Elina Oksanen

List of Publications by Year
in descending order

110	4,607	87888	110387
papers	citations	38 h-index	64 g-index

112	112	112	3952
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Altered performance of forest pests under atmospheres enriched by CO2 and O3. Nature, 2002, 420, 403-407.	27.8	275
2	Tropospheric O3 moderates responses of temperate hardwood forests to elevated CO2 : a synthesis of molecular to ecosystem results from the Aspen FACE project. Functional Ecology, 2003, 17, 289-304.	3.6	269
3	Genome sequencing and population genomic analyses provide insights into the adaptive landscape of silver birch. Nature Genetics, 2017, 49, 904-912.	21.4	221
4	Ozone affects plant, insect, and soil microbial communities: A threat to terrestrial ecosystems and biodiversity. Science Advances, 2020, 6, eabc1176.	10.3	181
5	Effects of elevated O3, alone and in combination with elevated CO2, on tree leaf chemistry and insect herbivore performance: a meta-analysis. Global Change Biology, 2007, 13, 184-201.	9.5	164
6	Free-Air Exposure Systems to Scale up Ozone Research to Mature Trees. Plant Biology, 2007, 9, 181-190.	3.8	132
7	Physiological, stomatal and ultrastructural ozone responses in birch (Betula pendula Roth.) are modified by water stress. Plant, Cell and Environment, 1998, 21, 671-684.	5.7	123
8	Ozoneâ€induced H 2 O 2 accumulation in fieldâ€grown aspen and birch is linked to foliar ultrastructure and peroxisomal activity. New Phytologist, 2004, 161, 791-799.	7.3	108
9	New flux based doseâ€“response relationships for ozone for European forest tree species. Environmental Pollution, 2015, 206, 163-174.	7.5	106
10	Structural characteristics and chemical composition of birch (Betula pendula) leaves are modified by increasing CO2 and ozone. Global Change Biology, 2005, 11, 732-748.	9.5	105
11	Emission of herbivore-induced volatile terpenoids from two hybrid aspen (Populus tremula Ã— Tj ETQq1 1 0.784314 rgBT /Overlock 1 Biology, 2007, 13, 2538-2550.	9.5	98
12	Leaf phenolic compounds in red clover (Trifolium pratense L.) induced by exposure to moderately elevated ozone. Environmental Pollution, 2010, 158, 440-446.	7.5	96
13	Realâ€time monitoring of herbivore induced volatile emissions in the field. Physiologia Plantarum, 2010, 138, 123-133.	5.2	93
14	Influence of nitrogen supply on the response of clones of birch (Betula pendula Roth.) to ozone. New Phytologist, 1995, 129, 595-603.	7.3	86
15	Impacts of increasing ozone on Indian plants. Environmental Pollution, 2013, 177, 189-200.	7.5	85
16	Effects of long-term open-field ozone exposure on leaf phenolics of European silver birch (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1	1.8	83
17	Ozone exposure over two growing seasons alters root-to-shoot ratio and chemical composition of birch (Betula pendula Roth). Global Change Biology, 2003, 9, 1363-1377.	9.5	82
18	Emissions of volatile organic compounds and leaf structural characteristics of European aspen (Populus tremula) grown under elevated ozone and temperature. Tree Physiology, 2009, 29, 1163-1173.	3.1	77

