Mikhail V Matz

List of Publications by Year
in descending order

132 papers	15,456 citations	28274 55 h-index	19749 117 g-index
158 all docs	158 docs citations	158 times ranked	16206 citing authors

#	Article	IF	Citations
1	Fluorescent proteins from nonbioluminescent Anthozoa species. Nature Biotechnology, 1999, 17, 969-973.	17.5	1,711
2	Fluorescent Proteins and Their Applications in Imaging Living Cells and Tissues. Physiological Reviews, 2010, 90, 1103-1163.	28.8	1,175
3	2b-RAD: a simple and flexible method for genome-wide genotyping. Nature Methods, 2012, 9, 808-810.	19.0	607
4	A ubiquitous family of putative gap junction molecules. Current Biology, 2000, 10, R473-R474.	3.9	485
5	Genomic determinants of coral heat tolerance across latitudes. Science, 2015, 348, 1460-1462.	12.6	473
6	Refined crystal structure of DsRed, a red fluorescent protein from coral, at 2.0-A resolution. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 462-467.	7.1	422
7	Sequencing and de novo analysis of a coral larval transcriptome using 454 GSFlx. BMC Genomics, 2009, 10, 219.	2.8	405
8	GFP-like Proteins as Ubiquitous Metazoan Superfamily: Evolution of Functional Features and Structural Complexity. Molecular Biology and Evolution, 2004, 21, 841-850.	8.9	394
9	Amplification of cDNA ends based on template-switching effect and step- out PCR. Nucleic Acids Research, 1999, 27, 1558-1560.	14.5	381
10	Simple cDNA normalization using kamchatka crab duplex-specific nuclease. Nucleic Acids Research, 2004, 32, 37e-37.	14.5	375
11	"Fluorescent Timer": Protein That Changes Color with Time. Science, 2000, 290, 1585-1588.	12.6	347
12	Diversity and evolution of the green fluorescent protein family. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4256-4261.	7.1	340
13	Profiling gene expression responses of coral larvae (Acropora millepora) to elevated temperature and settlement inducers using a novel RNA-Seq procedure. Molecular Ecology, 2011, 20, no-no.	3.9	328
14	Rapid adaptive responses to climate change in corals. Nature Climate Change, 2017, 7, 627-636.	18.8	327
15	Gene expression plasticity as a mechanism of coral adaptation to a variable environment. Nature Ecology and Evolution, 2017, 1, 14.	7.8	306
16	Natural Animal Coloration Can Be Determined by a Nonfluorescent Green Fluorescent Protein Homolog. Journal of Biological Chemistry, 2000, 275, 25879-25882.	3.4	300
17	Diversity and Evolution of Coral Fluorescent Proteins. PLoS ONE, 2008, 3, e2680.	2.5	281
18	Gene expression associated with white syndromes in a reef building coral, Acropora hyacinthus. BMC Genomics, 2015, 16, 371.	2.8	271

