Wolfgang RÃ¶ssler

List of Publications by Year
in descending order

130 papers	5,548 citations	76326 40 h-index	98798 67 g-index
140 all docs	140 docs citations	140 times ranked	2811 citing authors

#	Article	IF	Citations
1	A Systematic Nomenclature for the Insect Brain. Neuron, 2014, 81, 755-765.	8.1	564
2	Parallel Olfactory Systems in Insects: Anatomy and Function. Annual Review of Entomology, 2010, 55, 399-420.	11.8	290
3	Behavioral performance in adult honey bees is influenced by the temperature experienced during their pupal development. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7343-7347.	7.1	243
4	Synaptic organization in the adult honey bee brain is influenced by brood-temperature control during pupal development. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4268-4273.	7.1	212
5	Dual olfactory pathway in the honeybee, <i>Apis mellifera</i>. Journal of Comparative Neurology, 2006, 499, 933-952.	1.6	207
6	Long-Term Memory Leads to Synaptic Reorganization in the Mushroom Bodies: A Memory Trace in the Insect Brain?. Journal of Neuroscience, 2010, 30, 6461-6465.	3.6	170
7	Visual experience and age affect synaptic organization in the mushroom bodies of the desert ant <i>Cataglyphis fortis</i>. Developmental Neurobiology, 2010, 70, 408-423.	3.0	128
8	Organization of the olfactory pathway and odor processing in the antennal lobe of the ant <i>Camponotus floridanus</i>. Journal of Comparative Neurology, 2008, 506, 425-441.	1.6	125
9	Ageâ€related plasticity in the synaptic ultrastructure of neurons in the mushroom body calyx of the adult honeybee <i>Apis mellifera</i>. Journal of Comparative Neurology, 2012, 520, 3509-3527.	1.6	93
10	Development of a Glia-Rich Axon-Sorting Zone in the Olfactory Pathway of the Moth<i>Manduca sexta</i>. Journal of Neuroscience, 1999, 19, 9865-9877.	3.6	90
11	A Macroglomerulus in the Antennal Lobe of Leaf-cutting Ant Workers and its Possible Functional Significance. Chemical Senses, 2005, 30, 383-392.	2.0	86
12	The Geomagnetic Field Is a Compass Cue in Cataglyphis Ant Navigation. Current Biology, 2018, 28, 1440-1444.e2.	3.9	86
13	Ontogeny of learning walks and the acquisition of landmark information in desert ants,<i>Cataglyphis fortis</i>. Journal of Experimental Biology, 2016, 219, 3137-3145.	1.7	85
14	Comparison of microglomerular structures in the mushroom body calyx of neopteran insects. Arthropod Structure and Development, 2011, 40, 358-367.	1.4	81
15	Fâ€actin at identified synapses in the mushroom body neuropil of the insect brain. Journal of Comparative Neurology, 2004, 475, 303-314.	1.6	80
16	Parallel Processing via a Dual Olfactory Pathway in the Honeybee. Journal of Neuroscience, 2013, 33, 2443-2456.	3.6	77
17	Environment- and Age-Dependent Plasticity of Synaptic Complexes in the Mushroom Bodies of Honeybee Queens. Brain, Behavior and Evolution, 2006, 68, 1-14.	1.7	76
18	Caste- and sex-specific adaptations within the olfactory pathway in the brain of the ant Camponotus floridanus. Arthropod Structure and Development, 2008, 37, 469-479.	1.4	74

#	Article	IF	Citations
19	Caste-specific postembryonic development of primary and secondary olfactory centers in the female honeybee brain. Arthropod Structure and Development, 2008, 37, 459-468.	1.4	73
20	Visual experience affects both behavioral and neuronal aspects in the individual life history of the desert ant <i>Cataglyphis fortis</i>. Developmental Neurobiology, 2012, 72, 729-742.	3.0	66
21	Species-specific differences in the fine structure of learning walk elements in<i>Cataglyphis</i>ants. Journal of Experimental Biology, 2017, 220, 2426-2435.	1.7	66
