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List of Publications by Year
in descending order

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Version: 2024-02-01

114 papers	3,520 citations	136950 32 h-index	168389 53 g-index
120 all docs	120 docs citations	120 times ranked	3776 citing authors

#	Article	IF	Citations
1	DNA-free two-gene knockout in Chlamydomonas reinhardtii via CRISPR-Cas9 ribonucleoproteins. Scientific Reports, 2016, 6, 30620.	3.3	253
2	Pear fruit extract-assisted room-temperature biosynthesis of gold nanoplates. Colloids and Surfaces B: Biointerfaces, 2010, 75, 584-589.	5.0	226
3	Truncated chlorophyll antenna size of the photosystems?a practical method to improve microalgal productivity and hydrogen production in mass culture. International Journal of Hydrogen Energy, 2002, 27, 1257-1264.	7.1	181
4	Comparative analyses of lipidomes and transcriptomes reveal a concerted action of multiple defensive systems against photooxidative stress in Haematococcus pluvialis. Journal of Experimental Botany, 2014, 65, 4317-4334.	4.8	146
5	Targeted knockout of phospholipase A2 to increase lipid productivity in Chlamydomonas reinhardtii for biodiesel production. Bioresource Technology, 2019, 271, 368-374.	9.6	102
6	A mutant of the green algaDunaliella salina constitutively accumulates zeaxanthin under all growth conditions. Biotechnology and Bioengineering, 2003, 81, 115-124.	3.3	101
7	Photoautotrophic production of macular pigment in a Chlamydomonas reinhardtii strain generated by using DNAâ€free CRISPRâ€Cas9 RNPâ€mediated mutagenesis. Biotechnology and Bioengineering, 2018, 115, 719-728.	3.3	92
8	Draft Nuclear Genome Sequence of the Halophilic and Beta-Carotene-Accumulating Green Alga Dunaliella salina Strain CCAP19/18. Genome Announcements, 2017, 5, .	0.8	83
9	Improving lipid production by strain development in microalgae: Strategies, challenges and perspectives. Bioresource Technology, 2019, 292, 121953.	9.6	79
10	Involvement of zeaxanthin and of the Cbr protein in the repair of photosystem II from photoinhibition in the green alga Dunaliella salina. Biochimica Et Biophysica Acta - Bioenergetics, 2001, 1506, 244-259.	1.0	75
11	Stabilized and Immobilized Carbonic Anhydrase on Electrospun Nanofibers for Enzymatic CO₂ Conversion and Utilization in Expedited Microalgal Growth. Environmental Science & Technology, 2020, 54, 1223-1231.	10.0	69
12	Enhanced lipid productivity in AGP knockout marine microalga Tetraselmis sp. using a DNA-free CRISPR-Cas9 RNP method. Bioresource Technology, 2020, 303, 122932.	9.6	68
13	Antifreeze Protein in Antarctic Marine Diatom, Chaetoceros neogracile. Marine Biotechnology, 2010, 12, 630-639.	2.4	65
14	Synergistic effect of multiple stress conditions for improving microalgal lipid production. Algal Research, 2016, 19, 215-224.	4.6	65
15	Creating Anti-icing Surfaces via the Direct Immobilization of Antifreeze Proteins on Aluminum. Scientific Reports, 2015, 5, 12019.	3.3	61
16	Role of the Reversible Xanthophyll Cycle in the Photosystem II Damage and Repair Cycle in Dunaliella salina Â. Plant Physiology, 2003, 132, 352-364.	4.8	59
17	Dynamic response of the transcriptome of a psychrophilic diatom, Chaetoceros neogracile, to high irradiance. Planta, 2010, 231, 349-360.	3.2	56
18	Transcriptome analysis of acclimatory responses to thermal stress in Antarctic algae. Biochemical and Biophysical Research Communications, 2008, 367, 635-641.	2.1	55

