Brian H Smith

List of Publications by Year
in descending order

109 papers	5,503 citations	76326 40 h-index	91884 69 g-index
114 all docs	114 docs citations	114 times ranked	3406 citing authors

#	Article	IF	Citations
1	Active sensing in a dynamic olfactory world. Journal of Computational Neuroscience, 2022, 50, 1-6.	1.0	15
2	Novelty detection in early olfactory processing of the honey bee, Apis mellifera. PLoS ONE, 2022, 17, e0265009.	2.5	10
3	Unbalanced fatty acid diets impair discrimination ability of honey bee workers to damaged and healthy brood odors. Journal of Experimental Biology, 2022, 225, .	1.7	7
4	Hyperbolic odorant mixtures as a basis for more efficient signaling between flowering plants and bees. PLoS ONE, 2022, 17, e0270358.	2.5	3
5	Alternative model systems for cognitive variation: eusocial-insect colonies. Trends in Cognitive Sciences, 2022, , .	7.8	4
6	Colony field test reveals dramatically higher toxicity of a widely-used mito-toxic fungicide on honey bees (Apis mellifera). Environmental Pollution, 2021, 269, 115964.	7.5	43
7	Early olfactory, but not gustatory processing, is affected by the selection of heritable cognitive phenotypes in honey bee. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2021, 207, 17-26.	1.6	6
8	How Can We Fully Realize the Potential of Mathematical and Biological Models to Reintegrate Biology?. Integrative and Comparative Biology, 2021, , .	2.0	1
9	Field cross-fostering and in vitro rearing demonstrate negative effects of both larval and adult exposure to a widely used fungicide in honey bees (Apis mellifera). Ecotoxicology and Environmental Safety, 2021, 217, 112251.	6.0	11
10	Heritable Cognitive Phenotypes Influence Appetitive Learning but not Extinction in Honey Bees. Annals of the Entomological Society of America, 2021, 114, 606-613.	2.5	3
11	The effect of individual learning on collective foraging in honey bees in differently structured landscapes. Animal Behaviour, 2021, 179, 113-123.	1.9	18
12	A common fungicide, PristineÂ®, impairs olfactory associative learning performance in honey bees (Apis) Tj ETQq0 0 0 rgBT /Overlock 10	7.5	28
13	The active ingredients of a mitotoxic fungicide negatively affect pollen consumption and worker survival in laboratory-reared honey bees (Apis mellifera). Ecotoxicology and Environmental Safety, 2021, 226, 112841.	6.0	10
14	Experience-dependent tuning of early olfactory processing in the adult honey bee,<i>Apis mellifera</i>. Journal of Experimental Biology, 2020, 223, .	1.7	15
15	Individual learning phenotypes drive collective behavior. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17949-17956.	7.1	41
16	Experimental psychology meets behavioral ecology: what laboratory studies of learning polymorphisms mean for learning under natural conditions, and vice versa. Journal of Neurogenetics, 2020, 34, 178-183.	1.4	5
17	Anti-RDL and Anti-mGlutR1 Receptors Antibody Testing in Honeybee Brain Sections using CRISPR-Cas9. Journal of Visualized Experiments, 2020, , .	0.3	1
18	Expression of heat shock proteins in adult honey bee (Apis mellifera L.) workers under hot-arid subtropical ecosystems. Saudi Journal of Biological Sciences, 2019, 26, 1372-1376.	3.8	28