22	Phenotypic plasticity in number of glomeruli and sensory innervation of the antennal lobe in leafâ€cutting ant workers (<i>A. vollenweideri</i>). Developmental Neurobiology, 2010, 70, 222-234.	3.0	64
23	Long-term avoidance memory formation is associated with a transient increase in mushroom body synaptic complexes in leaf-cutting ants. Frontiers in Behavioral Neuroscience, 2015, 9, 84.	2.0	63
24	The Antennal Lobes of Fungus-Growing Ants (Attini): Neuroanatomical Traits and Evolutionary Trends. Brain, Behavior and Evolution, 2009, 73, 273-284.	1.7	59
25	Multimodal integration and stimulus categorization in putative mushroom body output neurons of the honeybee. Royal Society Open Science, 2018, 5, 171785.	2.4	58
26	Multiple olfactory receptor neurons and their axonal projections in the antennal lobe of the honeybee <i>Apis mellifera</i>. Journal of Comparative Neurology, 2006, 496, 395-405.	1.6	57
27	Functional morphology and development of tibial organs in the legs I, II and III of the bushcricketEphippiger ephippiger (Insecta, Ensifera). Zoomorphology, 1992, 112, 181-188.	0.8	54
28	Aggregation of F-Actin in Olfactory Glomeruli: a Common Feature of Glomeruli Across Phyla. Chemical Senses, 2002, 27, 803-810.	2.0	49
29	Serotonin depresses feeding behaviour in ants. Journal of Insect Physiology, 2012, 58, 7-17.	2.0	49
30	Microglomerular Synaptic Complexes in the Sky-Compass Network of the Honeybee Connect Parallel Pathways from the Anterior Optic Tubercle to the Central Complex. Frontiers in Behavioral Neuroscience, 2016, 10, 186.	2.0	49
31	Ageâ€related and lightâ€induced plasticity in opsin gene expression and in primary and secondary visual centers of the nectarâ€feeding ant <i>Camponotus rufipes</i>. Developmental Neurobiology, 2016, 76, 1041-1057.	3.0	49
32	Friends and Foes from an Ant Brain's Point of View â€“ Neuronal Correlates of Colony Odors in a Social Insect. PLoS ONE, 2011, 6, e21383.	2.5	49
33	Axons of olfactory receptor cells of transsexually grafted antennae induce development of sexually dimorphic glomeruli inManduca sexta. Journal of Neurobiology, 1999, 38, 521-541.	3.6	48
34	Light exposure leads to reorganization of microglomeruli in the mushroom bodies and influences juvenile hormone levels in the honeybee. Developmental Neurobiology, 2014, 74, 1141-1153.	3.0	47
35	Neuropeptidomics of the Carpenter Ant Camponotus floridanus. Journal of Proteome Research, 2015, 14, 1504-1514.	3.7	47
36	Experienceâ€related reorganization of giant synapses in the lateral complex: Potential role in plasticity of the skyâ€compass pathway in the desert ant <i>Cataglyphis fortis</i>. Developmental Neurobiology, 2016, 76, 390-404.	3.0	47

#	Article	IF	Citations
37	The Role of Celestial Compass Information in Cataglyphis Ants during Learning Walks and for Neuroplasticity in the Central Complex and Mushroom Bodies. Frontiers in Behavioral Neuroscience, 2017, 11, 226.	2.0	47
38	Complex tibial organs in the forelegs, midlegs, and hindlegs of the bushcricketGampsocleis gratiosa (tettigoniidae): Comparison of the physiology of the organs. The Journal of Experimental Zoology, 1994, 270, 155-161.	1.4	46
39	Biogenic amines in the ponerine ant Harpegnathos saltator: serotonin and dopamine immunoreactivity in the brain. Arthropod Structure and Development, 2005, 34, 429-440.	1.4	45
40	Postembryonic development of the complex tibial organ in the foreleg of the bushcricket Ephippiger ephippiger (Orthoptera, Tettigoniidae). Cell and Tissue Research, 1992, 269, 505-514.	2.9	43
