Tomas Morosinotto

List of Publications by Year
in descending order

125 papers	6,945 citations	50170 46 h-index	66788 78 g-index
133 all docs	133 docs citations	133 times ranked	5456 citing authors

#	Article	IF	Citations
1	The Response of Nannochloropsis gaditana to Nitrogen Starvation Includes <i>De Novo</i> Biosynthesis of Triacylglycerols, a Decrease of Chloroplast Galactolipids, and Reorganization of the Photosynthetic Apparatus. Eukaryotic Cell, 2013, 12, 665-676.	3.4	301
2	Contrasting Behavior of Higher Plant Photosystem I and II Antenna Systems during Acclimation. Journal of Biological Chemistry, 2007, 282, 8947-8958.	1.6	269
3	Light-induced Dissociation of an Antenna Hetero-oligomer Is Needed for Non-photochemical Quenching Induction. Journal of Biological Chemistry, 2009, 284, 15255-15266.	1.6	268
4	Analysis of LhcSR3, a Protein Essential for Feedback De-Excitation in the Green Alga Chlamydomonas reinhardtii. PLoS Biology, 2011, 9, e1000577.	2.6	260
5	Adjusted Light and Dark Cycles Can Optimize Photosynthetic Efficiency in Algae Growing in Photobioreactors. PLoS ONE, 2012, 7, e38975.	1.1	231
6	<i>Physcomitrella patens</i> mutants affected on heat dissipation clarify the evolution of photoprotection mechanisms upon land colonization. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11128-11133.	3.3	185
7	Minor Antenna Proteins CP24 and CP26 Affect the Interactions between Photosystem II Subunits and the Electron Transport Rate in Grana Membranes of <i>Arabidopsis</i> Â. Plant Cell, 2008, 20, 1012-1028.	3.1	178
8	Chromosome Scale Genome Assembly and Transcriptome Profiling of Nannochloropsis gaditana in Nitrogen Depletion. Molecular Plant, 2014, 7, 323-335.	3.9	178
9	The Nature of a Chlorophyll Ligand in Lhca Proteins Determines the Far Red Fluorescence Emission Typical of Photosystem I. Journal of Biological Chemistry, 2003, 278, 49223-49229.	1.6	167
10	Acclimation of Nannochloropsis gaditana to different illumination regimes: Effects on lipids accumulation. Bioresource Technology, 2011, 102, 6026-6032.	4.8	153
11	Flavodiiron proteins act as safety valve for electrons in <i>Physcomitrella patens</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12322-12327.	3.3	153
12	The Lhca antenna complexes of higher plants photosystem I. Biochimica Et Biophysica Acta - Bioenergetics, 2002, 1556, 29-40.	0.5	152
13	A Thylakoid-Located Two-Pore K ⁺ Channel Controls Photosynthetic Light Utilization in Plants. Science, 2013, 342, 114-118.	6.0	146
14	A Structural Basis for the pH-Dependent Xanthophyll Cycle in <i>Arabidopsis thaliana</i> Â Â. Plant Cell, 2009, 21, 2036-2044.	3.1	142
15	Optimization of light use efficiency for biofuel production in algae. Biophysical Chemistry, 2013, 182, 71-78.	1.5	125
16	Alternative electron transport mediated by flavodiiron proteins is operational in organisms from cyanobacteria up to gymnosperms. New Phytologist, 2017, 214, 967-972.	3.5	124
17	In Silico and Biochemical Analysis of Physcomitrella patens Photosynthetic Antenna: Identification of Subunits which Evolved upon Land Adaptation. PLoS ONE, 2008, 3, e2033.	1.1	121
18	Excess CO2 supply inhibits mixotrophic growth of Chlorella protothecoides and Nannochloropsis salina. Bioresource Technology, 2012, 104, 523-529.	4.8	118

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19	Zeaxanthin Binds to Light-Harvesting Complex Stress-Related Protein to Enhance Nonphotochemical Quenching in <i>Physcomitrella patens</i>. Plant Cell, 2013, 25, 3519-3534.	3.1	109
