

Gail Taylor

List of Publications by Year in descending order

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Version: 2024-02-01

127
papers

8,192
citations

47006

47
h-index

51608

86
g-index

129
all docs

129
docs citations

129
times ranked

9025
citing authors

#	ARTICLE	IF	CITATIONS
1	Particulate pollution capture by urban trees: effect of species and windspeed. <i>Global Change Biology</i> , 2000, 6, 995-1003.	9.5	399
2	Estimating the removal of atmospheric particulate pollution by the urban tree canopy of London, under current and future environments. <i>Landscape and Urban Planning</i> , 2011, 103, 129-138.	7.5	365
3	Identifying potential environmental impacts of large-scale deployment of dedicated bioenergy crops in the UK. <i>Renewable and Sustainable Energy Reviews</i> , 2009, 13, 271-290.	16.4	358
4	Energy crops: current status and future prospects. <i>Global Change Biology</i> , 2006, 12, 2054-2076.	9.5	351
5	<i>Populus</i> : <i>Arabidopsis</i> for Forestry. Do We Need a Model Tree?. <i>Annals of Botany</i> , 2002, 90, 681-689.	2.9	340
6	Deposition velocities to <i>Sorbus aria</i> , <i>Acer campestre</i> , <i>Populus deltoides</i> "trichocarpa" Beaupr "©", <i>Pinus nigra</i> and " Cupressocyparis leylandii for coarse, fine and ultra-fine particles in the urban environment. <i>Environmental Pollution</i> , 2005, 133, 157-167.	7.5	290
7	Yield and spatial supply of bioenergy poplar and willow short-rotation coppice in the UK. <i>New Phytologist</i> , 2008, 178, 358-370.	7.3	252
8	The genetics and genomics of the drought response in <i>Populus</i> . <i>Plant Journal</i> , 2006, 48, 321-341.	5.7	216
9	Capture of Particulate Pollution by Trees: A Comparison of Species Typical of Semi-Arid Areas (<i>Ficus</i>) Tj ETQq1 1 0.784314 rgBT /Over Pollution, 2004, 155, 173-187.	2.4	207
10	Biofuels and the biorefinery concept. <i>Energy Policy</i> , 2008, 36, 4406-4409.	8.8	173
11	Greenhouse gas emissions from four bioenergy crops in England and Wales: Integrating spatial estimates of yield and soil carbon balance in life cycle analyses. <i>GCB Bioenergy</i> , 2009, 1, 267-281.	5.6	146
12	Land use change to bioenergy: A meta-analysis of soil carbon and GHG emissions. <i>Biomass and Bioenergy</i> , 2015, 82, 27-39.	5.7	135
13	More plant growth but less plant defence? First global gene expression data for plants grown in soil amended with biochar. <i>GCB Bioenergy</i> , 2015, 7, 658-672.	5.6	135
14	Biochar alters the soil microbiome and soil function: results of next-generation amplicon sequencing across Europe. <i>GCB Bioenergy</i> , 2017, 9, 591-612.	5.6	126
15	Breeding progress and preparedness for mass-scale deployment of perennial lignocellulosic biomass crops switchgrass, miscanthus, willow and poplar. <i>GCB Bioenergy</i> , 2019, 11, 118-151.	5.6	116
16	Woody biomass production during the second rotation of a bio-energy <i>Populus</i> plantation increases in a future high CO ₂ world. <i>Global Change Biology</i> , 2006, 12, 1094-1106.	9.5	115
17	FTIR-ATR-based prediction and modelling of lignin and energy contents reveals independent intra-specific variation of these traits in bioenergy poplars. <i>Plant Methods</i> , 2011, 7, 9.	4.3	112
18	Second generation bioenergy crops and climate change: a review of the effects of elevated atmospheric CO ₂ and drought on water use and the implications for yield. <i>GCB Bioenergy</i> , 2009, 1, 97-114.	5.6	98

