Karen L Carleton

List of Publications by Citations

89 papers	5,377 citations	36 h-index	72 g-index
96 ext. papers	6,205 ext. citations	5.8 avg, IF	5.53 L-index

#	Paper	IF	Citations
89	Speciation through sensory drive in cichlid fish. *Nature*, **2008**, 455, 620-6	50.4	796
88	The genomic substrate for adaptive radiation in African cichlid fish. *Nature*, **2014**, 513, 375-381	50.4	656
87	A second-generation genetic linkage map of tilapia (Oreochromis spp.). *Genetics*, **2005**, 170, 237-44	4	212
86	Cone opsin genes of african cichlid fishes: tuning spectral sensitivity by differential gene expression. *Molecular Biology and Evolution*, **2001**, 18, 1540-50	8.3	210
85	Mix and match color vision: tuning spectral sensitivity by differential opsin gene expression in Lake Malawi cichlids. *Current Biology*, **2005**, 15, 1734-9	6.3	174
84	Evolution of the cichlid visual palette through ontogenetic subfunctionalization of the opsin gene arrays. *Molecular Biology and Evolution*, **2006**, 23, 1538-47	8.3	161
83	Colour vision and speciation in Lake Victoria cichlids of the genus Pundamilia. *Molecular Ecology*, **2005**, 14, 4341-53	5.7	133
82	The eyes have it: regulatory and structural changes both underlie cichlid visual pigment diversity. *PLoS Biology*, **2009**, 7, e1000266	9.7	116
81	Rapid isolation of CA microsatellites from the tilapia genome. *Animal Genetics*, **2002**, 33, 140-4	2.5	116
80	Visual sensitivities tuned by heterochronic shifts in opsin gene expression. *BMC Biology*, **2008**, 6, 22	7.3	114
79	Adaptive molecular evolution in the opsin genes of rapidly speciating cichlid species. *Molecular Biology and Evolution*, **2005**, 22, 1412-22	8.3	112
78	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, 1493-8	11.5	99
77	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, 147-54	2.3	99
76	Gene duplication and differential gene expression play an important role in the diversification of visual pigments in fish. *Integrative and Comparative Biology*, **2009**, 49, 630-43	2.8	97
75	Visual pigments of African cichlid fishes: evidence for ultraviolet vision from microspectrophotometry and DNA sequences. *Vision Research*, **2000**, 40, 879-90	2.1	97
74	Cichlid fish visual systems: mechanisms of spectral tuning. *Integrative Zoology*, **2009**, 4, 75-86	1.9	95
73	Surface structures and growth mechanism of Ga ON Si(100) determined by LEED and Auger electron spectroscopy. *Surface Science*, **1988**, 204, 455-472	1.8	95

72	Genetic and environmental variation in the visual properties of bluefin killifish, Lucania goodei. *Journal of Evolutionary Biology*, **2005**, 18, 516-23	2.3	91
71	Vision using multiple distinct rod opsins in deep-sea fishes. *Science*, **2019**, 364, 588-592	33.3	88
70	Photodissociation dynamics of formaldehyde: H2 rotational distributions and product quantum state correlations. *Journal of Chemical Physics*, **1990**, 92, 377-393	3.9	84
69	Ultrasensitive dual-beam absorption and gain spectroscopy: applications for near-infrared and visible diode laser sensors. *Applied Optics*, **1995**, 34, 3240-9	1.7	83
68	Parallel evolution of opsin gene expression in African cichlid fishes. *Molecular Biology and Evolution*, **2010**, 27, 2839-54	8.3	79
67	Plasticity of opsin gene expression in cichlids from Lake Malawi. *Molecular Ecology*, **2010**, 19, 2064-74	5.7	74
66	A BAC-based physical map of the Nile tilapia genome. *BMC Genomics*, **2005**, 6, 89	4.5	64
65	Colour vision in marine organisms. *Current Opinion in Neurobiology*, **2015**, 34, 86-94	7.6	63
64	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,	4.4	62
63	Variable light environments induce plastic spectral tuning by regional opsin coexpression in the African cichlid fish, Metriaclima zebra. *Molecular Ecology*, **2015**, 24, 4193-204	5.7	54
62	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, 3371-9	4.4	49
61	Chromosome-scale assemblies reveal the structural evolution of African cichlid genomes. *GigaScience*, **2019**, 8,	7.6	46
60	Proximate and ultimate causes of variable visual sensitivities: Insights from cichlid fish radiations. *Genesis*, **2016**, 54, 299-325	1.9	44
59	The fish eye view: are cichlids conspicuous?. *Journal of Experimental Biology*, **2010**, 213, 2243-55	3	43
58	Detection of nitrogen rotational distributions by resonant 2 + 2 multiphoton ionization through the a1g state. *Chemical Physics Letters*, **1985**, 115, 492-495	2.5	40
57	Photodissociation dynamics of formaldehyde: H2 (v,J) vector correlations. *Journal of Chemical Physics*, **1990**, 93, 3907-3918	3.9	39
56	An EST resource for tilapia based on 17 normalized libraries and assembly of 116,899 sequence tags. *BMC Genomics*, **2010**, 11, 278	4.5	38
55	Spacecraft thermal energy accommodation from atomic recombination. *Journal of Thermophysics and Heat Transfer*, **1992**, 6, 650-655	1.3	37

