John R Evans

List of Publications by Year
in descending order

109 papers	14,538 citations	26567 56 h-index	26548 107 g-index
117 all docs	117 docs citations	117 times ranked	11546 citing authors

#	Article	IF	Citations
1	Photosynthesis and nitrogen relationships in leaves of C3 plants. Oecologia, 1989, 78, 9-19.	0.9	2,873
2	Nitrogen and Photosynthesis in the Flag Leaf of Wheat (<i>Triticum aestivum</i> L.). Plant Physiology, 1983, 72, 297-302.	2.3	677
3	Resistances along the CO2 diffusion pathway inside leaves. Journal of Experimental Botany, 2009, 60, 2235-2248.	2.4	492
4	Photosynthetic nitrogen-use efficiency of species that differ inherently in specific leaf area. Oecologia, 1998, 116, 26-37.	0.9	476
5	Physiological and structural tradeoffs underlying the leaf economics spectrum. New Phytologist, 2017, 214, 1447-1463.	3.5	412
6	The Importance of Energy Balance in Improving Photosynthetic Productivity Â. Plant Physiology, 2011, 155, 70-78.	2.3	394
7	The kinetics of ribulose-1,5-bisphosphate carboxylase/oxygenase in vivo inferred from measurements of photosynthesis in leaves of transgenic tobacco. Planta, 1994, 195, 88-97.	1.6	366
8	Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. New Phytologist, 2015, 206, 614-636.	3.5	350
9	Improving Photosynthesis. Plant Physiology, 2013, 162, 1780-1793.	2.3	338
10	Estimating mesophyll conductance to CO2: methodology, potential errors, and recommendations. Journal of Experimental Botany, 2009, 60, 2217-2234.	2.4	289
11	Temperature responses of mesophyll conductance differ greatly between species. Plant, Cell and Environment, 2015, 38, 629-637.	2.8	271
12	Reduction of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Content by Antisense RNA Reduces Photosynthesis in Transgenic Tobacco Plants. Plant Physiology, 1992, 98, 294-302.	2.3	259
13	Leaf Respiration of Snow Gum in the Light and Dark. Interactions between Temperature and Irradiance. Plant Physiology, 2000, 122, 915-924.	2.3	249
14	The nitrogen cost of photosynthesis. Journal of Experimental Botany, 2019, 70, 7-15.	2.4	224
15	Faster Rubisco Is the Key to Superior Nitrogen-Use Efficiency in NADP-Malic Enzyme Relative to NAD-Malic Enzyme C4 Grasses. Plant Physiology, 2005, 137, 638-650.	2.3	223
16	Linking Development and Determinacy with Organic Acid Efflux from Proteoid Roots of White Lupin Grown with Low Phosphorus and Ambient or Elevated Atmospheric CO2 Concentration1. Plant Physiology, 1999, 120, 705-716.	2.3	211
17	Proteoid Roots. Physiology and Development. Plant Physiology, 1999, 121, 317-323.	2.3	210
18	Leaf anatomy enables more equal access to light and CO2 between chloroplasts. New Phytologist, 1999, 143, 93-104.	3.5	206