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19	Global impacts of energy demand on the freshwater resources of nations. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6707-16.	7.1	98
20	Elevated CO ₂ and plant growth: cellular mechanisms and responses of whole plants. Journal of Experimental Botany, 1994, 45, 1761-1774.	4.8	96
21	Elevated atmospheric CO ₂ increases fine root production, respiration, rhizosphere respiration and soil CO ₂ efflux in Scots pine seedlings. Global Change Biology, 1998, 4, 871-878.	9.5	96
22	Spatial and Temporal Effects of Free-Air CO ₂ Enrichment (POPFACE) on Leaf Growth, Cell Expansion, and Cell Production in a Closed Canopy of Poplar. Plant Physiology, 2003, 131, 177-185.	4.8	96
23	Future atmospheric CO ₂ leads to delayed autumnal senescence. Global Change Biology, 2008, 14, 264-275.	9.5	95
24	Characterization of the Poplar Pan-Genome by Genome-Wide Identification of Structural Variation. Molecular Biology and Evolution, 2016, 33, 2706-2719.	8.9	95
25	The transcriptome of Populus in elevated CO ₂ . New Phytologist, 2005, 167, 143-154.	7.3	88
26	Stomatal conductance and not stomatal density determines the long-term reduction in leaf transpiration of poplar in elevated CO ₂ . Oecologia, 2005, 143, 652-660.	2.0	80
27	Leaf stomatal and epidermal cell development: identification of putative quantitative trait loci in relation to elevated carbon dioxide concentration in poplar. Tree Physiology, 2002, 22, 633-640.	3.1	79
28	Potential benefits of commercial willow Short Rotation Coppice (SRC) for farm-scale plant and invertebrate communities in the agri-environment. Biomass and Bioenergy, 2011, 35, 325-336.	5.7	79
29	Molecular Breeding for Improved Second Generation Bioenergy Crops. Trends in Plant Science, 2016, 21, 43-54.	8.8	78
30	QTL for yield in bioenergy Populus: identifying G×E interactions from growth at three contrasting sites. Tree Genetics and Genomes, 2007, 4, 97-112.	1.6	71
31	Bioenergy, Food Production and Biodiversity – An Unlikely Alliance?. GCB Bioenergy, 2015, 7, 570-576.	5.6	70
32	Harmonised global datasets of wind and solar farm locations and power. Scientific Data, 2020, 7, 130.	5.3	69
33	Five QTL hotspots for yield in short rotation coppice bioenergy poplar: The Poplar Biomass Loci. BMC Plant Biology, 2009, 9, 23.	3.6	68
34	Antioxidant assays – consistent findings from FRAP and ORAC reveal a negative impact of organic cultivation on antioxidant potential in spinach but not watercress or rocket leaves. Food Science and Nutrition, 2013, 1, 439-444.	3.4	67
35	FACE facts hold for multiple generations; Evidence from natural CO ₂ springs. Global Change Biology, 2019, 25, 1-11.	9.5	67
36	Biochar mineralization and priming effect on SOM decomposition in two European short rotation coppices. GCB Bioenergy, 2015, 7, 1150-1160.	5.6	66

