HÃ¥kan Pleijel

List of Publications by Year
in descending order

139 papers	7,074 citations	57719 44 h-index	69214 77 g-index
140 all docs	140 docs citations	140 times ranked	5472 citing authors

#	Article	IF	Citations
1	Evaluating the relationship between leaf chlorophyll concentration and SPAD-502 chlorophyll meter readings. Photosynthesis Research, 2007, 91, 37-46.	1.6	585
2	A synthesis of AOT40-based response functions and critical levels of ozone for agricultural and horticultural crops. Atmospheric Environment, 2007, 41, 2630-2643.	1.9	406
3	New stomatal flux-based critical levels for ozone effects on vegetation. Atmospheric Environment, 2011, 45, 5064-5068.	1.9	215
4	Tropospheric Ozone Assessment Report: Present-day tropospheric ozone distribution and trends relevant to vegetation. Elementa, 2018, 6, .	1.1	212
5	Policy design for the Anthropocene. Nature Sustainability, 2019, 2, 14-21.	11.5	176
6	Ozone risk assessment for agricultural crops in Europe: Further development of stomatal flux and fluxâ€“response relationships for European wheat and potato. Atmospheric Environment, 2007, 41, 3022-3040.	1.9	174
7	Ozone effects on crops and consideration in crop models. European Journal of Agronomy, 2018, 100, 19-34.	1.9	170
8	Ozone pollution will compromise efforts to increase global wheat production. Global Change Biology, 2018, 24, 3560-3574.	4.2	163
9	Closing the global ozone yield gap: Quantification and cobenefits for multistress tolerance. Global Change Biology, 2018, 24, 4869-4893.	4.2	163
10	Constraints to nitrogen acquisition of terrestrial plants under elevated <scp>CO</scp>₂. Global Change Biology, 2015, 21, 3152-3168.	4.2	146
11	Transpiration of urban trees and its cooling effect in a high latitude city. International Journal of Biometeorology, 2016, 60, 159-172.	1.3	138
12	Relationships between ozone exposure and yield loss in European wheat and potatoâ€”a comparison of concentration- and flux-based exposure indices. Atmospheric Environment, 2004, 38, 2259-2269.	1.9	130
13	Influence of urban vegetation on air pollution and noise exposure â€“ A case study in Gothenburg, Sweden. Science of the Total Environment, 2017, 599-600, 1728-1739.	3.9	122
14	Differential ozone sensitivity in an old and a modern Swedish wheat cultivarâ€”grain yield and quality, leaf chlorophyll and stomatal conductance. Environmental and Experimental Botany, 2006, 56, 63-71.	2.0	121
15	Yield vs. Quality tradeâ€offs for wheat in response to carbon dioxide and ozone. Global Change Biology, 2012, 18, 596-605.	4.2	114
16	Yield and grain quality of spring wheat (Triticum aestivum L., cv. Drabant) exposed to different concentrations of ozone in open-top chambers. Environmental Pollution, 1991, 69, 151-168.	3.7	107
17	Grain protein accumulation in relation to grain yield of spring wheat (Triticum aestivum L.) grown in open-top chambers with different concentrations of ozone, carbon dioxide and water availability. Agriculture, Ecosystems and Environment, 1999, 72, 265-270.	2.5	96
18	Growth stage dependence of the grain yield response to ozone in spring wheat (Triticum aestivum L.). Agriculture, Ecosystems and Environment, 1998, 70, 61-68.	2.5	91

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19	Ozone uptake modelling and flux-response relationshipsâ€"an assessment of ozone-induced yield loss in spring wheat. Atmospheric Environment, 2003, 37, 475-485.	1.9	87
20	Ozone effects on wheat grain quality â€“ A summary. Environmental Pollution, 2015, 197, 203-213.	3.7	87
21	A stomatal ozone fluxâ€"response relationship to assess ozone-induced yield loss of winter wheat in subtropical China. Environmental Pollution, 2012, 164, 16-23.	3.7	85
22	Differential effects of ozone on photosynthesis of winter wheat among cultivars depend on antioxidative enzymes rather than stomatal conductance. Science of the Total Environment, 2016, 572, 404-411.	3.9	82