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19	Ageing-related Anatomical and Ultrastructural Changes in Leaves of Birch (Betula pendula Roth.) Clones as Affected by Low Ozone Exposure. Annals of Botany, 1995, 75, 285-294.	2.9	76
20	Silver birch and climate change: variable growth and carbon allocation responses to elevated concentrations of carbon dioxide and ozone. Tree Physiology, 2004, 24, 1227-1237.	3.1	71
21	Impact of elevated temperature and ozone on the emission of volatile organic compounds and gas exchange of silver birch (Betula pendula Roth). Environmental and Experimental Botany, 2012, 84, 33-43.	4.2	70
22	Shift in birch leaf metabolome and carbon allocation during long-term open-field ozone exposure. Global Change Biology, 2007, 13, 1053-1067.	9.5	64
23	Leaf photosynthetic characteristics of silver birch during three years of exposure to elevated concentrations of CO2 and O3 in the field. Tree Physiology, 2005, 25, 621-632.	3.1	63
24	Searching for common responsive parameters for ozone tolerance in 18 rice cultivars in India: Results from ethylenediurea studies. Science of the Total Environment, 2015, 532, 230-238.	8.0	63
25	Volatile emissions and phenolic compound concentrations along a vertical profile of Populus nigra leaves exposed to realistic ozone concentrations. Photosynthesis Research, 2010, 104, 61-74.	2.9	58
26	Interactive effect of springtime frost and elevated ozone on early growth, foliar injuries and leaf structure of birch (Betula pendula). New Phytologist, 2003, 159, 623-636.	7.3	57
27	Ozone affects ascorbate and glutathione biosynthesis as well as amino acid contents in three Euramerican poplar genotypes. Tree Physiology, 2014, 34, 253-266.	3.1	53
28	Physiological responses of birch (Betula pendula) to ozone: a comparison between open-soil-grown trees exposed for six growing seasons and potted seedlings exposed for one season. Tree Physiology, 2003, 23, 603-614.	3.1	49
29	Effects of decadal exposure to interacting elevated CO2 and/or O3 on paper birch (Betula papyrifera) reproduction. Environmental Pollution, 2008, 155, 446-452.	7.5	48
30	Impacts of elevated ozone and nitrogen on growth and photosynthesis of European aspen (<i>Populus) Tj ETQq0 0 0 rgBT /Overlock 10 Journal of Forest Research, 2007, 37, 2326-2336.	1.7	47
31	Application of metabolomics to genotype and phenotype discrimination of birch trees grown in a long-term open-field experiment. Metabolomics, 2008, 4, 39-51.	3.0	47
32	Differences in leaf characteristics between ozone-sensitive and ozone-tolerant hybrid aspen (Populus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.1	47
33	Leaf litter decomposition differs among genotypes in a local Betula pendula population. Oecologia, 2007, 152, 707-714.	2.0	43
34	Adaptability of birch (Betula pendula Roth) and aspen (Populus tremula L.) genotypes to different soil moisture conditions. Forest Ecology and Management, 2011, 262, 1387-1399.	3.2	43
35	Carbon gain and bud physiology in Populus tremuloides and Betula papyrifera grown under long-term exposure to elevated concentrations of CO2 and O3. Tree Physiology, 2008, 28, 243-254.	3.1	41
36	Interactive effects of elevated ozone and temperature on carbon allocation of silver birch (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.1	41