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19	Specific reduction of chloroplast carbonic anhydrase activity by antisense RNA in transgenic tobacco plants has a minor effect on photosynthetic CO2 assimilation. Planta, 1994, 193, 331-340.	1.6	197
20	Temperature response of carbon isotope discrimination and mesophyll conductance in tobacco. Plant, Cell and Environment, 2013, 36, 745-756.	2.8	193
21	Hyperspectral reflectance as a tool to measure biochemical and physiological traits in wheat. Journal of Experimental Botany, 2018, 69, 483-496.	2.4	190
22	Construction costs, chemical composition and payback time of high- and low-irradiance leaves. Journal of Experimental Botany, 2006, 57, 355-371.	2.4	181
23	The cyanobacterial CCM as a source of genes for improving photosynthetic CO2 fixation in crop species. Journal of Experimental Botany, 2013, 64, 753-768.	2.4	178
24	A simple new equation for the reversible temperature dependence of photosynthetic electron transport: a study on soybean leaf. Functional Plant Biology, 2004, 31, 275.	1.1	167
25	Relationship between the inhibition of leaf respiration by light and enhancement of leaf dark respiration following light treatment. Functional Plant Biology, 1998, 25, 437.	1.1	161
26	Acquisition and Diffusion of CO2 in Higher Plant Leaves. Advances in Photosynthesis and Respiration, 2000, , 321-351.	1.0	148
27	Influence of leaf dry mass per area, CO2, and irradiance on mesophyll conductance in sclerophylls. Journal of Experimental Botany, 2009, 60, 2303-2314.	2.4	145
28	Effects of growth and measurement light intensities on temperature dependence of CO₂assimilation rate in tobacco leaves. Plant, Cell and Environment, 2010, 33, 332-343.	2.8	144
29	Temperature response of mesophyll conductance in cultivated and wild <i>Oryza</i> species with contrasting mesophyll cell wall thickness. Plant, Cell and Environment, 2011, 34, 1999-2008.	2.8	141
30	Specific reduction of chloroplast glyceraldehyde-3-phosphate dehydrogenase activity by antisense RNA reduces CO2 assimilation via a reduction in ribulose bisphosphate regeneration in transgenic tobacco plants. Planta, 1995, 195, 369-378.	1.6	135
31	Differences between Wheat Genotypes in Specific Activity of Ribulose-1,5-bisphosphate Carboxylase and the Relationship to Photosynthesis. Plant Physiology, 1984, 74, 759-765.	2.3	132
32	Using tunable diode laser spectroscopy to measure carbon isotope discrimination and mesophyll conductance to CO₂ diffusion dynamically at different CO₂ concentrations. Plant, Cell and Environment, 2011, 34, 580-591.	2.8	132
33	Trait correlation networks: a wholeâ€plant perspective on the recently criticized leaf economic spectrum. New Phytologist, 2014, 201, 378-382.	3.5	131
34	Leaf mesophyll diffusion conductance in 35 Australian sclerophylls covering a broad range of foliage structural and physiological variation. Journal of Experimental Botany, 2009, 60, 2433-2449.	2.4	121
35	Light and CO2 do not affect the mesophyll conductance to CO2 diffusion in wheat leaves. Journal of Experimental Botany, 2009, 60, 2291-2301.	2.4	117
36	Growth of the C4 dicot Flaveria bidentis: photosynthetic acclimation to low light through shifts in leaf anatomy and biochemistry. Journal of Experimental Botany, 2010, 61, 4109-4122.	2.4	116

