

Jacek Oleksyn

List of Publications by Year in descending order

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Version: 2024-02-01

118
papers

27,032
citations

26567

56
h-index

18606

119
g-index

122
all docs

122
docs citations

122
times ranked

24202
citing authors

#	ARTICLE	IF	CITATIONS
1	The worldwide leaf economics spectrum. <i>Nature</i> , 2004, 428, 821-827.	13.7	6,489
2	Biomass allocation to leaves, stems and roots: meta-analyses of interspecific variation and environmental control. <i>New Phytologist</i> , 2012, 193, 30-50.	3.5	2,012
3	TRY – a global database of plant traits. <i>Global Change Biology</i> , 2011, 17, 2905-2935.	4.2	2,002
4	Assessing the generality of global leaf trait relationships. <i>New Phytologist</i> , 2005, 166, 485-496.	3.5	1,704
5	Global patterns of plant leaf N and P in relation to temperature and latitude. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 11001-11006.	3.3	1,544
6	Three keys to the radiation of angiosperms into freezing environments. <i>Nature</i> , 2014, 506, 89-92.	13.7	1,284
7	The Evolution of Plant Functional Variation: Traits, Spectra, and Strategies. <i>International Journal of Plant Sciences</i> , 2003, 164, S143-S164.	0.6	1,057
8	Positive biodiversity-productivity relationship predominant in global forests. <i>Science</i> , 2016, 354, .	6.0	864
9	Modulation of leaf economic traits and trait relationships by climate. <i>Global Ecology and Biogeography</i> , 2005, 14, 411-421.	2.7	669
10	Linking litter calcium, earthworms and soil properties: a common garden test with 14 tree species. <i>Ecology Letters</i> , 2005, 8, 811-818.	3.0	586
11	Universal scaling of respiratory metabolism, size and nitrogen in plants. <i>Nature</i> , 2006, 439, 457-461.	13.7	484
12	TREE SPECIES EFFECTS ON DECOMPOSITION AND FOREST FLOOR DYNAMICS IN A COMMON GARDEN. <i>Ecology</i> , 2006, 87, 2288-2297.	1.5	482
13	Modelling respiration of vegetation: evidence for a general temperature-dependent Q ₁₀ . <i>Global Change Biology</i> , 2001, 7, 223-230.	4.2	461
14	COMPARISONS OF STRUCTURE AND LIFE SPAN IN ROOTS AND LEAVES AMONG TEMPERATE TREES. <i>Ecological Monographs</i> , 2006, 76, 381-397.	2.4	377
15	Scaling of respiration to nitrogen in leaves, stems and roots of higher land plants. <i>Ecology Letters</i> , 2008, 11, 793-801.	3.0	373
16	Growth and physiology of <i>Picea abies</i> populations from elevational transects: common garden evidence for altitudinal ecotypes and cold adaptation. <i>Functional Ecology</i> , 1998, 12, 573-590.	1.7	291
17	Leaf phosphorus influences the photosynthesis-nitrogen relation: a cross-biome analysis of 314 species. <i>Oecologia</i> , 2009, 160, 207-212.	0.9	274
18	Temperature drives global patterns in forest biomass distribution in leaves, stems, and roots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13721-13726.	3.3	249