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37	The technical potential of <i>Carex</i> and <i>Betula</i> to produce lignocellulosic biomass for bioenergy in current and future climates. <i>GCB Bioenergy</i> , 2014, 6, 108-122.	5.6	64
38	Elevated CO ₂ and tree root growth: contrasting responses in <i>Fraxinus excelsior</i> , <i>Quercus petraea</i> and <i>Pinus sylvestris</i> . <i>New Phytologist</i> , 1998, 138, 241-250.	7.3	58
39	Elucidating genomic regions determining enhanced leaf growth and delayed senescence in elevated CO ₂ . <i>Plant, Cell and Environment</i> , 2006, 29, 1730-1741.	5.7	57
40	Potential impacts on ecosystem services of land use transitions to second-generation bioenergy crops in <i>GB</i> . <i>GCB Bioenergy</i> , 2016, 8, 317-333.	5.6	56
41	Adaptive mechanisms and genomic plasticity for drought tolerance identified in European black poplar (<i>Populus nigra</i> L.). <i>Tree Physiology</i> , 2016, 36, 909-928.	3.1	56
42	The control of ozone uptake by <i>Picea abies</i> (L.) Karst. and <i>P. sitchensis</i> (Bong.) Carr. during drought and interacting effects on shoot water relations. <i>New Phytologist</i> , 1990, 116, 465-474.	7.3	54
43	Mechanism for increased leaf growth in elevated CO ₂ . <i>Journal of Experimental Botany</i> , 1996, 47, 349-358.	4.8	54
44	Water use of a bioenergy plantation increases in a future high CO ₂ world. <i>Biomass and Bioenergy</i> , 2009, 33, 200-208.	5.7	52
45	Development and evaluation of ForestGrowthSRC a process-based model for short rotation coppice yield and spatial supply reveals poplar uses water more efficiently than willow. <i>GCB Bioenergy</i> , 2013, 5, 53-66.	5.6	51
46	Effects of environment and progeny on biomass estimations of five hybrid poplar families grown at three contrasting sites across Europe. <i>Forest Ecology and Management</i> , 2007, 252, 12-23.	3.2	49
47	Identifying traits to improve postharvest processability in baby leaf salad. <i>Postharvest Biology and Technology</i> , 2003, 30, 287-298.	6.0	48
48	Leaf growth of hybrid poplar following exposure to elevated CO ₂ . <i>New Phytologist</i> , 1995, 131, 81-90.	7.3	47
49	Adaptation of tree growth to elevated CO ₂ : quantitative trait loci for biomass in <i>Populus</i> . <i>New Phytologist</i> , 2007, 175, 59-69.	7.3	47
50	Plant adaptation or acclimation to rising CO ₂ ? Insight from first multigenerational RNA-seq transcriptome. <i>Global Change Biology</i> , 2016, 22, 3760-3773.	9.5	47
51	High-resolution spatial modelling of greenhouse gas emissions from land-use change to energy crops in the United Kingdom. <i>GCB Bioenergy</i> , 2017, 9, 627-644.	5.6	47
52	Biomass and compositional changes occur in chalk grassland turves exposed to elevated CO ₂ for two seasons in FACE. <i>Global Change Biology</i> , 1998, 4, 375-385.	9.5	46
53	Challenges in elevated CO ₂ experiments on forests. <i>Trends in Plant Science</i> , 2010, 15, 5-10.	8.8	46
54	Genetic and morphological differentiation in <i>Populus nigra</i> L.: isolation by colonization or isolation by adaptation?. <i>Molecular Ecology</i> , 2015, 24, 2641-2655.	3.9	46