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37	Needle metabolome, freezing tolerance and gas exchange in Norway spruce seedlings exposed to elevated temperature and ozone concentration. Tree Physiology, 2012, 32, 1102-1112.	3.1	41
38	Vertical profiles reveal impact of ozone and temperature on carbon assimilation of Betula pendula and Populus tremula. Tree Physiology, 2011, 31, 808-818.	3.1	40
39	Gene expression responses of paper birch (Betula papyrifera) to elevated CO2 and O3 during leaf maturation and senescence. Environmental Pollution, 2010, 158, 959-968.	7.5	39
40	Responses of two birch (Betula pendula Roth) clones to different ozone profiles with similar AOT40 exposure. Atmospheric Environment, 2001, 35, 5245-5254.	4.1	38
41	Differential gene expression in senescing leaves of two silver birch genotypes in response to elevated CO₂ and tropospheric ozone. Plant, Cell and Environment, 2010, 33, 1016-1028.	5.7	37
42	Trichomes form an important first line of defence against adverse environmentâ€"New evidence for ozone stress mitigation. Plant, Cell and Environment, 2018, 41, 1497-1499.	5.7	37
43	Differences in responses of two mustard cultivars to ethylenediurea (EDU) at high ambient ozone concentrations in India. Agriculture, Ecosystems and Environment, 2014, 196, 158-166.	5.3	36
44	Thermal and hyperspectral imaging for Norway spruce (Picea abies) seeds screening. Computers and Electronics in Agriculture, 2015, 116, 118-124.	7.7	36
45	Leaf Volatile Emissions of Betula pendula during Autumn Coloration and Leaf Fall. Journal of Chemical Ecology, 2010, 36, 1068-1075.	1.8	33
46	Interactive effect of elevated temperature and O3 on antioxidant capacity and gas exchange in Betula pendula saplings. Planta, 2009, 230, 419-427.	3.2	32
47	Emerging challenges of ozone impacts on asian plants: actions are needed to protect ecosystem health. Ecosystem Health and Sustainability, 2021, 7, .	3.1	32
48	Photosynthesis of birch (Betula pendula) is sensitive to springtime frost and ozone. Canadian Journal of Forest Research, 2005, 35, 703-712.	1.7	31
49	Strategic roadmap to assess forest vulnerability under air pollution and climate change. Global Change Biology, 2022, 28, 5062-5085.	9.5	31
50	Growth of northern deciduous trees under increasing atmospheric humidity: possible mechanisms behind the growth retardation. Regional Environmental Change, 2017, 17, 2135-2148.	2.9	30
51	Low vapor pressure deficit reduces glandular trichome density and modifies the chemical composition of cuticular waxes in silver birch leaves. Tree Physiology, 2017, 37, 1166-1181.	3.1	30
52	Differences of Betula origins in ozone sensitivity based on open-field experiment over two growing seasons. Canadian Journal of Forest Research, 2001, 31, 804-811.	1.7	29
53	Artificially decreased vapour pressure deficit in field conditions modifies foliar metabolite profiles in birch and aspen. Journal of Experimental Botany, 2016, 67, 4367-4378.	4.8	29
54	Variation in 13 leaf morphological and physiological traits within a silver birch (<i>Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 Td (p 657-665.	1.7	27

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55	Plants have different strategies to defend against air pollutants. Current Opinion in Environmental Science and Health, 2021, 19, 100222.	4.1	26
56	Ascorbate transport from the apoplast to the symplast in intact leaves. Physiologia Plantarum, 2001, 113, 377-383.	5.2	25
57	Chemical Composition and Decomposition of Silver Birch Leaf Litter Produced under Elevated CO2 and O3. Plant and Soil, 2006, 282, 261-280.	3.7	25
58	Genetic and environmental determinants of silver birch growth and herbivore resistance. Forest Ecology and Management, 2009, 257, 2145-2149.	3.2	25
59	High Variation in Resource Allocation Strategies among 11 Indian Wheat (Triticum aestivum) Cultivars Growing in High Ozone Environment. Climate, 2019, 7, 23.	2.8	25
60	Effects of elevated concentrations of ozone and carbon dioxide on the electrical impedance of leaves of silver birch (Betula pendula) clones. Tree Physiology, 2004, 24, 833-843.	3.1	24
61	Low vapour pressure deficit affects nitrogen nutrition and foliar metabolites in silver birch. Journal of Experimental Botany, 2016, 67, 4353-4365.	4.8	23
62	Seasonal variation in physiological characteristics of two silver birch clones in the field. Canadian Journal of Forest Research, 2003, 33, 2164-2176.	1.7	22
63	Leaf Canopy Layers Affect Spectral Reflectance in Silver Birch. Remote Sensing, 2019, 11, 2884.	4.0	21
64	Red clover (Trifolium pratense L.) isoflavones: root phenolic compounds affected by biotic and abiotic stress factors. Journal of the Science of Food and Agriculture, 2010, 90, 418-423.	3.5	20
65	Colonization of a host tree by herbivorous insects under a changing climate. Oikos, 2015, 124, 1013-1022.	2.7	19
66	Genotype- and provenance-related variation in the leaf surface secondary metabolites of silver birch. Canadian Journal of Forest Research, 2018, 48, 494-505.	1.7	19
67	Volatile organic compounds emitted from silver birch of different provenances across a latitudinal gradient in Finland. Tree Physiology, 2015, 35, 975-986.	3.1	18
68	Insect herbivory dampens Subarctic birch forest C sink response to warming. Nature Communications, 2020, 11, 2529.	12.8	18
69	Impacts of Elevated Atmospheric CO2and O3on Paper Birch (Betula papyrifera): Reproductive Fitness. Scientific World Journal, The, 2007, 7, 240-246.	2.1	17
70	Rising Atmospheric CO2Concentration Partially Masks the Negative Effects of Elevated O3in Silver Birch (Betula pendula Roth). Ambio, 2009, 38, 418-424.	5.5	17
71	Near-ambient Ozone Concentrations Reduce the Vigor ofBetulaandPopulusSpecies in Finland. Ambio, 2009, 38, 413-417.	5.5	17
72	Carbohydrate concentrations and freezing stress resistance of silver birch buds grown under elevated temperature and ozone. Tree Physiology, 2013, 33, 311-319.	3.1	17