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19	How does biomass distribution change with size and differ among species? An analysis for 1200 plant species from five continents. <i>New Phytologist</i> , 2015, 208, 736-749.	3.5	239
20	Fine root decomposition rates do not mirror those of leaf litter among temperate tree species. <i>Oecologia</i> , 2010, 162, 505-513.	0.9	229
21	Acclimation of respiration to temperature and CO ₂ in seedlings of boreal tree species in relation to plant size and relative growth rate. <i>Global Change Biology</i> , 1999, 5, 679-691.	4.2	214
22	Climate warming will reduce growth and survival of Scots pine except in the far north. <i>Ecology Letters</i> , 2008, 11, 588-597.	3.0	210
23	Tree Species Effects on Soil Organic Matter Dynamics: The Role of Soil Cation Composition. <i>Ecosystems</i> , 2007, 10, 999-1018.	1.6	193
24	Changes in leaf nitrogen and carbohydrates underlie temperature and CO ₂ acclimation of dark respiration in five boreal tree species. <i>Plant, Cell and Environment</i> , 1999, 22, 767-778.	2.8	192
25	Variation in fine root biomass of three European tree species: Beech (<i>Fagus sylvatica</i> L.), Norway spruce (<i>Picea abies</i> L. Karst.), and Scots pine (<i>Pinus sylvestris</i> L.). <i>Plant Biosystems</i> , 2007, 141, 394-405.	0.8	189
26	Tree species effects on coupled cycles of carbon, nitrogen, and acidity in mineral soils at a common garden experiment. <i>Biogeochemistry</i> , 2012, 111, 601-614.	1.7	184
27	Evidence of a general 2/3-power law of scaling leaf nitrogen to phosphorus among major plant groups and biomes. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2010, 277, 877-883.	1.2	163
28	Nutrient conservation increases with latitude of origin in European <i>Pinus sylvestris</i> populations. <i>Oecologia</i> , 2003, 136, 220-235.	0.9	154
29	Decomposition of the finest root branching orders: linking belowground dynamics to fine-root function and structure. <i>Ecological Monographs</i> , 2011, 81, 89-102.	2.4	149
30	Interaction of ozone pollution and light effects on photosynthesis in a forest canopy experiment. <i>Plant, Cell and Environment</i> , 1995, 18, 895-905.	2.8	135
31	Interannual growth response of Norway spruce to climate along an altitudinal gradient in the Tatra Mountains, Poland. <i>Trees - Structure and Function</i> , 2006, 20, 735-746.	0.9	115
32	Functional distinctiveness of major plant lineages. <i>Journal of Ecology</i> , 2014, 102, 345-356.	1.9	108
33	Biogeographic variation in evergreen conifer needle longevity and impacts on boreal forest carbon cycle projections. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13703-13708.	3.3	106
34	Soil organic carbon stability in forests: Distinct effects of tree species identity and traits. <i>Global Change Biology</i> , 2019, 25, 1529-1546.	4.2	104
35	Growth and biomass partitioning of populations of European <i>Pinus sylvestris</i> L. under simulated 50o and 60o N daylengths: evidence for photoperiodic ecotypes. <i>New Phytologist</i> , 1992, 120, 561-574.	3.5	100
36	Coupling of respiration, nitrogen, and sugars underlies convergent temperature acclimation in <i>Pinus banksiana</i> across wide-ranging sites and populations. <i>Global Change Biology</i> , 2008, 14, 782-797.	4.2	98