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55	Single primer enrichment technology as a tool for massive genotyping: a benchmark on black poplar and maize. <i>Annals of Botany</i> , 2019, 124, 543-551.	2.9	46
56	Contrasting effects of elevated CO ₂ on the root and shoot growth of four native herbs commonly found in chalk grassland. <i>New Phytologist</i> , 1993, 125, 855-866.	7.3	45
57	Nitrate Supply and the Biophysics of Leaf Growth in <i>Salix viminalis</i> . <i>Journal of Experimental Botany</i> , 1993, 44, 155-164.	4.8	44
58	Elevated CO ₂ , water relations and biophysics of leaf extension in four chalk grassland herbs. <i>New Phytologist</i> , 1994, 127, 297-307.	7.3	44
59	Long-term acclimation of leaf production, development, longevity and quality following 3-yr exposure to free-air CO ₂ enrichment during canopy closure in <i>Populus</i> . <i>New Phytologist</i> , 2004, 162, 413-426.	7.3	44
60	QTLs for shelf life in lettuce co-locate with those for leaf biophysical properties but not with those for leaf developmental traits. <i>Journal of Experimental Botany</i> , 2007, 58, 1433-1449.	4.8	44
61	Molecular features of secondary vascular tissue regeneration after bark girdling in <i>Populus</i> . <i>New Phytologist</i> , 2011, 192, 869-884.	7.3	43
62	Increased leaf area expansion of hybrid poplar in elevated CO ₂ . From controlled environments to open-top chambers and to FACE. <i>Environmental Pollution</i> , 2001, 115, 463-472.	7.5	42
63	Plasticity of growth and sylleptic branchiness in two poplar families grown at three sites across Europe. <i>Tree Physiology</i> , 2006, 26, 935-946.	3.1	41
64	Bioenergy with Carbon Capture and Storage (BECCS): Finding the win-winners for energy, negative emissions and ecosystem services—size matters. <i>GCB Bioenergy</i> , 2020, 12, 586-604.	5.6	41
65	THE CONTROL OF LEAF GROWTH OF BETULA AND ACER BY PHOTOENVIRONMENT. <i>New Phytologist</i> , 1985, 101, 259-268.	7.3	39
66	Defining leaf traits linked to yield in short-rotation coppice <i>Salix</i> . <i>Biomass and Bioenergy</i> , 2004, 26, 417-431.	5.7	39
67	End of Day Harvest Extends Shelf Life. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2005, 40, 1431-1435.	1.0	39
68	Photosynthetic characteristics, stomatal responses and water relations of <i>Fagus sylvatica</i> : impact of air quality at a site in southern Britain. <i>New Phytologist</i> , 1989, 113, 265-273.	7.3	37
69	Additive and antagonistic effects of ozone and salinity on the growth, ion contents and gas exchange of five varieties of rice (<i>Oryza sativa</i> L.). <i>Environmental Pollution</i> , 1996, 92, 257-266.	7.5	37
70	Estimating the supply of biomass from short-rotation coppice in England, given social, economic and environmental constraints to land availability. <i>Biofuels</i> , 2010, 1, 719-727.	2.4	37
71	Evaluating ecosystem processes in willow short rotation coppice bioenergy plantations. <i>GCB Bioenergy</i> , 2013, 5, 257-266.	5.6	36
72	Biomass traits and candidate genes for bioenergy revealed through association genetics in coppiced European <i>Populus nigra</i> (L.). <i>Biotechnology for Biofuels</i> , 2016, 9, 195.	6.2	36

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73	Grassland futures in Great Britain – Productivity assessment and scenarios for land use change opportunities. <i>Science of the Total Environment</i> , 2018, 634, 1108-1118.	8.0	36
74	Increased root growth in elevated CO ₂ : a biophysical analysis of root cell elongation. <i>Journal of Experimental Botany</i> , 1994, 45, 1603-1612.	4.8	35
75	Genes and gene clusters related to genotype and drought-induced variation in saccharification potential, lignin content and wood anatomical traits in <i>Populus nigra</i> . <i>Tree Physiology</i> , 2018, 38, 320-339.	3.1	35
76	Contrasting effects of tropospheric ozone on five native herbs which coexist in calcareous grassland. <i>Global Change Biology</i> , 1995, 1, 143-151.	9.5	34
77	Characterization of the watercress (<i>Nasturtium officinale</i> R. Br.; Brassicaceae) transcriptome using RNASeq and identification of candidate genes for important phytonutrient traits linked to human health. <i>BMC Genomics</i> , 2016, 17, 378.	2.8	33
78	The physiological, transcriptional and genetic responses of an ozone-sensitive and an ozone tolerant poplar and selected extremes of their F ₂ progeny. <i>Environmental Pollution</i> , 2011, 159, 45-54.	7.5	32
79	Implementing land-use and ecosystem service effects into an integrated bioenergy value chain optimisation framework. <i>Computers and Chemical Engineering</i> , 2016, 91, 392-406.	3.8	30
80	The potential for bioenergy crops to contribute to meeting GB heat and electricity demands. <i>GCB Bioenergy</i> , 2014, 6, 136-141.	5.6	29
81	YIELD TURGOR OF GROWING LEAVES OF BETULA AND ACER. <i>New Phytologist</i> , 1986, 104, 347-353.	7.3	28
82	Modification of cell wall properties in lettuce improves shelf life. <i>Journal of Experimental Botany</i> , 2010, 61, 1239-1248.	4.8	28
83	A place-based participatory mapping approach for assessing cultural ecosystem services in urban green space. <i>People and Nature</i> , 2020, 2, 123-137.	3.7	28
84	Estimating UK perennial energy crop supply using farm-scale models with spatially disaggregated data. <i>GCB Bioenergy</i> , 2014, 6, 142-155.	5.6	27
85	Elucidating the genetic basis of antioxidant status in lettuce (<i>Lactuca sativa</i>). <i>Horticulture Research</i> , 2015, 2, 15055.	6.3	27
86	Land-use change to bioenergy: grassland to short rotation coppice willow has an improved carbon balance. <i>GCB Bioenergy</i> , 2017, 9, 469-484.	5.6	27
87	The influence of the global electric power system on terrestrial biodiversity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 26078-26084.	7.1	27
88	Root growth of <i>Fagus sylvatica</i> : impact of air quality and drought at a site in southern Britain. <i>New Phytologist</i> , 1990, 116, 457-464.	7.3	26
89	Species-level effects more important than functional group-level responses to elevated CO ₂ : evidence from simulated curves. <i>Functional Ecology</i> , 2004, 18, 304-313.	3.6	26
90	Bridging the gap between energy and the environment. <i>Energy Policy</i> , 2016, 92, 181-189.	8.8	26