23	CO2-Induced Changes in Wheat Grain Composition: Meta-Analysis and Response Functions. Agronomy, 2017, 7, 32.	1.3	80
24	Current surface ozone concentrations significantly decrease wheat growth, yield and quality. Science of the Total Environment, 2018, 613-614, 687-692.	3.9	80
25	Past, present and future concentrations of ground-level ozone and potential impacts on ecosystems and human health in northern Europe. Science of the Total Environment, 2017, 576, 22-35.	3.9	77
26	Variation and co-variation of PM10, particle number concentration, NOx and NO2 in the urban air â€" Relationships with wind speed, vertical temperature gradient and weather type. Atmospheric Environment, 2015, 120, 317-327.	1.9	75
27	Rate and duration of grain filling in relation to flag leaf senescence and grain yield in spring wheat (Triticum aestivum) exposed to different concentrations of ozone. Physiologia Plantarum, 2000, 110, 366-375.	2.6	73
28	Updated stomatal flux and flux-effect models for wheat for quantifying effects of ozone on grain yield, grain mass and protein yield. Environmental Pollution, 2012, 165, 147-157.	3.7	69
29	Stomatal conductance and ozone exposure in relation to potato tuber yieldâ€"results from the European CHIP programme. European Journal of Agronomy, 2002, 17, 303-317.	1.9	68
30	Narrowing uncertainties in the effects of elevated CO2 on crops. Nature Food, 2020, 1, 775-782.	6.2	67
31	An ozone fluxâ€"response relationship for wheat. Environmental Pollution, 2000, 109, 453-462.	3.7	66
32	Exposure of spring wheat, Triticum aestivum L., cv. Drabant, to different concentrations of ozone in open-top chambers: effects on the ultrastructure of flag leaf cells. New Phytologist, 1992, 120, 39-48.	3.5	65
33	The grain quality of spring wheat (Triticum aestivum L.) in relation to elevated ozone uptake and carbon dioxide exposure. European Journal of Agronomy, 2008, 28, 245-254.	1.9	65
34	New Directions: A new generation of ozone critical levels for the protection of vegetation in Europe. Atmospheric Environment, 2004, 38, 2213-2214.	1.9	63
35	A unifying explanation for variation in ozone sensitivity among woody plants. Global Change Biology, 2018, 24, 78-84.	4.2	62
36	A framework for assessing urban greenery's effects and valuing its ecosystem services. Journal of Environmental Management, 2018, 205, 274-285.	3.8	60

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37	Clover as an indicator plant for phytotoxic ozone concentrations: visible injury in relation to species, leaf age and exposure dynamics. New Phytologist, 1995, 129, 355-365.	3.5	59
38	Biomass reduction of juvenile birch is more strongly related to stomatal uptake of ozone than to indices based on external exposure. Atmospheric Environment, 2004, 38, 4709-4719.	1.9	58
39	Photochemical smog in China: scientific challenges and implications for air-quality policies. National Science Review, 2016, 3, 401-403.	4.6	58
40	Limited effect of urban tree vegetation on NO2 and O3 concentrations near a traffic route. Environmental Pollution, 2014, 189, 73-76.	3.7	57
41	Growth of 27 herbs and grasses in relation to ozone exposure and plant strategy. New Phytologist, 1997, 135, 361-367.	3.5	56
42	Impact of four years exposure to different levels of ozone, phosphorus and drought on chlorophyll, mineral nutrients, and stem volume of Norway spruce, Picea abies. Physiologia Plantarum, 2002, 114, 192-206.	2.6	49
43	Impact of rising tropospheric ozone on potato: effects on photosynthesis, growth, productivity and yield quality. Plant, Cell and Environment, 2005, 28, 982-996.	2.8	46
44	Crop quality under rising atmospheric CO2. Current Opinion in Plant Biology, 2018, 45, 262-267.	3.5	46
45	Effects of Elevated CO2 on Wheat Yield: Non-Linear Response and Relation to Site Productivity. Agronomy, 2019, 9, 243.	1.3	46