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37	Enhancing C3 Photosynthesis. Plant Physiology, 2010, 154, 589-592.	2.3	113
38	Carbon dioxide and water transport through plant aquaporins. Plant, Cell and Environment, 2017, 40, 938-961.	2.8	112
39	Highâ€resolution temperature responses of leaf respiration in snow gum (<i><scp>E</scp>ucalyptus) Tj ETQq1 1 0.784314 rgBT /Overl 2013, 36, 1268-1284.	2.8	107
40	A comment on the quantitative significance of aerobic methane release by plants. Functional Plant Biology, 2006, 33, 521.	1.1	103
41	The relationship between CO2-assimilation rate, Rubisco carbamylation and Rubisco activase content in activase-deficient transgenic tobacco suggests a simple model of activase action. Planta, 1996, 198, 604-613.	1.6	101
42	Nitrogen in cell walls of sclerophyllous leaves accounts for little of the variation in photosynthetic nitrogenâ€use efficiency. Plant, Cell and Environment, 2009, 32, 259-270.	2.8	97
43	Online <scp>CO</scp>₂ and H₂O oxygen isotope fractionation allows estimation of mesophyll conductance in C₄ plants, and reveals that mesophyll conductance decreases as leaves age in both C₄ and C₃ plants. New Phytologist, 2016, 210, 875-889.	3.5	95
44	Leafâ€level photosynthetic capacity in lowland Amazonian and highâ€elevation Andean tropical moist forests of Peru. New Phytologist, 2017, 214, 1002-1018.	3.5	89
45	Growth and nutritive value of cassava (<i>Manihot esculenta</i> Cranz.) are reduced when grown in elevated CO₂. Plant Biology, 2009, 11, 76-82.	1.8	88
46	The response of fast- and slow-growing Acacia species to elevated atmospheric CO 2 : an analysis of the underlying components of relative growth rate. Oecologia, 1999, 120, 544-554.	0.9	85
47	Dual-purpose cereals: can the relative influences of management and environment on crop recovery and grain yield be dissected?. Crop and Pasture Science, 2011, 62, 930.	0.7	84
48	Strong thermal acclimation of photosynthesis in tropical and temperate wetâ€forest tree species: the importance of altered Rubisco content. Global Change Biology, 2017, 23, 2783-2800.	4.2	84
49	Is a Low Internal Conductance to CO2 Diffusion a Consequence of Succulence in Plants with Crassulacean Acid Metabolism?. Functional Plant Biology, 1997, 24, 777.	1.1	76
50	AusTraits, a curated plant trait database for the Australian flora. Scientific Data, 2021, 8, 254.	2.4	73
51	Mesophyll conductance: walls, membranes and spatial complexity. New Phytologist, 2021, 229, 1864-1876.	3.5	72
52	Photosynthesis within isobilateral Eucalyptus pauciflora leaves. New Phytologist, 2006, 171, 771-782.	3.5	69
53	Stomatal crypts may facilitate diffusion of CO₂ to adaxial mesophyll cells in thick sclerophylls. Plant, Cell and Environment, 2009, 32, 1596-1611.	2.8	69
54	Photosynthesis at an extreme end of the leaf trait spectrum: how does it relate to high leaf dry mass per area and associated structural parameters?. Journal of Experimental Botany, 2010, 61, 3015-3028.	2.4	67

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55	Phosphorus availability and elevated CO 2 affect biological nitrogen fixation and nutrient fluxes in a cloverâ€dominated sward. New Phytologist, 2006, 169, 157-167.	3.5	66
56	Photosynthesis is strongly reduced by antisense suppression of chloroplastic cytochrome bf complex in transgenic tobacco. Functional Plant Biology, 1998, 25, 445.	1.1	60
57	Phosphorus acquisition from soil by white lupin (Lupinus albus L.) and soybean (Glycine max L.), species with contrasting root development. Plant and Soil, 2003, 248, 271-283.	1.8	60
58	Functional Analysis of Corn Husk Photosynthesis Â. Plant Physiology, 2011, 156, 503-513.	2.3	59
59	Embracing 3D Complexity in Leaf Carbonâ€"Water Exchange. Trends in Plant Science, 2019, 24, 15-24.	4.3	55
60	Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. Plant, Cell and Environment, 2019, 42, 2133-2150.	2.8	54
61	Stomatal, mesophyll conductance, and biochemical limitations to photosynthesis during induction. Plant Physiology, 2021, 185, 146-160.	2.3	53
62	Effects of reduced carbonic anhydrase activity on CO₂assimilation rates in<i>Setaria viridis</i>: a transgenic analysis. Journal of Experimental Botany, 2017, 68, 299-310.	2.4	52
63	Grazing winter wheat relieves plant water stress and transiently enhances photosynthesis. Functional Plant Biology, 2010, 37, 726.	1.1	51
64	Nitrogen fertilization enhances water-use efficiency in a saline environment. Plant, Cell and Environment, 2010, 33, 344-357.	2.8	50
65	Potential Errors in Electron Transport Rates Calculated from Chlorophyll Fluorescence as Revealed by a Multilayer Leaf Model. Plant and Cell Physiology, 2009, 50, 698-706.	1.5	49
66	From green to gold: agricultural revolution for food security. Journal of Experimental Botany, 2020, 71, 2211-2215.	2.4	49
67	PrometheusWiki Gold Leaf Protocol: gas exchange using LI-COR 6400. Functional Plant Biology, 2014, 41, 223.	1.1	48
68	Genetic variation for photosynthetic capacity and efficiency in spring wheat. Journal of Experimental Botany, 2020, 71, 2299-2311.	2.4	48
69	Rubisco: the consequences of altering its expression and activation in transgenic plants. Journal of Experimental Botany, 1995, 46, 1293-1300.	2.4	47
70	Recovery dynamics of rainfed winter wheat after livestock grazing 1. Growth rates, grain yields, soil water use and water-use efficiency. Crop and Pasture Science, 2011, 62, 947.	0.7	47
71	Recovery dynamics of rainfed winter wheat after livestock grazing 2. Light interception, radiation-use efficiency and dry-matter partitioning. Crop and Pasture Science, 2011, 62, 960.	0.7	47
72	Using a mathematical framework to examine physiological changes in winter wheat after livestock grazing. Field Crops Research, 2012, 136, 116-126.	2.3	47

