Robert D Willows

List of Publications by Year
in descending order

84 papers	5,695 citations	159585 30 h-index	79698 73 g-index
85 all docs	85 docs citations	85 times ranked	6445 citing authors

#	Article	IF	Citations
1	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	12.6	2,354
2	A Red-Shifted Chlorophyll. Science, 2010, 329, 1318-1319.	12.6	437
3	Magnesium-protoporphyrin chelatase of Rhodobacter sphaeroides: reconstitution of activity by combining the products of the bchH, -I, and -D genes expressed in Escherichia coli.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 1941-1944.	7.1	197
4	Interplay between an AAA module and an integrin I domain may regulate the function of magnesium chelatase. Journal of Molecular Biology, 2001, 311, 111-122.	4.2	175
5	A cyanobacterium that contains chlorophyll <i>f</i> â€“ a redâ€absorbing photopigment. FEBS Letters, 2012, 586, 3249-3254.	2.8	150
6	Phytobilin biosynthesis: cloning and expression of a gene encoding soluble ferredoxin-dependent heme oxygenase from Synechocystis sp. PCC 6803. Plant Journal, 1998, 15, 99-107.	5.7	133
7	Extinction coefficient for red-shifted chlorophylls: Chlorophyll d and chlorophyll f. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1292-1298.	1.0	124
8	Biosynthesis of chlorophylls from protoporphyrin IX. Natural Product Reports, 2003, 20, 327.	10.3	123
9	Three Separate Proteins Constitute the Magnesium Chelatase of Rhodobacter Sphaeroides. FEBS Journal, 1996, 235, 438-443.	0.2	121
10	Characterization of red-shifted phycobilisomes isolated from the chlorophyll f -containing cyanobacterium Halomicronema hongdechloris. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 107-114.	1.0	91
11	Three semidominant barley mutants with single amino acid substitutions in the smallest magnesium chelatase subunit form defective AAA+ hexamers. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 13944-13949.	7.1	84
12	Strategic Distribution of Protective Proteins within Bran Layers of Wheat Protects the Nutrient-Rich Endosperm. Plant Physiology, 2010, 152, 1459-1470.	4.8	80
13	ATP-Induced Conformational Dynamics in the AAA+ Motor Unit of Magnesium Chelatase. Structure, 2010, 18, 354-365.	3.3	70
14	Heterologous Expression of the Rhodobacter capsulatus BchI, -D, and -H Genes That Encode Magnesium Chelatase Subunits and Characterization of the Reconstituted Enzyme. Journal of Biological Chemistry, 1998, 273, 34206-34213.	3.4	69
15	18O Labeling of Chlorophyll d in Acaryochloris marina Reveals That Chlorophyll a and Molecular Oxygen Are Precursors. Journal of Biological Chemistry, 2010, 285, 28450-28456.	3.4	63
16	Mammalian forebrain ketimine reductase identified as Î¼â€crystallin; potential regulation by thyroid hormones. Journal of Neurochemistry, 2011, 118, 379-387.	3.9	59
17	Structure of Chlorophyll <i>f</i>. Organic Letters, 2013, 15, 1588-1590.	4.6	50
18	Recessiveness and Dominance in Barley Mutants Deficient in Mg-Chelatase Subunit D, an AAA Protein Involved in Chlorophyll Biosynthesis. Plant Cell, 2007, 18, 3606-3616.	6.6	49