46	Exposure of spring wheat (Triticum aestivum) to ozone in open-top chambers. Effects on acyl lipid composition and chlorophyll content of flag leaves. New Phytologist, 1995, 131, 231-239.	3.5	45
47	Phenological development, leaf emergence, tillering and leaf area index, and duration of spring wheat across Europe in response to CO2 and ozone. European Journal of Agronomy, 1999, 10, 171-184.	1.9	45
48	Carbon stocks and dynamics at different successional stages in an Afromontane tropical forest. Biogeosciences, 2017, 14, 1285-1303.	1.3	44
49	Phenological weighting of ozone exposures in the calculation of critical levels for wheat, bean and plantain. Environmental Pollution, 2000, 109, 517-524.	3.7	41
50	On the logarithmic relationship between NO2 concentration and the distance from a highroad. Science of the Total Environment, 2004, 332, 261-264.	3.9	41
51	Surface wetness enhances ozone deposition to a pasture canopy. Atmospheric Environment, 1995, 29, 3391-3393.	1.9	40
52	Increasing risk for negative ozone impacts on vegetation in northern Sweden. Environmental Pollution, 2007, 150, 96-106.	3.7	40
53	Ozone risk for vegetation in the future climate of Europe based on stomatal ozone uptake calculations. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 63, 174.	0.8	40
54	Effects of elevated carbon dioxide, ozone and water availability on spring wheat growth and yield. Physiologia Plantarum, 2000, 108, 61-70.	2.6	39

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55	Simulations of stomatal conductance and ozone uptake to Norway spruce saplings in open-top chambers. Environmental Pollution, 2000, 109, 443-451.	3.7	39
56	Sourceâ€“sink balance of wheat determines responsiveness of grain production to increased [CO2] and water supply. Agriculture, Ecosystems and Environment, 2008, 127, 215-222.	2.5	37
57	The open-top chamber impact on vapour pressure deficit and its consequences for stomatal ozone uptake. Atmospheric Environment, 2008, 42, 6513-6522.	1.9	37
58	A process-oriented explanation of the nonlinear relationship between grain yield of wheat and ozone exposure. New Phytologist, 1995, 131, 241-246.	3.5	36
59	Influence of atmospheric circulation patterns on urban air quality during the winter. Atmospheric Pollution Research, 2015, 6, 278-285.	1.8	36
60	Ozone impact on wheat in Europe, Asia and North America â€“ A comparison. Science of the Total Environment, 2019, 664, 908-914.	3.9	36
61	Effect of climatic conditions on tuber yield (Solanum tuberosum L.) in the European â€˜CHIPâ€™ experiments. European Journal of Agronomy, 2002, 17, 243-255.	1.9	35
62	Ozone exposure- and flux-yield response relationships for maize. Environmental Pollution, 2019, 252, 1-7.	3.7	35
63	Reduced ozone by air filtration consistently improved grain yield in wheat. Environmental Pollution, 2011, 159, 897-902.	3.7	34
64	CO2 doseâ€“response functions for wheat grain, protein and mineral yield based on FACE and open-top chamber experiments. Environmental Pollution, 2015, 198, 70-77.	3.7	32
65	Photochemical oxidant effects on vegetation ? Response in relation to plant strategy. Water, Air, and Soil Pollution, 1995, 85, 111-122.	1.1	31
66	The relationship between birch pollen, air pollution and weather types and their effect on antihistamine purchase in two Swedish cities. Aerobiologia, 2017, 33, 457-471.	0.7	31
67	Wheat yield responses to stomatal uptake of ozone: Peak vs rising background ozone conditions. Atmospheric Environment, 2018, 173, 1-5.	1.9	31
68	CO2 and ozone effects on canopy development of potato crops across Europe. European Journal of Agronomy, 2002, 17, 257-272.	1.9	30
69	Fertilizer efficiency in wheat is reduced by ozone pollution. Science of the Total Environment, 2017, 607-608, 876-880.	3.9	30
70	Nitrogen application is required to realize wheat yield stimulation by elevated CO₂ but will not remove the CO₂â€induced reduction in grain protein concentration. Global Change Biology, 2019, 25, 1868-1876.	4.2	30