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19	Utilizing the algicidal activity of aminoclay as a practical treatment for toxic red tides. Scientific Reports, 2013, 3, 1292.	3.3	51
20	Loss of CpSRP54 function leads to a truncated light-harvesting antenna size in Chlamydomonas reinhardtii. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 45-55.	1.0	49
21	Site-Specific Gene Knock-Out and On-Site Heterologous Gene Overexpression in Chlamydomonas reinhardtii via a CRISPR-Cas9-Mediated Knock-in Method. Frontiers in Plant Science, 2020, 11, 306.	3.6	49
22	Development of a new constitutive expression system for the transformation of the diatom Phaeodactylum tricornutum. Algal Research, 2015, 11, 50-54.	4.6	47
23	Gene expression profile analysis in astaxanthin-induced Haematococcus pluvialis using a cDNA microarray. Planta, 2006, 223, 1231-1242.	3.2	45
24	Cell cycleâ€dependent regulation of telomerase activity by auxin, abscisic acid and protein phosphorylation in tobacco BYâ€2 suspension culture cells. Plant Journal, 2002, 29, 617-626.	5.7	42
25	Gene Regulatory Networks for the Haploid-to-Diploid Transition of Chlamydomonas reinhardtii. Plant Physiology, 2017, 175, 314-332.	4.8	42
26	Up-Regulation of Photoprotection and PSII-Repair Gene Expression by Irradiance in the Unicellular Green Alga Dunaliella salina. Marine Biotechnology, 2006, 8, 120-128.	2.4	39
27	Isolation, identification and characterization of algicidal bacteria against Stephanodiscus hantzschii and Peridinium bipes for the control of freshwater winter algal blooms. Journal of Applied Phycology, 2008, 20, 375-386.	2.8	38
28	Improvement in modular scalability of polymeric thin-film photobioreactor for autotrophic culturing of Haematococcus pluvialis using industrial flue gas. Bioresource Technology, 2018, 249, 519-526.	9.6	38
29	Deletion of the chloroplast LTD protein impedes LHCI import and PSIâ€“LHCI assembly in Chlamydomonas reinhardtii. Journal of Experimental Botany, 2018, 69, 1147-1158.	4.8	37
30	Cryoprotective effect of an antifreeze protein purified from Tenebrio molitor larvae on vegetables. Food Hydrocolloids, 2019, 94, 585-591.	10.7	37
31	Transcriptomic analysis of Haematococcus lacustris during astaxanthin accumulation under high irradiance and nutrient starvation. Biotechnology and Bioprocess Engineering, 2011, 16, 698-705.	2.6	36
32	The generation of metabolic changes for the production of high-purity zeaxanthin mediated by CRISPR-Cas9 in Chlamydomonas reinhardtii. Microbial Cell Factories, 2020, 19, 220.	4.0	35
33	Enhancing lipid productivity by modulating lipid catabolism using the CRISPR-Cas9 system in Chlamydomonas. Journal of Applied Phycology, 2020, 32, 2829-2840.	2.8	35
34	Development of a Dunaliella tertiolecta Strain with Increased Zeaxanthin Content Using Random Mutagenesis. Marine Drugs, 2017, 15, 189.	4.6	34
35	Augmented CO2 tolerance by expressing a single H+-pump enables microalgal valorization of industrial flue gas. Nature Communications, 2021, 12, 6049.	12.8	34
36	Thiazolidinediones as a Novel Class of Algicides Against Red Tide Harmful Algal Species. Applied Biochemistry and Biotechnology, 2010, 162, 2273-2283.	2.9	31

