Daniel Osorio

List of Publications by Year
in descending order

128 papers	10,380 citations	43973 48 h-index	35952 97 g-index
134 all docs	134 docs citations	134 times ranked	5848 citing authors

#	Article	IF	Citations
1	Receptor noise as a determinant of colour thresholds. Proceedings of the Royal Society B: Biological Sciences, 1998, 265, 351-358.	1.2	1,071
2	Animal colour visionÂâ€"Âbehavioural tests and physiological concepts. Biological Reviews, 2003, 78, 81-118.	4.7	731
3	Tetrachromacy, oil droplets and bird plumage colours. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1998, 183, 621-633.	0.7	639
4	The biology of color. Science, 2017, 357, .	6.0	509
5	Colour vision as an adaptation to frugivory in primates. Proceedings of the Royal Society B: Biological Sciences, 1996, 263, 593-599.	1.2	342
6	Photoreceptor sectral sensitivities in terrestrial animals: adaptations for luminance and colour vision. Proceedings of the Royal Society B: Biological Sciences, 2005, 272, 1745-1752.	1.2	334
7	A review of the evolution of animal colour vision and visual communication signals. Vision Research, 2008, 48, 2042-2051.	0.7	329
8	Evolution and selection of trichromatic vision in primates. Trends in Ecology and Evolution, 2003, 18, 198-205.	4.2	311
9	Guidelines for the Care and Welfare of Cephalopods in Research â€"A consensus based on an initiative by CephRes, FELASA and the Boyd Group. Laboratory Animals, 2015, 49, 1-90.	0.5	262
10	Colour vision of domestic chicks. Journal of Experimental Biology, 1999, 202, 2951-2959.	0.8	214
11	Visual Ecology and Perception of Coloration Patterns by Domestic Chicks. Evolutionary Ecology, 1999, 13, 673-689.	0.5	186
12	The sensory ecology of primate food perception. Evolutionary Anthropology, 2001, 10, 171-186.	1.7	184
13	Detection of Fruit and the Selection of Primate Visual Pigments for Color Vision. American Naturalist, 2004, 164, 696-708.	1.0	182
14	From spectral information to animal colour vision: experiments and concepts. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 1617-1625.	1.2	161
15	Zebrafish Differentially Process Color across Visual Space to Match Natural Scenes. Current Biology, 2018, 28, 2018-2032.e5.	1.8	161
16	Colour vision of domestic chicks. Journal of Experimental Biology, 1999, 202, 2951-9.	0.8	158
17	Spectral reflectance and directional properties of structural coloration in bird plumage. Journal of Experimental Biology, 2002, 205, 2017-2027.	0.8	152
18	The effect of colour vision status on the detection and selection of fruits by tamarins (Saguinus spp.). Journal of Experimental Biology, 2003, 206, 3159-3165.	0.8	145

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19	Human cone-pigment spectral sensitivities and the reflectances of natural surfaces. Biological Cybernetics, 1992, 67, 217-222.	0.6	144
20	Cephalopods in neuroscience: regulations, research and the 3Rs. Invertebrate Neuroscience, 2014, 14, 13-36.	1.8	142
21	The identification and management of pain, suffering and distress in cephalopods, including anaesthesia, analgesia and humane killing. Journal of Experimental Marine Biology and Ecology, 2013, 447, 46-64.	0.7	140
22	Field Kit to Characterize Physical, Chemical and Spatial Aspects of Potential Primate Foods. Folia Primatologica, 2001, 72, 11-25.	0.3	132
23	Testing the phenotypic gambit: phenotypic, genetic and environmental correlations of colour. Journal of Evolutionary Biology, 2007, 20, 549-557.	0.8	129
24	EVOLUTION AND FUNCTION OF ROUTINE TRICHROMATIC VISION IN PRIMATES. Evolution; International Journal of Organic Evolution, 2003, 57, 2636-2643.	1.1	127
25	Discrimination of oriented visual textures by poultry chicks. Vision Research, 2004, 44, 83-89.	0.7	119
26	Spectral reflectance and directional properties of structural coloration in bird plumage. Journal of Experimental Biology, 2002, 205, 2017-27.	0.8	119
27	Dramatic colour changes in a bird of paradise caused by uniquely structured breast feather barbules. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 2098-2104.	1.2	109
28	Color signals in natural scenes: characteristics of reflectance spectra and effects of natural illuminants. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 218.	0.8	104
29	UV Photoreceptors and UV-Yellow Wing Pigments in<i>Heliconius</i>Butterflies Allow a Color Signal to Serve both Mimicry and Intraspecific Communication. American Naturalist, 2012, 179, 38-51.	1.0	98
30	Selective signalling by cuttlefish to predators. Current Biology, 2007, 17, R1044-R1045.	1.8	96
31	Cognitive Dimensions of Predator Responses to Imperfect Mimicry. PLoS Biology, 2007, 5, e339.	2.6	95
32	Accurate memory for colour but not pattern contrast in chicks. Current Biology, 1999, 9, 199-202.	1.8	91
33	The Retinal Basis of Vertebrate Color Vision. Annual Review of Vision Science, 2019, 5, 177-200.	2.3	86
34	Perception of visual texture and the expression of disruptive camouflage by the cuttlefish, Sepia officinalis. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 1369-1375.	1.2	72
35	Camouflage by edge enhancement in animal coloration patterns and its implications for visual mechanisms. Proceedings of the Royal Society B: Biological Sciences, 1991, 244, 81-85.	1.2	71
36	Spectral tuning of dichromats to natural scenes. Vision Research, 2000, 40, 3257-3271.	0.7	67

