	1,046
5	ACE2 links amino acid malnutrition to microbial ecology and intestinal inflammation. Nature, 2012, 487, 477-481.	13.7	1,035
6	Nitrososphaera viennensis , an ammonia oxidizing archaeon from soil. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8420-8425.	3.3	810
7	The application of ecological stoichiometry to plantâ€“microbialâ€“soil organic matter transformations. Ecological Monographs, 2015, 85, 133-155.	2.4	735
8	Carbon use efficiency of microbial communities: stoichiometry, methodology and modelling. Ecology Letters, 2013, 16, 930-939.	3.0	627
9	A moderately thermophilic ammonia-oxidizing crenarchaeote from a hot spring. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2134-2139.	3.3	626
10	Non-structural carbon compounds in temperate forest trees. Plant, Cell and Environment, 2003, 26, 1067-1081.	2.8	625
11	Adjustment of microbial nitrogen use efficiency to carbon:nitrogen imbalances regulates soil nitrogen cycling. Nature Communications, 2014, 5, 3694.	5.8	594
12	Halogens and their role in polar boundary-layer ozone depletion. Atmospheric Chemistry and Physics, 2007, 7, 4375-4418.	1.9	593
13	An improved tropospheric NO₂ column retrieval algorithm for the Ozone Monitoring Instrument. Atmospheric Measurement Techniques, 2011, 4, 1905-1928.	1.2	550
14	Root Exudation of Primary Metabolites: Mechanisms and Their Roles in Plant Responses to Environmental Stimuli. Frontiers in Plant Science, 2019, 10, 157.	1.7	540
15	Who is who in litter decomposition? Metaproteomics reveals major microbial players and their biogeochemical functions. ISME Journal, 2012, 6, 1749-1762.	4.4	537
16	Dynamic Oxidation of Gaseous Mercury in the Arctic Troposphere at Polar Sunrise. Environmental Science & Technology, 2002, 36, 1245-1256.	4.6	526
17	Stoichiometric imbalances between terrestrial decomposer communities and their resources: mechanisms and implications of microbial adaptations to their resources. Frontiers in Microbiology, 2014, 5, 22.	1.5	501
18	amoAâ€based consensus phylogeny of ammoniaâ€oxidizing archaea and deep sequencing of amoA genes from soils of four different geographic regions. Environmental Microbiology, 2012, 14, 525-539.	1.8	485

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19	Microbes as Engines of Ecosystem Function: When Does Community Structure Enhance Predictions of Ecosystem Processes?. Frontiers in Microbiology, 2016, 7, 214.	1.5	479
20	The MACC reanalysis: an 8 yr data set of atmospheric composition. Atmospheric Chemistry and Physics, 2013, 13, 4073-4109.	1.9	424
21	NO_x emission trends for China, 1995â€“2004: The view from the ground and the view from space. Journal of Geophysical Research, 2007, 112, .	3.3	422
22	ATMOSPHERIC REMOTE-SENSING REFERENCE DATA FROM GOMEâ€”2. TEMPERATURE-DEPENDENT ABSORPTION CROSS SECTIONS OF O3 IN THE 231â€“794NM RANGE. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 61, 509-517.	1.1	397
23	Tropospheric NO2 from GOME measurements. Advances in Space Research, 2002, 29, 1673-1683.	1.2	361
24	Belowground carbon allocation by trees drives seasonal patterns of extracellular enzyme activities by altering microbial community composition in a beech forest soil. New Phytologist, 2010, 187, 843-858.	3.5	337
25	Antarctic Springtime Depletion of Atmospheric Mercury. Environmental Science & Technology, 2002, 36, 1238-1244.	4.6	307
26	Microbial community dynamics alleviate stoichiometric constraints during litter decay. Ecology Letters, 2014, 17, 680-690.	3.0	302
27	Global patterns of phosphatase activity in natural soils. Scientific Reports, 2017, 7, 1337.	1.6	296
28	Microbial carbon use efficiency and biomass turnover times depending on soil depth â€“ Implications for carbon cycling. Soil Biology and Biochemistry, 2016, 96, 74-81.	4.2	289
29	<scp>NxrB</scp> encoding the beta subunit of nitrite oxidoreductase as functional and phylogenetic marker for nitriteâ€oxidizing <scp>N</scp>itrospira. Environmental Microbiology, 2014, 16, 3055-3071.	1.8	280
