Karen L Carleton

List of Publications by Year
in descending order

90 papers	6,647 citations	87888 38 h-index	69250 77 g-index
96 all docs	96 docs citations	96 times ranked	4535 citing authors

#	Article	IF	Citations
1	Speciation through sensory drive in cichlid fish. Nature, 2008, 455, 620-626.	27.8	947
2	The genomic substrate for adaptive radiation in African cichlid fish. Nature, 2014, 513, 375-381.	27.8	874
3	A Second-Generation Genetic Linkage Map of Tilapia (Oreochromis spp.)Sequence data from this article have been deposited with the EMBL/GenBank data libraries under accession nos. G68180, G68324 and BV005269, BV005594.. Genetics, 2005, 170, 237-244.	2.9	243
4	Cone Opsin Genes of African Cichlid Fishes: Tuning Spectral Sensitivity by Differential Gene Expression. Molecular Biology and Evolution, 2001, 18, 1540-1550.	8.9	229
5	Mix and Match Color Vision: Tuning Spectral Sensitivity by Differential Opsin Gene Expression in Lake Malawi Cichlids. Current Biology, 2005, 15, 1734-1739.	3.9	194
6	Evolution of the Cichlid Visual Palette through Ontogenetic Subfunctionalization of the Opsin Gene Arrays. Molecular Biology and Evolution, 2006, 23, 1538-1547.	8.9	177
7	Colour vision and speciation in Lake Victoria cichlids of the genus Pundamilia. Molecular Ecology, 2005, 14, 4341-4353.	3.9	151
8	Vision using multiple distinct rod opsins in deep-sea fishes. Science, 2019, 364, 588-592.	12.6	151
9	The Eyes Have It: Regulatory and Structural Changes Both Underlie Cichlid Visual Pigment Diversity. PLoS Biology, 2009, 7, e1000266.	5.6	148
10	Visual sensitivities tuned by heterochronic shifts in opsin gene expression. BMC Biology, 2008, 6, 22.	3.8	140
11	Adaptive Molecular Evolution in the Opsin Genes of Rapidly Speciating Cichlid Species. Molecular Biology and Evolution, 2005, 22, 1412-1422.	8.9	138
12	Ancestral duplications and highly dynamic opsin gene evolution in percomorph fishes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1493-1498.	7.1	129
13	Rapid isolation of CA microsatellites from the tilapia genome. Animal Genetics, 2002, 33, 140-144.	1.7	126
14	Cichlid fish visual systems: mechanisms of spectral tuning. Integrative Zoology, 2009, 4, 75-86.	2.6	114
15	Gene duplication and differential gene expression play an important role in the diversification of visual pigments in fish. Integrative and Comparative Biology, 2009, 49, 630-643.	2.0	110
16	Population variation in opsin expression in the bluefin killifish, Lucania goodei : a real-time PCR study. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2004, 190, 147-154.	1.6	105
17	Genetic and environmental variation in the visual properties of bluefin killifish, Lucania goodei. Journal of Evolutionary Biology, 2005, 18, 516-523.	1.7	105
18	Ultrasensitive dual-beam absorption and gain spectroscopy: applications for near-infrared and visible diode laser sensors. Applied Optics, 1995, 34, 3240.	2.1	103

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19	Visual pigments of African cichlid fishes: evidence for ultraviolet vision from microspectrophotometry and DNA sequences. Vision Research, 2000, 40, 879-890.	1.4	103
20	Surface structures and growth mechanism of Ga ON Si(100) determined by LEED and Auger electron spectroscopy. Surface Science, 1988, 204, 455-472.	1.9	101
21	Parallel Evolution of Opsin Gene Expression in African Cichlid Fishes. Molecular Biology and Evolution, 2010, 27, 2839-2854.	8.9	95
22	Photodissociation dynamics of formaldehyde: H2 rotational distributions and product quantum state correlations. Journal of Chemical Physics, 1990, 92, 377-393.	3.0	90
23	Plasticity of opsin gene expression in cichlids from Lake Malawi. Molecular Ecology, 2010, 19, 2064-2074.	3.9	84
24	Chromosome-scale assemblies reveal the structural evolution of African cichlid genomes. GigaScience, 2019, 8, .	6.4	83
25	Colour vision in marine organisms. Current Opinion in Neurobiology, 2015, 34, 86-94.	4.2	80
26	Spectral tuning by opsin coexpression in retinal regions that view different parts of the visual field. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141980.	2.6	74
27	A BAC-based physical map of the Nile tilapia genome. BMC Genomics, 2005, 6, 89.	2.8	72
28	Seeing the rainbow: mechanisms underlying spectral sensitivity in teleost fishes. Journal of Experimental Biology, 2020, 223, .	1.7	72
29	Sea urchin tube feet are photosensory organs that express a rhabdomeric-like opsin and PAX6. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 3371-3379.	2.6	64
30	Proximate and ultimate causes of variable visual sensitivities: Insights from cichlid fish radiations. Genesis, 2016, 54, 299-325.	1.6	64
31	Variable light environments induce plastic spectral tuning by regional opsin coexpression in the African cichlid fish, Metriaclima zebra. Molecular Ecology, 2015, 24, 4193-4204.	3.9	63
32	Depthâ€dependent plasticity in opsin gene expression varies between damselfish (Pomacentridae) species. Molecular Ecology, 2016, 25, 3645-3661.	3.9	53
33	Adult plasticity in African cichlids: Rapid changes in opsin expression in response to environmental light differences. Molecular Ecology, 2017, 26, 6036-6052.	3.9	52
34	Detection of nitrogen rotational distributions by resonant 2 + 2 multiphoton ionization through the a1Îg state. Chemical Physics Letters, 1985, 115, 492-495.	2.6	48
35	The fish eye view: are cichlids conspicuous?. Journal of Experimental Biology, 2010, 213, 2243-2255.	1.7	45
36	Spacecraft thermal energy accommodation from atomic recombination. Journal of Thermophysics and Heat Transfer, 1992, 6, 650-655.	1.6	44