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37	Arthropod evolution: great brains, beautiful bodies. Trends in Ecology and Evolution, 1995, 10, 449-454.	4.2	66
38	Perception of edges and visual texture in the camouflage of the common cuttlefish, <i>Sepia officinalis</i>. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 439-448.	1.8	65
39	Colourful objects through animal eyes. Color Research and Application, 2001, 26, S214-S217.	0.8	61
40	To Be Seen or to Hide: Visual Characteristics of Body Patterns for Camouflage and Communication in the Australian Giant Cuttlefish<i>Sepia apama</i>. American Naturalist, 2011, 177, 681-690.	1.0	61
41	A foraging advantage for dichromatic marmosets (<i>Callithrix geoffroyi</i>) at low light intensity. Biology Letters, 2010, 6, 36-38.	1.0	60
42	Mechanisms for Neural Signal Enhancement in the Blowfly Compound Eye. Journal of Experimental Biology, 1989, 144, 113-146.	0.8	60
43	Colour preferences and colour vision in poultry chicks. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 1941-1948.	1.2	58
44	Sexual dimorphism in the compound eye of <i>Heliconius erato</i>: a nymphalid butterfly with at least five spectral classes of photoreceptor. Journal of Experimental Biology, 2016, 219, 2377-87.	0.8	57
45	Stomatopod photoreceptor spectral tuning as an adaptation for colour constancy in water. Vision Research, 1997, 37, 3299-3309.	0.7	54
46	Cuttlefish camouflage: context-dependent body pattern use during motion. Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 3963-3969.	1.2	53
47	Light during embryonic development modulates patterns of lateralization strongly and similarly in both zebrafish and chick. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 983-989.	1.8	52
48	Colour categorization by domestic chicks. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 2077-2084.	1.2	51
49	The effects of the visual environment on responses to colour by domestic chicks. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2002, 188, 135-140.	0.7	51
50	Juvenile plaice (Pleuronectes platessa) produce camouflage by flexibly combining two separate patterns. Journal of Experimental Biology, 2006, 209, 3288-3292.	0.8	51
51	A review of cuttlefish camouflage and object recognition and evidence for depth perception. Journal of Experimental Biology, 2008, 211, 1757-1763.	0.8	51
52	Mechanisms of early visual processing in the medulla of the locust optic lobe: How self-inhibition, spatial-pooling, and signal rectification contribute to the properties of transient cells. Visual Neuroscience, 1991, 7, 345-355.	0.5	50
53	A good eye for arthropod evolution. BioEssays, 1994, 16, 419-424.	1.2	50
54	Vision in Birds. , 2008, , 25-52.		49