30	Metatranscriptomic census of active protists in soils. ISME Journal, 2015, 9, 2178-2190.	4.4	274
31	Seasonality and resource availability control bacterial and archaeal communities in soils of a temperate beech forest. ISME Journal, 2011, 5, 389-402.	4.4	273
32	Thaumarchaeotes abundant in refinery nitrifying sludges express amoA but are not obligate autotrophic ammonia oxidizers. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16771-16776.	3.3	272
33	Aerobic nitrous oxide production through N-nitrosating hybrid formation in ammonia-oxidizing archaea. ISME Journal, 2014, 8, 1135-1146.	4.4	270
34	Simultaneous global observations of glyoxal and formaldehyde from space. Geophysical Research Letters, 2006, 33, .	1.5	265
35	Experimental drought reduces the transfer of recently fixed plant carbon to soil microbes and alters the bacterial community composition in a mountain meadow. New Phytologist, 2014, 201, 916-927.	3.5	261
36	Does photosynthesis affect grassland soilâ€respired CO₂ and its carbon isotope composition on a diurnal timescale?. New Phytologist, 2009, 182, 451-460.	3.5	260

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37	Long-Term Change in the Nitrogen Cycle of Tropical Forests. Science, 2011, 334, 664-666.	6.0	250
38	Atmospheric composition change: Climateâ€“Chemistry interactions. Atmospheric Environment, 2009, 43, 5138-5192.	1.9	243
39	Megacities as hot spots of air pollution in the East Mediterranean. Atmospheric Environment, 2011, 45, 1223-1235.	1.9	239
40	Microbial carbon limitation: The need for integrating microorganisms into our understanding of ecosystem carbon cycling. Global Change Biology, 2020, 26, 1953-1961.	4.2	239
41	Long-term changes of tropospheric NO₂ over megacities derived from multiple satellite instruments. Atmospheric Chemistry and Physics, 2013, 13, 4145-4169.	1.9	237
42	SO₂emissions and lifetimes: Estimates from inverse modeling using in situ and global, space-based (SCIAMACHY and OMI) observations. Journal of Geophysical Research, 2011, 116, .	3.3	230
43	Microbial temperature sensitivity and biomass change explain soil carbon loss with warming. Nature Climate Change, 2018, 8, 885-889.	8.1	230
44	Stoichiometric controls of nitrogen and phosphorus cycling in decomposing beech leaf litter. Ecology, 2012, 93, 770-782.	1.5	228
45	The effect of resource quantity and resource stoichiometry on microbial carbon-use-efficiency. FEMS Microbiology Ecology, 2010, 73, no-no.	1.3	227
46	Magnification of atmospheric mercury deposition to polar regions in springtime: The link to tropospheric ozone depletion chemistry. Geophysical Research Letters, 2001, 28, 3219-3222.	1.5	224
47	Satellite-observed U.S. power plant NOxemission reductions and their impact on air quality. Geophysical Research Letters, 2006, 33, .	1.5	219
48	Nitrogen fixation by phyllosphere bacteria associated with higher plants and their colonizing epiphytes of a tropical lowland rainforest of Costa Rica. ISME Journal, 2008, 2, 561-570.	4.4	218
49	Soil multifunctionality is affected by the soil environment and by microbial community composition and diversity. Soil Biology and Biochemistry, 2019, 136, 107521.	4.2	217
50	Increased microbial growth, biomass, and turnover drive soil organic carbon accumulation at higher plant diversity. Global Change Biology, 2020, 26, 669-681.	4.2	217
51	ATMOSPHERIC REMOTE-SENSING REFERENCE DATA FROM GOME: PART 1. TEMPERATURE-DEPENDENT ABSORPTION CROSS-SECTIONS OF NO2 IN THE 231â€“794 nm RANGE. Journal of Quantitative Spectroscopy and Radiative Transfer, 1998, 60, 1025-1031.	1.1	215
52	Input of easily available organic C and N stimulates microbial decomposition of soil organic matter in arctic permafrost soil. Soil Biology and Biochemistry, 2014, 75, 143-151.	4.2	213
53	Host-compound foraging by intestinal microbiota revealed by single-cell stable isotope probing. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4720-4725.	3.3	210
