Arthur Grossman

List of Publications by Year
in descending order

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131 papers	13,879 citations	30070 54 h-index	22166 113 g-index
142 all docs	142 docs citations	142 times ranked	11264 citing authors

#	Article	IF	Citations
1	The Chlamydomonas Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	12.6	2,354
2	A pigment-binding protein essential for regulation of photosynthetic light harvesting. Nature, 2000, 403, 391-395.	27.8	1,354
3	Arabidopsis Mutants Define a Central Role for the Xanthophyll Cycle in the Regulation of Photosynthetic Energy Conversion. Plant Cell, 1998, 10, 1121-1134.	6.6	882
4	The phycobilisome, a light-harvesting complex responsive to environmental conditions. Microbiological Reviews, 1993, 57, 725-749.	10.1	475
5	High-Efficiency Transformation of Chlamydomonas reinhardtii by Electroporation. Genetics, 1998, 148, 1821-1828.	2.9	400
6	An Indexed, Mapped Mutant Library Enables Reverse Genetics Studies of Biological Processes in Chlamydomonas reinhardtii. Plant Cell, 2016, 28, 367-387.	6.6	336
7	Transformation of the diatom Phaeodactylum tricornutum (Bacillariophyceae) with a variety of selectable marker and reporter genes. Journal of Phycology, 2001, 36, 379-386.	2.3	316
8	Nitrogen-Sparing Mechanisms in Chlamydomonas Affect the Transcriptome, the Proteome, and Photosynthetic Metabolism. Plant Cell, 2014, 26, 1410-1435.	6.6	314
9	RNA-Seq Analysis of Sulfur-Deprived Chlamydomonas Cells Reveals Aspects of Acclimation Critical for Cell Survival. Plant Cell, 2010, 22, 2058-2084.	6.6	253
10	In situanalysis of nitrogen fixation and metabolic switching in unicellular thermophilic cyanobacteria inhabiting hot spring microbial mats. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2398-2403.	7.1	239
11	A genome-wide algal mutant library and functional screen identifies genes required for eukaryotic photosynthesis. Nature Genetics, 2019, 51, 627-635.	21.4	234
12	Type IV pilus biogenesis and motility in the cyanobacterium Synechocystis sp. PCC6803. Molecular Microbiology, 2000, 37, 941-951.	2.5	226
13	Population level functional diversity in a microbial community revealed by comparative genomic and metagenomic analyses. ISME Journal, 2007, 1, 703-713.	9.8	216
14	The High Light-inducible Polypeptides in Synechocystis PCC6803. Journal of Biological Chemistry, 2001, 276, 306-314.	3.4	214
15	Community ecology of hot spring cyanobacterial mats: predominant populations and their functional potential. ISME Journal, 2011, 5, 1262-1278.	9.8	206
16	Optimal nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13194-13199.	7.1	181
17	Light regulation of type IV pilus-dependent motility by chemosensor-like elements in Synechocystis PCC6803. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 7540-7545.	7.1	173
18	Trafficking of protein into the recently established photosynthetic organelles of Paulinella chromatophora. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5340-5345.	7.1	154

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19	A Flavin Binding Cryptochrome Photoreceptor Responds to Both Blue and Red Light in Chlamydomonas reinhardtii. Plant Cell, 2012, 24, 2992-3008.	6.6	151
20	The Chlamydomonas genome project: a decade on. Trends in Plant Science, 2014, 19, 672-680.	8.8	145
21	Chlamydomonas reinhardtii at the Crossroads of Genomics. Eukaryotic Cell, 2003, 2, 1137-1150.	3.4	143
22	Isolation of clonal axenic strains of the symbiotic dinoflagellate Symbiodinium and their growth and host specificity¹. Journal of Phycology, 2013, 49, 447-458.	2.3	131