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37	The opsin genes of amazonian cichlids. Molecular Ecology, 2017, 26, 1343-1356.	3.9	44
38	Why UV vision and red vision are important for damselfish (Pomacentridae): structural and expression variation in opsin genes. Molecular Ecology, 2017, 26, 1323-1342.	3.9	42
39	Photodissociation dynamics of formaldehyde: H2 (v,J) vector correlations. Journal of Chemical Physics, 1990, 93, 3907-3918.	3.0	41
40	Retinal specialization through spatially varying cell densities and opsin coexpression in cichlid fish. Journal of Experimental Biology, 2017, 220, 266-277.	1.7	40
41	An EST resource for tilapia based on 17 normalized libraries and assembly of 116,899 sequence tags. BMC Genomics, 2010, 11, 278.	2.8	39
42	Opsin Evolution in Damselfish: Convergence, Reversal, and Parallel Evolution Across Tuning Sites. Journal of Molecular Evolution, 2012, 75, 79-91.	1.8	39
43	New evidence for the role of heterochrony in the repeated evolution of cichlid opsin expression. Evolution & Development, 2011, 13, 193-203.	2.0	38
44	Limited variation in visual sensitivity among bowerbird species suggests that there is no link between spectral tuning and variation in display colouration. Journal of Experimental Biology, 2012, 215, 1090-1105.	1.7	37
45	Divergence in cis-regulatory sequences surrounding the opsin gene arrays of African cichlid fishes. BMC Evolutionary Biology, 2011, 11, 120.	3.2	35
46	Multiple Genetic Mechanisms Contribute to Visual Sensitivity Variation in the Labridae. Molecular Biology and Evolution, 2016, 33, 201-215.	8.9	34
47	The effect of parent rotational state on fragment anisotropy and application to formaldehyde. Journal of Chemical Physics, 1991, 94, 1947-1953.	3.0	33
48	Intraspecific cone opsin expression variation in the cichlids of Lake Malawi. Molecular Ecology, 2011, 20, 299-310.	3.9	33
49	The relationship between lens transmission and opsin gene expression in cichlids from Lake Malawi. Vision Research, 2010, 50, 357-363.	1.4	32
50	Evolution of cichlid vision via trans-regulatory divergence. BMC Evolutionary Biology, 2012, 12, 251.	3.2	31
51	Interspecific Variation in Rx1 Expression Controls Opsin Expression and Causes Visual System Diversity in African Cichlid Fishes. Molecular Biology and Evolution, 2014, 31, 2297-2308.	8.9	31
52	Laser probing of gallium atom interactions with silicon(100) surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1987, 5, 1141.	1.6	30
53	Identification of Amino Acid Residues Responsible for the Selectivity of Tadalafil Binding to Two Closely Related Phosphodiesterases, PDE5 and PDE6. Journal of Biological Chemistry, 2012, 287, 41406-41416.	3.4	29
54	Vector and product quantum-state correlations for photofragmentation of formaldehyde. Journal of the Chemical Society, Faraday Transactions 2, 1989, 85, 1155.	1.1	28