41	Postembryonic development of the olfactory system in the mothManduca sexta: primary-afferent control of glomerular development. Seminars in Cell and Developmental Biology, 1997, 8, 163-170.	5.0	43
42	Neuronal plasticity in the mushroom body calyx during adult maturation in the honeybee and possible pheromonal influences. Developmental Neurobiology, 2015, 75, 1368-1384.	3.0	43
43	Flight-induced compass representation in the monarch butterfly heading network. Current Biology, 2022, 32, 338-349.e5.	3.9	42
44	Early foraging life: spatial and temporal aspects of landmark learning in the ant Cataglyphis noda. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2018, 204, 579-592.	1.6	41
45	Neuronâ€“Glia Communication via Nitric Oxide Is Essential in Establishing Antennal-Lobe Structure in Manduca sexta. Developmental Biology, 2001, 240, 326-339.	2.0	40
46	Auditory receptor organs in the forelegs ofGampsocleis gratiosa (Tettigoniidae): Morphology and function of the organs in comparison to the frequency parameters of the conspecific song. The Journal of Experimental Zoology, 1993, 267, 377-388.	1.4	39
47	Analysis of Synaptic Microcircuits in the Mushroom Bodies of the Honeybee. Insects, 2020, 11, 43.	2.2	39
48	Functional morphology of bushcricket ears: comparison between two species belonging to the Phaneropterinae and Decticinae (Insecta, Ensifera). Zoomorphology, 1994, 114, 39-46.	0.8	38
49	Structure of atympanate tibial organs in legs of the caveâ€living ensifera, <i>Troglophilus neglectus</i> (Gryllacridoidea, Raphidophoridae). Journal of Morphology, 1995, 223, 109-118.	1.2	38
50	CaMKII is differentially localized in synaptic regions of kenyon cells within the mushroom bodies of the honeybee brain. Journal of Comparative Neurology, 2011, 519, 3700-3712.	1.6	37
51	Parallel processing in the honeybee olfactory pathway: structure, function, and evolution. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 981-996.	1.6	37
52	Density of mushroom body synaptic complexes limits intraspecies brain miniaturization in highly polymorphic leaf-cutting ant workers. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140432.	2.6	37
53	Elemental and non-elemental olfactory learning using PER conditioning in the bumblebee, Bombus terrestris. Apidologie, 2014, 45, 106-115.	2.0	37
54	Dual olfactory pathway in Hymenoptera: Evolutionary insights from comparative studies. Arthropod Structure and Development, 2011, 40, 349-357.	1.4	35

#	Article	IF	Citations
55	Physiology of atympanate tibial organs in forelegs and midlegs of the cave-living Ensifera,Troglophilus neglectus (Raphidophoridae, Gryllacridoidea). The Journal of Experimental Zoology, 1995, 273, 376-388.	1.4	34
56	Early formation of sexually dimorphic glomeruli in the developing olfactory lobe of the brain of the mothManduca sexta. , 1998, 396, 415-428.		34
57	Functional neuroanatomy of the rhinophore of Aplysia punctata. Frontiers in Zoology, 2006, 3, 6.	2.0	33
58	Perceptual differences in trail-following leaf-cutting ants relate to body size. Journal of Insect Physiology, 2007, 53, 1233-1241.	2.0	33
59	Antennal-Lobe Organization in Desert Ants of the Genus Cataglyphis. Brain, Behavior and Evolution, 2011, 77, 136-146.	1.7	33
60	cAMPâ€independent responses of olfactory neurons inXenopus laevistadpoles and their projection onto olfactory bulb neurons. Journal of Physiology, 2002, 545, 475-484.	2.9	32
61	Innate colour preference, individual learning and memory retention in the ant Camponotus blandus. Journal of Experimental Biology, 2017, 220, 3315-3326.	1.7	30