23	The gene family encoding the fucoxanthin chlorophyll proteins from the brown alga Macrocystis pyrifera. Molecular Genetics and Genomics, 1995, 246, 455-464.	2.4	129
24	Gene transfers from diverse bacteria compensate for reductive genome evolution in the chromatophore of Paulinella chromatophora. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12214-12219.	7.1	127
25	Sac3, an Snf1-like Serine/Threonine Kinase That Positively and Negatively Regulates the Responses of Chlamydomonas to Sulfur Limitation. Plant Cell, 1999, 11, 1179-1190.	6.6	117
26	Chlamydomonas reinhardtiiin the Landscape of Pigments. Annual Review of Genetics, 2004, 38, 119-173.	7.6	115
27	Phototropin involvement in the expression of genes encoding chlorophyll and carotenoid biosynthesis enzymes and LHC apoproteins inChlamydomonas reinhardtii. Plant Journal, 2006, 48, 1-16.	5.7	115
28	The GreenCut2 Resource, a Phylogenomically Derived Inventory of Proteins Specific to the Plant Lineage. Journal of Biological Chemistry, 2011, 286, 21427-21439.	3.4	113
29	Endosymbiotic Gene Transfer and Transcriptional Regulation of Transferred Genes in Paulinella chromatophora. Molecular Biology and Evolution, 2011, 28, 407-422.	8.9	110
30	Retrograde bilin signaling enables Chlamydomonas greening and phototrophic survival. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3621-3626.	7.1	107
31	Coral Bleaching Independent of Photosynthetic Activity. Current Biology, 2013, 23, 1782-1786.	3.9	103
32	Multiple Light Inputs Control Phototaxis in Synechocystis sp. Strain PCC6803. Journal of Bacteriology, 2003, 185, 1599-1607.	2.2	96
33	Multiple facets of anoxic metabolism and hydrogen production in the unicellular green alga Chlamydomonas reinhardtii. New Phytologist, 2011, 190, 279-288.	7.3	94
34	Polyphosphate: A Multifunctional Metabolite in Cyanobacteria and Algae. Frontiers in Plant Science, 2020, 11, 938.	3.6	94
35	A photosynthetic strategy for coping in a highâ€light, lowâ€nutrient environment. Limnology and Oceanography, 2008, 53, 900-913.	3.1	90
36	Identification and Regulation of Plasma Membrane Sulfate Transporters in Chlamydomonas Â Â. Plant Physiology, 2010, 153, 1653-1668.	4.8	90

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37	Reverse genetics in Chlamydomonas: a platform for isolating insertional mutants. Plant Methods, 2011, 7, 24.	4.3	87
38	Symbiont population control by host-symbiont metabolic interaction in Symbiodiniaceae-cnidarian associations. Nature Communications, 2020, 11, 108.	12.8	87
39	Relative Contributions of Various Cellular Mechanisms to Loss of Algae during Cnidarian Bleaching. PLoS ONE, 2016, 11, e0152693.	2.5	86
40	Analysis of thehligene family in marine and freshwater cyanobacteria. FEMS Microbiology Letters, 2002, 215, 209-219.	1.8	76
41	Environmental effects on the light-harvesting complex of cyanobacteria. Journal of Bacteriology, 1993, 175, 575-582.	2.2	75
42	Optimization of protein synthesis in isolated higher plant chloroplasts. Identification of paused translation intermediates. FEBS Journal, 1986, 155, 331-338.	0.2	74
43	Symbiodinium transcriptome and global responses of cells to immediate changes in light intensity when grown under autotrophic or mixotrophic conditions. Plant Journal, 2015, 82, 67-80.	5.7	74
44	Critical Function of a Chlamydomonas reinhardtii Putative Polyphosphate Polymerase Subunit during Nutrient Deprivation Â. Plant Cell, 2014, 26, 4214-4229.	6.6	72