71	Epidemiological analysis of ozone and nitrogen impacts on vegetation â€“ Critical evaluation and recommendations. Science of the Total Environment, 2017, 603-604, 785-792.	3.9	29
72	Effects of ozone on biomass, non-structural carbohydrates and nitrogen in spring wheat with artificially manipulated source/sink ratio. Environmental and Experimental Botany, 2001, 46, 155-169.	2.0	28

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73	Impact of ozone and reduced water supply on the biomass accumulation of Norway spruce saplings. Environmental Pollution, 2002, 119, 237-244.	3.7	28
74	Declining ozone exposure of European vegetation under climate change and reduced precursor emissions. Biogeosciences, 2014, 11, 5269-5283.	1.3	27
75	Test of the short-term critical levels for acute ozone injury on plantsâ€"improvements by ozone uptake modelling and the use of an effect threshold. Atmospheric Environment, 2004, 38, 2237-2245.	1.9	26
76	Recovery of the Epiphytic Lichen Flora Following Air Quality Improvement in South-West Sweden. Water, Air, and Soil Pollution, 2004, 154, 203-211.	1.1	25
77	Economic Assessment of the Negative Impacts of Ozone on Crop Yields and Forest Production. A Case Study of the Estate Ã–stads SÃteri in Southwestern Sweden. Ambio, 2005, 34, 32-40.	2.8	25
78	Impact of elevated O3 and CO2 exposure on potato (Solanum tuberosum L. cv. Bintje) tuber macronutrients (N, P, K, Mg, Ca). Agriculture, Ecosystems and Environment, 2007, 118, 55-64.	2.5	25
79	Yield vs. quality trade-offs for wheat in response to carbon dioxide and ozone. Global Change Biology, 2011, , n/a-n/a.	4.2	25
80	Ozone deposition to an oat crop (Avena sativa L.) grown in open-top chambers and in the ambient air. Atmospheric Environment, 1994, 28, 1971-1979.	1.9	24
81	Measuring and modelling leaf diffusive conductance in juvenile silver birch, Betula pendula. Trees - Structure and Function, 2004, 18, 686-695.	0.9	23
82	Yield dilution of grain Zn in wheat grown in open-top chamber experiments with elevated CO2 and O3 exposure. Journal of Cereal Science, 2009, 50, 278-282.	1.8	23
83	Elevated ozone (O3) alters carbohydrate metabolism during grain filling in wheat (Triticum aestivum) Tj ETQq1 1 0.784314 rgBT /Ove	2.5	22
84	Four years of ozone exposure at high or low phosphorus reduced biomass in Norway spruce. Trees - Structure and Function, 2003, 17, 299-307.	0.9	22
85	Comparison of modelled and measured ozone concentrations and meteorology for a site in south-west Sweden: Implications for ozone uptake calculations. Environmental Pollution, 2008, 155, 99-111.	3.7	22
86	Gradients of ozone at a forest site and over a field cropconsequences for the AOT40 concept of critical level. Water, Air, and Soil Pollution, 1995, 85, 2033-2038.	1.1	21
87	Rate and duration of grain filling in relation to flag leaf senescence and grain yield in spring wheat (Triticum aestivum) exposed to different concentrations of ozone. Physiologia Plantarum, 2000, 110, 366-375.	2.6	21
88	Ozone sensitivity, growth and flower development in Phleum genotypes of different geographic origin in the Nordic countries. Environmental and Experimental Botany, 1999, 42, 41-49.	2.0	19
89	Clover as a tool for bioindication of phytotoxic ozoneâ€"5 years of experience from southern Swedenâ€"consequences for the short-term critical levels. Science of the Total Environment, 2003, 301, 205-213.	3.9	19
90	A cumulative ozone uptakeâ€“response relationship for the growth of Norway spruce saplings. Environmental Pollution, 2004, 128, 405-417.	3.7	19

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91	A method to assess the inter-annual weather-dependent variability in air pollution concentration and deposition based on weather typing. Atmospheric Environment, 2016, 126, 200-210.	1.9	19