54	Essential role for collectrin in renal amino acid transport. Nature, 2006, 444, 1088-1091.	13.7	208

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55	Soil microbial carbon use efficiency and biomass turnover in a long-term fertilization experiment in a temperate grassland. Soil Biology and Biochemistry, 2016, 97, 168-175.	4.2	205
56	Tropospheric chemistry in the Integrated Forecasting System of ECMWF. Geoscientific Model Development, 2015, 8, 975-1003.	1.3	204
57	Frost flowers on sea ice as a source of sea salt and their influence on tropospheric halogen chemistry. Geophysical Research Letters, 2004, 31, .	1.5	202
58	Heterotrophic microbial communities use ancient carbon following glacial retreat. Biology Letters, 2007, 3, 487-490.	1.0	201
59	Summer drought alters carbon allocation to roots and root respiration in mountain grassland. New Phytologist, 2015, 205, 1117-1127.	3.5	199
60	Validation of Ozone Monitoring Instrument nitrogen dioxide columns. Journal of Geophysical Research, 2008, 113, .	3.3	194
61	Improving algorithms and uncertainty estimates for satellite NO₂ retrievals: results from the quality assurance for the essential climate variables (QA4ECV) project. Atmospheric Measurement Techniques, 2018, 11, 6651-6678.	1.2	187
62	Functional diversity of the soil microflora in primary succession across two glacier forelands in the Central Alps. European Journal of Soil Science, 2003, 54, 685-696.	1.8	175
63	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution. Atmospheric Chemistry and Physics, 2008, 8, 4965-4981.	1.9	174
64	Nitrification in terrestrial hot springs of Iceland and Kamchatka. FEMS Microbiology Ecology, 2008, 64, 167-174.	1.3	173
65	Standardized protocols and procedures can precisely and accurately quantify non-structural carbohydrates. Tree Physiology, 2018, 38, 1764-1778.	1.4	171
66	Microbial processes and community composition in the rhizosphere of European beechÂâ€“ÂThe influence of plant C exudates. Soil Biology and Biochemistry, 2011, 43, 551-558.	4.2	170
67	Comparison of box-air-mass-factors and radiances for Multiple-Axis Differential Optical Absorption Spectroscopy (MAX-DOAS) geometries calculated from different UV/visible radiative transfer models. Atmospheric Chemistry and Physics, 2007, 7, 1809-1833.	1.9	168
68	Growth of nitrite-oxidizing bacteria by aerobic hydrogen oxidation. Science, 2014, 345, 1052-1054.	6.0	166
69	Nitrification rates in Arctic soils are associated with functionally distinct populations of ammonia-oxidizing archaea. ISME Journal, 2013, 7, 1620-1631.	4.4	163
70	Non-structural carbohydrates in woody plants compared among laboratories. Tree Physiology, 2015, 35, tpv073.	1.4	163
71	Measuring atmospheric composition change. Atmospheric Environment, 2009, 43, 5351-5414.	1.9	160
72	Global observations of tropospheric BrO columns using GOME-2 satellite data. Atmospheric Chemistry and Physics, 2011, 11, 1791-1811.	1.9	156

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73	Analysis for BrO in zenith-sky spectra: An intercomparison exercise for analysis improvement. Journal of Geophysical Research, 2002, 107, ACH 10-1.	3.3	152
74	Negligible contribution from roots to soil-borne phospholipid fatty acid fungal biomarkers 18:2Ï‰6,9 and 18:1Ï‰9. Soil Biology and Biochemistry, 2010, 42, 1650-1652.	4.2	150
75	Widespread soil bacterium that oxidizes atmospheric methane. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 8515-8524.	3.3	149
76	NO₂columns in the western United States observed from space and simulated by a regional chemistry model and their implications for NO_xemissions. Journal of Geophysical Research, 2009, 114, .	3.3	146
77	Temperature-dependent shift from labile to recalcitrant carbon sources of arctic heterotrophs. Rapid Communications in Mass Spectrometry, 2005, 19, 1401-1408.	0.7	145