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37	Scots pine fine roots adjust along a 2000 km latitudinal climatic gradient. <i>New Phytologist</i> , 2016, 212, 389-399.	3.5	98
38	Responses of leaf structure and photosynthetic properties to intra-canopy light gradients: a common garden test with four broadleaf deciduous angiosperm and seven evergreen conifer tree species. <i>Oecologia</i> , 2012, 170, 11-24.	0.9	93
39	Phenotypic correlates of the lianescent growth form: a review. <i>Annals of Botany</i> , 2013, 112, 1667-1681.	1.4	91
40	Light, earthworms, and soil resources as predictors of diversity of 10 soil invertebrate groups across monocultures of 14 tree species. <i>Soil Biology and Biochemistry</i> , 2016, 92, 184-198.	4.2	91
41	Acclimation of respiratory temperature responses in northern and southern populations of <i>Pinus banksiana</i> . <i>New Phytologist</i> , 2009, 181, 218-229.	3.5	90
42	Controls on declining carbon balance with leaf age among 10 woody species in Australian woodland: do leaves have zero daily net carbon balances when they die?. <i>New Phytologist</i> , 2009, 183, 153-166.	3.5	82
43	No globally consistent effect of ectomycorrhizal status on foliar traits. <i>New Phytologist</i> , 2012, 196, 845-852.	3.5	78
44	Effects of litter traits, soil biota, and soil chemistry on soil carbon stocks at a common garden with 14 tree species. <i>Biogeochemistry</i> , 2015, 123, 313-327.	1.7	77
45	Overstorey tree species regulate colonization by native and exotic plants: a source of positive relationships between understorey diversity and invasibility. <i>Diversity and Distributions</i> , 2008, 14, 666-675.	1.9	76
46	Patterns of structural and defense investments in fine roots of Scots pine (<i>Pinus sylvestris</i> L.) across a strong temperature and latitudinal gradient in Europe. <i>Global Change Biology</i> , 2017, 23, 1218-1231.	4.2	74
47	Differential Above- and Below-ground Biomass Accumulation of European <i>Pinus sylvestris</i> Populations in a 12-year-old Provenance Experiment. <i>Scandinavian Journal of Forest Research</i> , 1999, 14, 7-17.	0.5	72
48	The impact of material used for minirhizotron tubes for root research. <i>New Phytologist</i> , 2003, 160, 533-544.	3.5	72
49	Light environment alters response to ozone stress in seedlings of <i>Acer saccharum</i> Marsh, and hybrid <i>Populus L.</i> . <i>New Phytologist</i> , 1993, 124, 627-636.	3.5	70
50	Seed mass effects on germination and growth of diverse European Scots pine populations. <i>Canadian Journal of Forest Research</i> , 1994, 24, 306-320.	0.8	68
51	Drought-induced shoot dieback starts with massive root xylem embolism and variable depletion of nonstructural carbohydrates in seedlings of two tree species. <i>New Phytologist</i> , 2017, 213, 597-610.	3.5	67
52	Adaptation to changing environment in Scots pine populations across a latitudinal gradient. <i>Silva Fennica</i> , 1998, 32, .	0.5	67
53	Ectomycorrhizal fungal communities of native and non-native <i>Pinus</i> and <i>Quercus</i> species in a common garden of 35-year-old trees. <i>Mycorrhiza</i> , 2012, 22, 121-134.	1.3	66
54	Needle nutrients in geographically diverse <i>Pinus sylvestris</i> L. populations. <i>Annals of Forest Science</i> , 2002, 59, 1-18.	0.8	63

