Philippe Lucas

List of Publications by Year
in descending order

58 papers	1,856 citations	257450 24 h-index	276875 41 g-index
62 all docs	62 docs citations	62 times ranked	1624 citing authors

#	Article	IF	Citations
1	A Diacylglycerol-Gated Cation Channel in Vomeronasal Neuron Dendrites Is Impaired in TRPC2 Mutant Mice. Neuron, 2003, 40, 551-561.	8.1	295
2	Insect Odorscapes: From Plant Volatiles to Natural Olfactory Scenes. Frontiers in Physiology, 2019, 10, 972.	2.8	132
3	A carboxylesterase, Esterase-6, modulates sensory physiological and behavioral response dynamics to pheromone in Drosophila. BMC Biology, 2012, 10, 56.	3.8	86
4	Functional characterization of a sex pheromone receptor in the pest moth <i>Spodoptera littoralis</i> by heterologous expression in <i>Drosophila</i>. European Journal of Neuroscience, 2012, 36, 2588-2596.	2.6	86
5	Neurobiology of TRPC2: from gene to behavior. Pflugers Archiv European Journal of Physiology, 2005, 451, 61-71.	2.8	70
6	An Antennal Circadian Clock and Circadian Rhythms in Peripheral Pheromone Reception in the Moth <i>Spodoptera littoralis</i>. Journal of Biological Rhythms, 2007, 22, 502-514.	2.6	67
7	Functional Characterization of a New Class of Odorant-Binding Proteins in the MothMamestra brassicae. Biochemical and Biophysical Research Communications, 1998, 253, 489-494.	2.1	65
8	Differential Interactions of Sex Pheromone and Plant Odour in the Olfactory Pathway of a Male Moth. PLoS ONE, 2012, 7, e33159.	2.5	64
9	Reactive Searching and Infotaxis in Odor Source Localization. PLoS Computational Biology, 2014, 10, e1003861.	3.2	63
10	Mating-induced differential coding of plant odour and sex pheromone in a male moth. European Journal of Neuroscience, 2011, 33, 1841-1850.	2.6	55
11	Unexpected effects of sublethal doses of insecticide on the peripheral olfactory response and sexual behavior in a pest insect. Environmental Science and Pollution Research, 2016, 23, 3073-3085.	5.3	46
12	Sex pheromone reception in Mamestra brassicae L. (Lepidoptera): Responses of olfactory receptor neurones to minor components of the pheromone blend. Journal of Insect Physiology, 1994, 40, 75-85.	2.0	38
13	Differences in sex pheromone communication systems of closely related species:Spodoptera latifascia (walker) andS. descoinsi lalannecassou & silvain (Lepidoptera: Noctuidae). Journal of Chemical Ecology, 1995, 21, 641-660.	1.8	38
14	Experience-dependent modulation of antennal sensitivity and input to antennal lobes in male moths (<i>Spodoptera littoralis</i>) pre-exposed to sex pheromone. Journal of Experimental Biology, 2012, 215, 2334-2341.	1.7	37
15	Computational Model of the Insect Pheromone Transduction Cascade. PLoS Computational Biology, 2009, 5, e1000321.	3.2	35
16	Behavioral responses ofSpodoptera littoralis males to sex pheromone components and virgin females in wind tunnel. Journal of Chemical Ecology, 1996, 22, 1087-1102.	1.8	34
17	Effects of Trifluoromethyl Ketones and Related Compounds on the EAG and Behavioural Responses to Pheromones in Male Moths. Chemical Senses, 1997, 22, 407-416.	2.0	32
18	Ca2+ Stabilizes the Membrane Potential of Moth Olfactory Receptor Neurons at Rest and Is Essential for Their Fast Repolarization. Chemical Senses, 2007, 32, 305-317.	2.0	32

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19	Peripheral regulation by ecdysteroids of olfactory responsiveness in male Egyptian cotton leaf worms, Spodoptera littoralis. Insect Biochemistry and Molecular Biology, 2012, 42, 22-31.	2.7	32
20	Transformation of the Sex Pheromone Signal in the Noctuid Moth Agrotis ipsilon: From Peripheral Input to Antennal Lobe Output. Chemical Senses, 2010, 35, 705-715.	2.0	29
21	Odour Transduction in Olfactory Receptor Neurons. Chinese Journal of Physiology, 2010, 53, 364-372.	1.0	29
22	Heterogeneity and Convergence of Olfactory First-Order Neurons Account for the High Speed and Sensitivity of Second-Order Neurons. PLoS Computational Biology, 2014, 10, e1003975.	3.2	28
23	Development of multiple calcium channel types in cultured mouse hippocampal neurons. Neuroscience, 1999, 90, 383-388.	2.3	27
24	Expression pattern in the antennae of a newly isolated lepidopteran Gq protein Î± subunit cDNA. FEBS Journal, 2002, 269, 2133-2142.	0.2	27
25	Responses to pheromone compounds in Mamestra suasa (Lepidoptera: Noctuidae) olfactory neurones. Journal of Insect Physiology, 1989, 35, 837-845.	2.0	24
26	Electrophysiological and field activity of halogenated analogs of (E,E)-8,10-dodecadien-1-ol, the main pheromone component, in codling moth (Cydia pomonella L.). Journal of Chemical Ecology, 1994, 20, 489-503.	1.8	24
27	Multiphasic On/Off Pheromone Signalling in Moths as Neural Correlates of a Search Strategy. PLoS ONE, 2013, 8, e61220.	2.5	23
28	Modelling the signal delivered by a population of first-order neurons in a moth olfactory system. Brain Research, 2012, 1434, 123-135.	2.2	22
29	Using Insect Electroantennogram Sensors on Autonomous Robots for Olfactory Searches. Journal of Visualized Experiments, 2014, , e51704.	0.3	22
30	Olfactory coding in the turbulent realm. PLoS Computational Biology, 2017, 13, e1005870.	3.2	22
31	Voltage- and Calcium-activated Currents in Cultured Olfactory Receptor Neurons of Male Mamestra brassicae (Lepidoptera). Chemical Senses, 2002, 27, 599-610.	2.0	20
32	Modelling the early steps of transduction in insect olfactory receptor neurons. BioSystems, 2007, 89, 101-109.	2.0	20
33	Low doses of a neonicotinoid insecticide modify pheromone response thresholds of central but not peripheral olfactory neurons in a pest insect. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20152987.	2.6	18
34	Calcium Activates a Chloride Conductance Likely Involved in Olfactory Receptor Neuron Repolarization in the Moth<i>Spodoptera littoralis</i>. Journal of Neuroscience, 2010, 30, 6323-6333.	3.6	17
35	Automatic tracking of free-flying insects using a cable-driven robot. Science Robotics, 2020, 5, .	17.6	17
36	Comparison of Chemoreceptive Abilities of the Hydrothermal Shrimp Mirocaris fortunata and the Coastal Shrimp Palaemon elegans. Chemical Senses, 2018, 43, 489-501.	2.0	15