78	Satellite measurements of NO2from international shipping emissions. Geophysical Research Letters, 2004, 31, .	1.5	144
79	Decoupling of microbial carbon, nitrogen, and phosphorus cycling in response to extreme temperature events. Science Advances, 2017, 3, e1602781.	4.7	143
80	Disruption ofAtMRP4, a guard cell plasma membrane ABCC-type ABC transporter, leads to deregulation of stomatal opening and increased drought susceptibility. Plant Journal, 2004, 39, 219-236.	2.8	141
81	A panâ€Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. Global Change Biology, 2015, 21, 2787-2803.	4.2	138
82	Distinct microbial communities associated with buried soils in the Siberian tundra. ISME Journal, 2014, 8, 841-853.	4.4	137
83	Chemical characterization of air pollution in Eastern China and the Eastern United States. Atmospheric Environment, 2006, 40, 2607-2625.	1.9	134
84	An improved NO₂ retrieval for the GOME-2 satellite instrument. Atmospheric Measurement Techniques, 2011, 4, 1147-1159.	1.2	134
85	Multi-model simulations of the impact of international shipping on Atmospheric Chemistry and Climate in 2000 and 2030. Atmospheric Chemistry and Physics, 2007, 7, 757-780.	1.9	133
86	Structural uncertainty in air mass factor calculation for NO₂ and HCHO satellite retrievals. Atmospheric Measurement Techniques, 2017, 10, 759-782.	1.2	133
87	Quantification and monosaccharide composition of hemicelluloses from different plant functional types. Plant Physiology and Biochemistry, 2010, 48, 1-8.	2.8	132
88	Seasonal variation in functional properties of microbial communities in beech forest soil. Soil Biology and Biochemistry, 2013, 60, 95-104.	4.2	131
89	Inverse modelling of the spatial distribution of NO_x emissions on a continental scale using satellite data. Atmospheric Chemistry and Physics, 2006, 6, 1747-1770.	1.9	127
90	Multi-model ensemble simulations of tropospheric NO₂ compared with GOME retrievals for the year 2000. Atmospheric Chemistry and Physics, 2006, 6, 2943-2979.	1.9	127

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91	Convergence of soil nitrogen isotopes across global climate gradients. Scientific Reports, 2015, 5, 8280.	1.6	127
92	Algorithm theoretical baseline for formaldehyde retrievals from S5P TROPOMI and from the QA4ECV project. Atmospheric Measurement Techniques, 2018, 11, 2395-2426.	1.2	127
93	Growth explains microbial carbon use efficiency across soils differing in land use and geology. Soil Biology and Biochemistry, 2019, 128, 45-55.	4.2	127
94	Initial effects of experimental warming on carbon exchange rates, plant growth and microbial dynamics of a lichen-rich dwarf shrub tundra in Siberia. Plant and Soil, 2008, 307, 191-205.	1.8	126
95	Sample preservation for determination of organic compounds: microwave versus freeze-drying. Journal of Experimental Botany, 1996, 47, 1469-1473.	2.4	125
96	Low yield and abiotic origin of N2O formed by the complete nitrifier Nitrospira inopinata. Nature Communications, 2019, 10, 1836.	5.8	123
97	Systematic analysis of interannual and seasonal variations of model-simulated tropospheric NO₂ in Asia and comparison with GOME-satellite data. Atmospheric Chemistry and Physics, 2007, 7, 1671-1681.	1.9	122
98	Analysis of the Raffinose Family Oligosaccharide Pathway in Pea Seeds with Contrasting Carbohydrate Composition. Plant Physiology, 2001, 127, 1764-1772.	2.3	121
99	Conservation of soil organic matter through cryoturbation in arctic soils in Siberia. Journal of Geophysical Research, 2007, 112, .	3.3	118
100	Determination of gross rates of amino acid production and immobilization inÂdecomposing leaf litter by a novel 15N isotope pool dilution technique. Soil Biology and Biochemistry, 2010, 42, 1293-1302.	4.2	118
101	Plants control the seasonal dynamics of microbial N cycling in a beech forest soil by belowground C allocation. Ecology, 2011, 92, 1036-1051.	1.5	118
102	Optimal metabolic regulation along resource stoichiometry gradients. Ecology Letters, 2017, 20, 1182-1191.	3.0	118