92	Yield and quality of spring barley, Hordeum vulgare L., exposed to different concentrations of ozone in open-top chambers. Agriculture, Ecosystems and Environment, 1992, 38, 21-29.	2.5	18
93	Clover Sweden ? A national three-year study of the effects of tropospheric ozone on Trifolium subterraneum, L.. Water, Air, and Soil Pollution, 1995, 85, 1503-1508.	1.1	18
94	Exposure of a grass-clover mixture to ozone in open-top chambersâ€"effects on yield, quality and botanical composition. Agriculture, Ecosystems and Environment, 1996, 59, 55-62.	2.5	18
95	Tropospheric ozone decreases biomass production in radish plants (Raphanus sativus) grown in rural south-west Sweden. Environmental Pollution, 1999, 106, 143-147.	3.7	18
96	Growth of Norway spruce (Picea abies) in relation to different ozone exposure indices: a synthesis. Atmospheric Environment, 2004, 38, 2225-2236.	1.9	18
97	Urban NO2 and NO pollution in relation to the North Atlantic Oscillation NAO. Atmospheric Environment, 2011, 45, 883-888.	1.9	18
98	Variation in ozone exposure in the landscape of southern Sweden with consideration of topography and coastal climate. Atmospheric Environment, 2012, 47, 252-260.	1.9	18
99	Harvest index and remobilization of 13 elements during wheat grain filling: Experiences from ozone experiments in China and Sweden. Field Crops Research, 2021, 271, 108259.	2.3	18
100	Effects of air pollutant emissions from a rural motorway on Petunia and Trifolium. Science of the Total Environment, 1994, 146-147, 117-123.	3.9	17
101	The effects of tropospheric ozone and elevated carbon dioxide on potato (Solanum tuberosum L. cv.) Tj ETQq1 1 0.784314 rgBT /Ove	3.9	17
102	Have ozone effects on carbon sequestration been overestimated? A new biomass response function for wheat. Biogeosciences, 2014, 11, 4521-4528.	1.3	17
103	Mercury accumulation in leaves of different plant types â€“ the significance of tissue age and specific leaf area. Biogeosciences, 2021, 18, 6313-6328.	1.3	17
104	Air pollution dynamics and the need for temporally differentiated road pricing. Transportation Research, Part A: Policy and Practice, 2015, 75, 178-195.	2.0	16
105	Effects of ground surface permeability on the growth of urban linden trees. Urban Ecosystems, 2018, 21, 691-696.	1.1	16
106	Benefits of the Phytotoxic Ozone Dose (POD) index in dose-response functions for wheat yield loss. Atmospheric Environment, 2022, 268, 118797.	1.9	16
107	An ozone response relationship for four Phleum pratense genotypes based on modelling of the phytotoxic ozone dose (POD). Environmental and Experimental Botany, 2013, 90, 70-77.	2.0	15
108	The impact of tropospheric O3 on leaf number duration and tuber yield of the potato (Solanum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6 483-492.	2.5	14

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109	Variation in ozone concentration in relation to local climate in south-west Sweden. Water, Air, and Soil Pollution, 2006, 173, 339-354.	1.1	14
110	Parameterization of Thermal Properties of Aging Secondary Organic Aerosol Produced by Photo-Oxidation of Selected Terpene Mixtures. Environmental Science & Technology, 2014, 48, 6168-6176.	4.6	14
111	Polycyclic aromatic hydrocarbon (PAH) accumulation in Quercus palustris and Pinus nigra in the urban landscape of Gothenburg, Sweden. Science of the Total Environment, 2022, 805, 150163.	3.9	14
112	Ozone gradients in a spruce forest stand in relation to wind speed and time of the day. Atmospheric Environment, 1996, 30, 4077-4084.	1.9	13
113	Ozone Exposure and Impacts on Vegetation in the Nordic and Baltic Countries. Ambio, 2009, 38, 402-405.	2.8	13
114	Title is missing!. Water, Air, and Soil Pollution, 1998, 102, 61-74.	1.1	12
115	Ozone concentration gradients and wind conditions in Norway spruce (Picea abies) forests in Sweden. Atmospheric Environment, 2006, 40, 1610-1618.	1.9	12