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55	Effect of colour vision status on insect prey capture efficiency of captive and wild tamarins (Saguinus spp.). Animal Behaviour, 2012, 83, 479-486.	0.8	48
56	Ultraviolet and yellow reflectance but not fluorescence is important for visual discrimination of conspecifics by <i>Heliconius erato</i>. Journal of Experimental Biology, 2017, 220, 1267-1276.	0.8	47
57	Colour vision in the glow-worm Lampyris noctiluca (L.)(Coleoptera: Lampyridae): evidence for a green-blue chromatic mechanism. Journal of Experimental Biology, 2004, 207, 2373-2378.	0.8	45
58	Cuttlefish responses to visual orientation of substrates, water flow and a model of motion camouflage. Journal of Experimental Biology, 2006, 209, 4717-4723.	0.8	44
59	Spectral sensitivities of photoreceptors and lamina monopolar cells in the dragonfly, Hemicordulia tau. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1991, 169, 663.	0.7	43
60	Effect of polymorphic colour vision for fruit detection in the spider monkey Ateles geoffroyi, and its implications for the maintenance of polymorphic colour vision in platyrrhine monkeys. Journal of Experimental Biology, 2004, 207, 2465-2470.	0.8	43
61	The tuning of human photopigments may minimize redâ€"green chromatic signals in natural conditions. Proceedings of the Royal Society B: Biological Sciences, 1993, 252, 209-213.	1.2	41
62	Characterization of natural illuminants in forests and the use of digital video data to reconstruct illuminant spectra. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1713.	0.8	41
63	Coevolution of coloration and colour vision?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160338.	1.8	41
64	Estimation of errors in luminance signals encoded by primate retina resulting from sampling of natural images with red and green cones. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1998, 15, 16.	0.8	40
65	Animal Coloration Patterns: Linking Spatial Vision to Quantitative Analysis. American Naturalist, 2019, 193, 164-186.	1.0	38
66	Characterisation of columnar neurons and visual signal processing in the medulla of the locust optic lobe by system identification techniques. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1996, 178, 183-99.	0.7	36
67	Directionally selective cells in the locust medulla. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1986, 159, 841-847.	0.7	35
68	Cuttlefish camouflage: a quantitative study of patterning. Biological Journal of the Linnean Society, 0, 92, 335-345.	0.7	35
69	The temporal properties of non-linear, transient cells in the locust medulla. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1987, 161, 431-440.	0.7	33
70	Homology and parallelism in arthropod sensory processing. , 1998, , 333-347.		31
71	Identifying the structure in cuttlefish visual signals. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 1617-1624.	1.8	29
72	Ultraviolet Sensitivity and Spectral Opponency in the Locust. Journal of Experimental Biology, 1986, 122, 193-208.	0.8	29

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73	The effects of longitudinal chromatic aberration and a shift in the peak of the middle-wavelength sensitive cone fundamental on cone contrast. Vision Research, 2008, 48, 1929-1939.	0.7	28
74	The retinal basis of vision in chicken. Seminars in Cell and Developmental Biology, 2020, 106, 106-115.	2.3	28
75	Spam and the evolution of the fly's eye. BioEssays, 2007, 29, 111-115.	1.2	27
76	Modelling fish colour constancy, and the implications for vision and signalling in water. Journal of Experimental Biology, 2016, 219, 1884-92.	0.8	27
77	Dietary analysis I: Food physics. , 2003, , 184-198.		26
78	Does conspicuousness scale linearly with colour distance? A test using reef fish. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201456.	1.2	26
79	Morphology and Ornamentation in Male Magnificent Frigatebirds: Variation with Age Class and Mating Status. American Naturalist, 2007, 169, S93-S111.	1.0	25
80	Edge detection and texture classification by cuttlefish. Journal of Vision, 2009, 9, 13-13.	0.1	25
81	What causes edge fixation in walking flies?. Journal of Experimental Biology, 1990, 149, 281-292.	0.8	25
82	Modular organization of adaptive colouration in flounder and cuttlefish revealed by independent component analysis. Network: Computation in Neural Systems, 2003, 14, 321-333.	2.2	23
83	Temporal and spectral properties of sustaining cells in the medulla of the locust. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1987, 161, 441-448.	0.7	21
84	Local feedback mediated via amacrine cells in the insect optic lobe. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1992, 171, 447.	0.7	20
85	Bi-partitioning and boundary detection in natural scenes. Spatial Vision, 1987, 2, 191-198.	1.4	19
86	Generalization of Color by Chickens: Experimental Observations and a Bayesian Model. American Naturalist, 2007, 169, S27-S41.	1.0	19
87	Leaf Colour as a Signal of Chemical Defence to Insect Herbivores in Wild Cabbage (Brassica oleracea). PLoS ONE, 2015, 10, e0136884.	1.1	17
88	What causes edge fixation in walking flies?. Journal of Experimental Biology, 1990, 149, 281-92.	0.8	17
89	Prospective severity classification of scientific procedures in cephalopods: Report of a COST FA1301 Working Group survey. Laboratory Animals, 2019, 53, 541-563.	0.5	16
90	Spectral responses and chromatic processing in the dragonfly lamina. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1996, 178, 543.	0.7	15