103	The 2005 and 2006 DANDELIONS NO₂ and aerosol intercomparison campaigns. Journal of Geophysical Research, 2008, 113, .	3.3	116
104	Satellite observations of atmospheric SO2 from volcanic eruptions during the time-period of 1996â€“2002. Advances in Space Research, 2005, 36, 879-887.	1.2	115
105	Plant roots increase both decomposition and stable organic matter formation in boreal forest soil. Nature Communications, 2019, 10, 3982.	5.8	115
106	myo-Inositol and sucrose concentrations affect the accumulation of raffinose family oligosaccharides in seeds. Journal of Experimental Botany, 2004, 55, 1981-1987.	2.4	114
107	GOME-2 observations of oxygenated VOCs: what can we learn from the ratio glyoxal to formaldehyde on a global scale?. Atmospheric Chemistry and Physics, 2010, 10, 10145-10160.	1.9	114
108	Operational total and tropospheric NO₂ column retrieval for GOME-2. Atmospheric Measurement Techniques, 2011, 4, 1491-1514.	1.2	114

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109	Satellite remote sensing of changes in NO x emissions over China during 1996â€“2010. Science Bulletin, 2012, 57, 2857-2864.	1.7	113
110	C:N:P stoichiometry regulates soil organic carbon mineralization and concomitant shifts in microbial community composition in paddy soil. Biology and Fertility of Soils, 2020, 56, 1093-1107.	2.3	112
111	Gome measurements of stratospheric and tropospheric BrO. Advances in Space Research, 2002, 29, 1667-1672.	1.2	110
112	Data assimilation of satellite-retrieved ozone, carbon monoxide and nitrogen dioxide with ECMWF's Composition-IFS. Atmospheric Chemistry and Physics, 2015, 15, 5275-5303.	1.9	109
113	Remote Sensing of Tropospheric Pollution from Space. Bulletin of the American Meteorological Society, 2008, 89, 805-822.	1.7	108
114	Temporal and spatial variability of glyoxal as observed from space. Atmospheric Chemistry and Physics, 2009, 9, 4485-4504.	1.9	108
115	Fungal and bacterial utilization of organic substrates depends on substrate complexity and N availability. FEMS Microbiology Ecology, 2014, 87, 142-152.	1.3	108
116	Microbial nitrogen dynamics in organic and mineral soil horizons along a latitudinal transect in western Siberia. Global Biogeochemical Cycles, 2015, 29, 567-582.	1.9	108
117	Ecological memory of recurrent drought modifies soil processes via changes in soil microbial community. Nature Communications, 2021, 12, 5308.	5.8	108
118	Temperature response of permafrost soil carbon is attenuated by mineral protection. Global Change Biology, 2018, 24, 3401-3415.	4.2	107
119	Towards monitoring localized CO₂ emissions from space: co-located regional CO₂ and NO₂ enhancements observed by the OCO-2 and S5P satellites. Atmospheric Chemistry and Physics, 2019, 19, 9371-9383.	1.9	107
120	Intercomparison of slant column measurements of NO₂ and O₄ by MAX-DOAS and zenith-sky UV and visible spectrometers. Atmospheric Measurement Techniques, 2010, 3, 1629-1646.	1.2	106
121	Rapid Transfer of Plant Photosynthates to Soil Bacteria via Ectomycorrhizal Hyphae and Its Interaction With Nitrogen Availability. Frontiers in Microbiology, 2019, 10, 168.	1.5	106
122	Retrieval of vertical columns of sulfur dioxide from SCIAMACHY and OMI: Air mass factor algorithm development, validation, and error analysis. Journal of Geophysical Research, 2009, 114, .	3.3	105
123	Microbial community composition shapes enzyme patterns in topsoil and subsoil horizons along a latitudinal transect in Western Siberia. Soil Biology and Biochemistry, 2015, 83, 106-115.	4.2	104
124	Soil organic matter quality exerts a stronger control than stoichiometry on microbial substrate use efficiency along a latitudinal transect. Soil Biology and Biochemistry, 2018, 121, 212-220.	4.2	104
125	On the improvement of NO₂ satellite retrievals â€“ aerosol impact on the airmass factors. Atmospheric Measurement Techniques, 2010, 3, 475-493.	1.2	103