62	Complex tibial organs in fore-, mid-, and hindlegs of the bushcricketGampsocleis gratiosa(Tettigoniidae): Comparison of morphology of the organs. Journal of Morphology, 1994, 221, 191-198.	1.2	29
63	Olfactory subsystems in the honeybee: sensory supply and sex specificity. Cell and Tissue Research, 2014, 357, 583-595.	2.9	29
64	Immediate early genes in social insects: a tool to identify brain regions involved in complex behaviors and molecular processes underlying neuroplasticity. Cellular and Molecular Life Sciences, 2019, 76, 637-651.	5.4	29
65	Plasticity and modulation of olfactory circuits in insects. Cell and Tissue Research, 2021, 383, 149-164.	2.9	29
66	Organization of glomeruli in the main olfactory bulb ofXenopus laevistadpoles. Journal of Comparative Neurology, 2003, 464, 257-268.	1.6	28
67	3D subcellular localization with superresolution array tomography on ultrathin sections of various species. Methods in Cell Biology, 2017, 140, 21-47.	1.1	27
68	The brain of <scp><i>Cataglyphis</i></scp> ants: Neuronal organization and visual projections. Journal of Comparative Neurology, 2020, 528, 3479-3506.	1.6	27
69	Magnetoreception in Hymenoptera: importance for navigation. Animal Cognition, 2020, 23, 1051-1061.	1.8	26
70	CaMKII knockdown affects both early and late phases of olfactory long-term memory in the honeybee. Journal of Experimental Biology, 2015, 218, 3788-96.	1.7	24
71	Molecular and biochemical characterization of the major royal jelly protein in bumblebees suggest a non-nutritive function. Insect Biochemistry and Molecular Biology, 2012, 42, 647-654.	2.7	22
72	Learning to navigateÂâ€“ how desert ants calibrate their compass systems. Neuroforum, 2019, 25, 109-120.	0.3	22

#	Article	IF	Citations
73	Presynaptic protein distribution and odour mapping in glomeruli of the olfactory bulb of <i>Xenopus laevis</i> tadpoles. European Journal of Neuroscience, 2007, 26, 925-934.	2.6	21
74	Transcriptomic, peptidomic, and mass spectrometry imaging analysis of the brain in the ant <i>Cataglyphis nodus</i>. Journal of Neurochemistry, 2021, 158, 391-412.	3.9	21
75	Royal jelly-like protein localization reveals differences in hypopharyngeal glands buildup and conserved expression pattern in brains of bumblebees and honeybees. Biology Open, 2014, 3, 281-288.	1.2	20
76	Neuronal distribution of tyramine and the tyramine receptor AmTAR1 in the honeybee brain. Journal of Comparative Neurology, 2017, 525, 2615-2631.	1.6	20
77	Does Fine Color Discrimination Learning in Free-Flying Honeybees Change Mushroom-Body Calyx Neuroarchitecture?. PLoS ONE, 2016, 11, e0164386.	2.5	20
78	Morphology of the tibial organs of acrididae: Comparison of subgenual and distal organs in foreâ€, midâ€, and hindlegs of <i>Schistocerca gregaria</i> (Acrididae, Catantopinae) and <i>Locusta migratoria</i> (Acrididae, Oedipodinae). Journal of Morphology, 1995, 226, 351-360.	1.2	19
79	Males of a solitary wasp possess a postpharyngeal gland. Arthropod Structure and Development, 2007, 36, 123-133.	1.4	19
80	It takes twoâ€"coincidence coding within the dual olfactory pathway of the honeybee. Frontiers in Physiology, 2015, 6, 208.	2.8	19
81	Distributed plasticity in ant visual pathways following colour learning. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20182813.	2.6	19
82	Omega AGA toxin IVA blocks high-voltage-activated calcium channel currents in cultured pars intercerebralis neurosecretory cells of adult locusta migratoria. Neuroscience Letters, 1994, 181, 113-116.	2.1	18
83	Neuronal representation of odourants in the olfactory bulb ofXenopus laevistadpoles. European Journal of Neuroscience, 2003, 17, 113-118.	2.6	18