116	Exposure of oats, Avena sativa L., to filtered and unfiltered air in open-top chambers: Effects on grain yield and quality. Environmental Pollution, 1994, 86, 129-134.	3.7	11
117	Characteristics of NO2 Pollution in the City of Gothenburg, South-West Swedenâ€"Relation to NO x and O3 Levels, Photochemistry and Monitoring Location. Water, Air and Soil Pollution, 2009, 9, 15-25.	0.8	11
118	Surface Ozone in the Marine Environmentâ€"Horizontal Ozone Concentration Gradients in Coastal Areas. Water, Air, and Soil Pollution, 2013, 224, 1.	1.1	11
119	Ozone Induced Loss of Seed Protein Accumulation Is Larger in Soybean than in Wheat and Rice. Agronomy, 2020, 10, 357.	1.3	11
120	Effect of CO2 enrichment on non-structural carbohydrates in leaves, stems and ears of spring wheat. Physiologia Plantarum, 1999, 107, 60-67.	2.6	10
121	Potato tuber sugars, starch and organic acids in relation to ozone exposure. Potato Research, 2003, 46, 67-79.	1.2	10
122	New Directions: Discussion of â€œA new generation of ozone critical levels for the protection of vegetation in Europeâ€•by Ashmore et al.. Atmospheric Environment, 2005, 39, 5213-5217.	1.9	10
123	Estimates of AOT ozone indices from time-integrated ozone data and hourly air temperature measurements in southwest Sweden. Environmental Pollution, 2009, 157, 3051-3058.	3.7	10
124	Introduction for ozone deposition special issue. Atmospheric Environment, 2004, 38, 2211-2212.	1.9	9
125	Observations of Ground-level Ozone and NO₂in Northernmost Sweden, Including the Scandian Mountain Range. Ambio, 2009, 38, 448-451.	2.8	9
126	Nitrous oxide emissions from a wheat field in response to elevated carbon dioxide concentration and open-top chamber enclosure. Environmental Pollution, 1998, 102, 167-171.	3.7	8

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127	Changes in stomatal conductance and net photosynthesis during phenological development in spring wheat: implications for gas exchange modelling. International Journal of Biometeorology, 2006, 51, 37-48.	1.3	8
128	Effects of ozone on zinc and cadmium accumulation in wheat â€“ doseâ€“response functions and relationship with protein, grain yield, and harvest index. Ecology and Evolution, 2012, 2, 3186-3194.	0.8	8
129	Evidence for Impacts of Near-ambient Ozone Concentrations on Vegetation in Southern Sweden. Ambio, 2009, 38, 425-432.	2.8	7
130	Letter to the editor regarding Pleijel et al. 2019: Ozone sensitivity of wheat in different continents â€“ An addendum. Science of the Total Environment, 2021, 773, 146335.	3.9	7
131	Yield Response of an Ensemble of Potato Crop Models to Elevated CO2 in Continental Europe. European Journal of Agronomy, 2021, 126, 126265.	1.9	6
132	Effects of tropospheric ozone on the yield and grain protein content of spring wheat(Triticum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 1997, 47, 20-25.	0.3	5
133	Response of subterranean clover (Trifolium subterraneum) to ozone in relation to plant age and light conditions during exposure. New Phytologist, 1999, 143, 315-321.	3.5	5
134	Observations of temperature and air humidity during the total solar eclipse 29 March 2006 at Side, Turkey. Meteorologische Zeitschrift, 2009, 18, 107-109.	0.5	4
135	Co-Producing Policy-Relevant Science and Science-Based Policy: The Case of Regulating Ground-Level Ozone. , 2011, , 223-250.		4
136	Concentration gradients of ozone and other trace gases in and above cereal canopies. Meteorologische Zeitschrift, 2008, 17, 187-192.	0.5	2
137	Economic assessment of the negative impacts of ozone on crop yields and forest production. A case study of the estate Ostads SÃteri in southwestern Sweden. Ambio, 2005, 34, 32-40.	2.8	2
138	The Leaf Acyl Lipid Composition of Plants Exposed to Moderately Enhanced Levels of Ozone: Species, Age and Dose Dependence. , 1995, , 459-461.		1
139	Editorial. Ambio, 2009, 38, 401-401.	2.8	0