20	Light Remodels Lipid Biosynthesis in <i>Nannochloropsis gaditana</i> by Modulating Carbon Partitioning between Organelles. Plant Physiology, 2016, 171, 2468-2482.	2.3	106
21	Cultivation of Scenedesmus obliquus in Photobioreactors: Effects of Light Intensities and Lightâ€“Dark Cycles on Growth, Productivity, and Biochemical Composition. Applied Biochemistry and Biotechnology, 2014, 172, 2377-2389.	1.4	97
22	Mechanistic aspects of the xanthophyll dynamics in higher plant thylakoids. Physiologia Plantarum, 2003, 119, 347-354.	2.6	96
23	Dynamics of Chromophore Binding to Lhc Proteins in Vivo and in Vitro during Operation of the Xanthophyll Cycle. Journal of Biological Chemistry, 2002, 277, 36913-36920.	1.6	95
24	Recombinant Lhca2 and Lhca3 Subunits of the Photosystem I Antenna System. Biochemistry, 2003, 42, 4226-4234.	1.2	91
25	Trap-Limited Charge Separation Kinetics in Higher Plant Photosystem I Complexes. Biophysical Journal, 2008, 94, 3601-3612.	0.2	88
26	Balancing protection and efficiency in the regulation of photosynthetic electron transport across plant evolution. New Phytologist, 2019, 221, 105-109.	3.5	84
27	Generation of random mutants to improve light-use efficiency of Nannochloropsis gaditana cultures for biofuel production. Biotechnology for Biofuels, 2015, 8, 161.	6.2	82
28	Mutation Analysis of Lhca1 Antenna Complex. Journal of Biological Chemistry, 2002, 277, 36253-36261.	1.6	77
29	Role of PSBS and LHCSR in <i>Physcomitrella patens</i> acclimation to high light and low temperature. Plant, Cell and Environment, 2011, 34, 922-932.	2.8	76
30	Slowly reversible de-epoxidation of lutein-epoxide in deep shade leaves of a tropical tree legume may 'lock-in' lutein-based photoprotection during acclimation to strong light. Journal of Experimental Botany, 2004, 56, 461-468.	2.4	75
31	Dynamic reorganization of photosystem II supercomplexes in response to variations in light intensities. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1651-1660.	0.5	70
32	Photosynthetic Antenna Size in Higher Plants Is Controlled by the Plastoquinone Redox State at the Post-transcriptional Rather than Transcriptional Level. Journal of Biological Chemistry, 2007, 282, 29457-29469.	1.6	69
33	The Low-Energy Forms of Photosystem I Light-Harvesting Complexes: Spectroscopic Properties and Pigment-Pigment Interaction Characteristics. Biophysical Journal, 2007, 93, 2418-2428.	0.2	65
34	Mutagenesis and phenotypic selection as a strategy toward domestication of Chlamydomonas reinhardtii strains for improved performance in photobioreactors. Photosynthesis Research, 2011, 108, 107-120.	1.6	65
35	A Palmitic Acid Elongase Affects Eicosapentaenoic Acid and Plastidial Monogalactosyldiacylglycerol Levels in Nannochloropsis. Plant Physiology, 2017, 173, 742-759.	2.3	65
36	Transcriptome and Cell Physiological Analyses in Different Rice Cultivars Provide New Insights Into Adaptive and Salinity Stress Responses. Frontiers in Plant Science, 2018, 9, 204.	1.7	65

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37	Antenna complexes protect Photosystem I from Photoinhibition. BMC Plant Biology, 2009, 9, 71.	1.6	64
38	Pigment-Pigment Interactions in Lhca4 Antenna Complex of Higher Plants Photosystem I. Journal of Biological Chemistry, 2005, 280, 20612-20619.	1.6	63
39	Coexistence of plant and algal energy dissipation mechanisms in the moss <i>Physcomitrella patens</i>. New Phytologist, 2012, 196, 763-773.	3.5	61
40	Stoichiometry of LHCI antenna polypeptides and characterization of gap and linker pigments in higher plants Photosystem I. FEBS Journal, 2004, 271, 4659-4665.	0.2	60