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55	Temperature and ontogeny mediate growth response to elevated CO ₂ in seedlings of five boreal tree species. <i>New Phytologist</i> , 1998, 140, 197-210.	3.5	62
56	Light environment alters response to ozone stress in seedlings of <i>Acer saccharum</i> Marsh, and hybrid <i>Populus L.</i> <i>New Phytologist</i> , 1993, 124, 637-646.	3.5	57
57	Differentiating temperate tree species and their organs using lipid biomarkers in leaves, roots and soil. <i>Organic Geochemistry</i> , 2012, 52, 130-141.	0.9	53
58	Avoiding transport bottlenecks in an expanding root system: Xylem vessel development in fibrous and pioneer roots under field conditions. <i>American Journal of Botany</i> , 2012, 99, 1417-1426.	0.8	52
59	Relationship of aluminium and calcium to net CO ₂ exchange among diverse Scots pine provenances under pollution stress in Poland. <i>Oecologia</i> , 1994, 97, 82-92.	0.9	48
60	Controls over leaf and litter calcium concentrations among temperate trees. <i>Biogeochemistry</i> , 2007, 86, 175-187.	1.7	45
61	Do evergreen and deciduous trees have different effects on net N mineralization in soil?. <i>Ecology</i> , 2012, 93, 1463-1472.	1.5	45
62	Season and light affect constitutive defenses of understory shrub species against folivorous insects. <i>Acta Oecologica</i> , 2013, 53, 19-32.	0.5	44
63	Unearthing the roots of degradation of <i>Quercus pyrenaica</i> coppices: A root-to-shoot imbalance caused by historical management?. <i>Forest Ecology and Management</i> , 2016, 363, 200-211.	1.4	43
64	Accumulation of particulate matter, heavy metals, and polycyclic aromatic hydrocarbons on the leaves of <i>Tilia cordata</i> Mill. in five Polish cities with different levels of air pollution. <i>International Journal of Phytoremediation</i> , 2017, 19, 1134-1141.	1.7	43
65	Lifetime return on investment increases with leaf lifespan among 10 Australian woodland species. <i>New Phytologist</i> , 2012, 193, 409-419.	3.5	41
66	Relation between genetic diversity and pollution impact in a 1912 experiment with East European <i>Pinus sylvestris</i> provenances. <i>Canadian Journal of Forest Research</i> , 1994, 24, 2390-2394.	0.8	39
67	Direct inhibition of leaf dark respiration by elevated CO ₂ is minor in 12 grassland species. <i>New Phytologist</i> , 2001, 150, 419-424.	3.5	39
68	Soil modification by different tree species influences the extent of seedling ectomycorrhizal infection. <i>Mycorrhiza</i> , 2006, 16, 73-79.	1.3	39
69	Tertiary remnants and Holocene colonizers: Genetic structure and phylogeography of Scots pine reveal higher genetic diversity in young boreal than in relict Mediterranean populations and a dual colonization of Fennoscandia. <i>Diversity and Distributions</i> , 2017, 23, 540-555.	1.9	39
70	Biogeographic differences in shoot elongation pattern among European Scots pine populations. <i>Forest Ecology and Management</i> , 2001, 148, 207-220.	1.4	37
71	Ectomycorrhizal identity determines respiration and concentrations of nitrogen and non-structural carbohydrates in root tips: a test using <i>Pinus sylvestris</i> and <i>Quercus robur</i> saplings. <i>Tree Physiology</i> , 2010, 30, 648-654.	1.4	36
72	Ontogenetic patterns of leaf CO ₂ exchange, morphology and chemistry in <i>Betula pendula</i> trees. <i>Trees - Structure and Function</i> , 2000, 14, 271-281.	0.9	35