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55	Rod and Cone Opsin Families Differ in Spectral Tuning Domains but Not Signal Transducing Domains as Judged by Saturated Evolutionary Trace Analysis. Journal of Molecular Evolution, 2005, 61, 75-89.	1.8	27
56	Diurnal variation in opsin expression and common housekeeping genes necessitates comprehensive normalization methods for quantitative realâ€time PCR analyses. Molecular Ecology Resources, 2019, 19, 1447-1460.	4.8	27
57	A detailed investigation of the visual system and visual ecology of the Barrier Reef anemonefish, Amphiprion akindynos. Scientific Reports, 2019, 9, 16459.	3.3	27
58	Lineage-Specific Expansion of Vomeronasal Type 2 Receptor-Like (OlfC) Genes in Cichlids May Contribute to Diversification of Amino Acid Detection Systems. Genome Biology and Evolution, 2013, 5, 711-722.	2.5	26
59	Short term colour vision plasticity on the reef: Changes in opsin expression under varying light conditions differ between ecologically distinct reef fish species. Journal of Experimental Biology, 2018, 221, .	1.7	26
60	Cardinalfishes (Apogonidae) show visual system adaptations typical of nocturnally and diurnally active fish. Molecular Ecology, 2019, 28, 3025-3041.	3.9	24
61	Behavioral color vision in a cichlid fish: Metriaclima benetos. Journal of Experimental Biology, 2017, 220, 2887-2899.	1.7	22
62	Variable vision in variable environments: the visual system of an invasive cichlid (Cichla) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td	1.7	22
63	The Use of Group Activities in Introductory Biology Supports Learning Gains and Uniquely Benefits High-Achieving Students. Journal of Microbiology and Biology Education, 2016, 17, 360-369.	1.0	21
64	Quantification of Transcript Levels with Quantitative RT-PCR. Methods in Molecular Biology, 2012, 772, 279-295.	0.9	20
65	Tbx2aModulates Switching ofRH2andLWSOpsin Gene Expression. Molecular Biology and Evolution, 2020, 37, 2002-2014.	8.9	20
66	Chromosomeâ€level assembly of southern catfish (silurus meridionalis) provides insights into visual adaptation to nocturnal and benthic lifestyles. Molecular Ecology Resources, 2021, 21, 1575-1592.	4.8	20
67	Axes of visual adaptation in the ecologically diverse family Cichlidae. Seminars in Cell and Developmental Biology, 2020, 106, 43-52.	5.0	20
68	Base Substitution in Fish Mitochondrial DNA: Patterns and Rates. , 1997, , 13-24.		19
69	Multiple trans QTL and one cis-regulatory deletion are associated with the differential expression of cone opsins in African cichlids. BMC Genomics, 2018, 19, 945.	2.8	19
70	Sensory modalities in cichlid fish behavior. Current Opinion in Behavioral Sciences, 2015, 6, 115-124.	3.9	18
71	Movement of transposable elements contributes to cichlid diversity. Molecular Ecology, 2020, 29, 4956-4969.	3.9	18
72	Reviewing guppy color vision: integrating the molecular and physiological variation in visual tuning of a classic system for sensory drive. Environmental Epigenetics, 2018, 64, 535-545.	1.8	17

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73	An Evaluation of the Role of Sensory Drive in the Evolution of Lake Malawi Cichlid Fishes. International Journal of Evolutionary Biology, 2012, 2012, 1-12.	1.0	15
74	Color discrimination thresholds in a cichlid fish: Metriaclima benetos. Journal of Experimental Biology, 2019, 222, .	1.7	15
75	Visual pigment evolution in Characiformes: The dynamic interplay of teleost wholeâ€genome duplication, surviving opsins and spectral tuning. Molecular Ecology, 2020, 29, 2234-2253.	3.9	15
76	Dynamics of electronic energy quenching: The reaction of H2(B)+He. Journal of Chemical Physics, 1990, 93, 323-332.	3.0	14
77	Desorption of a two-state system: Laser probing of gallium atom spin-orbit states from silicon (100). Surface Science, 1988, 199, 447-466.	1.9	13
78	Quantification of vitellogeninâ€“mRNA during maturation and breeding of a burying beetle. Journal of Insect Physiology, 2005, 51, 323-331.	2.0	13
79	Determination of the Genetic Architecture Underlying Short Wavelength Sensitivity in Lake Malawi Cichlids. Journal of Heredity, 2017, 108, 379-390.	2.4	12
80	Allelic Variation in Malawi Cichlid Opsins: A Tale of Two Genera. Journal of Molecular Evolution, 2010, 70, 593-604.	1.8	11
81	Visual Photopigment Evolution in Speciation. , 2014, , 241-267.		8
82	Evolutionary Genetics: Rose-colored goggles. Heredity, 2003, 90, 116-117.	2.6	5
83	Group Active Engagements Using Quantitative Modeling of Physiology Concepts in Large-Enrollment Biology Classes. Journal of Microbiology and Biology Education, 2016, 17, 487-489.	1.0	3
84	A novel exome probe set captures phototransduction genes across birds (Aves) enabling efficient analysis of vision evolution. Molecular Ecology Resources, 2022, 22, 587-601.	4.8	3
85	The Right Light: Tiger Salamander Capture Rates and Spectral Sensitivity. Wildlife Society Bulletin, 2020, 44, 68-76.	1.6	2
86	Laser Probing of the Dynamics of Ga Interactions on Si(lO0). Materials Research Society Symposia Proceedings, 1988, 116, 45.	0.1	1
87	Visual adaptation could aid sympatric speciation in a deep crater lake. Molecular Ecology, 2019, 28, 5007-5009.	3.9	1
88	How reef fish see their colourful world: why UV-and red vision are important for damselfish (Pomacentridae). Frontiers in Marine Science, 0, 6, .	2.5	1
89	Spacecraft thermal energy accommodation from atomic recombination. , 1991, , .		0
90	H2/O2 three-body rates at high temperatures. , 1991, , .		0