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73	Effects of elevated atmospheric CO2, cutting frequency, and differential day/night atmospheric warming on root growth and turnover of Phalaris swards. Global Change Biology, 2007, 13, 1040-1052.	4.2	46
74	Using a mathematical framework to examine physiological changes in winter wheat after livestock grazing. Field Crops Research, 2012, 136, 127-137.	2.3	46
75	Chloroplast to Leaf. Ecological Studies, 2004, , 15-41.	0.4	39
76	Effects of mesophyll conductance on vegetation responses to elevated CO₂ concentrations in a land surface model. Global Change Biology, 2019, 25, 1820-1838.	4.2	38
77	Biochemical model of C₃ photosynthesis applied to wheat at different temperatures. Plant, Cell and Environment, 2017, 40, 1552-1564.	2.8	37
78	Antisense reductions in the PsbO protein of photosystem II leads to decreased quantum yield but similar maximal photosynthetic rates. Journal of Experimental Botany, 2012, 63, 4781-4795.	2.4	36
79	Drought increases heat tolerance of leaf respiration in Eucalyptus globulus saplings grown under both ambient and elevated atmospheric [CO2] and temperature. Journal of Experimental Botany, 2014, 65, 6471-6485.	2.4	34
80	Association between water and carbon dioxide transport in leaf plasma membranes: assessing the role of aquaporins. Plant, Cell and Environment, 2017, 40, 789-801.	2.8	32
81	Chapter 8 Nitrogen and Water Use Efficiency of C4 Plants. Advances in Photosynthesis and Respiration, 2010, , 129-146.	1.0	31
82	Absolute absorption and relative fluorescence excitation spectra of the five major chlorophyll-protein complexes from spinach thylakoid membranes. Biochimica Et Biophysica Acta - Bioenergetics, 1987, 892, 75-82.	0.5	30
83	Mesophyll conductance does not contribute to greater photosynthetic rate per unit nitrogen in temperate compared with tropical evergreen wetâ€forest tree leaves. New Phytologist, 2018, 218, 492-505.	3.5	30
84	Light Quality Affects Chloroplast Electron Transport Rates Estimated from Chl Fluorescence Measurements. Plant and Cell Physiology, 2017, 58, 1652-1660.	1.5	28
85	A Decrease in Mesophyll Conductance by Cell-Wall Thickening Contributes to Photosynthetic Downregulation. Plant Physiology, 2020, 183, 1600-1611.	2.3	28
86	Genome-wide identification and characterisation of Aquaporins in Nicotiana tabacum and their relationships with other Solanaceae species. BMC Plant Biology, 2020, 20, 266.	1.6	27
87	Wheat physiology predictor: predicting physiological traits in wheat from hyperspectral reflectance measurements using deep learning. Plant Methods, 2021, 17, 108.	1.9	27
88	Resolving methane fluxes. New Phytologist, 2007, 175, 1-4.	3.5	24
89	Changes in Nutritional Value of Cyanogenic Trifolium repens Grown at Elevated Atmospheric CO2. Journal of Chemical Ecology, 2009, 35, 476-478.	0.9	23
90	A reporting format for leaf-level gas exchange data and metadata. Ecological Informatics, 2021, 61, 101232.	2.3	22