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19	Gene expression under chronic heat stress in populations of the mustard hill coral (<scp>P</scp>orites astreoides) from different thermal environments. Molecular Ecology, 2013, 22, 4322-4334.	3.9	242
20	GFP-like chromoproteins as a source of far-red fluorescent proteins. FEBS Letters, 2001, 507, 16-20.	2.8	240
21	Demystifying the <scp>RAD</scp> fad. Molecular Ecology, 2014, 23, 5937-5942.	3.9	199
22	Potential and limits for rapid genetic adaptation to warming in a Great Barrier Reef coral. PLoS Genetics, 2018, 14, e1007220.	3.5	184
23	Population genetics of the coral Acropora millepora : Toward genomic prediction of bleaching. Science, 2020, 369, .	12.6	167
24	Considerations for maximizing the adaptive potential of restored coral populations in the western Atlantic. Ecological Applications, 2019, 29, e01978.	3.8	163
25	Evidence for a host role in thermotolerance divergence between populations of the mustard hill coral (<scp>P</scp>orites astreoides) from different reef environments. Molecular Ecology, 2013, 22, 4335-4348.	3.9	158
26	Evolution of Coral Pigments Recreated. Science, 2004, 305, 1433-1433.	12.6	144
27	No Control Genes Required: Bayesian Analysis of qRT-PCR Data. PLoS ONE, 2013, 8, e71448.	2.5	137
28	Novel fluorescent protein from Discosoma coral and its mutants possesses a unique far-red fluorescence. FEBS Letters, 2000, 479, 127-130.	2.8	136
29	Role of gene body methylation in acclimatization and adaptation in a basal metazoan. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 13342-13346.	7.1	136
30	Deep-Sequencing Method for Quantifying Background Abundances of Symbiodinium Types: Exploring the Rare Symbiodinium Biosphere in Reef-Building Corals. PLoS ONE, 2014, 9, e94297.	2.5	135
31	Family of the green fluorescent protein: Journey to the end of the rainbow. BioEssays, 2002, 24, 953-959.	2.5	131
32	Evolution of Rhizaria: new insights from phylogenomic analysis of uncultivated protists. BMC Evolutionary Biology, 2010, 10, 377.	3.2	130
33	Statistical Approaches for DNA Barcoding. Systematic Biology, 2006, 55, 162-169.	5.6	122
34	Rapid Evolution of Coral Proteins Responsible for Interaction with the Environment. PLoS ONE, 2011, 6, e20392.	2.5	114
35	Role of host genetics and heatâ€tolerant algal symbionts in sustaining populations of the endangered coral Orbicella faveolata in the Florida Keys with ocean warming. Global Change Biology, 2019, 25, 1016-1031.	9.5	111
36	CRISPR/Cas9-mediated genome editing in a reef-building coral. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5235-5240.	7.1	110

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37	Blue light regulation of host pigment in reef-building corals. Marine Ecology - Progress Series, 2008, 364, 97-106.	1.9	110
38	Development of Gene Expression Markers of Acute Heat-Light Stress in Reef-Building Corals of the Genus Porites. PLoS ONE, 2011, 6, e26914.	2.5	108
39	Molecular Basis and Evolutionary Origins of Color Diversity in Great Star Coral Montastraea cavernosa (Scleractinia: Faviida). Molecular Biology and Evolution, 2003, 20, 1125-1133.	8.9	102
40	Genetic variation in responses to a settlement cue and elevated temperature in the reef-building coral Acropora millepora. Marine Ecology - Progress Series, 2009, 392, 81-92.	1.9	102
41	Contributions of host and symbiont pigments to the coloration of reef corals. FEBS Journal, 2007, 274, 1102-1122.	4.7	101
42	Ordered differential display: a simple method for systematic comparison of gene expression profiles. Nucleic Acids Research, 1997, 25, 2541-2542.	14.5	96
43	Adaptive Evolution of Multicolored Fluorescent Proteins in Reef-Building Corals. Journal of Molecular Evolution, 2006, 62, 332-339.	1.8	90
44	Bimodal signatures of germline methylation are linked with gene expression plasticity in the coral Acropora millepora. BMC Genomics, 2014, 15, 1109.	2.8	89
45	A likelihood ratio test for species membership based on DNA sequence data. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, 360, 1969-1974.	4.0	86
46	Are Corals Colorful?. Photochemistry and Photobiology, 2006, 82, 345.	2.5	79
47	Intraspecific differences in molecular stress responses and coral pathobiome contribute to mortality under bacterial challenge in Acropora millepora. Scientific Reports, 2017, 7, 2609.	3.3	78
48	Fineâ€scale environmental specialization of reefâ€building corals might be limiting reef recovery in the Florida Keys. Ecology, 2015, 96, 3197-3212.	3.2	74
49	Heritable differences in fitness-related traits among populations of the mustard hill coral, Porites astreoides. Heredity, 2015, 115, 509-516.	2.6	74
50	Giant Deep-Sea Protist Produces Bilaterian-like Traces. Current Biology, 2008, 18, 1849-1854.	3.9	72
51	Different strategies of differential display: areas of application. Nucleic Acids Research, 1998, 26, 5537-5543.	14.5	71
52	Exploring the role of Micronesian islands in the maintenance of coral genetic diversity in the Pacific Ocean. Molecular Ecology, 2015, 24, 70-82.	3.9	68
53	Coral larvae for restoration and research: a large-scale method for rearing Acropora millepora larvae, inducing settlement, and establishing symbiosis. PeerJ, 2017, 5, e3732.	2.0	67
54	Crystal structure of carboxypeptidase T from Thermoactinomyces vulgaris. FEBS Journal, 1992, 208, 281-288.	0.2	65