45	Partner switching and metabolic flux in a model cnidarianâ€“dinoflagellate symbiosis. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, .	2.6	72
46	The Central Role of a SNRK2 Kinase in Sulfur Deprivation Responses Â Â. Plant Physiology, 2008, 147, 216-227.	4.8	70
47	Menthol-induced bleaching rapidly and effectively provides experimental aposymbiotic sea anemones (Aiptasiasp.) for symbiosis investigations. Journal of Experimental Biology, 2015, 219, 306-10.	1.7	70
48	A molecular understanding of complementary chromatic adaptation. Photosynthesis Research, 2003, 76, 207-215.	2.9	69
49	Sulfur Economy and Cell Wall Biosynthesis during Sulfur Limitation of Chlamydomonas reinhardtii. Plant Physiology, 2001, 127, 665-673.	4.8	68
50	Novel Motility Mutants of Synechocystis Strain PCC 6803 Generated by In Vitro Transposon Mutagenesis. Journal of Bacteriology, 2001, 183, 6140-6143.	2.2	63
51	Insights into the acclimation of Chlamydomonas reinhardtii to sulfur deprivation. Photosynthesis Research, 2005, 86, 475-489.	2.9	63
52	In situ dynamics of O2, pH and cyanobacterial transcripts associated with CCM, photosynthesis and detoxification of ROS. ISME Journal, 2011, 5, 317-328.	9.8	58
53	Critical role ofChlamydomonas reinhardtiiferredoxin-5 in maintaining membrane structure and dark metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14978-14983.	7.1	58
54	UNDERSTANDING NITROGEN LIMITATION IN AUREOCOCCUS ANOPHAGEFFERENS (PELAGOPHYCEAE) THROUGH cDNA AND qRTâ€PCR ANALYSIS¹. Journal of Phycology, 2008, 44, 1235-1249.	2.3	56

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55	Porphyra (Bangiophyceae) Transcriptomes Provide Insights Into Red Algal Development And Metabolism. Journal of Phycology, 2012, 48, 1328-1342.	2.3	56
56	Thermal Shock Induces Host Proteostasis Disruption and Endoplasmic Reticulum Stress in the Model Symbiotic Cnidarian Aiptasia. Journal of Proteome Research, 2017, 16, 2121-2134.	3.7	56
57	Genetic Interactions Between Regulators of Chlamydomonas Phosphorus and Sulfur Deprivation Responses. Genetics, 2009, 181, 889-905.	2.9	53
58	Picophytoplankton responses to changing nutrient and light regimes during a bloom. Marine Biology, 2009, 156, 1531-1546.	1.5	52
59	Phylogenomic analysis of the Chlamydomonas genome unmasks proteins potentially involved in photosynthetic function and regulation. Photosynthesis Research, 2010, 106, 3-17.	2.9	51
60	The Type II NADPH Dehydrogenase Facilitates Cyclic Electron Flow, Energy-Dependent Quenching, and Chlororespiratory Metabolism during Acclimation of Chlamydomonas reinhardtii to Nitrogen Deprivation. Plant Physiology, 2016, 170, 1975-1988.	4.8	51
61	A Plant Cryptochrome Controls Key Features of the Chlamydomonas Circadian Clock and Its Life Cycle. Plant Physiology, 2017, 174, 185-201.	4.8	50
62	Chromatic adaptation and the events involved in phycobilisome biosynthesis. Plant, Cell and Environment, 1990, 13, 651-666.	5.7	48
63	Nutrient Acquisition: The Generation of Bioactive Vitamin B 12 by Microalgae. Current Biology, 2016, 26, R319-R321.	3.9	48
64	Sequences Controlling Transcription of the Chlamydomonas reinhardtii Î²₂-Tubulin Gene after Deflagellation and during the Cell Cycle. Molecular and Cellular Biology, 1994, 14, 5165-5174.	2.3	47
65	Algae after dark: mechanisms to cope with anoxic/hypoxic conditions. Plant Journal, 2015, 82, 481-503.	5.7	46
66	Alternative Acetate Production Pathways inChlamydomonas reinhardtiiduring Dark Anoxia and the Dominant Role of Chloroplasts in Fermentative Acetate Production. Plant Cell, 2014, 26, 4499-4518.	6.6	44
