Matteo Ballottari

List of Publications by Year
in descending order

76	5,153	94433 37	91884 69
papers	citations	h-index	g-index

83	83	83	4034
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Architecture of a Charge-Transfer State Regulating Light Harvesting in a Plant Antenna Protein. Science, 2008, 320, 794-797.	12.6	492
2	Contrasting Behavior of Higher Plant Photosystem I and II Antenna Systems during Acclimation. Journal of Biological Chemistry, 2007, 282, 8947-8958.	3.4	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.	3.4	268
4	Quantum Coherence Enabled Determination of the Energy Landscape in Light-Harvesting Complex II. Journal of Physical Chemistry B, 2009, 113, 16291-16295.	2.6	266
5	Analysis of LhcSR3, a Protein Essential for Feedback De-Excitation in the Green Alga Chlamydomonas reinhardtii. PLoS Biology, 2011, 9, e1000577.	5.6	260
6	Zeaxanthin Radical Cation Formation in Minor Light-harvesting Complexes of Higher Plant Antenna. Journal of Biological Chemistry, 2008, 283, 3550-3558.	3.4	193
7	Lutein Accumulation in the Absence of Zeaxanthin Restores Nonphotochemical Quenching in the <i>Arabidopsis thaliana npq1</i> Mutant Â. Plant Cell, 2009, 21, 1798-1812.	6.6	183
8	Acclimation of Chlamydomonas reinhardtii to Different Growth Irradiances. Journal of Biological Chemistry, 2012, 287, 5833-5847.	3.4	179
9	Pathways of Energy Flow in LHCII from Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry B, 2009, 113, 15352-15363.	2.6	175
10	Elucidation of the timescales and origins of quantum electronic coherence in LHCII. Nature Chemistry, 2012, 4, 389-395.	13.6	156
11	Domestication of the green alga Chlorella sorokiniana: reduction of antenna size improves light-use efficiency in a photobioreactor. Biotechnology for Biofuels, 2014, 7, 157.	6.2	147
12	Evolution and functional properties of Photosystem II light harvesting complexes in eukaryotes. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 143-157.	1.0	144
13	Regulation of plant light harvesting by thermal dissipation of excess energy. Biochemical Society Transactions, 2010, 38, 651-660.	3.4	126
14	Turning a green alga red: engineering astaxanthin biosynthesis by intragenic pseudogene revival in <i>Chlamydomonas reinhardtii</i>. Plant Biotechnology Journal, 2020, 18, 2053-2067.	8.3	103
15	Identification of pH-sensing Sites in the Light Harvesting Complex Stress-related 3 Protein Essential for Triggering Non-photochemical Quenching in Chlamydomonas reinhardtii. Journal of Biological Chemistry, 2016, 291, 7334-7346.	3.4	100
16	Molecular basis of autotrophic vs mixotrophic growth in Chlorella sorokiniana. Scientific Reports, 2018, 8, 6465.	3.3	90
17	Trap-Limited Charge Separation Kinetics in Higher Plant Photosystem I Complexes. Biophysical Journal, 2008, 94, 3601-3612.	0.5	88
18	Antenna size reduction as a strategy to increase biomass productivity: a great potential not yet realized. Journal of Applied Phycology, 2015, 27, 1063-1077.	2.8	88

