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	Synthetic biology for improved hydrogen production in <i>Chlamydomonas reinhardtii</i>. Microbial Biotechnology, 2022, 15, 1946-1965.	4.2	9
2	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
3	Subsurface Stappia: Success Through Defence, Specialisation and Putative Pressure-Dependent Carbon Fixation. Microbial Ecology, 2020, 80, 34-46.	2.8	9
4	Biosynthesis of Chlorophyll and Bilins in Algae. Advances in Photosynthesis and Respiration, 2020, , 83-103.	1.0	3
5	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
6	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
7	The Mg branch of chlorophyll synthesis: Biosynthesis of chlorophyll a from protoporphyrin IX. Advances in Botanical Research, 2019, , 141-182.	1.1	9
8	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
9	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
10	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
11	The C21-formyl group in chlorophyll f originates from molecular oxygen. Journal of Biological Chemistry, 2017, 292, 19279-19289.	3.4	20
12	Barley Grain Proteomics. , 2017, , 75-88.		3
13	Spectral properties of bacteriophytochrome AM1_5894 in the chlorophyll d-containing cyanobacterium Acaryochloris marina. Scientific Reports, 2016, 6, 27547.	3.3	16
14	Sensitive Time-Gated Immunoluminescence Detection of Prostate Cancer Cells Using a TEGylated Europium Ligand. Analytical Chemistry, 2016, 88, 9564-9571.	6.5	27
15	Stable Upconversion Nanohybrid Particles for Specific Prostate Cancer Cell Immunodetection. Scientific Reports, 2016, 6, 37533.	3.3	25
16	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
17	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
18	Structure of GUN4 fromChlamydomonas reinhardtii. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 1094-1099.	0.8	8

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19	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
20	In vitro Conversion of Vinyl to Formyl Groups in Naturally Occurring Chlorophylls. Scientific Reports, 2015, 4, 6069.	3.3	36
21	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
22	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
23	Structure of Chlorophyll <i>f</i>. Organic Letters, 2013, 15, 1588-1590.	4.6	50
24	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
25	A cyanobacterium that contains chlorophyll <i>f</i> â€" a redâ€absorbing photopigment. FEBS Letters, 2012, 586, 3249-3254.	2.8	150
26	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
27	Extinction coefficient for red-shifted chlorophylls: Chlorophyll d and chlorophyll f. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1292-1298.	1.0	124
28	Novel indoleamine 2,3-dioxygenase-1 inhibitors from a multistep in silico screen. Bioorganic and Medicinal Chemistry, 2012, 20, 1354-1363.	3.0	49
29	Mammalian forebrain ketimine reductase identified as Î¼â€crystallin; potential regulation by thyroid hormones. Journal of Neurochemistry, 2011, 118, 379-387.	3.9	59
30	Methods for the preparation of chlorophyllide a: An intermediate of the chlorophyll biosynthetic pathway. Analytical Biochemistry, 2011, 419, 271-276.	2.4	18
31	A Red-Shifted Chlorophyll. Science, 2010, 329, 1318-1319.	12.6	437
32	Chlorophyll-deficient mutants of Chlamydomonas reinhardtii that accumulate magnesium protoporphyrin IX. Plant Molecular Biology, 2010, 72, 643-658.	3.9	34
33	ATP-Induced Conformational Dynamics in the AAA+ Motor Unit of Magnesium Chelatase. Structure, 2010, 18, 354-365.	3.3	70
34	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
35	International comparability in spectroscopic measurements of protein structure by circular dichroism: CCQM-P59. Metrologia, 2010, 47, 08022-08022.	1.2	6
36	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

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37	Strategic Distribution of Protective Proteins within Bran Layers of Wheat Protects the Nutrient-Rich Endosperm. Plant Physiology, 2010, 152, 1459-1470.	4.8	80
38	Mouse and human indoleamine 2,3-dioxygenase display some distinct biochemical and structural properties. Amino Acids, 2009, 36, 99-106.	2.7	30
39	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
40	Germination of Wheat: A Functional Proteomics Analysis of the Embryo. Cereal Chemistry, 2009, 86, 281-289.	2.2	29
41	Biosynthesis of Bacteriochlorophylls in Purple Bacteria. Advances in Photosynthesis and Respiration, 2009, , 57-79.	1.0	15
42	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
43	Substrate-binding Model of the Chlorophyll Biosynthetic Magnesium Chelatase BchH Subunit. Journal of Biological Chemistry, 2008, 283, 11652-11660.	3.4	49
44	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
45	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
46	Chlorophyll Synthesis. Advances in Photosynthesis and Respiration, 2007, , 295-313.	1.0	12
47	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	12.6	2,354
48	Proteome mapping of the Trichoderma reesei 20S proteasome. Current Genetics, 2007, 51, 79-88.	1.7	25
49	Chlorophyll Synthesis. , 2007, , 295-313.		0
50	Inhibition of indoleamine 2,3 dioxygenase activity by H2O2. Archives of Biochemistry and Biophysics, 2006, 450, 9-19.	3.0	30
51	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
52	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
53	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
54	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

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55	ATPase activity of magnesium chelatase subunit I is required to maintain subunit D in vivo. FEBS Journal, 2004, 271, 2182-2188.	0.2	41
56	New enzymes from environmental cassette arrays: Functional attributes of a phosphotransferase and an RNA-methyltransferase. Protein Science, 2004, 13, 1651-1659.	7.6	30
57	Optimised expression and purification of recombinant human indoleamine 2,3-dioxygenase. Protein Expression and Purification, 2004, 37, 392-398.	1.3	40
58	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
59	Chlorophylls. , 2004, , 258-262.		3
60	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
61	Biosynthesis of Chlorophylls from Protoporphyrin IX. ChemInform, 2003, 34, no.	0.0	1
62	Biosynthesis of chlorophylls from protoporphyrin IX. Natural Product Reports, 2003, 20, 327.	10.3	123
63	Mechanism, Structure, and Regulation of Magnesium Chelatase. , 2003, , 1-47.		17
64	Inactivation of Mg Chelatase during Transition from Anaerobic to Aerobic Growth in Rhodobacter capsulatus. Journal of Bacteriology, 2003, 185, 3249-3258.	2.2	24
65	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
66	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
67	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
68	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
69	Making light of a dark situation. Nature, 1999, 397, 27-28.	27.8	8
70	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
71	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
72	Three Separate Proteins Constitute the Magnesium Chelatase of Rhodobacter Sphaeroides. FEBS Journal, 1996, 235, 438-443.	0.2	121

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73	Structural genes for Mg-chelatase subunits in barley:. Molecular Genetics and Genomics, 1996, 250, 383.	2.4	10
74	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
75	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
76	Enzymic and Mechanistic Studies on the Conversion of Glutamate to 5â€Aminolaevulinate. Novartis Foundation Symposium, 1994, 180, 3-25.	1.1	19
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	Synthesis and properties of C-1-azido-aba. Phytochemistry, 1993, 32, 869-873.	2.9	7
79	Configurations and conformations of abscisic acid. Phytochemistry, 1993, 34, 233-237.	2.9	16
80	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
81	Abscisic aldehyde: A new synthesis, isotopic labelling, exchange reactions and oxidation. Phytochemistry, 1992, 31, 2649-2653.	2.9	9
82	Synthesis of stably deuteriated abscisic acid, phaseic acid and related compounds. Phytochemistry, 1991, 30, 1483-1485.	2.9	12
83	The stereochemistry of the hydrogen atoms at C-5â€²of abscisic acid. Phytochemistry, 1989, 28, 2641-2642.	2.9	13
84	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