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19	Substrate-binding Model of the Chlorophyll Biosynthetic Magnesium Chelatase BchH Subunit. Journal of Biological Chemistry, 2008, 283, 11652-11660.	3.4	49
20	Novel indoleamine 2,3-dioxygenase-1 inhibitors from a multistep in silico screen. Bioorganic and Medicinal Chemistry, 2012, 20, 1354-1363.	3.0	49
21	EM single particle analysis of the ATP-dependent BchI complex of magnesium chelatase: an AAA+ hexamer. Journal of Structural Biology, 2004, 146, 227-233.	2.8	47
22	Câ€terminal residues of <i>Oryza sativa</i> GUN4 are required for the activation of the ChlH subunit of magnesium chelatase in chlorophyll synthesis. FEBS Letters, 2012, 586, 205-210.	2.8	46
23	ATPase activity of magnesium chelatase subunit I is required to maintain subunit D in vivo. FEBS Journal, 2004, 271, 2182-2188.	0.2	41
24	GUN4-Protoporphyrin IX Is a Singlet Oxygen Generator with Consequences for Plastid Retrograde Signaling. Journal of Biological Chemistry, 2016, 291, 8978-8984.	3.4	41
25	Optimised expression and purification of recombinant human indoleamine 2,3-dioxygenase. Protein Expression and Purification, 2004, 37, 392-398.	1.3	40
26	In vitro Conversion of Vinyl to Formyl Groups in Naturally Occurring Chlorophylls. Scientific Reports, 2015, 4, 6069.	3.3	36
27	A proteomic approach to the identification and characterisation of protein composition in wheat germ. Functional and Integrative Genomics, 2006, 6, 322-337.	3.5	35
28	Chlorophyll-deficient mutants of Chlamydomonas reinhardtii that accumulate magnesium protoporphyrin IX. Plant Molecular Biology, 2010, 72, 643-658.	3.9	34
29	Black Point is associated with reduced levels of stress, disease- and defence-related proteins in wheat grain. Molecular Plant Pathology, 2006, 7, 177-189.	4.2	32
30	Phytobilin biosynthesis: the Synechocystis sp. PCC 6803 heme oxygenase-encoding ho1 gene complements a phytochrome-deficient Arabidopsis thalianna hy1 mutant. Plant Molecular Biology, 2000, 43, 113-120.	3.9	31
31	New enzymes from environmental cassette arrays: Functional attributes of a phosphotransferase and an RNA-methyltransferase. Protein Science, 2004, 13, 1651-1659.	7.6	30
32	Inhibition of indoleamine 2,3 dioxygenase activity by H2O2. Archives of Biochemistry and Biophysics, 2006, 450, 9-19.	3.0	30
33	Mouse and human indoleamine 2,3-dioxygenase display some distinct biochemical and structural properties. Amino Acids, 2009, 36, 99-106.	2.7	30
34	Germination of Wheat: A Functional Proteomics Analysis of the Embryo. Cereal Chemistry, 2009, 86, 281-289.	2.2	29
35	The Chlamydomonas reinhardtii gtr Gene Encoding the Tetrapyrrole Biosynthetic Enzyme Glutamyl-tRNA Reductase: Structure of the Gene and Properties of the Expressed Enzyme. Plant Molecular Biology, 2005, 58, 643-658.	3.9	27
36	Sensitive Time-Gated Immunoluminescence Detection of Prostate Cancer Cells Using a TEGylated Europium Ligand. Analytical Chemistry, 2016, 88, 9564-9571.	6.5	27

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37	Proteome mapping of the Trichoderma reesei 20S proteasome. Current Genetics, 2007, 51, 79-88.	1.7	25
38	Stable Upconversion Nanohybrid Particles for Specific Prostate Cancer Cell Immunodetection. Scientific Reports, 2016, 6, 37533.	3.3	25
39	Nucleotides of tRNA (Glu) involved in recognition by barley chloroplast glutamyl-tRNA synthetase and glutamyl-tRNA reductase. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1995, 1263, 228-234.	2.4	24
40	Inactivation of Mg Chelatase during Transition from Anaerobic to Aerobic Growth in Rhodobacter capsulatus. Journal of Bacteriology, 2003, 185, 3249-3258.	2.2	24
41	ATPase activity associated with the magnesium chelatase H-subunit of the chlorophyll biosynthetic pathway is an artefact. Biochemical Journal, 2006, 400, 477-484.	3.7	24
42	BchJ and BchM interact in a 1â€ƒ:â€ƒ1 ratio with the magnesium chelatase BchH subunit of <i>Rhodobacterâ€ƒcapsulatus</i>. FEBS Journal, 2010, 277, 4709-4721.	4.7	23
43	Genome and proteome of the chlorophyll f-producing cyanobacterium Halomicronema hongdechloris: adaptative proteomic shifts under different light conditions. BMC Genomics, 2019, 20, 207.	2.8	23
44	The isolation and identification of the prosthetic group released from a bound form of abscisic acid. Plant Growth Regulation, 1992, 11, 327-334.	3.4	22
45	The C21-formyl group in chlorophyll f originates from molecular oxygen. Journal of Biological Chemistry, 2017, 292, 19279-19289.	3.4	20
46	Kinetic Analyses of the Magnesium Chelatase Provide Insights into the Mechanism, Structure, and Formation of the Complex*. Journal of Biological Chemistry, 2008, 283, 31294-31302.	3.4	19
47	Enzymic and Mechanistic Studies on the Conversion of Glutamate to 5â€Aminolaevulinate. Novartis Foundation Symposium, 1994, 180, 3-25.	1.1	19
48	Methods for the preparation of chlorophyllide a: An intermediate of the chlorophyll biosynthetic pathway. Analytical Biochemistry, 2011, 419, 271-276.	2.4	18
49	Bilin-dependent regulation of chlorophyll biosynthesis by GUN4. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	18
50	Rapid extraction of RNA and analysis of transcript levels in Chlamydomonas reinhardtii using real-time RT-PCR: Magnesium chelatase chlH, chlD and chlI gene expression. Photosynthesis Research, 2003, 77, 69-76.	2.9	17
51	Mechanism, Structure, and Regulation of Magnesium Chelatase. , 2003, , 1-47.		17
52	Configurations and conformations of abscisic acid. Phytochemistry, 1993, 34, 233-237.	2.9	16
53	Spectral properties of bacteriophytochrome AM1_5894 in the chlorophyll d-containing cyanobacterium Acaryochloris marina. Scientific Reports, 2016, 6, 27547.	3.3	16
54	1-<i>N</i>-histidine phosphorylation of ChlD by the AAA+ ChlI2 stimulates magnesium chelatase activity in chlorophyll synthesis. Biochemical Journal, 2017, 474, 2095-2105.	3.7	16