126	Testing and improving OMI DOMINO tropospheric NO₂ using observations from the DANDELIONS and INTEXâ€B validation campaigns. Journal of Geophysical Research, 2010, 115, .	3.3	103

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127	Cyanate and urea are substrates for nitrification by Thaumarchaeota in the marine environment. Nature Microbiology, 2019, 4, 234-243.	5.9	103
128	A plantâ€“microbe interaction framework explaining nutrient effects on primary production. Nature Ecology and Evolution, 2018, 2, 1588-1596.	3.4	100
129	Decreasing emissions of NOx relative to CO2 in East Asia inferred from satellite observations. Nature Geoscience, 2014, 7, 792-795.	5.4	99
130	BrO, blizzards, and drivers of polar tropospheric ozone depletion events. Atmospheric Chemistry and Physics, 2009, 9, 4639-4652.	1.9	98
131	Inhibition of raffinose oligosaccharide breakdown delays germination of pea seeds. Journal of Plant Physiology, 2007, 164, 1093-1096.	1.6	97
132	Soil warming alters microbial substrate use in alpine soils. Global Change Biology, 2014, 20, 1327-1338.	4.2	97
133	Short-term changes in carbon isotope composition of soluble carbohydrates and starch: from canopy leaves to the root system. Rapid Communications in Mass Spectrometry, 2006, 20, 653-660.	0.7	94
134	Drought history affects grassland plant and microbial carbon turnover during and after a subsequent drought event. Journal of Ecology, 2016, 104, 1453-1465.	1.9	94
135	Chemical and aerosol characterisation of the troposphere over West Africa during the monsoon period as part of AMMA. Atmospheric Chemistry and Physics, 2010, 10, 7575-7601.	1.9	93
136	Remote sensing and inverse transport modeling of the Kasatochi eruption sulfur dioxide cloud. Journal of Geophysical Research, 2010, 115, .	3.3	93
137	Dynamical control of NH and SH winter/spring total ozone from GOME observations in 1995â€“2002. Geophysical Research Letters, 2003, 30, .	1.5	92
138	Chain Elongation of Raffinose in Pea Seeds. Journal of Biological Chemistry, 2002, 277, 194-200.	1.6	91
139	Effects of Soil Organic Matter Properties and Microbial Community Composition on Enzyme Activities in Cryoturbated Arctic Soils. PLoS ONE, 2014, 9, e94076.	1.1	90
140	Variations of the increasing trend of tropospheric NO2 over central east China during the past decade. Atmospheric Environment, 2007, 41, 4865-4876.	1.9	89
141	Linking Microbial and Ecosystem Ecology Using Ecological Stoichiometry: A Synthesis of Conceptual and Empirical Approaches. Ecosystems, 2011, 14, 261-273.	1.6	89
142	Microbial activities and foliar uptake of nitrogen in the epiphytic bromeliad Vriesea gigantea. New Phytologist, 2007, 175, 311-320.	3.5	88
143	Chemical differences between seeds and elaiosomes indicate an adaptation to nutritional needs of ants. Oecologia, 2008, 155, 539-547.	0.9	88
144	Economic crisis detected from space: Air quality observations over Athens/Greece. Geophysical Research Letters, 2013, 40, 458-463.	1.5	88

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145	Plant-derived compounds stimulate the decomposition of organic matter in arctic permafrost soils. Scientific Reports, 2016, 6, 25607.	1.6	87
146	Evaluations of NO_x and highly reactive VOC emission inventories in Texas and their implications for ozone plume simulations during the Texas Air Quality Study 2006. Atmospheric Chemistry and Physics, 2011, 11, 11361-11386.	1.9	85
147	Storage and transformation of organic matter fractions in cryoturbated permafrost soils across the Siberian Arctic. Biogeosciences, 2015, 12, 4525-4542.	1.3	85
148	Preparation of starch and other carbon fractions from higher plant leaves for stable carbon isotope analysis. Rapid Communications in Mass Spectrometry, 2001, 15, 1136-1140.	0.7	84
149	GEM-AQ, an on-line global multiscale chemical weather modelling system: model description and evaluation of gas phase chemistry processes. Atmospheric Chemistry and Physics, 2008, 8, 3255-3281.	1.9	84