41	Short- and Long-Term Operation of the Lutein-Epoxide Cycle in Light-Harvesting Antenna Complexes. Plant Physiology, 2007, 144, 926-941.	2.3	59
42	Mutation Analysis of Violaxanthin De-epoxidase Identifies Substrate-binding Sites and Residues Involved in Catalysis. Journal of Biological Chemistry, 2010, 285, 23763-23770.	1.6	59
43	Biochemical and structural analyses of a higher plant photosystem II supercomplex of a photosystem I-less mutant of barley. FEBS Journal, 2006, 273, 4616-4630.	2.2	58
44	Occurrence of the lutein-epoxide cycle in mistletoes of the Loranthaceae and Viscaceae. Planta, 2003, 217, 868-879.	1.6	54
45	Evolution of photoprotection mechanisms upon land colonization: evidence of <scp>PSBS</scp>â€dependent <scp>NPQ</scp> in late Streptophyte algae. Physiologia Plantarum, 2013, 149, 583-598.	2.6	50
46	Evolutionary insight into the ionotropic glutamate receptor superfamily of photosynthetic organisms. Biophysical Chemistry, 2016, 218, 14-26.	1.5	50
47	Quenching of Chlorophyll Triplet States by Carotenoids in Reconstituted Lhca4 Subunit of Peripheral Light-Harvesting Complex of Photosystem I. Biochemistry, 2005, 44, 8337-8346.	1.2	49
48	Characterization of the photosynthetic apparatus of the Eustigmatophycean Nannochloropsis gaditana: Evidence of convergent evolution in the supramolecular organization of photosystem I. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 306-314.	0.5	44
49	In Vivo Identification of Photosystem II Light Harvesting Complexes Interacting with PHOTOSYSTEM II SUBUNIT S. Plant Physiology, 2015, 168, 1747-1761.	2.3	43
50	Probing the structure of Lhca3 by mutation analysis. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 1607-1613.	0.5	42
51	Role of cyclic and pseudoâ€cyclic electron transport in response to dynamic light changes inPhyscomitrella patens. Plant, Cell and Environment, 2019, 42, 1590-1602.	2.8	42
52	Singlet and Triplet State Transitions of Carotenoids in the Antenna Complexes of Higher-Plant Photosystem Iâ€. Biochemistry, 2007, 46, 3846-3855.	1.2	41
53	Photobioreactors for microalgal growth and oil production with Nannochloropsis salina: From lab-scale experiments to large-scale design. Chemical Engineering Research and Design, 2012, 90, 1151-1158.	2.7	41
54	Origin of the 701-nm Fluorescence Emission of the Lhca2 Subunit of Higher Plant Photosystem I. Journal of Biological Chemistry, 2004, 279, 48543-48549.	1.6	39

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55	Cultivation of Scenedesmus obliquus in liquid hydrolysate from flash hydrolysis for nutrient recycling. Bioresource Technology, 2016, 207, 59-66.	4.8	39
56	Mitochondria Affect Photosynthetic Electron Transport and Photosensitivity in a Green Alga. Plant Physiology, 2018, 176, 2305-2314.	2.3	39
57	The Association of the Antenna System to Photosystem I in Higher Plants. Journal of Biological Chemistry, 2005, 280, 31050-31058.	1.6	38
58	Occupancy and Functional Architecture of the Pigment Binding Sites of Photosystem II Antenna Complex Lhcb5. Journal of Biological Chemistry, 2009, 284, 8103-8113.	1.6	38
59	Protein redox regulation in the thylakoid lumen: The importance of disulfide bonds for violaxanthin deâ€epoxidase. FEBS Letters, 2015, 589, 919-923.	1.3	37
60	The potential of quantitative models to improve microalgae photosynthetic efficiency. Physiologia Plantarum, 2019, 166, 380-391.	2.6	37
61	Regulation of electron transport is essential for photosystem I stability and plant growth. New Phytologist, 2020, 228, 1316-1326.	3.5	36