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91	Innovative breeding technologies in lettuce for improved post-harvest quality. <i>Postharvest Biology and Technology</i> , 2020, 168, 111266.	6.0	25
92	Characterisation of cell death in bagged baby salad leaves. <i>Postharvest Biology and Technology</i> , 2007, 46, 150-159.	6.0	24
93	Incorporating ecosystem services into the design of future energy systems. <i>Applied Energy</i> , 2018, 222, 812-822.	10.1	22
94	Predicted wind and solar energy expansion has minimal overlap with multiple conservation priorities across global regions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	22
95	Characterization of phenology, physiology, morphology and biomass traits across a broad Euro-Mediterranean ecotypic panel of the lignocellulosic feedstock <i>Arundo donax</i> . <i>GCB Bioenergy</i> , 2019, 11, 152-170.	5.6	21
96	Simulation of greenhouse gases following land-use change to bioenergy crops using the <i>ECOSSE</i> model: a comparison between site measurements and model predictions. <i>GCB Bioenergy</i> , 2016, 8, 925-940.	5.6	19
97	Contrasting effects of elevated CO ₂ and water deficit on two native herbs. <i>New Phytologist</i> , 1995, 131, 491-501.	7.3	18
98	Bioenergy for heat and electricity in the UK: A research atlas and roadmap. <i>Energy Policy</i> , 2008, 36, 4383-4389.	8.8	18
99	Insight into the Genetic Components of Community Genetics: QTL Mapping of Insect Association in a Fast-Growing Forest Tree. <i>PLoS ONE</i> , 2013, 8, e79925.	2.5	18
100	Counting the cost of carbon in bioenergy systems: sources of variation and hidden pitfalls when comparing life cycle assessments. <i>Biofuels</i> , 2011, 2, 693-707.	2.4	17
101	Do energy scenarios pay sufficient attention to the environment? Lessons from the UK to support improved policy outcomes. <i>Energy Policy</i> , 2018, 115, 397-408.	8.8	17
102	How can accelerated development of bioenergy contribute to the future UK energy mix? Insights from a MARKAL modelling exercise. <i>Biotechnology for Biofuels</i> , 2009, 2, 13.	6.2	16
103	Reducing post-harvest losses and improving quality in sweet corn (<i>Zea mays</i> L.): challenges and solutions for less food waste and improved food security. <i>Food and Energy Security</i> , 2021, 10, e277.	4.3	16
104	Toward improved drought tolerance in bioenergy crops: QTL for carbon isotope composition and stomatal conductance in <i>Populus</i> . <i>Food and Energy Security</i> , 2013, 2, 220-236.	4.3	14
105	Diversity in global gene expression and morphology across a watercress (<i>Nasturtium officinale</i> R. Br.) germplasm collection: first steps to breeding. <i>Horticulture Research</i> , 2015, 2, 15029.	6.3	14
106	Leaf growth of <i>Betula</i> and <i>Acer</i> in simulated shadelight. <i>Oecologia</i> , 1986, 69, 589-593.	2.0	13
107	The influence of photosynthetically-active radiation and simulated shadelight on the control of leaf growth of <i>Betula</i> and <i>Acer</i> . <i>New Phytologist</i> , 1988, 108, 393-398.	7.3	13
108	Plasticity of growth and biomass production of an intraspecific <i>Populus alba</i> family grown at three sites across Europe during three growing seasons. <i>Canadian Journal of Forest Research</i> , 2010, 40, 1887-1903.	1.7	13