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55	Biosynthesis of Bacteriochlorophylls in Purple Bacteria. Advances in Photosynthesis and Respiration, 2009, , 57-79.	1.0	15
56	Rapid isolation of novel FK506 binding proteins from multiple organisms using gDNA and cDNA T7 phage display. Bioorganic and Medicinal Chemistry, 2009, 17, 6841-6850.	3.0	14
57	The stereochemistry of the hydrogen atoms at C-5â€²of abscisic acid. Phytochemistry, 1989, 28, 2641-2642.	2.9	13
58	Spectral signatures of five hydroxymethyl chlorophyll a derivatives chemically derived from chlorophyll b or chlorophyll f. Photosynthesis Research, 2019, 140, 115-127.	2.9	13
59	Synthesis of stably deuteriated abscisic acid, phaseic acid and related compounds. Phytochemistry, 1991, 30, 1483-1485.	2.9	12
60	Chlorophyll Synthesis. Advances in Photosynthesis and Respiration, 2007, , 295-313.	1.0	12
61	Crystallization and preliminary X-ray analysis of theRhodobacter capsulatusmagnesium chelatase BchI subunit. Acta Crystallographica Section D: Biological Crystallography, 1999, 55, 689-690.	2.5	11
62	S-Adenosyl-L-methionine:magnesium-protoporphyrin IX O-methyltransferase from Rhodobacter capsulatus: mechanistic insights and stimulation with phospholipids. Biochemical Journal, 2007, 406, 469-478.	3.7	11
63	Inducing the oxidative stress response in Escherichia coli improves the quality of a recombinant protein: Magnesium chelatase ChlH. Protein Expression and Purification, 2014, 101, 61-67.	1.3	11
64	2,7-Dimethylocta-2,4-dienedioic acid is not a by-product of abscisic acid biosynthesis. Plant Science, 1988, 56, 49-53.	3.6	10
65	Structural genes for Mg-chelatase subunits in barley:. Molecular Genetics and Genomics, 1996, 250, 383.	2.4	10
66	Abscisic aldehyde: A new synthesis, isotopic labelling, exchange reactions and oxidation. Phytochemistry, 1992, 31, 2649-2653.	2.9	9
67	Mutation of cysteine residues alters the heme-binding pocket of indoleamine 2,3-dioxygenase-1. Biochemical and Biophysical Research Communications, 2013, 436, 595-600.	2.1	9
68	The Mg branch of chlorophyll synthesis: Biosynthesis of chlorophyll a from protoporphyrin IX. Advances in Botanical Research, 2019, , 141-182.	1.1	9
69	Subsurface Stappia: Success Through Defence, Specialisation and Putative Pressure-Dependent Carbon Fixation. Microbial Ecology, 2020, 80, 34-46.	2.8	9
70	Synthetic biology for improved hydrogen production in <i>Chlamydomonas reinhardtii</i>. Microbial Biotechnology, 2022, 15, 1946-1965.	4.2	9
71	Making light of a dark situation. Nature, 1999, 397, 27-28.	27.8	8
72	Structure of GUN4 fromChlamydomonas reinhardtii. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 1094-1099.	0.8	8

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73	Characterisation of the First Archaeal Mannonate Dehydratase from Thermoplasma acidophilum and Its Potential Role in the Catabolism of D-Mannose. Catalysts, 2019, 9, 234.	3.5	8
74	Cell-Free Enzymatic Conversion of Spent Coffee Grounds Into the Platform Chemical Lactic Acid. Frontiers in Bioengineering and Biotechnology, 2019, 7, 389.	4.1	8
75	Synthesis and properties of C-1-azido-aba. Phytochemistry, 1993, 32, 869-873.	2.9	7
76	International comparability in spectroscopic measurements of protein structure by circular dichroism: CCQM-P59. Metrologia, 2010, 47, 08022-08022.	1.2	6
77	Endogenous Biosynthetic Precursors of (+)-Abscisic Acid. I. Incorporation of Isotopes From 2H2O, 18O2 and [5-18O]Mevalonic Acid. Functional Plant Biology, 1994, 21, 327.	2.1	6
78	Hydroxylation of the C132 and C18 carbons of chlorophylls by heme and molecular oxygen. Journal of Porphyrins and Phthalocyanines, 2015, 19, 1007-1013.	0.8	5
79	Barley Grain Proteomics. , 2017, , 75-88.		3
80	Chlorophylls. , 2004, , 258-262.		3
81	Biosynthesis of Chlorophyll and Bilins in Algae. Advances in Photosynthesis and Respiration, 2020, , 83-103.	1.0	3
82	Biosynthesis of Chlorophylls from Protoporphyrin IX. ChemInform, 2003, 34, no.	0.0	1
83	The Evolution of Far-Red Light Perception in Acaryochloris Marina, a Chlorophyll d-Containing Cyanobacterium. Advanced Topics in Science and Technology in China, 2013, , 638-641.	0.1	1
84	Chlorophyll Synthesis. , 2007, , 295-313.		0