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37	A new coccolith modified electrode-based biosensor using a cognate pair of aptamers with sandwich-type binding. Biosensors and Bioelectronics, 2019, 123, 160-166.	10.1	31
38	Photosystem II antenna complexes CP26 and CP29 are essential for nonphotochemical quenching in Chlamydomonas reinhardtii. Plant, Cell and Environment, 2020, 43, 496-509.	5.7	30
39	Algicidal Activity of Thiazolidinedione Derivatives Against Harmful Algal Blooming Species. Marine Biotechnology, 2012, 14, 312-322.	2.4	27
40	Comparison of the responses of two Dunaliella strains, Dunaliella salina CCAP 19/18 and Dunaliella bardawil to light intensity with special emphasis on carotenogenesis. Algae, 2013, 28, 203-211.	2.3	27
41	Gene expression profiling of Dunaliella sp. acclimated to different salinities. Phycological Research, 2010, 58, 17-28.	1.6	26
42	Isolation and Characterization of Antifreeze Proteins from the Antarctic Marine Microalga Pyramimonas gelidicola. Marine Biotechnology, 2014, 16, 502-512.	2.4	26
43	Introducing Dunaliella LIP promoter containing lightâ€inducible motifs improves transgenic expression in Chlamydomonas reinhardtii. Biotechnology Journal, 2016, 11, 384-392.	3.5	26
44	Expression of the high light-inducible Dunaliella LIP promoter in Chlamydomonas reinhardtii. Planta, 2013, 238, 1147-1156.	3.2	24
45	One-Pot Enzymatic Conversion of Carbon Dioxide and Utilization for Improved Microbial Growth. Environmental Science & Technology, 2015, 49, 4466-4472.	10.0	24
46	Sedimentation rate-based screening of oleaginous microalgae for utilization as a direct combustion fuel. Bioresource Technology, 2019, 293, 122045.	9.6	23
47	Development of a Chlorella vulgaris mutant by chemical mutagenesis as a producer for natural violaxanthin. Algal Research, 2020, 46, 101790.	4.6	23
48	Identification of distinct pH- and zeaxanthin-dependent quenching in LHCSR3 from Chlamydomonas reinhardtii. ELife, 2021, 10, .	6.0	22
49	Isolation and Characterization of a Xanthophyll Aberrant Mutant of the Green Alga Nannochloropsis oculata. Marine Biotechnology, 2006, 8, 238-245.	2.4	20
50	Enhanced pyruvate metabolism in plastids by overexpression of putative plastidial pyruvate transporter in Phaeodactylum tricornutum. Biotechnology for Biofuels, 2020, 13, 120.	6.2	20
51	Macular pigment-enriched oil production from genome-edited microalgae. Microbial Cell Factories, 2022, 21, 27.	4.0	20
52	The Chlamydomonas bZIP transcription factor BLZ8 confers oxidative stress tolerance by inducing the carbon-concentrating mechanism. Plant Cell, 2022, 34, 910-926.	6.6	20
53	Temporal and spatial regulation of the expression of 1â€aminocyclopropaneâ€1â€carboxylate oxidase by ethylene in mung bean (Vigna radiata). Physiologia Plantarum, 1999, 105, 132-140.	5.2	19
54	An intracellular antifreeze protein from an Antarctic microalga that responds to various environmental stresses. FASEB Journal, 2014, 28, 4924-4935.	0.5	19

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55	Exogenous Gene Integration for Microalgal Cell Transformation Using a Nanowire-Incorporated Microdevice. ACS Applied Materials & Interfaces, 2015, 7, 27554-27561.	8.0	19
56	Overexpression of malic enzyme isoform 2 in Chlamydomonas reinhardtii PTS42 increases lipid production. Bioresource Technology Reports, 2019, 7, 100239.	2.7	19
57	Establishment of a Genome Editing Tool Using CRISPR-Cas9 in Chlorella vulgaris UTEX395. International Journal of Molecular Sciences, 2021, 22, 480.	4.1	19
58	Biogenic Nano-Synthesis; towards the Efficient Production of the Biocompatible Gold Nanoparticles. Bulletin of the Korean Chemical Society, 2010, 31, 2771-2775.	1.9	19
59	New Cysteine-Rich Ice-Binding Protein Secreted from Antarctic Microalga, Chloromonas sp.. PLoS ONE, 2016, 11, e0154056.	2.5	18
60	Genomic adaptations of the green alga Dunaliella salina to life under high salinity. Algal Research, 2020, 50, 101990.	4.6	18
61	Conversion of carbon dioxide to oxaloacetate using integrated carbonic anhydrase and phosphoenolpyruvate carboxylase. Bioprocess and Biosystems Engineering, 2013, 36, 1923-1928.	3.4	17
62	Contrasting photoadaptive strategies of two morphologically distinct Dunaliella species under various salinities. Journal of Applied Phycology, 2015, 27, 1053-1062.	2.8	16
63	Identification of the carbonic anhydrases from the unicellular green alga Dunaliella salina strain CCAP 19/18. Algal Research, 2016, 19, 12-20.	4.6	16
64	Biogenic materialization using pear extract intended for the synthesis and design of ordered gold nanostructures. Journal of Materials Science, 2011, 46, 4741-4747.	3.7	15
65	Enhanced efficacy of TD53, a novel algicidal agent, against the harmful algae via the liposomal delivery system. International Journal of Pharmaceutics, 2011, 405, 137-141.	5.2	15
66	Oxaloacetate and malate production in engineered Escherichia coli by expression of codon-optimized phosphoenolpyruvate carboxylase2 gene from Dunaliella salina. Bioprocess and Biosystems Engineering, 2013, 36, 127-131.	3.4	15
67	Cyanobacteria-specific algicidal mechanism of bioinspired naphthoquinone derivative, NQ 2-0. Scientific Reports, 2018, 8, 11595.	3.3	15
68	Identification and characterization of a new strain of the unicellular green alga Dunaliella salina (Teod.) from Korea. Journal of Microbiology and Biotechnology, 2008, 18, 821-7.	2.1	15
69	Frozen assembly of gold nanoparticles for rapid analysis of antifreeze protein activity. Biosensors and Bioelectronics, 2013, 41, 752-757.	10.1	14
70	Lipid turnover between membrane lipids and neutral lipids via inhibition of diacylglyceryl N,N,N-trimethylhomoserine synthesis in Chlamydomonas reinhardtii. Algal Research, 2017, 27, 162-169.	4.6	13
71	Enhanced biomass production by Phaeodactylum tricornutum overexpressing phosphoenolpyruvate carboxylase. Algal Research, 2018, 31, 489-496.	4.6	13
72	The alga Dunaliella revisited: Looking back and moving forward with model and production organisms. Algal Research, 2020, 49, 101948.	4.6	13