62	Influence of light and temperature on growth and high-value molecules productivity from Cyanobacterium aponinum. Journal of Applied Phycology, 2017, 29, 1781-1790.	1.5	35
63	Identification of the Chromophores Involved in Aggregation-dependent Energy Quenching of the Monomeric Photosystem II Antenna Protein Lhcb5. Journal of Biological Chemistry, 2010, 285, 28309-28321.	1.6	34
64	Photoacclimation of photosynthesis in the Eustigmatophycean Nannochloropsis gaditana. Photosynthesis Research, 2016, 129, 291-305.	1.6	34
65	Excitation Decay Pathways of Lhca Proteins:Â A Time-Resolved Fluorescence Study. Journal of Physical Chemistry B, 2005, 109, 21150-21158.	1.2	33
66	Photoprotective sites in the violaxanthinâ€"chlorophyll a binding Protein (VCP) from Nannochloropsis gaditana. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1235-1246.	0.5	32
67	A model of chlorophyll fluorescence in microalgae integrating photoproduction, photoinhibition and photoregulation. Journal of Biotechnology, 2015, 194, 91-99.	1.9	29
68	Photosynthesis in extreme environments: responses toÂdifferent light regimes in the Antarctic alga <i>Koliella antarctica</i>. Physiologia Plantarum, 2015, 153, 654-667.	2.6	29
69	A Red-shifted Antenna Protein Associated with Photosystem II in Physcomitrella patens. Journal of Biological Chemistry, 2011, 286, 28978-28987.	1.6	28
70	Role of an ancient light-harvesting protein of PSI in light absorption and photoprotection. Nature Communications, 2021, 12, 679.	5.8	28
71	Novel micro-photobioreactor design and monitoring method for assessing microalgae response to light intensity. Algal Research, 2016, 19, 69-76.	2.4	27
72	Conservation of core complex subunits shaped the structure and function of photosystem I in the secondary endosymbiont alga Nannochloropsis gaditana. New Phytologist, 2017, 213, 714-726.	3.5	27

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73	An Identifiable State Model To Describe Light Intensity Influence on Microalgae Growth. Industrial & Engineering Chemistry Research, 2014, 53, 6738-6749.	1.8	26
74	Photoprotection strategies of the alga Nannochloropsis gaditana. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 544-552.	0.5	26
75	An NMR comparison of the light-harvesting complex II (LHCII) in active and photoprotective states reveals subtle changes in the chlorophyll a ground-state electronic structures. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 738-744.	0.5	25
76	Role and regulation of class-C flavodiiron proteins in photosynthetic organisms. Biochemical Journal, 2019, 476, 2487-2498.	1.7	25
77	Effect of specific light supply rate on photosynthetic efficiency of Nannochloropsis salina in a continuous flat plate photobioreactor. Applied Microbiology and Biotechnology, 2015, 99, 8309-8318.	1.7	24
78	Integration of biofuels intermediates production and nutrients recycling in the processing of a marine algae. AICHE Journal, 2017, 63, 1494-1502.	1.8	24
79	Revised assignment of room-temperature chlorophyll fluorescence emission bands in single living cells of Chlamydomonas reinhardtii. Journal of Bioenergetics and Biomembranes, 2011, 43, 163-173.	1.0	23
80	Excitation Energy Transfer Pathways in Lhca4. Biophysical Journal, 2005, 88, 1959-1969.	0.2	22
81	NPQ activation reduces chlorophyll triplet state formation in the moss Physcomitrella patens. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1608-1615.	0.5	21
82	Protein and lipid dynamics in photosynthetic thylakoid membranes investigated by in-situ solid-state NMR. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1849-1859.	0.5	21