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73	Cold adaptation drives variability in needle structure and anatomy in <i>Pinus sylvestris</i> L. along a 1,900 km temperature-boreal transect. <i>Functional Ecology</i> , 2017, 31, 2212-2223.	1.7	33
74	Light environment alters response to ozone stress in seedlings of <i>Acer saccharum</i> Marsh, and hybrid <i>Populus</i> L.. <i>New Phytologist</i> , 1993, 124, 647-651.	3.5	32
75	Net photosynthesis, dark respiration and susceptibility to air pollution of 20 European provenances of scots pine <i>Pinus sylvestris</i> L.. <i>Environmental Pollution Series A, Ecological and Biological</i> , 1986, 40, 287-302.	0.8	31
76	Stem CO ₂ efflux in six co-occurring tree species: underlying factors and ecological implications. <i>Plant, Cell and Environment</i> , 2015, 38, 1104-1115.	2.8	30
77	Woody tissue photosynthesis delays drought stress in <i>Populus tremula</i> trees and maintains starch reserves in branch xylem tissues. <i>New Phytologist</i> , 2020, 228, 70-81.	3.5	30
78	The silent shareholder in deterioration of oak growth: common planting practices affect the long-term response of oaks to periodic drought. <i>Forest Ecology and Management</i> , 2014, 318, 133-141.	1.4	28
79	Variation in aboveground net primary production of diverse European <i>Pinus sylvestris</i> populations. <i>Trees - Structure and Function</i> , 2000, 14, 415-421.	0.9	25
80	Link between defoliation and light treatments on root vitality of five understory shrubs with different resistance to insect herbivory. <i>Tree Physiology</i> , 2010, 30, 969-978.	1.4	25
81	Aboveground biomass allocation and accumulation in a chronosequence of young <i>Pinus sylvestris</i> stands growing on a lignite mine spoil heap. <i>Dendrobiology</i> , 0, 72, 139-150.	0.6	25
82	Carbon allocation in seedlings of deciduous tree species depends on their shade tolerance. <i>Acta Physiologiae Plantarum</i> , 2015, 37, 1.	1.0	25
83	Pollution, Habitat Destruction, and Biodiversity in Poland. <i>Conservation Biology</i> , 1994, 8, 943-960.	2.4	23
84	Title is missing!. <i>Water, Air, and Soil Pollution</i> , 1999, 110, 195-212.	1.1	23
85	Influence of climatic factors upon tree rings of <i>Larix decidua</i> and <i>L. decidua</i> 1/2 <i>L. kaempferi</i> from Pulawy, Poland. <i>Trees - Structure and Function</i> , 1991, 5, 75.	0.9	22
86	Fungal Diversity of Norway Spruce Litter: Effects of Site Conditions and Premature Leaf Fall Caused By Bark Beetle Outbreak. <i>Microbial Ecology</i> , 2008, 56, 332-340.	1.4	22
87	What controls the concentration of various aliphatic lipids in soil?. <i>Soil Biology and Biochemistry</i> , 2013, 63, 14-17.	4.2	22
88	Photosynthetic ecophysiology of evergreen leaves in the woody angiosperms - a review. <i>Dendrobiology</i> , 0, 72, 3-27.	0.6	22
89	Light conditions alter accumulation of long chain polyphenols in leaves of trees and shrubs throughout the vegetation season.. <i>Acta Biochimica Polonica</i> , 2005, 52, 233-241.	0.3	22
90	Invasive <i>Prunus serotina</i> - a new host for <i>Yponomeuta evonymellus</i> (Lepidoptera: Yponomeutidae)?. <i>European Journal of Entomology</i> , 2014, 111, 227-236.	1.2	19