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73	Carotenoid Biosynthesis in Dunaliella (Chlorophyta). , 2009, , 147-171.		13
74	Annotation and expression profile analysis of cDNas from the Antarctic diatom Chaetoceros neogracile. Journal of Microbiology and Biotechnology, 2007, 17, 1330-7.	2.1	13
75	Sex-linked deubiquitinase establishes uniparental transmission of chloroplast DNA. Nature Communications, 2022, 13, 1133.	12.8	13
76	Identification and Functional Analysis of the psaD Promoter of Chlorella vulgaris Using Heterologous Model Strains. International Journal of Molecular Sciences, 2018, 19, 1969.	4.1	12
77	A novel thiazolidinedione derivative TD118 showing selective algicidal effects for red tide control. World Journal of Microbiology and Biotechnology, 2014, 30, 1603-1614.	3.6	11
78	De novo transcriptome profile of coccolithophorid alga Emiliania huxleyi CCMP371 at different calcium concentrations with proteome analysis. PLoS ONE, 2019, 14, e0221938.	2.5	11
79	LPA2 protein is involved in photosystemÂII assembly in Chlamydomonas reinhardtii. Plant Journal, 2021, 107, 1648-1662.	5.7	11
80	Identification and Characterization of an Isoform Antifreeze Protein from the Antarctic Marine Diatom, Chaetoceros neogracile and Suggestion of the Core Region. Marine Drugs, 2017, 15, 318.	4.6	10
81	Comparative transcriptome analysis of short-term responses to salt and glycerol hyperosmotic stress in the green alga Dunaliella salina. Algal Research, 2021, 53, 102147.	4.6	10
82	Arginine-fed cultures generates triacylglycerol by triggering nitrogen starvation responses during robust growth in Chlamydomonas. Algal Research, 2020, 46, 101782.	4.6	9
83	Combination of 1,4-naphthoquinone with benzothiazoles had selective algicidal effects against harmful algae. Biotechnology and Bioprocess Engineering, 2013, 18, 932-941.	2.6	8
84	Enhanced production of biomass and lipids by supplying CO2 in marine microalga Dunaliella sp.. Journal of Microbiology, 2013, 51, 773-776.	2.8	8
85	Improvement of the phosphoenolpyruvate carboxylase activity of Phaeodactylum tricornutum PEPCase 1 through protein engineering. Enzyme and Microbial Technology, 2014, 60, 64-71.	3.2	7
86	Overproduction of recombinant E. coli malate synthase enhances Chlamydomonas reinhardtii biomass by upregulating heterotrophic metabolism. Bioresource Technology, 2019, 272, 594-598.	9.6	7
87	Molecular basis of ice-binding and cryopreservation activities of type III antifreeze proteins. Computational and Structural Biotechnology Journal, 2021, 19, 897-909.	4.1	7
88	Gene Expression Analysis of Zeaxanthin Epoxidase from the Marine Microalga Dunaliella tertiolecta in Response to Light/Dark Cycle and Salinity. Journal of Microbiology and Biotechnology, 2019, 29, 1453-1459.	2.1	7
89	Reduction in Phosphoribulokinase Amount and Re-Routing Metabolism in Chlamydomonas reinhardtii CP12 Mutants. International Journal of Molecular Sciences, 2022, 23, 2710.	4.1	7
90	Construction of targetâ€specific virusâ€like particles for the delivery of algicidal compounds to harmful algae. Environmental Microbiology, 2015, 17, 1463-1474.	3.8	6