54	Depth-dependent plasticity in opsin gene expression varies between damselfish (Pomacentridae) species. *Molecular Ecology*, **2016**, 25, 3645-61	5.7	37
53	Adult plasticity in African cichlids: Rapid changes in opsin expression in response to environmental light differences. *Molecular Ecology*, **2017**, 26, 6036-6052	5.7	35
52	Retinal specialization through spatially varying cell densities and opsin coexpression in cichlid fish. *Journal of Experimental Biology*, **2017**, 220, 266-277	3	33
51	Opsin evolution in damselfish: convergence, reversal, and parallel evolution across tuning sites. *Journal of Molecular Evolution*, **2012**, 75, 79-91	3.1	33
50	Why UV vision and red vision are important for damselfish (Pomacentridae): structural and expression variation in opsin genes. *Molecular Ecology*, **2017**, 26, 1323-1342	5.7	32
49	Seeing the rainbow: mechanisms underlying spectral sensitivity in teleost fishes. *Journal of Experimental Biology*, **2020**, 223,	3	31
48	The relationship between lens transmission and opsin gene expression in cichlids from Lake Malawi. *Vision Research*, **2010**, 50, 357-63	2.1	31
47	The effect of parent rotational state on fragment anisotropy and application to formaldehyde. *Journal of Chemical Physics*, **1991**, 94, 1947-1953	3.9	31
46	Multiple Genetic Mechanisms Contribute to Visual Sensitivity Variation in the Labridae. *Molecular Biology and Evolution*, **2016**, 33, 201-15	8.3	30
45	The opsin genes of amazonian cichlids. *Molecular Ecology*, **2017**, 26, 1343-1356	5.7	30
44	New evidence for the role of heterochrony in the repeated evolution of cichlid opsin expression. *Evolution & Development*, **2011**, 13, 193-203	2.6	30
43	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, 1090-105	3	29
42	Intraspecific cone opsin expression variation in the cichlids of Lake Malawi. *Molecular Ecology*, **2011**, 20, 299-310	5.7	29
41	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		29
40	Interspecific variation in Rx1 expression controls opsin expression and causes visual system diversity in African cichlid fishes. *Molecular Biology and Evolution*, **2014**, 31, 2297-308	8.3	28
39	Divergence in cis-regulatory sequences surrounding the opsin gene arrays of African cichlid fishes. *BMC Evolutionary Biology*, **2011**, 11, 120	3	28
38	Vector and product quantum-state correlations for photofragmentation of formaldehyde. *Journal of the Chemical Society, Faraday Transactions 2*, **1989**, 85, 1155		28
37	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, 41406-16	5.4	26