83	Cultivation in industrially relevant conditions has a strong influence on biological properties and performances of Nannochloropsis gaditana genetically modified strains. Algal Research, 2017, 28, 88-99.	2.4	21
84	Light excess stimulates Poly-beta-hydroxybutyrate yield in a mangrove-isolated strain of Synechocystis sp.. Bioresource Technology, 2021, 320, 124379.	4.8	21
85	Thylakoid Protein Phosphorylation Dynamics in a Moss Mutant Lacking SERINE/THREONINE PROTEIN KINASE STN8. Plant Physiology, 2019, 180, 1582-1597.	2.3	20
86	Plant biodiversity and regulation of photosynthesis in the natural environment. Planta, 2019, 249, 1217-1228.	1.6	20
87	Identification of Key Residues for pH Dependent Activation of Violaxanthin De-Epoxidase from Arabidopsis thaliana. PLoS ONE, 2012, 7, e35669.	1.1	20
88	Systemic Calcium Wave Propagation in Physcomitrella patens. Plant and Cell Physiology, 2018, 59, 1377-1384.	1.5	19
89	Purification of structurally intact grana from plants thylakoids membranes. Journal of Bioenergetics and Biomembranes, 2010, 42, 37-45.	1.0	18
90	Higher order photoprotection mutants reveal the importance of Î”pH-dependent photosynthesis-control in preventing light induced damage to both photosystem II and photosystem I. Scientific Reports, 2020, 10, 6770.	1.6	18

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91	A blueprint for gene function analysis through Base Editing in the model plant <i>Physcomitrium (Physcomitrella) patens</i>. New Phytologist, 2021, 230, 1258-1272.	3.5	18
92	Acclimation of photosynthesis and lipids biosynthesis to prolonged nitrogen and phosphorus limitation in Nannochloropsis gaditana. Algal Research, 2021, 58, 102368.	2.4	18
93	A mathematical model to guide genetic engineering of photosynthetic metabolism. Metabolic Engineering, 2017, 44, 337-347.	3.6	17
94	Photosynthesis Regulation in Response to Fluctuating Light in the Secondary Endosymbiont Alga Nannochloropsis gaditana. Plant and Cell Physiology, 2020, 61, 41-52.	1.5	17
95	A plant secretory signal peptide targets plastome-encoded recombinant proteins to the thylakoid membrane. Plant Molecular Biology, 2011, 76, 427-441.	2.0	16
96	First solid-state NMR analysis of uniformly 13C-enriched major light-harvesting complexes from Chlamydomonas reinhardtii and identification of protein and cofactor spin clusters. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 437-443.	0.5	15
97	Merged Heme and Non-Heme Manganese Cofactors for a Dual Antioxidant Surveillance in Photosynthetic Organisms. ACS Catalysis, 2017, 7, 1971-1976.	5.5	13
98	Conformational Dynamics of Light-Harvesting Complex II in a Native Membrane Environment. Biophysical Journal, 2021, 120, 270-283.	0.2	12
99	High-Fidelity Modelling Methodology of Light-Limited Photosynthetic Production in Microalgae. PLoS ONE, 2016, 11, e0152387.	1.1	12
100	The chloroplast NADH dehydrogenase-like complex influences the photosynthetic activity of the moss Physcomitrella patens. Journal of Experimental Botany, 2020, 71, 5538-5548.	2.4	11
101	Knowledge of Regulation of Photosynthesis in Outdoor Microalgae Cultures Is Essential for the Optimization of Biomass Productivity. Frontiers in Plant Science, 2022, 13, 846496.	1.7	11
102	Semi-empirical modeling of microalgae photosynthesis in different acclimation states â€“ Application to N. gaditana. Journal of Biotechnology, 2017, 259, 63-72.	1.9	10
103	The low energy emitting states of the Lhca4 subunit of higher plant photosystem I. FEBS Letters, 2005, 579, 2071-2076.	1.3	9