84	Impact of light and alarm pheromone on immediate early gene expression in the European honeybee, <scp><i>Apis mellifera</i></scp>. Entomological Science, 2017, 20, 122-126.	0.6	18
85	Ageâ€dependent transcriptional and epigenomic responses to light exposure in the honey bee brain. FEBS Open Bio, 2016, 6, 622-639.	2.3	17
86	In-situ recording of ionic currents in projection neurons and Kenyon cells in the olfactory pathway of the honeybee. PLoS ONE, 2018, 13, e0191425.	2.5	17
87	Johnston's organ and its central projections in <i>Cataglyphis</i> desert ants. Journal of Comparative Neurology, 2021, 529, 2138-2155.	1.6	17
88	Neuropeptides in the desert ant <i>Cataglyphis fortis</i>: Mass spectrometric analysis, localization, and ageâ€related changes. Journal of Comparative Neurology, 2017, 525, 901-918.	1.6	15
89	Importance of timing of olfactory receptor-axon outgrowth for glomerulus development inManduca sexta. Journal of Comparative Neurology, 2000, 425, 233-243.	1.6	14
90	Plasticity of Synaptic Microcircuits in the Mushroom-Body Calyx of the Honey Bee. , 2012, , 141-153.		14

#	Article	IF	Citations
91	Daily Thermal Fluctuations Experienced by Pupae via Rhythmic Nursing Behavior Increase Numbers of Mushroom Body Microglomeruli in the Adult Ant Brain. Frontiers in Behavioral Neuroscience, 2016, 10, 73.	2.0	14
92	Neuronal Plasticity in the Mushroomâ€Body Calyx of Bumble Bee Workers During Early Adult Development. Developmental Neurobiology, 2019, 79, 287-302.	3.0	14
93	Causes of the differences in detection of low frequencies in the auditory receptor organs of two species of bushcrickets. The Journal of Experimental Zoology, 1995, 272, 103-115.	1.4	13
94	Neuropeptides as potential modulators of behavioral transitions in the ant <scp><i>Cataglyphis nodus</i></scp>. Journal of Comparative Neurology, 2021, 529, 3155-3170.	1.6	12
95	Anesthesia disrupts distance, but not direction, of path integration memory. Current Biology, 2022, 32, 445-452.e4.	3.9	12
96	Bounded Plasticity in the Desert Antâ€™s Navigational Tool Kit. Handbook of Behavioral Neuroscience, 2013, , 514-529.	0.7	11
97	Extracting the Behaviorally Relevant Stimulus: Unique Neural Representation of Farnesol, a Component of the Recruitment Pheromone of Bombus terrestris. PLoS ONE, 2015, 10, e0137413.	2.5	10
98	Pitfalls of using confocal-microscopy based automated quantification of synaptic complexes in honeybee mushroom bodies (response to Peng and Yang 2016). Scientific Reports, 2017, 7, 9786.	3.3	10
99	Dummies versus Air Puffs: Efficient Stimulus Delivery for Low-Volatile Odors. Chemical Senses, 2010, 35, 323-333.	2.0	8
100	Sensory reception of the primer pheromone ethyl oleate. Die Naturwissenschaften, 2012, 99, 421-425.	1.6	8
101	Simultaneous Long-term Recordings at Two Neuronal Processing Stages in Behaving Honeybees. Journal of Visualized Experiments, 2014, , .	0.3	8
102	Magnetosensation during re-learning walks in desert ants (Cataglyphis nodus). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, 208, 125-133.	1.6	8
103	Similar structural dimensions in bushcricket auditory organs in spite of different foreleg size: Consequences for auditory tuning. Hearing Research, 1994, 80, 191-196.	2.0	7
104	UV-light perception is modulated by the odour element of an olfactory-visual compound in restrained honeybees. Journal of Experimental Biology, 2019, 222, .	1.7	7
105	Comparative Investigation on the Morphology and Physiology of the Auditory Receptor Organs of Seven Species of Bushcrickets. , 1990, , 241-247.		7