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37	Reinvestigation of Female Sex Pheromone of Processionary Moth (Thaumetopoea pityocampa): No Evidence for Minor Components. Journal of Chemical Ecology, 1997, 23, 713-726.	1.8	14
38	Primary culture of antennal cells of Mamestra brassicae: morphology of cell types and evidence for biosynthesis of pheromone-binding proteins in vitro. Cell and Tissue Research, 1997, 289, 375-382.	2.9	14
39	A TRP channel is expressed in <i>Spodoptera littoralis</i> antennae and is potentially involved in insect olfactory transduction. Insect Molecular Biology, 2009, 18, 213-222.	2.0	14
40	Electrophysiological study of the effects of deltamethrin, bioresmethrin, and DDT on the activity of pheromone receptor neurones in two moth species. Pesticide Biochemistry and Physiology, 1992, 43, 103-115.	3.6	13
41	Moth olfactory receptor neurons adjust their encoding efficiency to temporal statistics of pheromone fluctuations. PLoS Computational Biology, 2018, 14, e1006586.	3.2	13
42	Modulation of Sex Pheromone Discrimination by a UDP-Glycosyltransferase in Drosophila melanogaster. Genes, 2020, 11, 237.	2.4	13
43	Water Taste Transduction Pathway Is Calcium Dependent in Drosophila. Chemical Senses, 2009, 34, 441-449.	2.0	11
44	Adaptive integrate-and-fire model reproduces the dynamics of olfactory receptor neuron responses in a moth. Journal of the Royal Society Interface, 2019, 16, 20190246.	3.4	11
45	A comparative study of sex pheromone reception in the Hadeninae (Lepidoptera: Noctuidae). Physiological Entomology, 1991, 16, 87-97.	1.5	9
46	Molecular Characterization of a Phospholipase C Â Potentially Involved in Moth Olfactory Transduction. Chemical Senses, 2010, 35, 363-373.	2.0	8
47	New electroantennography method on a marine shrimp in water. Journal of Experimental Biology, 2016, 219, 3696-3700.	1.7	7
48	Light-Weight Portable Electroantennography Device as a Future Field-Based Tool for Applied Chemical Ecology. Journal of Chemical Ecology, 2020, 46, 557-566.	1.8	7
49	Responses of Mamestra suasa male moths to synthetic pheromone compounds in a wind tunnel. Entomologia Experimentalis Et Applicata, 1989, 53, 81-87.	1.4	5
50	Sex pheromone ofStenoma cecropia Meyrick (Lepidoptera: Elachistidae). Journal of Chemical Ecology, 1996, 22, 1103-1121.	1.8	5
51	Molecular cloning and expression patterns of a putative olfactory diacylglycerol kinase from the noctuid moth <i>Spodoptera littoralis</i>. Insect Molecular Biology, 2008, 17, 485-493.	2.0	5
52	Firing and intrinsic properties of antennal lobe neurons in the Noctuid moth Agrotis ipsilon. BioSystems, 2015, 136, 46-58.	2.0	4
53	Bestrophin-Encoded Ca2+-Activated Clâˆ’ Channels Underlie a Current with Properties Similar to the Native Current in the Moth Spodoptera littoralis Olfactory Receptor Neurons. PLoS ONE, 2012, 7, e52691.	2.5	3
54	Effects of Multi-Component Backgrounds of Volatile Plant Compounds on Moth Pheromone Perception. Insects, 2021, 12, 409.	2.2	3

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55	Characterization of a plasma membrane Ca2+ ATPase expressed in olfactory receptor neurons of the moth Spodoptera littoralis. Cell and Tissue Research, 2012, 350, 239-250.	2.9	2
56	Functional Characterization of Insect Olfactory Receptor Neurons Through In Vivo Approaches. Methods in Molecular Biology, 2013, 1003, 173-186.	0.9	2
57	Introduction: Insect olfactory structures. Microscopy Research and Technique, 2001, 55, 283-283.	2.2	1
58	Editorial: Invertebrate Neurobiology: Sensory Systems, Information Integration, Locomotor- and Behavioral Output. Frontiers in Physiology, 2021, 12, 807521.	2.8	0