36	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	3.1	25
35	Evolution of cichlid vision via trans-regulatory divergence. *BMC Evolutionary Biology*, **2012**, 12, 251	3	24
34	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, 711-22	3.9	20
33	Behavioral color vision in a cichlid fish:. *Journal of Experimental Biology*, **2017**, 220, 2887-2899	3	16
32	A detailed investigation of the visual system and visual ecology of the Barrier Reef anemonefish, Amphiprion akindynos. *Scientific Reports*, **2019**, 9, 16459	4.9	16
31	Variable vision in variable environments: the visual system of an invasive cichlid () in Lake Gatun, Panama. *Journal of Experimental Biology*, **2019**, 222,	3	15
30	Quantification of transcript levels with quantitative RT-PCR. *Methods in Molecular Biology*, **2011**, 772, 279-95	1.4	15
29	Base Substitution in Fish Mitochondrial DNA: Patterns and Rates **1997**, 13-24		15
28	Short-term colour vision plasticity on the reef: changes in opsin expression under varying light conditions differ between ecologically distinct fish species. *Journal of Experimental Biology*, **2018**, 221,	3	15
27	Sensory modalities in cichlid fish behavior. *Current Opinion in Behavioral Sciences*, **2015**, 6, 115-124	4	14
26	Cardinalfishes (Apogonidae) show visual system adaptations typical of nocturnally and diurnally active fish. *Molecular Ecology*, **2019**, 28, 3025-3041	5.7	13
25	An evaluation of the role of sensory drive in the evolution of lake Malawi cichlid fishes. *International Journal of Evolutionary Biology*, **2012**, 2012, 647420		13
24	Quantification of vitellogenin-mRNA during maturation and breeding of a burying beetle. *Journal of Insect Physiology*, **2005**, 51, 323-31	2.4	13
23	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	4.5	13
22	Dynamics of electronic energy quenching: The reaction of H2(B)+He. *Journal of Chemical Physics*, **1990**, 93, 323-332	3.9	12
21	Desorption of a two-state system: Laser probing of gallium atom spin-orbit states from silicon (100). *Surface Science*, **1988**, 199, 447-466	1.8	12
20	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	2.4	11
19	Allelic variation in Malawi cichlid opsins: a tale of two genera. *Journal of Molecular Evolution*, **2010**, 70, 593-604	3.1	11

18	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	1.3	11
17	Color discrimination thresholds in a cichlid fish:. *Journal of Experimental Biology*, **2019**, 222,	3	10
16	Tbx2a Modulates Switching of RH2 and LWS Opsin Gene Expression. *Molecular Biology and Evolution*, **2020**, 37, 2002-2014	8.3	9
15	Diurnal variation in opsin expression and common housekeeping genes necessitates comprehensive normalization methods for quantitative real-time PCR analyses. *Molecular Ecology Resources*, **2019**, 19, 1447-1460	8.4	9
14	Determination of the Genetic Architecture Underlying Short Wavelength Sensitivity in Lake Malawi Cichlids. *Journal of Heredity*, **2017**, 108, 379-390	2.4	8
13	Movement of transposable elements contributes to cichlid diversity. *Molecular Ecology*, **2020**, 29, 4956-4969	5.7	8
12	Visual pigment evolution in Characiformes: The dynamic interplay of teleost whole-genome duplication, surviving opsins and spectral tuning. *Molecular Ecology*, **2020**, 29, 2234-2253	5.7	7
11	Axes of visual adaptation in the ecologically diverse family Cichlidae. *Seminars in Cell and Developmental Biology*, **2020**, 106, 43-52	7.5	7
10	Chromosome-scale assemblies reveal the structural evolution of African cichlid genomes		5
9	Visual Photopigment Evolution in Speciation **2014**, 241-267		4
8	Chromosome-level assembly of southern catfish (silurus meridionalis) provides insights into visual adaptation to nocturnal and benthic lifestyles. *Molecular Ecology Resources*, **2021**, 21, 1575-1592	8.4	3
7	Group Active Engagements Using Quantitative Modeling of Physiology Concepts in Large-Enrollment Biology Classes. *Journal of Microbiology and Biology Education*, **2016**, 17, 487-489	1.3	2
6	Movement of transposable elements contributes to cichlid diversity		2
5	Visual pigment evolution in Characiformes: the dynamic interplay of teleost whole-genome duplication, surviving opsins and spectral tuning		2
4	Laser Probing of the Dynamics of Ga Interactions on Si(lO0). *Materials Research Society Symposia Proceedings*, **1988**, 116, 45		1
3	Vision using multiple distinct rod opsins in deep-sea fishes		1
2	The Right Light: Tiger Salamander Capture Rates and Spectral Sensitivity. *Wildlife Society Bulletin*, **2020**, 44, 68-76	1.4	
1	The genetic basis of biodiversity: genomic studies of cichlid fishes **2003**, 35-44		