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109	The methylome is altered for plants in a high CO ₂ world: Insights into the response of a wild plant population to multigenerational exposure to elevated atmospheric [CO ₂]. <i>Global Change Biology</i> , 2020, 26, 6474-6492.	9.5	13
110	Land-use change from food to energy: meta-analysis unravels effects of bioenergy on biodiversity and cultural ecosystem services. <i>Environmental Research Letters</i> , 2021, 16, 113005.	5.2	13
111	Impact of gaseous air pollution on leaf growth of hybrid poplar. <i>Forest Ecology and Management</i> , 1992, 51, 151-162.	3.2	12
112	Biophysics of leaf growth of hybrid poplar: impact of ozone. <i>New Phytologist</i> , 1991, 118, 407-415.	7.3	11
113	Elevated CO ₂ protects poplar (<i>Populus trichocarpa</i> – <i>P. deltoides</i>) from damage induced by O ₃ : identification of mechanisms. <i>Functional Plant Biology</i> , 2005, 32, 221.	2.1	11
114	An underground, wireless, open-source, low-cost system for monitoring oxygen, temperature, and soil moisture. <i>Soil</i> , 2022, 8, 85-97.	4.9	10
115	Comparative evaluation of the effects of gaseous pollutants, acidic deposition and mineral deficiencies on gas exchange of trees. <i>Agriculture, Ecosystems and Environment</i> , 1992, 42, 321-332.	5.3	9
116	The genetic basis of water-use efficiency and yield in lettuce. <i>BMC Plant Biology</i> , 2021, 21, 237.	3.6	8
117	Research Spotlight: The ELUM project: Ecosystem Land-Use Modeling and Soil Carbon GHG Flux Trial. <i>Biofuels</i> , 2014, 5, 111-116.	2.4	7
118	The potential to improve culinary herb crop quality with deficit irrigation. <i>Scientia Horticulturae</i> , 2018, 242, 44-50.	3.6	7
119	Assessing the impact of internal conductance to CO ₂ in a land-surface scheme: Measurement and modelling of photosynthesis in <i>Populus nigra</i> . <i>Agricultural and Forest Meteorology</i> , 2012, 152, 240-251.	4.8	6
120	Biogenic Carbon Capture and Sequestration. , 2018, , 55-76.		6
121	A transcriptomic approach to identify genes associated with wood density in <i>Picea sitchensis</i> . <i>Scandinavian Journal of Forest Research</i> , 2011, 26, 82-96.	1.4	5
122	Improving phosphate use efficiency in the aquatic crop watercress (<i>Nasturtium officinale</i>). <i>Horticulture Research</i> , 2022, 9, .	6.3	5
123	Spatial mapping of Great Britain's bioenergy to 2050. <i>GCB Bioenergy</i> , 2014, 6, 97-98.	5.6	4
124	Water use and yield of bioenergy poplar in future climates: modelling the interactive effects of elevated atmospheric CO ₂ and climate on productivity and water use. <i>GCB Bioenergy</i> , 2015, 7, 958-973.	5.6	3
125	Significant Contribution of Energy Crops to Heat and Electricity Needs in Great Britain to 2050. <i>Bioenergy Research</i> , 2014, 7, 919-926.	3.9	2
126	Embrace open-source sensors for local climate studies. <i>Nature</i> , 2021, 599, 32-32.	27.8	2

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127	Genotypic and tissue-specific variation of <i>Populus nigra</i> transcriptome profiles in response to drought. <i>Scientific Data</i> , 2022, 9, .	5.3	0