David B Layzell

List of Publications by Year
in descending order

88 papers	4,406 citations	70961 41 h-index	110170 64 g-index
89 all docs	89 docs citations	89 times ranked	2725 citing authors

#	Article	IF	Citations
1	Modelling electric vehicle charging network capacity and performance during short-notice evacuations. International Journal of Disaster Risk Reduction, 2021, 56, 102093.	1.8	11
2	Reconciling energy efficiency and energy intensity metrics: an integrated decomposition analysis. Energy Efficiency, 2018, 11, 1999-2016.	1.3	13
3	Understanding energy systems change in Canada: 1. Decomposition of total energy intensity. Energy Economics, 2016, 56, 101-106.	5.6	51
4	Removal and biodegradation of naphthenic acids by biochar and attached environmental biofilms in the presence of co-contaminating metals. Bioresource Technology, 2016, 216, 352-361.	4.8	90
5	Early atmospheric detection of carbon dioxide from carbon capture and storage sites. Journal of the Air and Waste Management Association, 2016, 66, 739-747.	0.9	7
6	EnergyViz: an interactive system for visualization of energy systems. Visual Computer, 2016, 32, 403-413.	2.5	10
7	Using activated biochar for greenhouse gas mitigation and industrial water treatment. Mitigation and Adaptation Strategies for Global Change, 2016, 21, 761-777.	1.0	5
8	Dinitrogen Fixation. Assa, Cssa and Sssa, 2015, , 311-335.	0.6	1
9	Interactive Visualization of Energy System. , 2014, , .		3
10	Nitrogen fixation, hydrogen production and N₂O emissions. Canadian Journal of Plant Science, 2014, 94, 1037-1041.	0.3	10
11	Enhancing biochar yield by co-pyrolysis of bio-oil with biomass: Impacts of potassium hydroxide addition and air pretreatment prior to co-pyrolysis. Bioresource Technology, 2014, 171, 88-94.	4.8	32
12	Pyrolysis of wood to biochar: Increasing yield while maintaining microporosity. Bioresource Technology, 2014, 153, 173-179.	4.8	41
13	Adsorption of naphthenic acids on high surface area activated carbons. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2014, 49, 913-922.	0.9	32
14	Feasibility study of a Great Lakes bioenergy system. Bioresource Technology, 2011, 102, 1087-1094.	4.8	14
15	Soil biogeochemistry during the early spring in low arctic mesic tundra and the impacts of deepened snow and enhanced nitrogen availability. Biogeochemistry, 2010, 99, 127-141.	1.7	86
16	Production of Bio-Synthetic Natural Gas in Canada. Environmental Science & Technology, 2010, 44, 2183-2188.	4.6	23
17	Break crop benefits in temperate wheat production. Field Crops Research, 2008, 107, 185-195.	2.3	404
18	Isolation and characterization of hydrogen-oxidizing bacteria induced following exposure of soil to hydrogen gas and their impact on plant growth. Environmental Microbiology, 2007, 9, 435-444.	1.8	92

#	Article	IF	Citations
19	Adenylate-Coupled Ion Movement. A Mechanism for the Control of Nodule Permeability to O2 Diffusion. Plant Physiology, 2006, 141, 280-287.	2.3	33
20	Poster Summaries. Current Plant Science and Biotechnology in Agriculture, 2005, , 225-250.	0.0	0
21	Adenylate Gradients and Ar:O2 Effects on Legume Nodules: I. Mathematical Models. Plant Physiology, 2004, 134, 801-812.	2.3	7
22	Adenylate Gradients and Ar:O2 Effects on Legume Nodules. II. Changes in the Subcellular Adenylate Pools. Plant Physiology, 2004, 134, 1775-1783.	2.3	5
23	Hydrogen fertilization of soils - is this a benefit of legumes in rotation?. Plant, Cell and Environment, 2003, 26, 1875-1879.	2.8	85
24	In Vivo Gas Exchange Measurement of the Site and Dynamics of Nitrate Reduction in Soybean. Plant Physiology, 2003, 131, 1147-1156.	2.3	14
25	H2 oxidation, O2 uptake and CO2 fixation in hydrogen treated soils. Plant and Soil, 2001, 229, 1-12.	1.8	78
26	Whole-Plant Gas Exchange and Reductive Biosynthesis in White Lupin. Plant Physiology, 2001, 126, 1555-1565.	2.3	37
27	Leaf O2 uptake in the dark is independent of coincident CO2 partial pressure. Journal of Experimental Botany, 2001, 52, 2235-2238.	2.4	45
28	A Simplified Approach for Modeling Diffusion into Cells. Journal of Theoretical Biology, 2000, 204, 47-65.	0.8	10
29	Oxygen Regulation of a Nodule-Located Carbonic Anhydrase in Alfalfa. Plant Physiology, 2000, 124, 1059-1068.	2.3	51
30	Oxygen Regulation and Adenylates in Legume Nodules. , 2000, , 367-368.		1
31	The Site of Oxygen Limitation in Soybean Nodules1. Plant Physiology, 1999, 119, 399-408.	2.3	37
32	Evidence for Light-Stimulated Fatty Acid Synthesis in Soybean Fruit1. Plant Physiology, 1999, 120, 1117-1128.	2.3	48
33	Plant biology and food science in Canada: a vision for the future. Canadian Journal of Botany, 1998, 76, 355-364.	1.2	0
34	Effects of Oxygen on Nodule Physiology and Expression of Nodulins in Alfalfa1. Plant Physiology, 1998, 117, 385-395.	2.3	24
35	Phloem Glutamine and the Regulation of O2 Diffusion in Legume Nodules. Plant Physiology, 1997, 113, 259-267.	2.3	119
36	Role of oxygen limitation and nitrate metabolism in the nitrate inhibition of nitrogen fixation by pea. Physiologia Plantarum, 1997, 101, 45-50.	2.6	15