104	Biochemical characterization and genetic identity of an oil-rich Acutodesmus obliquus isolate. Journal of Applied Phycology, 2015, 27, 149-161.	1.5	9
105	Assembly of Light Harvesting Pigment-Protein Complexes in Photosynthetic Eukaryotes. Advances in Photosynthesis and Respiration, 2012, , 113-126.	1.0	9
106	Protein dynamics and lipid affinity of monomeric, zeaxanthin-binding LHCII in thylakoid membranes. Biophysical Journal, 2022, 121, 396-409.	0.2	9
107	Model-Based Optimization of Microalgae Growth in a Batch Plant. Industrial & Engineering Chemistry Research, 2019, 58, 5121-5130.	1.8	7
108	LHCI: The Antenna Complex of Photosystem I in Plants and Green Algae. , 2006, , 119-137.		7

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109	A Framework for the Dynamic Modelling of PI Curves in Microalgae. Computer Aided Chemical Engineering, 2015, , 2483-2488.	0.3	6
110	Global spectroscopic analysis to study the regulation of the photosynthetic proton motive force: A critical reappraisal. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 676-683.	0.5	6
111	Microfluidic Platform for Microalgae Cultivation under Non-limiting CO₂ Conditions. Industrial & Engineering Chemistry Research, 2019, 58, 18036-18045.	1.8	6
112	A New Remote Sensing-Based System for the Monitoring and Analysis of Growth and Gas Exchange Rates of Photosynthetic Microorganisms Under Simulated Non-Terrestrial Conditions. Frontiers in Plant Science, 2020, 11, 182.	1.7	6
113	Acclimation of photosynthetic apparatus in the mesophilic red alga Dixoniella giordanoi. Physiologia Plantarum, 2021, 173, 805-817.	2.6	5
114	Lipid Polymorphism of the Subchloroplastâ€"Granum and Stroma Thylakoid Membraneâ€"Particles. II. Structure and Functions. Cells, 2021, 10, 2363.	1.8	5
115	Potential of Microalgae Biomass for the Sustainable Production of Bio-commodities. Progress in Botany Fortschritte Der Botanik, 2019, , 243-276.	0.1	4
116	Optimization of Microalgae Photosynthetic Metabolism to Close the Gap with Potential Productivity. Grand Challenges in Biology and Biotechnology, 2019, , 223-248.	2.4	4
117	Role of serine/threonine protein kinase STN7 in the formation of two distinct photosystem I supercomplexes in <i>Physcomitrium patens</i>. Plant Physiology, 2022, 190, 698-713.	2.3	4
118	A Dynamic Model of Photoproduction, Photoregulation and Photoinhibition in Microalgae using Chlorophyll Fluorescence. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4370-4375.	0.4	3
119	Modelling the photosynthetic electron transport chain in Nannochloropsis gaditana via exploitation of absorbance data. Algal Research, 2018, 33, 430-439.	2.4	3
120	Inactivation of mitochondrial complex I stimulates chloroplast ATPase in<i>Physcomitrium patens</i>. Plant Physiology, 2021, 187, 931-946.	2.3	3
121	Molecular Mechanisms for Activation of Non-Photochemical Fluorescence Quenching: From Unicellular Algae to Mosses and Higher Plants. Advances in Photosynthesis and Respiration, 2014, , 315-331.	1.0	3
122	A new cryptic species of the unicellular red algal genus <i>Dixoniella</i> (Rhodellophyceae,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 T	0.6	3
123	Corrigendum to: The room temperature emission band shape of the lowest energy chlorophyll spectral form of LHCI (FEBS 27430). FEBS Letters, 2003, 549, 181-181.	1.3	1
124	A model-based investigation of genetically modified microalgae strains. Computer Aided Chemical Engineering, 2016, 38, 607-612.	0.3	1
125	Kinetic Description of Energy and Charge transfer Processes in PSI from Arabidopsis thaliana. , 2008, , 323-326.		0