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19	Acute sublethal exposure to toxic heavy metals alters honey bee (Apis mellifera) feeding behavior. Scientific Reports, 2019, 9, 4253.	3.3	57
20	Diverse single-stranded DNA viruses associated with honey bees (Apis mellifera). Infection, Genetics and Evolution, 2019, 71, 179-188.	2.3	31
21	A Multiscale Review of Behavioral Variation in Collective Foraging Behavior in Honey Bees. Insects, 2019, 10, 370.	2.2	28
22	Individual differences in learning and biogenic amine levels influence the behavioural division between foraging honeybee scouts and recruits. Journal of Animal Ecology, 2019, 88, 236-246.	2.8	39
23	Olfactory associative behavioral differences in three honey bee Apis mellifera L. races under the arid zone ecosystem of central Saudi Arabia. Saudi Journal of Biological Sciences, 2019, 26, 563-568.	3.8	18
24	Comparative study of chemical neuroanatomy of the olfactory neuropil in mouse, honey bee, and human. Biological Cybernetics, 2018, 112, 127-140.	1.3	13
25	Colony-level non-associative plasticity of alarm responses in the stingless honey bee, Tetragonisca angustula. Behavioral Ecology and Sociobiology, 2018, 72, 1.	1.4	9
26	Re-encounters and southbound migration of Sand Martin pulli from a Scottish colony over a 15-year period. Ringing and Migration, 2018, 33, 94-97.	0.4	0
27	Glomerular Organization in the Antennal Lobe of the Oriental Fruit Fly Bactrocera dorsalis. Frontiers in Neuroanatomy, 2018, 12, 71.	1.7	9
28	Odorant mixtures elicit less variable and faster responses than pure odorants. PLoS Computational Biology, 2018, 14, e1006536.	3.2	23
29	Comparison of RNAi knockdown effect of tyramine receptor 1 induced by dsRNA and siRNA in brains of the honey bee, Apis mellifera. Journal of Insect Physiology, 2018, 111, 47-52.	2.0	24
30	Hyperbolic geometry of the olfactory space. Science Advances, 2018, 4, eaaq1458.	10.3	56
31	Editorial: Biogenic Amines and Neuromodulation of Animal Behavior. Frontiers in Systems Neuroscience, 2018, 12, 31.	2.5	8
32	SwarmSight: Measuring the temporal progression of animal group activity levels from natural-scene and laboratory videos. Behavior Research Methods, 2017, 49, 576-587.	4.0	9
33	Osmotic concentration in three races of honey bee, Apis mellifera L. under environmental conditions of arid zone. Saudi Journal of Biological Sciences, 2017, 24, 1081-1085.	3.8	12
34	Improved diagnosis of Parkinson's disease from a detailed olfactory phenotype. Annals of Clinical and Translational Neurology, 2017, 4, 714-721.	3.7	12
35	Task allocation and site fidelity jointly influence foraging regulation in honeybee colonies. Royal Society Open Science, 2017, 4, 170344.	2.4	25
36	The Biogenic Amine Tyramine and its Receptor (AmTyr1) in Olfactory Neuropils in the Honey Bee (Apis) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.5	18

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37	SwarmSight: Real-time Tracking of Insect Antenna Movements and Proboscis Extension Reflex Using a Common Preparation and Conventional Hardware. Journal of Visualized Experiments, 2017, , .	0.3	2
38	Learning about natural variation of odor mixtures enhances categorization in early olfactory processing. Journal of Experimental Biology, 2016, 219, 2752-62.	1.7	26
39	Non-parametric change point detection for spike trains. , 2016, , .		6
40	Acute exposure to selenium disrupts associative conditioning and long-term memory recall in honey bees (Apis mellifera). Ecotoxicology and Environmental Safety, 2016, 127, 71-79.	6.0	43
41	Learning Modifies Odor Mixture Processing to Improve Detection of Relevant Components. Journal of Neuroscience, 2015, 35, 179-197.	3.6	35
42	On piecewise polynomial regression under general dependence conditions, with an application to calcium-imaging data. Sankhya B, 2014, 76, 49-81.	0.9	3
43	High-speed odor transduction and pulse tracking by insect olfactory receptor neurons. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16925-16930.	7.1	109
44	A Proboscis Extension Response Protocol for Investigating Behavioral Plasticity in Insects: Application to Basic, Biomedical, and Agricultural Research. Journal of Visualized Experiments, 2014, , e51057.	0.3	39
45	Octopamine modulates activity of neural networks in the honey bee antennal lobe. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 947-962.	1.6	49
46	Nonassociative plasticity alters competitive interactions among mixture components in early olfactory processing. European Journal of Neuroscience, 2013, 37, 63-79.	2.6	48
47	A Computational Framework for Understanding Decision Making through Integration of Basic Learning Rules. Journal of Neuroscience, 2013, 33, 5686-5697.	3.6	59
48	Gain Control Network Conditions in Early Sensory Coding. PLoS Computational Biology, 2013, 9, e1003133.	3.2	27
49	Apis mellifera octopamine receptor 1 (AmOA1) expression in antennal lobe networks of the honey bee (Apis mellifera) and fruit fly (Drosophila melanogaster). Frontiers in Systems Neuroscience, 2013, 7, 70.	2.5	35
50	Selenium Toxicity to Honey Bee (Apis mellifera L.) Pollinators: Effects on Behaviors and Survival. PLoS ONE, 2012, 7, e34137.	2.5	72
51	Ensemble Response in Mushroom Body Output Neurons of the Honey Bee Outpaces Spatiotemporal Odor Processing Two Synapses Earlier in the Antennal Lobe. PLoS ONE, 2012, 7, e50322.	2.5	38
52	Distribution of the Octopamine Receptor AmOA1 in the Honey Bee Brain. PLoS ONE, 2011, 6, e14536.	2.5	56
53	Analyzing neuronal networks using discrete-time dynamics. Physica D: Nonlinear Phenomena, 2010, 239, 515-528.	2.8	17
54	Latent inhibition in the honey bee, Apis mellifera: Is it a unitary phenomenon?. Animal Cognition, 2010, 13, 805-815.	1.8	47