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55	Deep relationships of Rhizaria revealed by phylogenomics: A farewell to Haeckelâ€™s Radiolaria. Molecular Phylogenetics and Evolution, 2013, 67, 53-59.	2.7	65
56	Diagnostic gene expression biomarkers of coral thermal stress. Molecular Ecology Resources, 2014, 14, 667-678.	4.8	65
57	It's cheap to be colorful. FEBS Journal, 2007, 274, 2496-2505.	4.7	64
58	Fantastic Beasts and How To Sequence Them: Ecological Genomics for Obscure Model Organisms. Trends in Genetics, 2018, 34, 121-132.	6.7	64
59	Retracing Evolution of Red Fluorescence in GFP-Like Proteins from Faviina Corals. Molecular Biology and Evolution, 2010, 27, 225-233.	8.9	60
60	Metaâ€analysis of the coral environmental stress response: Acropora corals show opposing responses depending on stress intensity. Molecular Ecology, 2020, 29, 2855-2870.	3.9	60
61	A Hinge Migration Mechanism Unlocks the Evolution of Green-to-Red Photoconversion in GFP-like Proteins. Structure, 2015, 23, 34-43.	3.3	58
62	Evolutionary Consequences of DNA Methylation in a Basal Metazoan. Molecular Biology and Evolution, 2016, 33, 2285-2293.	8.9	57
63	Regulation of average length of complex PCR product. Nucleic Acids Research, 1999, 27, 23e-23.	14.5	57
64	Construction of a high-resolution genetic linkage map and comparative genome analysis for the reef-building coral Acropora millepora. Genome Biology, 2009, 10, R126.	9.6	55
65	Quantifying crypticSymbiodiniumdiversity withinOrbicella faveolataandOrbicella franksiat the Flower Garden Banks, Gulf of Mexico. PeerJ, 2014, 2, e386.	2.0	55
66	Estimating the potential for coral adaptation to global warming across the Indoâ€West Pacific. Global Change Biology, 2020, 26, 3473-3481.	9.5	54
67	Fluorescence of coral larvae predicts their settlement response to crustose coralline algae and reflects stress. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 2691-2697.	2.6	53
68	So, you want to use next-generation sequencing in marine systems? Insight from the Pan-Pacific Advanced Studies Institute. Bulletin of Marine Science, 2014, 90, 79-122.	0.8	53
69	Positive genetic associations among fitness traits support evolvability of a reefâ€building coral under multiple stressors. Global Change Biology, 2019, 25, 3294-3304.	9.5	50
70	Population structure and connectivity of the mountainous star coral, Orbicella faveolata, throughout the wider Caribbean region. Ecology and Evolution, 2017, 7, 9234-9246.	1.9	49
71	Novel polymorphic microsatellite markers for population genetics of the endangered Caribbean star coral, Montastraea faveolata. Marine Biodiversity, 2013, 43, 167-172.	1.0	47
72	Differential responses of coral larvae to the colour of ambient light guide them to suitable settlement microhabitat. Royal Society Open Science, 2015, 2, 150358.	2.4	46