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73	Stomatal characteristics and infection biology of Pyrenopeziza betulicola in Betula pendula trees grown under elevated CO2 and O3. Environmental Pollution, 2008, 156, 536-543.	7.5	16
74	Insect herbivore damage on latitudinally translocated silver birch (Betula pendula) â€“ predicting the effects of climate change. Climatic Change, 2015, 131, 245-257.	3.6	16
75	Imaging lichen water content with visible to mid-wave infrared (400â€“5500â€¯nm) spectroscopy. Remote Sensing of Environment, 2018, 216, 301-310.	11.0	16
76	Within-stand variation in silver birch (Betula pendula Roth) phenology. Trees - Structure and Function, 2014, 28, 1801-1812.	1.9	15
77	Susceptibility of silver birch (Betula pendula) to herbivorous insects is associated with the size and phenology of birch â€“ implications for climate warming. Scandinavian Journal of Forest Research, 2017, 32, 95-104.	1.4	15
78	Differences in growth and gas exchange between southern and northern provenances of silver birch (Betula pendula Roth) in northern Europe. Tree Physiology, 2020, 40, 198-214.	3.1	14
79	RPA-PCR couple: an approach to expedite plant diagnostics and overcome PCR inhibitors. BioTechniques, 2020, 69, 270-280.	1.8	14
80	Root morphology, mycorrhizal roots and extramatrical mycelium growth in silver birch (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 467 Soil, 2016, 407, 341-353.	3.7	13
81	Northern Forest Trees Under Increasing Atmospheric Humidity. Progress in Botany Fortschritte Der Botanik, 2018, , 317-336.	0.3	12
82	Evaluation of simulated ozone effects in forest ecosystems against biomass damage estimates from fumigation experiments. Biogeosciences, 2018, 15, 6941-6957.	3.3	11
83	Elevated temperature and ozone modify structural characteristics of silver birch (Betula pendula) leaves. Tree Physiology, 2020, 40, 467-483.	3.1	11
84	Birch as a Model Species for the Acclimation and Adaptation of Northern Forest Ecosystem to Changing Environment. Frontiers in Forests and Global Change, 2021, 4, .	2.3	10
85	Genetic and environmental determinants of insect herbivore community structure in a Betula pendula population. F1000Research, 2014, 3, 34.	1.6	9
86	Metabolomics and Transcriptomics Increase Our Understanding About Defence Responses and Genotypic Differences of Northern Deciduous Trees to Elevating Ozone, CO2 and Climate Warming. Developments in Environmental Science, 2013, 13, 309-329.	0.5	8
87	Trait syndromes underlying stand-level differences in growth and acclimation in 10 silver birch (Betula pendula Roth) genotypes. Forest Ecology and Management, 2015, 343, 123-135.	3.2	7
88	Interactive effects of elevated ozone and springtime frost on growth and physiology of birch (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.9	6
89	Impact of Experimentally Elevated Ozone on Seed Germination and Growth of Russian Pine (Pinus) Tj ETQq1 1 0.784314 rgBT /Overlo	5.5	6
90	Impacts of Air Pollution and Climate Change on Plants. Developments in Environmental Science, 2013, , 391-409.	0.5	6