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55	Modulation of motor behavior by dopamine and the D1-like dopamine receptor AmDOP2 in the honey bee. Journal of Insect Physiology, 2010, 56, 422-430.	2.0	81
56	Associative Conditioning Tunes Transient Dynamics of Early Olfactory Processing. Journal of Neuroscience, 2009, 29, 10191-10202.	3.6	115
57	The effect of foraging specialization on various learning tasks in the honey bee (Apis mellifera). Behavioral Ecology and Sociobiology, 2009, 64, 135-148.	1.4	28
58	Universal Social Competence Promotion Programme in School: Does it Work for Children with Low Socio-Economic Background?. Advances in School Mental Health Promotion, 2009, 2, 51-60.	0.8	21
59	A honeybee's ability to learn, recognize, and discriminate odors depends upon odor sampling time and concentration.. Behavioral Neuroscience, 2009, 123, 36-43.	1.2	58
60	Learning and memory in workers reared by nutritionally stressed honey bee (Apis mellifera L.) colonies. Physiology and Behavior, 2008, 95, 609-616.	2.1	11
61	Olfactory Interference during Inhibitory Backward Pairing in Honey Bees. PLoS ONE, 2008, 3, e3513.	2.5	13
62	Experimentally induced change in infectious period affects transmission dynamics in a social group. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 61-65.	2.6	52
63	Olfactory memory formation and the influence of reward pathway during appetitive learning by honey bees. Journal of Experimental Biology, 2007, 210, 4024-4033.	1.7	40
64	Octopamine and tyramine influence the behavioral profile of locomotor activity in the honey bee (Apis) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.0	100
65	Caste-specific differences in risk sensitivity in honeybees, Apis mellifera. Animal Behaviour, 2005, 69, 859-868.	1.9	29
66	Heritable variation in learning performance affects foraging preferences in the honey bee (Apis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 30	1.4	31
67	Intensity and the ratios of compounds in the scent of snapdragon flowers affect scent discrimination by honeybees (Apis mellifera). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2005, 191, 105-114.	1.6	122
68	Odour concentration affects odour identity in honeybees. Proceedings of the Royal Society B: Biological Sciences, 2005, 272, 2417-2422.	2.6	54
69	Molecular Features of Odorants Systematically Influence Slow Temporal Responses Across Clusters of Coordinated Antennal Lobe Units in the Moth Manduca sexta. Journal of Neurophysiology, 2004, 92, 236-254.	1.8	46
70	Variation in complex olfactory stimuli and its influence on odour recognition. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 147-152.	2.6	52
71	Learning modulates the ensemble representations for odors in primary olfactory networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10476-10481.	7.1	106
72	Different Thresholds for Detection and Discrimination of Odors in the Honey bee (Apis mellifera). Chemical Senses, 2004, 29, 127-135.	2.0	72

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73	Octopamine receptors in the honeybee (Apis mellifera) brain and their disruption by RNA-mediated interference. Journal of Insect Physiology, 2004, 50, 701-713.	2.0	92
74	Modulation of Early Olfactory Processing by an Octopaminergic Reinforcement Pathway in the Honeybee. Journal of Neuroscience, 2003, 23, 5370-5380.	3.6	261
75	Context-dependent violations of rational choice in honeybees (Apis mellifera) and gray jays () Tj ETQq1 1 0.784314 rgBT /Overlock 10 T	1.4	240
76	Ability of honeybee, Apis mellifera, to detect and discriminate odors of varieties of canola (Brassica) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2002, 28, 721-740.	1.8	66
77	Sensitivity to a change in reward is heritable in the honeybee, Apis mellifera. Animal Behaviour, 2001, 61, 527-534.	1.9	57
78	Quantitative trait loci associated with reversal learning and latent inhibition in honeybees (Apis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54	2.1	54
79	Olfactory-based discrimination learning in the moth, Manduca sexta. Journal of Insect Physiology, 2001, 47, 375-384.	2.0	62
80	Heritable variation for latent inhibition and its correlation with reversal learning in honeybees (Apis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.5	98
81	Impairment of olfactory discrimination by blockade of GABA and nitric oxide activity in the honey bee antennal lobes.. Behavioral Neuroscience, 2000, 114, 514-525.	1.2	71
82	Effect of an amino acid on feeding preferences and learning behavior in the honey bee, Apis mellifera. Journal of Insect Physiology, 2000, 46, 793-801.	2.0	53
83	Risk-sensitive foraging: choice behaviour of honeybees in response to variability in volume of reward. Animal Behaviour, 1999, 57, 1055-1061.	1.9	78
84	Generalization Between Binary Odor Mixtures and Their Components in the Rat. Physiology and Behavior, 1999, 66, 701-707.	2.1	63
85	Analysis of Interaction in Binary Odorant Mixtures. Physiology and Behavior, 1998, 65, 397-407.	2.1	81
86	An analysis of blocking in odorant mixtures: An increase but not a decrease in intensity of reinforcement produces unblocking.. Behavioral Neuroscience, 1997, 111, 57-69.	1.2	46
87	Olfactory conditioning in the honey bee, Apis mellifera: Effects of odor intensity. Physiology and Behavior, 1997, 61, 107-117.	2.1	108
88	A computational model of the response of honey bee antennal lobe circuitry to odor mixtures: overshadowing, blocking and unblocking can arise from lateral inhibition. Behavioural Brain Research, 1997, 87, 1-14.	2.2	77
89	Impaired odour discrimination on desynchronization of odour-encoding neural assemblies. Nature, 1997, 390, 70-74.	27.8	912
90	Selection on a haploid genotype for discrimination learning performance: Correlation between drone honey bees (Apis mellifera) and their worker progeny (Hymenoptera: Apidae). Journal of Insect Behavior, 1995, 8, 637-652.	0.7	28