150	Satellite measurement based estimates of decadal changes in European nitrogen oxides emissions. Atmospheric Chemistry and Physics, 2008, 8, 2623-2641.	1.9	84
151	Short-term dynamics of nonstructural carbohydrates and hemicelluloses in young branches of temperate forest trees during bud break. Tree Physiology, 2009, 29, 901-911.	1.4	84
152	Responses of belowground carbon allocation dynamics to extended shading in mountain grassland. New Phytologist, 2013, 198, 116-126.	3.5	84
153	Proteome analysis of fungal and bacterial involvement in leaf litter decomposition. Proteomics, 2010, 10, 1819-1830.	1.3	83
154	The Cabauw Intercomparison campaign for Nitrogen Dioxide measuring Instruments (CINDI): design, execution, and early results. Atmospheric Measurement Techniques, 2012, 5, 457-485.	1.2	83
155	Analysis of tropospheric NOx over Asia using the model of atmospheric transport and chemistry (MATCH-MPIC) and GOME-satellite observations. Atmospheric Environment, 2004, 38, 581-596.	1.9	82
156	Satellite measurements of daily variations in soil NOxemissions. Geophysical Research Letters, 2005, 32, .	1.5	82
157	Exploring the missing source of glyoxal (CHOCHO) over China. Geophysical Research Letters, 2012, 39, .	1.5	82
158	Intercomparison of BrO measurements from ERS-2 GOME, ground-based and balloon platforms. Advances in Space Research, 2002, 29, 1661-1666.	1.2	80
159	Social dynamics within decomposer communities lead to nitrogen retention and organic matter build-up in soils. Nature Communications, 2015, 6, 8960.	5.8	80
160	Global observations of stratospheric bromine monoxide from SCIAMACHY. Geophysical Research Letters, 2005, 32, .	1.5	79
161	Convective forcing of mercury and ozone in the Arctic boundary layer induced by leads in sea ice. Nature, 2014, 506, 81-84.	13.7	79
162	Nitrogen dynamics in Turbic Cryosols from Siberia and Greenland. Soil Biology and Biochemistry, 2013, 67, 85-93.	4.2	78

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163	MAX-DOAS formaldehyde slant column measurements during CINDI: intercomparison and analysis improvement. Atmospheric Measurement Techniques, 2013, 6, 167-185.	1.2	78
164	Evaluation of the MOCAGE chemistry transport model during the ICARTT/ITOP experiment. Journal of Geophysical Research, 2007, 112, .	3.3	76
165	Preparation of starch and soluble sugars of plant material for the analysis of carbon isotope composition: a comparison of methods. Rapid Communications in Mass Spectrometry, 2009, 23, 2476-2488.	0.7	76
166	Formaldehyde and nitrogen dioxide over the remote western Pacific Ocean: SCIAMACHY and GOME-2 validation using ship-based MAX-DOAS observations. Atmospheric Chemistry and Physics, 2012, 12, 11179-11197.	1.9	76
167	Functional expression of a cDNA encoding pea (Pisum sativum L.) raffinose synthase, partial purification of the enzyme from maturing seeds, and steady-state kinetic analysis of raffinose synthesis. Planta, 2002, 215, 839-846.	1.6	75
168	Analysis of reactive bromine production and ozone depletion in the Arctic boundary layer using 3-D simulations with GEM-AQ: inference from synoptic-scale patterns. Atmospheric Chemistry and Physics, 2011, 11, 3949-3979.	1.9	75
169	Significance of organic nitrogen acquisition for dominant plant species in an alpine meadow on the Tibet plateau, China. Plant and Soil, 2006, 285, 221-231.	1.8	74
170	Improved slant column density retrieval of nitrogen dioxide and formaldehyde for OMI and GOME-2A from QA4ECV: intercomparison, uncertainty characterisation, and trends. Atmospheric Measurement Techniques, 2018, 11, 4033-4058.	1.2	74
171	Galactosylononitol and Stachyose Synthesis in Seeds of Adzuki Bean1. Plant Physiology, 1998, 117, 165-172.	2.3	73
172	Photosynthetic carbohydrate metabolism in the resurrection plant Craterostigma plantagineum. Journal of Experimental Botany, 2000, 51, 159-165.	2.4	73
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