67	Proteomics quantifies protein expression changes in a model cnidarian colonised by a thermally tolerant but suboptimal symbiont. ISME Journal, 2019, 13, 2334-2345.	9.8	44
68	Nutrient scavenging and energy management: acclimation responses in nitrogen and sulfur deprived Chlamydomonas. Current Opinion in Plant Biology, 2017, 39, 114-122.	7.1	42
69	Alternative outlets for sustaining photosynthetic electron transport during dark-to-light transitions. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11518-11527.	7.1	42
70	Systematic characterization of gene function in the photosynthetic alga Chlamydomonas reinhardtii. Nature Genetics, 2022, 54, 705-714.	21.4	42
71	Responses of a Thermophilic Synechococcus Isolate from the Microbial Mat of Octopus Spring to Light. Applied and Environmental Microbiology, 2007, 73, 4268-4278.	3.1	40
72	DIFFERENCES IN THE PROTEIN PROFILES OF CULTURED AND ENDOSYMBIOTIC SYMBIODINIUM SP. (PYRROPHYTA) FROM THE ANEMONE AIPTASIA PALLIDA (ANTHOZOA)1. Journal of Phycology, 1997, 33, 44-53.	2.3	39

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73	Genome Analysis of Planctomycetes Inhabiting Blades of the Red Alga Porphyra umbilicalis. PLoS ONE, 2016, 11, e0151883.	2.5	39
74	The mitochondrial alternative oxidase from Chlamydomonas reinhardtii enables survival in high light. Journal of Biological Chemistry, 2019, 294, 1380-1395.	3.4	38
75	Transcription-dependent domain-scale three-dimensional genome organization in the dinoflagellate Breviolum minutum. Nature Genetics, 2021, 53, 613-617.	21.4	38
76	Effects of high light on transcripts of stress-associated genes for the cyanobacteria Synechocystis sp. PCC 6803 and Prochlorococcus MED4 and MIT9313. Microbiology (United Kingdom), 2004, 150, 1271-1281.	1.8	37
77	Bilin-Dependent Photoacclimation in Chlamydomonas reinhardtii. Plant Cell, 2017, 29, 2711-2726.	6.6	36
78	The GreenCut: re-evaluation of physiological role of previously studied proteins and potential novel protein functions. Photosynthesis Research, 2013, 116, 427-436.	2.9	35
79	Paulinella, a model for understanding plastid primary endosymbiosis. Journal of Phycology, 2020, 56, 837-843.	2.3	35
80	Tiered Regulation of Sulfur Deprivation Responses in Chlamydomonas reinhardtii and Identification of an Associated Regulatory Factor Â Â. Plant Physiology, 2013, 162, 195-211.	4.8	34
81	Tetratricopeptide repeat protein protects photosystem I from oxidative disruption during assembly. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2774-2779.	7.1	34
82	Towards sustainable microalgal biomass processing: anaerobic induction of autolytic cell-wall self-ingestion in lipid-rich Nannochloropsis slurries. Green Chemistry, 2019, 21, 2967-2982.	9.0	34
83	Pyrenoid loss in Chlamydomonas reinhardtii causes limitations in CO2 supply, but not thylakoid operating efficiency. Journal of Experimental Botany, 2017, 68, 3903-3913.	4.8	33
84	Glucose-Induced Trophic Shift in an Endosymbiont Dinoflagellate with Physiological and Molecular Consequences. Plant Physiology, 2018, 176, 1793-1807.	4.8	32
85	A PERSPECTIVE ON PHOTOSYNTHESIS IN THE OLIGOTROPHIC OCEANS: HYPOTHESES CONCERNING ALTERNATE ROUTES OF ELECTRON FLOW1. Journal of Phycology, 2010, 46, 629-634.	2.3	31
86	A Gene of Synechocystis sp. Strain PCC 6803 Encoding a Novel Iron Transporter. Journal of Bacteriology, 2000, 182, 6523-6524.	2.2	30