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91	Modulation of the honey bee (Apis mellifera) sting response by octopamine. Journal of Insect Physiology, 1995, 41, 671-680.	2.0	38
92	Effect of genotype but not of age or caste on olfactory learning performance in the honey bee, Apis mellifera. Animal Behaviour, 1994, 48, 1357-1369.	1.9	57
93	Controlling Tracheal Mites (Acari: Tarsonemidae) in Honey Bees (Hymenoptera: Apidae) with Vegetable Oil. Journal of Economic Entomology, 1994, 87, 910-916.	1.8	12
94	Swelling of the retromolar region and cheek associated with limited opening. Journal of Oral and Maxillofacial Surgery, 1993, 51, 304-309.	1.2	35
95	Conditional withholding of proboscis extension in honeybees (Apis mellifera) during discriminative punishment.. Journal of Comparative Psychology (Washington, D C: 1983), 1991, 105, 345-356.	0.5	91
96	The Olfactory Memory of the Honeybee Apis Mellifera: I. Odorant Modulation of Short- and Intermediate-Term Memory After Single-Trial Conditioning. Journal of Experimental Biology, 1991, 161, 367-382.	1.7	64
97	Nesting strategies of primitively eusocial bees: A model of nest usurpation during the solitary state of the nesting cycle. Journal of Theoretical Biology, 1990, 144, 445-471.	1.7	15
98	Social competition among gynes in halictine bees: The influence of bee size and pheromones on behavior. Journal of Insect Behavior, 1989, 2, 397-411.	0.7	55
99	The use of electromyogram recordings to quantify odourant discrimination in the honey bee, Apis mellifera. Journal of Insect Physiology, 1989, 35, 369-375.	2.0	89
100	An Analysis of Variability in the Feeding Motor Program of the Honey Bee; the Role of Learning in Releasing a Modal Action Pattern. Ethology, 1989, 82, 68-81.	1.1	44
101	Pheromonal covariation and kinship in social beeLasioglossum zephyrum (Hymenoptera: Halictidae). Journal of Chemical Ecology, 1988, 14, 87-94.	1.8	29
102	Genealogical relationship and social dominance in bees: A reply to Kukuk & May. Animal Behaviour, 1988, 36, 1850-1851.	1.9	3
103	Neurobiology and Behavior of Honeybees. Randolf Menzel , Alison Mercer. Quarterly Review of Biology, 1988, 63, 250-250.	0.1	0
104	An agenda of future tasks for international and indigenous NGOs: Views from the North. World Development, 1987, 15, 87-93.	4.9	23
105	Effects of genealogical relationship and colony age on the dominance hierarchy in the primitively eusocial bee Lasioglossum zephyrum. Animal Behaviour, 1987, 35, 211-217.	1.9	27
106	Kin-based male mating preferences in two species of halictine bee. Behavioral Ecology and Sociobiology, 1987, 20, 313-318.	1.4	58
107	Voluntary Agencies in the Welfare State. Journal of Health Politics, Policy and Law, 1984, 9, 173-177.	1.9	0
108	Stratum, Tree, and Flower Selection by Tropical Bees: Implications for the Reproductive Biology of Outcrossing Cochlospermum Vitifolium in Panama. Ecology, 1982, 63, 712-720.	3.2	19

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109	An Incrementally Variable Phase-Locked Control for a Polyphase Inverter. IEEE Transactions on Instrumentation and Measurement, 1978, 27, 74-76.	4.7	0