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91	Development of a species-specific transformation system using the novel endogenous promoter calreticulin from oleaginous microalgae Ettlia sp.. Scientific Reports, 2020, 10, 13947.	3.3	6
92	Calcium-related genes associated with intracellular calcification of Emiliania huxleyi (Haptophyta) CCMP 371. Algae, 2018, 33, 181-189.	2.3	6
93	<scp>NMR</scp> study of the antifreeze activities of active and inactive isoforms of a type <scp>III</scp> antifreeze protein. FEBS Letters, 2016, 590, 4202-4212.	2.8	5
94	Loss of Function in Zeaxanthin Epoxidase of Dunaliella tertiolecta Caused by a Single Amino Acid Mutation within the Substrate-Binding Site. Marine Drugs, 2018, 16, 418.	4.6	5
95	Proteomic Profiling of Emiliania huxleyi Using a Three-Dimensional Separation Method Combined with Tandem Mass Spectrometry. Molecules, 2020, 25, 3028.	3.8	5
96	DNA-free Genome Editing of Chlamydomonas reinhardtii Using CRISPR and Subsequent Mutant Analysis. Bio-protocol, 2017, 7, e2352.	0.4	5
97	Expression of telomerase activity is closely correlated with the capacity for cell division in tobacco plants. Journal of Plant Biology, 2001, 44, 168-171.	2.1	4
98	Homologous sense and antisense expression of a gene in Dunaliella tertiolecta. Planta, 2015, 242, 1051-1058.	3.2	4
99	Vibration-induced stress priming during seed culture increases microalgal biomass in high shear field-cultivation. Bioresource Technology, 2018, 254, 340-346.	9.6	3
100	Association of Phosphatidylinositol-Specific Phospholipase C with Calcium-Induced Biomineralization in the Coccolithophore Emiliania huxleyi. Microorganisms, 2020, 8, 1389.	3.6	3
101	Analysis of Expressed Sequence Tags from the Antarctic Psychrophilic Green Algae, Pyramimonas gelidicola. Journal of Microbiology and Biotechnology, 2012, 22, 902-906.	2.1	3
102	Silicon transporter genes of Fragilariopsis cylindrus (Bacillariophyceae) are differentially expressed during the progression of cell cycle synchronized by Si or light. Algae, 2018, 33, 191-203.	2.3	3
103	The bHLH family NITROGENâ€REPLETION INSENSITIVE1 represses nitrogen starvationâ€induced responses in Chlamydomonas reinhardtii .. Plant Journal, 2022, , .	5.7	3
104	Effect of Temperature on Inorganic Carbon Acquisition ofChlamydomonas reinhardtii. Journal of Freshwater Ecology, 2009, 24, 255-260.	1.2	2
105	Discovery of Post-Translational Modifications in Emiliania huxleyi. Molecules, 2021, 26, 2027.	3.8	2
106	Bone Graft Biomineral Complex Coderived from Marine Biocalcification and Biosilicification. ACS Applied Bio Materials, 2021, 4, 6046-6055.	4.6	2
107	Chloroplast Acclimation, Photodamage and Repair Reactions of Photosystem-II in the Model Green Alga Dunaliella salina. , 2009, , 273-299.		2
108	Heterologous Gene Expression System Using the Cold-Inducible CnAFP Promoter in Chlamydomonas reinhardtii. Journal of Microbiology and Biotechnology, 2020, 30, 1777-1784.	2.1	2

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109	Characterization of Ice Binding Proteins from Sea Ice Algae. Methods in Molecular Biology, 2014, 1166, 241-253.	0.9	2
110	Inhibition of 4-HYDROXYPHENYLPYRUVATE DIOXYGENASE expression by brassinosteroid reduces carotenoid accumulation in Arabidopsis. Journal of Experimental Botany, 2022, 73, 1415-1428.	4.8	2
111	Characterization of Ice-Binding Proteins from Sea-Ice. Methods in Molecular Biology, 2020, 2156, 289-302.	0.9	2
112	Antifreeze Protein-Covered Surfaces. , 2020, , 307-326.		1
113	Inhibition of Oxidative Phosphorylation Induces a Rapid Death of GA-Pretreated Aleurone Cells, But Not of ABA-Pretreated Aleurone Cells. Journal of Plant Biology, 2010, 53, 205-213.	2.1	0
114	Editorial: Microalgae Biology and Biotechnology. Frontiers in Plant Science, 2020, 11, 628267.	3.6	0