#	Article	IF	Citations
37	Can genotypes of soybean (Glycine max) selected for nitrate tolerance provide good "models" for studying the mechanism of nitrate inhibition of nitrogenase activity?. Physiologia Plantarum, 1996, 98, 653-660.	2.6	5
38	Gaba shunt in developing soybean seeds is associated with hypoxia. Physiologia Plantarum, 1995, 94, 219-228.	2.6	77
39	Gaba shunt in developing soybean seeds is associated with hypoxia. Physiologia Plantarum, 1995, 94, 219-228.	2.6	61
40	The relationship between nodule adenylates and the regulation of nitrogenase activity by O2 in soybean. Physiologia Plantarum, 1994, 91, 687-695.	2.6	15
41	Evidence that short-term regulation of nodule permeability does not occur in the inner cortex. Physiologia Plantarum, 1994, 91, 477-487.	2.6	8
42	Evidence that short-term regulation of nodule permeability does not occur in the inner cortex. Physiologia Plantarum, 1994, 91, 477-487.	2.6	12
43	The relationship between nodule adenylates and the regulation of nitrogenase activity by O2 in soybean. Physiologia Plantarum, 1994, 91, 687-695.	2.6	13
44	Dimensions and distribution of intercellular spaces in cryo-planed soybean nodules. Physiologia Plantarum, 1993, 89, 252-261.	2.6	8
45	Gaseous diffusive properties of soybean nodules cultured with non-ambient pO2. Physiologia Plantarum, 1993, 87, 89-95.	2.6	19
46	Dimensions and distribution of intercellular spaces in cryo-planed soybean nodules. Physiologia Plantarum, 1993, 89, 252-261.	2.6	17
47	Gaseous diffusive properties of soybean nodules cultured with non-ambient pO2. Physiologia Plantarum, 1993, 87, 89-95.	2.6	15
48	Nitrogenase Activity, Nodule Respiration, and O2 Permeability Following Detopping of Alfalfa and Birdsfoot Trefoil. Plant Physiology, 1992, 98, 894-900.	2.3	71
49	O2 regulation and O2 -limitation of nitrogenase activity in root nodules of pea and lupin. Physiologia Plantarum, 1992, 86, 269-278.	2.6	21
50	A metabolic connection between nitrogenase activity and the synthesis of ureides in nodulated soybean. Physiologia Plantarum, 1992, 84, 441-447.	2.6	14
51	A metabolic connection between nitrogenase activity and the synthesis of ureides in nodulated soybean. Physiologia Plantarum, 1992, 84, 441-447.	2.6	3
52	Effect of Increases in Oxygen Concentration during the Argon-Induced Decline in Nitrogenase Activity in Root Nodules of Soybean. Plant Physiology, 1991, 96, 376-381.	2.3	55
53	Measurement of Legume Nodule Respiration and O₂ Permeability by Noninvasive Spectrophotometry of Leghemoglobin. Plant Physiology, 1991, 96, 137-143.	2.3	54
54	Oxygen and the regulation of nitrogen fixation in legume nodules. Physiologia Plantarum, 1990, 80, 322-327.	2.6	80