87	Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis. Molecular Phylogenetics and Evolution, 2018, 120, 307-320.	2.7	30
88	THE USE OF CHLAMYDOMONAS (CHLOROPHYTA: VOLVOCALES) AS A MODEL ALGAL SYSTEM FOR GENOME STUDIES AND THE ELUCIDATION OF PHOTOSYNTHETIC PROCESSES. Journal of Phycology, 1998, 34, 907-917.	2.3	29
89	Impact of light intensity and quality on chromatophore and nuclear gene expression in Paulinella chromatophora, an amoeba with nascent photosynthetic organelles. Plant Journal, 2017, 90, 221-234.	5.7	29
90	Flocculation of Chlamydomonas reinhardtii with Different Phenotypic Traits by Metal Cations and High pH. Frontiers in Plant Science, 2017, 8, 1997.	3.6	28

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91	The Use of Contact Mode Atomic Force Microscopy in Aqueous Medium for Structural Analysis of Spinach Photosynthetic Complexes. Plant Physiology, 2015, 169, 1318-1332.	4.8	26
92	Development of a toolbox to dissect host-endosymbiont interactions and protein trafficking in the trypanosomatid Angomonas deanei. BMC Evolutionary Biology, 2016, 16, 247.	3.2	26
93	Biotic interactions as drivers of algal origin and evolution. New Phytologist, 2017, 216, 670-681.	7.3	25
94	Characterization of genes encoding the light-harvesting proteins in diatoms: biogenesis of the fucoxanthin chlorophylla/c protein complex. Journal of Applied Phycology, 1994, 6, 225-230.	2.8	23
95	Patterned Nanowire Electrode Array for Direct Extraction of Photosynthetic Electrons from Multiple Living Algal Cells. Advanced Functional Materials, 2016, 26, 7679-7689.	14.9	23
96	Cnidarian-Symbiodiniaceae symbiosis establishment is independent of photosynthesis. Current Biology, 2022, 32, 2402-2415.e4.	3.9	23
97	CHARACTERIZATION OF A GENE ENCODING THE LIGHT-HARVESTING VIOLAXANTHIN-CHLOROPHYLL PROTEIN OF NANNOCHLOROPSIS SP. (EUSTIGMATOPHYCEAE). Journal of Phycology, 2000, 36, 563-570.	2.3	22
98	Novel Thylakoid Membrane GreenCut Protein CPLD38 Impacts Accumulation of the Cytochrome b6f Complex and Associated Regulatory Processes. Journal of Biological Chemistry, 2013, 288, 7024-7036.	3.4	22
99	Metabolic control of acclimation to nutrient deprivation dependent on polyphosphate synthesis. Science Advances, 2020, 6, .	10.3	22
100	Subâ€cellular imaging shows reduced photosynthetic carbon and increased nitrogen assimilation by the nonâ€native endosymbiont Durusdinium trenchii in the model cnidarian Aiptasia. Environmental Microbiology, 2020, 22, 3741-3753.	3.8	22
101	Deep imaging flow cytometry. Lab on A Chip, 2022, 22, 876-889.	6.0	22
102	Phosphorelay control of phycobilisome biogenesis during complementary chromatic adaptation. Photosynthesis Research, 1997, 53, 95-108.	2.9	20
103	THE gamma SUBUNITS OF PHYCOERYTHRIN FROM A RED ALGA: POSITION IN PHYCOBILISOMES AND SEQUENCE CHARACTERIZATION. Journal of Phycology, 2001, 37, 64-70.	2.3	20
104	EXAMINATION OF DIEL CHANGES IN GLOBAL TRANSCRIPT ACCUMULATION IN SYNECHOCYSTIS (CYANOBACTERIA)1. Journal of Phycology, 2006, 42, 622-636.	2.3	18
105	A robust protocol for efficient generation, and genomic characterization of insertional mutants of Chlamydomonas reinhardtii. Plant Methods, 2017, 13, 22.	4.3	18
106	Prolonged and highly efficient intracellular extraction of photosynthetic electrons from single algal cells by optimized nanoelectrode insertion. Nano Research, 2018, 11, 397-409.	10.4	17
107	Why is primary endosymbiosis so rare?. New Phytologist, 2021, 231, 1693-1699.	7.3	17
108	Transcriptional regulation of photoprotection in dark-to-light transitionâ€”More than just a matter of excess light energy. Science Advances, 2022, 8, .	10.3	17