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19	Photosynthetic response to nitrogen starvation and high light in Haematococcus pluvialis. Algal Research, 2015, 12, 170-181.	4.6	82
20	Non-photochemical quenching and xanthophyll cycle activities in six green algal species suggest mechanistic differences in the process of excess energy dissipation. Journal of Plant Physiology, 2015, 172, 92-103.	3.5	82
21	LHCBM1 and LHCBM2/7 Polypeptides, Components of Major LHCII Complex, Have Distinct Functional Roles in Photosynthetic Antenna System of Chlamydomonas reinhardtii. Journal of Biological Chemistry, 2012, 287, 16276-16288.	3.4	81
22	Microalgae Cultivation on Anaerobic Digestate of Municipal Wastewater, Sewage Sludge and Agro-Waste. International Journal of Molecular Sciences, 2016, 17, 1692.	4.1	74
23	Regulation of photosystem I light harvesting by zeaxanthin. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2431-8.	7.1	73
24	Lutein Can Act as a Switchable Charge Transfer Quencher in the CP26 Light-harvesting Complex. Journal of Biological Chemistry, 2009, 284, 2830-2835.	3.4	72
25	Chlorophyll Triplet Quenching and Photoprotection in the Higher Plant Monomeric Antenna Protein Lhcb5. Journal of Physical Chemistry B, 2013, 117, 11337-11348.	2.6	68
26	LHCSR3 is a nonphotochemical quencher of both photosystems in <i>Chlamydomonas reinhardtii</i>. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4212-4217.	7.1	66
27	Antenna complexes protect Photosystem I from Photoinhibition. BMC Plant Biology, 2009, 9, 71.	3.6	64
28	Light-Harvesting Complex Protein LHCBM9 Is Critical for Photosystem II Activity and Hydrogen Production in <i>Chlamydomonas reinhardtii</i> Â Â. Plant Cell, 2014, 26, 1598-1611.	6.6	64
29	Spectroscopic elucidation of uncoupled transition energies in the major photosynthetic light-harvesting complex, LHCII. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13276-13281.	7.1	62
30	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
31	Electron transfer between carotenoid and chlorophyll contributes to quenching in the LHCSR1 protein from Physcomitrella patens. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1870-1878.	1.0	51
32	Observation of Electronic Excitation Transfer Through Light Harvesting Complex II Using Two-Dimensional Electronicâ€“Vibrational Spectroscopy. Journal of Physical Chemistry Letters, 2016, 7, 4197-4206.	4.6	51
33	Solving structure in the CP29 light harvesting complex with polarization-phased 2D electronic spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3848-3853.	7.1	47
34	Dynamics of zeaxanthin binding to the photosystem II monomeric antenna protein Lhcb6 (CP24) and modulation of its photoprotection properties. Archives of Biochemistry and Biophysics, 2010, 504, 67-77.	3.0	43
35	<i>Chlorella vulgaris</i> genome assembly and annotation reveals the molecular basis for metabolic acclimation to high light conditions. Plant Journal, 2019, 100, 1289-1305.	5.7	39
36	The Association of the Antenna System to Photosystem I in Higher Plants. Journal of Biological Chemistry, 2005, 280, 31050-31058.	3.4	38

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37	Occupancy and Functional Architecture of the Pigment Binding Sites of Photosystem II Antenna Complex Lhcb5. Journal of Biological Chemistry, 2009, 284, 8103-8113.	3.4	38
38	High Light-Dependent Phosphorylation of Photosystem II Inner Antenna CP29 in Monocots Is STN7 Independent and Enhances Nonphotochemical Quenching. Plant Physiology, 2015, 167, 457-471.	4.8	36
39	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.	3.4	34
40	The function of LHCBM4/6/8 antenna proteins inChlamydomonas reinhardtii. Journal of Experimental Botany, 2016, 68, erw462.	4.8	31
41	Functional analysis of photosynthetic pigment binding complexes in the green alga Haematococcus pluvialis reveals distribution of astaxanthin in Photosystems. Scientific Reports, 2017, 7, 16319.	3.3	31
42	Photosystem II antenna complexes CP26 and CP29 are essential for nonphotochemical quenching in <i>Chlamydomonas reinhardtii</i>. Plant, Cell and Environment, 2020, 43, 496-509.	5.7	30
43	The potential use of Chlamydomonas reinhardtii and Chlorella sorokiniana as biostimulants on maize plants. Algal Research, 2021, 60, 102515.	4.6	29
44	Integration of Carbon Assimilation Modes with Photosynthetic Light Capture in the Green Alga Chlamydomonas reinhardtii. Molecular Plant, 2014, 7, 1545-1559.	8.3	27
45	Improved lipid productivity in Nannochloropsis gaditana in nitrogen-replete conditions by selection of pale green mutants. Biotechnology for Biofuels, 2020, 13, 78.	6.2	27
46	Kinetic Modeling of Charge-Transfer Quenching in the CP29 Minor Complex. Journal of Physical Chemistry B, 2008, 112, 13418-13423.	2.6	24
47	LHCSR Expression under HSP70/RBCS2 Promoter as a Strategy to Increase Productivity in Microalgae. International Journal of Molecular Sciences, 2018, 19, 155.	4.1	24
48	Time- and frequency-resolved fluorescence with a single TCSPC detector via a Fourier-transform approach. Optics Express, 2018, 26, 2270.	3.4	22
49	Identification of distinct pH- and zeaxanthin-dependent quenching in LHCSR3 from Chlamydomonas reinhardtii. ELife, 2021, 10, .	6.0	22
50	Functional modulation of LHCSR1 protein from Physcomitrella patens by zeaxanthin binding and low pH. Scientific Reports, 2017, 7, 11158.	3.3	21
51	LHCII can substitute for LHCI as an antenna for photosystem I but with reduced light-harvesting capacity. Nature Plants, 2016, 2, 16131.	9.3	20
52	Molecular Mechanisms of Nonphotochemical Quenching in the LHCSR3 Protein of <i>Chlamydomonas reinhardtii</i>. Journal of Physical Chemistry Letters, 2019, 10, 2500-2505.	4.6	20
53	Evolutionary divergence of photoprotection in the green algal lineage: a plantâ€like violaxanthin deâ€epoxidase enzyme activates the xanthophyll cycle in the green alga <i>Chlorella vulgaris</i> modulating photoprotection. New Phytologist, 2020, 228, 136-150.	7.3	20
54	Incorporating a molecular antenna in diatom microalgae cells enhances photosynthesis. Scientific Reports, 2021, 11, 5209.	3.3	19