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91	Symmetry perception by poultry chicks and its implications for three-dimensional object recognition. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 841-846.	1.2	15
92	Colourfulness as a possible measure of object proximity in the larval zebrafish brain. Current Biology, 2021, 31, R235-R236.	1.8	15
93	Visual contrast and color in rapid learning of novel patterns by chicks. Journal of Experimental Biology, 2013, 216, 4184-9.	0.8	14
94	Eye evolution: Darwin's shudder stilled. Trends in Ecology and Evolution, 1994, 9, 241-242.	4.2	13
95	Cuttlefish see shape from shading, fine-tuning coloration in response to pictorial depth cues and directional illumination. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20160062.	1.2	13
96	Colourful objects through animal eyes. Color Research and Application, 2001, 26, S214-S217.	0.8	13
97	Visual Pigments: Trading Noise for Fast Recovery. Current Biology, 2004, 14, R1051-R1053.	1.8	12
98	Multi-level control of adaptive camouflage by European cuttlefish. Current Biology, 2022, 32, 2556-2562.e2.	1.8	12
99	Determination of Photoreceptor Cell Spectral Sensitivity in an Insect Model from In Vivo Intracellular Recordings. Journal of Visualized Experiments, 2016, , 53829.	0.2	11
100	Visual perception and camouflage response to 3D backgrounds and cast shadows in the European cuttlefish, <i>Sepia officinalis</i>. Journal of Experimental Biology, 2021, 224, .	0.8	11
101	Colour discrimination thresholds vary throughout colour space in a reef fish (<i>Rhinecanthus) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.8	11
102	Sepia tones, stomatopod signals and the uses of colour. Trends in Ecology and Evolution, 1997, 12, 167-168.	4.2	10
103	EVOLUTION AND FUNCTION OF ROUTINE TRICHROMATIC VISION IN PRIMATES. Evolution; International Journal of Organic Evolution, 2003, 57, 2636.	1.1	10
104	Short article: Sensory generalization and learning about novel colours by poultry chicks. Quarterly Journal of Experimental Psychology, 2009, 62, 1249-1256.	0.6	9
105	Cephalopod Behaviour: Skin Flicks. Current Biology, 2014, 24, R684-R685.	1.8	9
106	Principles and application of the receptor noise model of color discrimination: a comment on Olsson et al.. Behavioral Ecology, 2018, 29, 283-284.	1.0	9
107	Object colours, material properties and animal signals. Journal of Experimental Biology, 2019, 222, .	0.8	8
108	Colour generalisation by domestic chicks. Behavioral and Brain Sciences, 2001, 24, 654-654.	0.4	7

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109	The evolutionary ecology of bird and reptile photoreceptor spectral sensitivities. Current Opinion in Behavioral Sciences, 2019, 30, 223-227.	2.0	7
110	What can camouflage tell us about non-human visual perception? A case study of multiple cue use in cuttlefish (<i>Sepia</i> spp.). , 2011, , 164-185.		6
111	The challenge of objective scar colour assessment in a clinical setting: using digital photography. Journal of Wound Care, 2015, 24, 379-387.	0.5	6
112	Shift of edge-taxis to scototaxis depends on mean luminance and is predicted by a matched filter theory on the responses of fly lamina LMC cells. Visual Neuroscience, 1990, 4, 579-584.	0.5	4
113	Perspectives on Primate Color Vision. , 2007, , 805-819.		4
114	Extraordinary Color Vision. Science, 2014, 343, 381-382.	6.0	4
115	Modular organization of adaptive colouration in flounder and cuttlefish revealed by independent component analysis. , 0, .		4
116	Modular organization of adaptive colouration in flounder and cuttlefish revealed by independent component analysis. Network: Computation in Neural Systems, 2003, 14, 321-33.	2.2	4
117	The Ecology of the Primate Eye: Retinal Sampling and Color Vision. , 2006, , 99-126.		3
118	Cuttlefish camouflage: vision and cognition. , 0, , 197-222.		3
119	The Importance of Spatial Visual Scene Parameters in Predicting Optimal Cone Sensitivities in Routinely Trichromatic Frugivorous Old-World Primates. Frontiers in Computational Neuroscience, 2018, 12, 15.	1.2	3
120	Color Generalization by Birds. , 2009, , 129-146.		3
121	Reply from D. Osorio et al.. Trends in Ecology and Evolution, 1996, 11, 253.	4.2	2
122	Zebrafish Differentially Process Colour Across Visual Space to Match Natural Scenes. SSRN Electronic Journal, 0, , .	0.4	2
123	Dietary analysis I: food physics. , 0, , 237-254.		1
124	Light sense. Nature, 2011, 472, 300-301.	13.7	1
125	Cuttlefish. Current Biology, 2017, 27, R1093-R1095.	1.8	1
126	What is primate color vision for? a comment on Caro et al.. Behavioral Ecology, 2021, 32, 571-572.	1.0	1

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127	Cognitive dimensions of predator responses to imperfect mimicry?. Nature Precedings, 2007, , .	0.1	0
128	The astonishing diversity of vision: Introduction to an issue of Vision Research on animal vision. Vision Research, 2020, 172, 62-63.	0.7	0