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109	Photo-movement in the sea anemone Aiptasia influenced by light quality and symbiotic association. Coral Reefs, 2020, 39, 47-54.	2.2	16
110	Interplay of four auxiliary factors is required for the assembly of photosystem I reaction center subcomplex. Plant Journal, 2021, 106, 1075-1086.	5.7	15
111	Title is missing!. Plant Molecular Biology Reporter, 1999, 17, 221-224.	1.8	14
112	Building the GreenCut2 suite of proteins to unmask photosynthetic function and regulation. Microbiology (United Kingdom), 2019, 165, 697-718.	1.8	13
113	Title is missing!. Photosynthesis Research, 1997, 53, 173-184.	2.9	12
114	THE PHYCOBILISOME Î²18SUBUNIT GENE OF ALLOPHYCOCYANIN IS LOCATED ON THE PLASTID GENOME INAGLAOTHAMNION NEGLECTUM(RHODOPHYTA) AND CO TRANSCRIBED WITH AN UNIDENTIFIED OPEN READING FRAME1. Journal of Phycology, 1993, 29, 716-718.	2.3	11
115	GreenCut protein <scp>CPLD</scp>49 of Chlamydomonas reinhardtii associates with thylakoid membranes and is required for cytochrome b₆f complex accumulation. Plant Journal, 2018, 94, 1023-1037.	5.7	10
116	Impact of Menthol on Growth and Photosynthetic Function of Breviolum Minutum (Dinoflagellata, Dinophyceae, Symbiodiniaceae) and Interactions with its Aiptasia Host. Journal of Phycology, 2021, 57, 245-257.	2.3	7
117	A phytophotonic approach to enhanced photosynthesis. Energy and Environmental Science, 2020, 13, 4794-4807.	30.8	5
118	Transcriptome Reprogramming of Symbiodiniaceae Breviolum minutum in Response to Casein Amino Acids Supplementation. Frontiers in Physiology, 2020, 11, 574654.	2.8	5
119	Retrotransposition facilitated the establishment of a primary plastid in the thecate amoeba Paulinella. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	5
120	THE STRUCTURE OF PHYCOBILISOMES IN MUTANTS OF Synechococcus sp. STRAIN PCC 7942 DEVOID OF SPECIFIC LINKER POLYPEPTIDES. Photochemistry and Photobiology, 1995, 61, 298-302.	2.5	4
121	moving toward more model algae. Journal of Phycology, 2021, 57, 51-53.	2.3	4
122	The chromatin organization of a chlorarachniophyte nucleomorph genome. Genome Biology, 2022, 23, 65.	8.8	4
123	Symbiosis with Dinoflagellates Alters Cnidarian Cell-Cycle Gene Expression. Cellular Microbiology, 2022, 2022, 1-20.	2.1	4
124	Intelligent imageâ€activated sorting of Chlamydomonas reinhardtii by mitochondrial localization. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2022, 101, 1027-1034.	1.5	4
125	Immunolocalization of Metabolite Transporter Proteins in a Model Cnidarian-Dinoflagellate Symbiosis. Applied and Environmental Microbiology, 2022, 88, .	3.1	3
126	Corrigendum to â€œA novel analytical method for in vivo phosphate trackingâ€•[FEBS Lett. 580 (2006) 5885-5893]. FEBS Letters, 2007, 581, 579-579.	2.8	2

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127	Analysis of the hli gene family in marine and freshwater cyanobacteria. FEMS Microbiology Letters, 2002, 215, 209-219.	1.8	2
128	Differential Phototactic Behavior of Closely Related Cyanobacterial Isolates from Yellowstone Hot Spring Biofilms. Applied and Environmental Microbiology, 2022, 88, e0019622.	3.1	2
129	Introduction. Photosynthesis Research, 2001, 67, 1-3.	2.9	1
130	REGENERATION OF A CELL FROM PROTOPLASM. Journal of Phycology, 2006, 42, 1-5.	2.3	1
131	Phylogenetic analysis of cell-cycle regulatory proteins within the Symbiodiniaceae. Scientific Reports, 2020, 10, 20473.	3.3	1