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73	Molecule by molecule PCR amplification of complex DNA mixtures for direct sequencing: an approach to in vitro cloning. Nucleic Acids Research, 1996, 24, 2194-2195.	14.5	44
74	Construction of cDNA Libraries from Small Amounts of Total RNA Using the Suppression PCR Effect. Biochemical and Biophysical Research Communications, 1997, 230, 285-288.	2.1	44
75	Molecular tools for coral reef restoration: Beyond biomarker discovery. Conservation Letters, 2020, 13, e12687.	5.7	44
76	Coralâ€bleaching responses to climate change across biological scales. Global Change Biology, 2022, 28, 4229-4250.	9.5	44
77	Microsatellite Characterization and Marker Development from Public EST and WGS Databases in the Reef-Building Coral Acropora millepora (Cnidaria, Anthozoa, Scleractinia). Journal of Heredity, 2009, 100, 329-337.	2.4	42
78	Molecular characterization of larval development from fertilization to metamorphosis in a reef-building coral. BMC Genomics, 2018, 19, 17.	2.8	39
79	Six priorities to advance the science and practice of coral reef restoration worldwide. Restoration Ecology, 2021, 29, e13498.	2.9	36
80	Ecological Complexity of Coral Recruitment Processes: Effects of Invertebrate Herbivores on Coral Recruitment and Growth Depends Upon Substratum Properties and Coral Species. PLoS ONE, 2013, 8, e72830.	2.5	35
81	Evolutionary origins of germline segregation in Metazoa: evidence for a germ stem cell lineage in the coralOrbicella faveolata(Cnidaria, Anthozoa). Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20152128.	2.6	34
82	Amplification of Representative cDNA Samples from Microscopic Amounts of Invertebrate Tissue to Search for New Genes. , 2002, 183, 003-018.		32
83	A Green Fluorescent Protein with Photoswitchable Emission from the Deep Sea. PLoS ONE, 2008, 3, e3766.	2.5	32
84	Gene Expression Signatures of Energetic Acclimatisation in the Reef Building Coral Acropora millepora. PLoS ONE, 2013, 8, e61736.	2.5	32
85	Transcriptome dynamics over a lunar month in a broadcast spawning acroporid coral. Molecular Ecology, 2017, 26, 2514-2526.	3.9	32
86	Amplification of cDNA Ends Using PCR Suppression Effect and Step-Out PCR. , 2003, 221, 41-50.		31
87	Very Bright Green Fluorescent Proteins from the Pontellid Copepod Pontella mimocerami. PLoS ONE, 2010, 5, e11517.	2.5	30
88	Modeled differences of coral life-history traits influence the refugium potential of a remote Caribbean reef. Coral Reefs, 2017, 36, 913-925.	2.2	30
89	Primary structure of carboxypeptidase T: Delineation of functionally relevant features in Zn-carboxypeptidase family. The Protein Journal, 1992, 11, 561-570.	1.1	28
90	Red fluorescence in coral larvae is associated with a diapauseâ€like state. Molecular Ecology, 2016, 25, 559-569.	3.9	28

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91	Molecular cloning and primary structure of Thermoactinomyces vulgaris carboxypeptidase T A metalloenzyme endowed with dual substrate specificity. FEBS Letters, 1991, 291, 75-78.	2.8	27
92	Environmental specialization and cryptic genetic divergence in two massive coral species from the Florida Keys Reef Tract. Molecular Ecology, 2021, 30, 3468-3484.	3.9	27
93	Identification and characterization of a new family of C-type lectin-like genes from planaria Girardia tigrina. Glycobiology, 2002, 12, 463-472.	2.5	25
94	Acidâ€“Base Catalysis and Crystal Structures of a Least Evolved Ancestral GFP-like Protein Undergoing Green-to-Red Photoconversion. Biochemistry, 2013, 52, 8048-8059.	2.5	25
95	Contrasting effects of Symbiodinium identity on coral host transcriptional profiles across latitudes. Molecular Ecology, 2018, 27, 3103-3115.	3.9	23
96	Effects of thermal stress on amount, composition, and antibacterial properties of coral mucus. PeerJ, 2019, 7, e6849.	2.0	23
97	Inductive Interactions Regulating Body Patterning in Planarian, Revealed by Analysis of Expression of Novel Genescarf. Developmental Biology, 1998, 194, 172-181.	2.0	22
98	A cross-ocean comparison of responses to settlement cues in reef-building corals. PeerJ, 2014, 2, e333.	2.0	22
99	Amplification of Representative cDNA Pools from Microscopic Amounts of Animal Tissue. , 2003, 221, 103-116.		21
100	Cladocopium community divergence in two Acropora coral hosts across multiple spatial scales. Molecular Ecology, 2020, 29, 4559-4572.	3.9	21
101	How mitonuclear discordance and geographic variation have confounded species boundaries in a widely studied snake. Molecular Phylogenetics and Evolution, 2021, 162, 107194.	2.7	21
102	Altering electrical connections in the nervous system of the pteropod molluscClione limacinaby neuronal injections of gap junction mRNA. European Journal of Neuroscience, 2002, 16, 2475-2476.	2.6	20
103	Applications of Ancestral Protein Reconstruction in Understanding Protein Function: GFP-Like Proteins. Methods in Enzymology, 2005, 395, 652-670.	1.0	20
104	Changes in gene body methylation do not correlate with changes in gene expression in Anthozoa or Hexapoda. BMC Genomics, 2022, 23, 234.	2.8	19
105	Fluorescence lifetime imaging of coral fluorescent proteins. Microscopy Research and Technique, 2007, 70, 243-251.	2.2	18
106	Multi-domain GFP-like proteins from two species of marine hydrozoans. Photochemical and Photobiological Sciences, 2012, 11, 637-644.	2.9	18
107	Estimating Trait Heritability in Highly Fecund Species. G3: Genes, Genomes, Genetics, 2015, 5, 2639-2645.	1.8	17
108	Variation in heat shock protein expression at the latitudinal range limits of a widelyâ€distributed species, the <scp>G</scp>lanville fritillary butterfly (<scp>M</scp>elitaea cinxia). Physiological Entomology, 2016, 41, 241-248.	1.5	15