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91	Strategy by latitude? Higher photosynthetic capacity and root mass fraction in northern than southern silver birch (Betula pendula Roth) in uniform growing conditions. Tree Physiology, 2021, 41, 974-991.	3.1	6
92	BVOC Emissions From a Subarctic Ecosystem, as Controlled by Insect Herbivore Pressure and Temperature. Ecosystems, 2022, 25, 872-891.	3.4	5
93	Climate and Competitive Status Modulate the Variation in Secondary Metabolites More in Leaves Than in Fine Roots of Betula pendula. Frontiers in Plant Science, 2021, 12, 746165.	3.6	5
94	Early shoot growth termination in Betula pendula is associated with the number of overwintering aphid eggs on boreal birches. Evolutionary Ecology, 2015, 29, 157-167.	1.2	4
95	Northern conditions enhance the susceptibility of birch (Betula pendula Roth) to oxidative stress caused by ozone. , 2005, , 29-35.		3
96	Proteomic Analysis of Two Hybrid Aspen Clones Subjected to Long-term Chronic Ozone Exposure in Open Field. Current Proteomics, 2013, 10, 67-74.	0.3	3
97	Spectral Reflectance in Silver Birch Genotypes from Three Provenances in Finland. Remote Sensing, 2020, 12, 2677.	4.0	2
98	Luonnon monimuotoisuus ja vihreÃ elvytys. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	2
99	Ozone Effects on the Metabolism and the Antioxidant System of Poplar Leaves at Different Stages of Development. , 2008, , 1317-1321.		2
100	MetsÃluonnon turvaava suojelun kohdentaminen Suomessa. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	2
101	Jatkuvapeitteisen metsÃnkÃsittelyn vaikutukset luonnon monimuotoisuuteen, vesistÃ¶ihin, ilmastoon, virkistyskÃyttÃ¶Ã¶n ja metsÃtuhoriskeihin. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	2
102	Development and evaluation of a recombinase polymerase amplification assay for rapid detection of strawberry red stele pathogen. Phytopathology Research, 2020, 2, .	2.4	1
103	Keskeiset keinot luontokadon pysÃyttÃmiseksi. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	1
104	Soiden ennallistamisen suoluonto-, vesistÃ¶- ja ilmastovaikutukset. Luontopaneelin yhteenveto ja suositukset luontopolitiikan suunnittelun ja pÃÃtÃ¶ksenteon tueksi.. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	1
105	Impacts of Ozone on Forest Plants and Ecosystems. Forests, 2021, 12, 1345.	2.1	1
106	Shift in birch leaf metabolome and carbon allocation during long-term open-field ozone exposure. Global Change Biology, 2007, .	9.5	1
107	Strong Interactive Effects of Warming and Insect Herbivory on Soil Carbon and Nitrogen Dynamics at Subarctic Tree Line. Frontiers in Forests and Global Change, 2021, 4, .	2.3	1
108	Natural Vision Data File Format as a New Spectral Image Format for Biological Applications. Lecture Notes in Computer Science, 2014, , 124-132.	1.3	0

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109	MetsÃluonnon turvaava suojelun kohdentaminen Suomessa. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	0
110	Jatkuvapeitteisen metsÃnkÃsittelyn ympÃristÃ¶- ja talousvaikutukset: Raportin yhteenveto. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	0