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91	Regeneration origin affects radial growth patterns preceding oak decline and death – insights from tree-ring $\delta^{13}C$ and $\delta^{18}O$. <i>Agricultural and Forest Meteorology</i> , 2019, 278, 107685.	1.9	18
92	Does climate-related in situ variability of Scots pine (<i>Pinus sylvestris</i> L.) needles have a genetic basis? Evidence from common garden experiments. <i>Tree Physiology</i> , 2019, 39, 573-589.	1.4	16
93	<sc>TR</sc>eSpire – a biophysical <sc>TR</sc>ee Stem respiration model. <i>New Phytologist</i> , 2020, 225, 2214-2230.	3.5	16
94	Feeding behavior and performance of <i>Neodiprion sertifer</i> larvae reared on <i>Pinus sylvestris</i> needles. <i>Forest Ecology and Management</i> , 2007, 242, 700-707.	1.4	14
95	Carbohydrate dynamics in a resprouting species after severe aboveground perturbations. <i>European Journal of Forest Research</i> , 2020, 139, 841-852.	1.1	14
96	Plant host drives fungal phenology. <i>Fungal Ecology</i> , 2010, 3, 311-315.	0.7	13
97	An open-air system for exposing forest-canopy branches to ozone pollution. <i>Plant, Cell and Environment</i> , 1994, 17, 211-218.	2.8	12
98	Mycorrhizal status of a Scots pine (<i>Pinus sylvestris</i> L.) plantation affected by pollution from a phosphate fertilizer plant. <i>Water, Air, and Soil Pollution</i> , 1995, 85, 1281-1286.	1.1	12
99	Fine root classification matters: nutrient levels in different functional categories, orders and diameters of roots in boreal <i>Pinus sylvestris</i> across a latitudinal gradient. <i>Plant and Soil</i> , 2020, 447, 507-520.	1.8	12
100	Differential reaction of <i>Pinus sylvestris</i> , <i>quercus robur</i> and <i>Q. petraea</i> trees to nitrogen and sulfur pollution. <i>Water, Air, and Soil Pollution</i> , 2005, 160, 95-108.	1.1	11
101	Does the exception prove the rule? (Reply). <i>Nature</i> , 2007, 445, E10-E11.	13.7	11
102	Whole-plant CO ₂ exchange of seedlings of two <i>Pinus sylvestris</i> L. provenances grown under simulated photoperiodic conditions of 50 μ mol \cdot m ⁻² \cdot s ⁻¹ and 60 μ mol \cdot m ⁻² \cdot s ⁻¹ N. <i>Trees - Structure and Function</i> , 1992, 6, 225.	0.9	10
103	Functional response of <i>Quercus robur</i> L. to taproot pruning: a 5-year case study. <i>Annals of Forest Science</i> , 2018, 75, 1.	0.8	10
104	Remarkable Similarity in Timing of Absorptive Fine-Root Production Across 11 Diverse Temperate Tree Species in a Common Garden. <i>Frontiers in Plant Science</i> , 2020, 11, 623722.	1.7	10
105	Species-specific responses of growth and biomass distribution to trellis availability in three temperate lianas. <i>Trees - Structure and Function</i> , 2019, 33, 921-932.	0.9	9
106	Woody tissue photosynthesis increases radial stem growth of young poplar trees under ambient atmospheric CO ₂ but its contribution ceases under elevated CO ₂ . <i>Tree Physiology</i> , 2020, 40, 1572-1582.	1.4	9
107	Living on the edge: Ecology of an incipient <i>Betula</i> -fungal community growing on brick walls. <i>Trees - Structure and Function</i> , 2007, 21, 239-247.	0.9	7
108	Higher biomass partitioning to absorptive roots improves needle nutrition but does not alleviate stomatal limitation of northern Scots pine. <i>Global Change Biology</i> , 2021, 27, 3859-3869.	4.2	7

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109	Stomatal density in <i>Pinus sylvestris</i> as an indicator of temperature rather than CO ₂ : Evidence from a pan-European transect. <i>Plant, Cell and Environment</i> , 2022, 45, 121-132.	2.8	7
110	Mineral content and the sensitivity of black pine (<i>Pinus nigra</i>) of various provenances to industrial air pollution. <i>Forest Ecology and Management</i> , 1987, 21, 237-247.	1.4	6
111	Biomass and nitrogen distribution ratios reveal a reduced root investment in temperate lianas vs. self-supporting plants. <i>Annals of Botany</i> , 2019, 124, 777-790.	1.4	6
112	Mechanistic drivers of stem respiration: A modelling exercise across species and seasons. <i>Plant, Cell and Environment</i> , 2022, 45, 1270-1285.	2.8	6
113	A fingerprint of climate change across pine forests of Sweden. <i>Ecology Letters</i> , 2020, 23, 1739-1746.	3.0	5
114	Zanne et al. reply. <i>Nature</i> , 2015, 521, E6-E7.	13.7	3
115	An alternative, portable method for extracting microarthropods from forest soil. <i>Acta Oecologica</i> , 2020, 109, 103655.	0.5	3
116	Axial variability of anatomical structure and the scaling relationships in Scots pine (<i>Pinus sylvestris</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2021, 274, 151747.	0.6	3
117	Biodiversity of Balcan pine (<i>Pinus peuce</i> Griseb.) experimental stands in the RogÅ³w Arboretum (Poland). <i>Folia Forestalia Polonica, Series A</i> , 2013, 55, .	0.1	1
118	Anatomical adjustment of mature leaves of sycamore maple (<i>Acer pseudoplatanus</i> L.) to increased irradiance. <i>Photosynthesis Research</i> , 2022, , 1.	1.6	1