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109	Multi-colored homologs of the green fluorescent protein from hydromedusa Obelia sp.. Photochemical and Photobiological Sciences, 2011, 10, 1303-1309.	2.9	14
110	Quantitative high resolution melting: two methods to determine SNP allele frequencies from pooled samples. BMC Genetics, 2015, 16, 62.	2.7	14
111	Characterization of a Group of MITEs with Unusual Features from Two Coral Genomes. PLoS ONE, 2010, 5, e10700.	2.5	14
112	Evolution of Function and Color in GFP-Like Proteins. Methods of Biochemical Analysis, 2005, 47, 139-161.	0.2	12
113	Benchmarking DNA methylation assays in a reefâ€building coral. Molecular Ecology Resources, 2021, 21, 464-477.	4.8	12
114	Gene expression associated with disease resistance and long-term growth in a reef-building coral. Royal Society Open Science, 2021, 8, 210113.	2.4	10
115	Shuffling between Cladocopium and Durusdinium extensively modifies the physiology of each symbiont without stressing the coral host. Molecular Ecology, 2021, 30, 6585-6595.	3.9	10
116	Comparative neurotranscriptomics reveal widespread species differences associated with bonding. BMC Genomics, 2021, 22, 399.	2.8	7
117	Discovery and Properties of GFP-Like Proteins from Nonbioluminescent Anthozoa. Methods of Biochemical Analysis, 2005, , 121-138.	0.2	6
118	Comparative transcriptomics of sympatric species of coral reef fishes (genus: Haemulon). PeerJ, 2019, 7, e6541.	2.0	6
119	Sequence-Independent Method forin VitroGeneration of Nested Deletions for Sequencing Large DNA Fragments. Analytical Biochemistry, 1998, 258, 138-141.	2.4	5
120	Relationship betweenAcropora milleporajuvenile fluorescence and composition of newly establishedSymbiodiniumassemblage. PeerJ, 2018, 6, e5022.	2.0	5
121	Discovery and properties of GFP-like proteins from nonbioluminescent anthozoa. Methods of Biochemical Analysis, 2006, 47, 121-38.	0.2	4
122	Mechanisms and potential immune tradeoffs of accelerated coral growth induced by microfragmentation. PeerJ, 2022, 10, e13158.	2.0	4
123	Complex selection on a regulator of social cognition: Evidence of balancing selection, regulatory interactions and population differentiation in the prairie vole Avpr1a locus. Molecular Ecology, 2018, 27, 419-431.	3.9	3
124	A 2b-RAD parentage analysis pipeline for complex and mixed DNA samples. Forensic Science International: Genetics, 2021, 55, 102590.	3.1	3
125	Novel fluorescent proteins: diversity, mutagenesis and applications. , 0, 2004, .		3
126	Photoinduced activation of GFP-like proteins in tissues of reef corals. , 2006, 6098, 64.		2

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127	Dealing with model uncertainty in reconstructing ancestral proteins in the laboratory: examples from archosaur visual pigments and coralfluorescent proteins. , 2007, , 164-180.		2
128	NATURAL ANIMAL COLORATION CAN BE DETERMINED BY A NON-FLUORESCENT GFP HOMOLOG. , 2001, , .		1
129	Whole mount in situhybridization on freshwater planaria. Technical Tips Online, 1997, 2, 100-103.	0.2	0
130	Methods for Analysing mRNA Expression. , 0, , 163-407.		0
131	Ordered Differential Display. , 2006, 317, 059-074.		0
132	BOOK REVIEW | Aglow in the Dark: The Revolutionary Science of Biofluorescence. Oceanography, 2006, 19, 155-157.	1.0	0