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55	Engineering astaxanthin accumulation reduces photoinhibition and increases biomass productivity under high light in Chlamydomonas reinhardtii. , 2022, 15, .		17
56	Impaired Mitochondrial Transcription Termination Disrupts the Stromal Redox Poise in <i>Chlamydomonas</i>. Plant Physiology, 2017, 174, 1399-1419.	4.8	15
57	Heterologous expression of cyanobacterial Orange Carotenoid Protein (OCP2) as a soluble carrier of ketocarotenoids in Chlamydomonas reinhardtii. Algal Research, 2021, 55, 102255.	4.6	15
58	In vitro and in vivo investigation of chlorophyll binding sites involved in nonâ€photochemical quenching in <scp><i>Chlamydomonas reinhardtii</i></scp>. Plant, Cell and Environment, 2019, 42, 2522-2535.	5.7	14
59	Chlamydomonas reinhardtii LHCSR1 and LHCSR3 proteins involved in photoprotective non-photochemical quenching have different quenching efficiency and different carotenoid affinity. Scientific Reports, 2020, 10, 21957.	3.3	13
60	Formate binding near the redox-active TyrosineD in Photosystem II: consequences on the properties of TyrD. Photosynthesis Research, 2005, 84, 139-144.	2.9	12
61	Encapsulation of Photosystem I in Organic Microparticles Increases Its Photochemical Activity and Stability for Ex Vivo Photocatalysis. ACS Sustainable Chemistry and Engineering, 2019, 7, 10435-10444.	6.7	12
62	<i>Chlamydomonas reinhardtii</i> cellular compartments and their contribution to intracellular calcium signalling. Journal of Experimental Botany, 2021, 72, 5312-5335.	4.8	12
63	<scp>CO₂</scp> supply modulates lipid remodelling, photosynthetic and respiratory activities in <i>Chlorella</i> species. Plant, Cell and Environment, 2021, 44, 2987-3001.	5.7	11
64	LPA2 protein is involved in photosystemÂII assembly in <i>Chlamydomonas reinhardtii</i>. Plant Journal, 2021, 107, 1648-1662.	5.7	11
65	A synthetic switch based on orange carotenoid protein to control blueâ€“green light responses in chloroplasts. Plant Physiology, 2022, 189, 1153-1168.	4.8	10
66	Astaxanthin and eicosapentaenoic acid production by S4, a new mutant strain of Nannochloropsis gaditana. Microbial Cell Factories, 2022, 21, .	4.0	9
67	The Role of Acidic Residues in the C Terminal Tail of the LHCSR3 Protein of <i>Chlamydomonas reinhardtii</i> in Non-Photochemical Quenching. Journal of Physical Chemistry Letters, 2021, 12, 6895-6900.	4.6	6
68	Host-endosymbiont co-evolution shaped chloroplast translational regulation. Botany Letters, 2019, 166, 309-325.	1.4	3
69	Elucidation of Electronic Structure and Quantum Coherence in LHCII with Polarized 2D Spectroscopy. , 2010, , .		1
70	Determining Chlorophyll Orientation in the CP29 Light Harvesting Complex with Arithmetic Polarized 2D Electronic Spectroscopy. , 2010, , .		0
71	Investigating The CP29 Photosynthetic Light Harvesting Complex withÂ2DÂElectronic Spectroscopy. Biophysical Journal, 2010, 98, 172a.	0.5	0
72	Molecular Mechanism of Non-Photochemical Quenching in LHCSR3 Protein of Chlamydomonas Reindhartii. , 2019, , .		0

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73	Editorial: Microalgae Biology and Biotechnology. Frontiers in Plant Science, 2020, 11, 628267.	3.6	0
74	Kinetic Description of Energy and Charge transfer Processes in PSI from Arabidopsis thaliana. , 2008, , 323-326.		0
75	Observation of Quantum Coherence in Light-Harvesting Complex II by Two-Dimensional Electronic Spectroscopy. Springer Series in Chemical Physics, 2009, , 406-408.	0.2	0
76	Studying Spatio-Energetic Dynamics in Light Harvesting Complex II using Two-Dimensional Electronic-Vibrational Spectroscopy. , 2016, , .		0