106	Group recruitment in a thermophilic desert ant, Ocymyrmex robustior. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 711-722.	1.6	6
107	Fenvalerate treatment affects development of olfactory glomeruli inManduca sexta. Journal of Comparative Neurology, 2001, 430, 533-541.	1.6	5
108	Rotation of skylight polarization during learning walks is necessary to trigger neuronal plasticity in<i>Cataglyphis</i>ants. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, 20212499.	2.6	5

#	Article	IF	Citations
109	Separation of different pollen types by chemotactile sensing in <i>Bombus terrestris</i>.. Journal of Experimental Biology, 2017, 220, 1435-1442.	1.7	4
110	Neuroanatomical correlates of mobility: Sensory brain centres are bigger in winged than in wingless parthenogenetic pea aphid females. Arthropod Structure and Development, 2019, 52, 100883.	1.4	4
111	Novel structure in the nuclei of honey bee brain neurons revealed by immunostaining. Scientific Reports, 2021, 11, 6852.	3.3	4
112	The Auditory-Vibratory Sensory System in Bushcrickets (Tettigoniidae, Ensifera, Orthoptera) I Comparison of Morphology, Development and Physiology. , 2003, , 169-207.		4
113	Functional neuroanatomy of the rhinophore of Archidoris pseudoargus. Helgoland Marine Research, 2007, 61, 135-142.	1.3	3
114	Sexâ€specific and casteâ€specific brain adaptations related to spatial orientation in <i>Cataglyphis</i> ants. Journal of Comparative Neurology, 2021, 529, 3882-3892.	1.6	3
115	Ant-App-DB: a smart solution for monitoring arthropods activities, experimental data management and solar calculations without GPS in behavioral field studies. F1000Research, 2014, 3, 311.	1.6	3
116	Importance of Tooth Impact Rate in Acoustic Communication in Bushcrickets. , 1990, , 248-253.		2
117	Categorizing Visual Information in Subpopulations of Honeybee Mushroom Body Output Neurons. Frontiers in Physiology, 2022, 13, 866807.	2.8	2
118	Government funding of research beyond biomedicine: challenges and opportunities for neuroethology. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, 208, 443-456.	1.6	2
119	Comparison of the physiology of the auditory receptor organs inGryllus bimaculatus andEphippiger ephippiger: CSD Recordings within the auditory neuropiles. Journal of Neurobiology, 1993, 24, 447-455.	3.6	1
120	Insect chemoreception: a tribute to John G. Hildebrand. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 875-877.	1.6	1
121	Ant-App-DB: a smart solution for monitoring arthropods activities, experimental data management and solar calculations without GPS in behavioral field studies. F1000Research, 0, 3, 311.	1.6	1
122	Flight-Induced Compass Representation in the Monarch Butterfly Heading Network. SSRN Electronic Journal, 0, , .	0.4	1
123	Itâ€™s all about seeing and hearing: the Editorsâ€™ and Readersâ€™ Choice Awards 2022. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, , 1.	1.6	1
124	Neuronal distribution of tyramine and the tyramine receptor AmTAR1 in the honeybee brain. Journal of Comparative Neurology, 2017, 525, spc1-spc1.	1.6	0
125	Cover Image, Volume 529, Issue 8. Journal of Comparative Neurology, 2021, 529, C4.	1.6	0
126	Reize und Reiztransport. Springer-Lehrbuch, 2013, , 459-470.	0.0	0

#	Article	IF	Citations
127	Chemische Sinne. Springer-Lehrbuch, 2013, , 537-570.	0.0	0
128	Lernen und GedÃchtnis. Springer-Lehrbuch, 2013, , 1077-1125.	0.0	0
129	HÃ¶ren. Springer-Lehrbuch, 2013, , 659-746.	0.0	0
130	Editorial: Structural Plasticity of Invertebrate Neural Systems. Frontiers in Physiology, 2022, 13, 874999.	2.8	0