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91	A unique web resource for physiology, ecology and the environmental sciences: PrometheusWiki. Functional Plant Biology, 2010, 37, 687.	1.1	20
92	Uncovering candidate genes involved in photosynthetic capacity using unexplored genetic variation in Spring Wheat. Plant Biotechnology Journal, 2021, 19, 1537-1552.	4.1	19
93	Effects of water availability, nitrogen supply and atmospheric CO2 concentrations on plant nitrogen natural abundance values. Functional Plant Biology, 2006, 33, 219.	1.1	17
94	Phosphorus status determines biomass response to elevated CO2 in a legume : C4 grass community. Global Change Biology, 2005, 11, 051013014052003-???.	4.2	14
95	Exploiting transplastomically modified Rubisco to rapidly measure natural diversity in its carbon isotope discrimination using tuneable diode laser spectroscopy. Journal of Experimental Botany, 2014, 65, 3759-3767.	2.4	13
96	Effects of growth temperature on photosynthetic gas exchange characteristics and hydraulic anatomy in leaves of two cold-climate Poa species. Functional Plant Biology, 2011, 38, 54.	1.1	12
97	Effect of leaf temperature on the estimation of photosynthetic and other traits of wheat leaves from hyperspectral reflectance. Journal of Experimental Botany, 2021, 72, 1271-1281.	2.4	12
98	Chloroplast to Leaf. Ecological Studies, 2004, , 107-132.	0.4	10
99	Phosphorus deficiency alters scaling relationships between leaf gas exchange and associated traits in a wide range of contrasting Eucalyptus species. Functional Plant Biology, 2018, 45, 813.	1.1	10
100	Mesophyll conductance is unaffected by expression of Arabidopsis <i>PIP1</i> aquaporins in the plasmalemma of <i>Nicotiana</i>. Journal of Experimental Botany, 2022, 73, 3625-3636.	2.4	10
101	Phenotypic variation in photosynthetic traits in wheat grown under field versus glasshouse conditions. Journal of Experimental Botany, 2022, 73, 3221-3237.	2.4	9
102	Internal transport of CO₂ from the rootâ€zone to plant shoot is pH dependent. Physiologia Plantarum, 2019, 165, 451-463.	2.6	7
103	A consensus on the Aquaporin Gene Family in the Allotetraploid Plant, Nicotiana tabacum. Plant Direct, 2021, 5, e00321.	0.8	6
104	Effect of N supply on the carbon economy of barley when accounting for plant size. Functional Plant Biology, 2020, 47, 368.	1.1	6
105	Effects of elevated atmospheric CO₂concentrations, clipping regimen and differential day/night atmospheric warming on tissue nitrogen concentrations of a perennial pasture grass. AoB PLANTS, 2015, 7, plv094.	1.2	4
106	Phosphorus acquisition from soil by white lupin (Lupinus albus L.) and soybean (Glycine max L.), species with contrasting root development. , 2003, , 271-283.		2
107	Temperature responses of photosynthesis and respiration in a sub-Antarctic megaherb from Heard Island. Functional Plant Biology, 2015, 42, 552.	1.1	1
108	Measurement of Mesophyll Conductance in Tobacco, Arabidopsis and Wheat Leaves with Tunable Diode Laser Absorption Spectroscopy. Advanced Topics in Science and Technology in China, 2013, , 751-755.	0.0	1

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109	Carbon Dioxide Diffusion Inside C3 Leaves. , 1998, , 3463-3466.		1