#	Article	IF	Citations
55	Mechanism of Nitrogenase Inhibition in Soybean Nodules. Plant Physiology, 1990, 92, 1101-1107.	2.3	96
56	Energetics and Biological Costs of Nitrogen Assimilation. , 1990, , 1-42.		30
57	Oxygen and the regulation of nitrogen fixation in legume nodules. Physiologia Plantarum, 1990, 80, 322-327.	2.6	9
58	Effects of Gradual Increases in O2 Concentration on Nodule Activity in Soybean. Plant Physiology, 1989, 91, 315-321.	2.3	64
59	Photorespiratory Ammonia Does Not Inhibit Photosynthesis in Glutamate Synthase Mutants of Arabidopsis. Plant Physiology, 1989, 89, 498-500.	2.3	18
60	Model of gas exchange and diffusion in legume nodules. Planta, 1988, 173, 117-127.	1.6	44
61	Model of gas exchange and diffusion in legume nodules. Planta, 1988, 173, 128-141.	1.6	78
62	Can a limitation in pholem supply to nodules account for the inhibitory effect of nitrate on nitrogenase activity in soybean?. Physiologia Plantarum, 1988, 74, 137-146.	2.6	70
63	Oxygen limitation of N₂ fixation in stemâ€girdled and nitrateâ€treated soybean. Physiologia Plantarum, 1988, 73, 113-121.	2.6	121
64	Regulation of O₂ Concentration in Soybean Nodules Observed by in Situ Spectroscopic Measurement of Leghemoglobin Oxygenation. Plant Physiology, 1988, 87, 296-299.	2.3	77
65	Ammonia Production and Assimilation in Glutamate Synthase Mutants of Arabidopsis thaliana. Plant Physiology, 1988, 87, 148-154.	2.3	24
66	Regulation of Assimilate Partitioning in Soybean. Plant Physiology, 1987, 83, 341-348.	2.3	53
67	Carbohydrate Supply and N2 Fixation in Soybean. Plant Physiology, 1987, 85, 137-144.	2.3	121
68	Steady and Nonsteady State Gas Exchange Characteristics of Soybean Nodules in Relation to the Oxygen Diffusion Barrier. Plant Physiology, 1987, 84, 164-172.	2.3	117
69	Glutamine synthetase genes are regulated by ammonia provided externally or by symbiotic nitrogen fixation. EMBO Journal, 1987, 6, 1167-1171.	3.5	126
70	The Role of Dark Carbon Dioxide Fixation in Root Nodules of Soybean. Plant Physiology, 1986, 81, 200-205.	2.3	78
71	Inexpensive, Computer-Automated HPLC for Ion Exchange Separation and Quantification of Amino Acids in Physiological Fluids. Journal of Liquid Chromatography and Related Technologies, 1986, 9, 2199-2221.	0.9	5
72	Carbon and Nitrogen Assimilation and Partitioning in Soybeans Exposed to Low Root Temperatures. Plant Physiology, 1986, 80, 249-255.	2.3	71

#	Article	IF	Citations
73	Modeling the C Economy of Anabaena flos-aquae. Plant Physiology, 1985, 78, 746-752.	2.3	42
74	Effect of N Source on the Steady State Growth and N Assimilation of P-limited Anabaena flos-aquae. Plant Physiology, 1985, 78, 739-745.	2.3	27
75	A morphometric study of effective nodules induced by Rhizobium loti and Bradyrhizobium sp. (Lotus) on Lotus pedunculatus. Canadian Journal of Botany, 1985, 63, 43-53.	1.2	20
76	A Highly Sensitive, Flow Through H2 Gas Analyzer for Use in Nitrogen Fixation Studies. Plant Physiology, 1984, 75, 582-585.	2.3	48
77	Effects of N₂ Deficiency on Transport and Partitioning of C and N in a Nodulated Legume. Plant Physiology, 1984, 76, 59-64.	2.3	39
78	Modeling C and N Transport to Developing Soybean Fruits. Plant Physiology, 1982, 70, 1290-1298.	2.3	89
79	Partitioning of Carbon and Nitrogen and the Nutrition of Root and Shoot Apex in a Nodulated Legume. Plant Physiology, 1981, 67, 30-36.	2.3	148
80	Synthesis, Storage, and Utilization of Amino Compounds in White Lupin (Lupinus albus L.). Plant Physiology, 1981, 67, 37-42.	2.3	51
81	Carbon and Nitrogen Partitioning in the Whole Plant â€" A Thesis Based on Empirical Modeling. , 1981, , 94-134.		24
82	Efficiency and regulation of root respiration in a legume: Effects of the N source. Physiologia Plantarum, 1980, 50, 319-325.	2.6	49
83	Economy of Carbon and Nitrogen in a Nodulated and Nonnodulated (NO₃-grown) Legume. Plant Physiology, 1979, 64, 1083-1088.	2.3	161
84	Economy of Photosynthate Use in Nitrogen-fixing Legume Nodules. Plant Physiology, 1979, 64, 888-891.	2.3	106
85	Modeling the Transport and Utilization of Carbon and Nitrogen in a Nodulated Legume. Plant Physiology, 1979, 63, 730-737.	2.3	148
86	Transport of Organic Solutes in Phloem and Xylem of a Nodulated Legume. Plant Physiology, 1979, 63, 1082-1088.	2.3	94
87	Assimilation and Transport of Nitrogen in Nonnodulated (NO₃-grown) Lupinus albus L. Plant Physiology, 1979, 64, 1078-1082.	2.3	68
88	Photoperiod and floral-bud development in Caryopteris Ã— clandonensis. Canadian Journal of Botany, 1978, 56, 1844-1851.	1.2	1