Rayko Halitschke

List of Publications by Year
in descending order

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78 papers	9,260 citations	61977 43 h-index	66906 78 g-index
85 all docs	85 docs citations	85 times ranked	7812 citing authors

#	Article	IF	Citations
1	Volatile Signaling in Plant-Plant Interactions: "Talking Trees" in the Genomics Era. Science, 2006, 311, 812-815.	12.6	737
2	A knock-out mutation in allene oxide synthase results in male sterility and defective wound signal transduction in Arabidopsis due to a block in jasmonic acid biosynthesis. Plant Journal, 2002, 31, 1-12.	5.7	560
3	Silencing the Jasmonate Cascade: Induced Plant Defenses and Insect Populations. Science, 2004, 305, 665-668.	12.6	514
4	Molecular Interactions between the Specialist HerbivoreManduca sexta (Lepidoptera, Sphingidae) and Its Natural Host Nicotiana attenuata. III. Fatty Acid-Amino Acid Conjugates in Herbivore Oral Secretions Are Necessary and Sufficient for Herbivore-Specific Plant Responses. Plant Physiology, 2001, 125, 711-717.	4.8	496
5	Nicotine's Defensive Function in Nature. PLoS Biology, 2004, 2, e217.	5.6	400
6	Herbivory in the Previous Generation Primes Plants for Enhanced Insect Resistance Â Â. Plant Physiology, 2012, 158, 854-863.	4.8	394
7	Priming of plant defense responses in nature by airborne signaling between Artemisia tridentata and Nicotiana attenuata. Oecologia, 2006, 148, 280-292.	2.0	334
8	Agrobacterium-mediated transformation of Nicotiana attenuata, a model ecological expression system. Chemoecology, 2002, 12, 177-183.	1.1	324
9	Antisense LOX expression increases herbivore performance by decreasing defense responses and inhibiting growth-related transcriptional reorganization inNicotiana attenuata. Plant Journal, 2003, 36, 794-807.	5.7	320
10	Shared signals â€“â€˜alarm callsâ€™ from plants increase apparency to herbivores and their enemies in nature. Ecology Letters, 2008, 11, 24-34.	6.4	250
11	CONSTITUTIVE AND INDUCED DEFENSES TO HERBIVORY IN ABOVE- AND BELOWGROUND PLANT TISSUES. Ecology, 2008, 89, 392-406.	3.2	238
12	Co(i)-ordinating defenses: NaCOI1 mediates herbivore- induced resistance in Nicotiana Âattenuata and reveals the role of herbivore movement in avoiding defenses. Plant Journal, 2007, 51, 79-91.	5.7	237
13	Salicylic acid 3-hydroxylase regulates Arabidopsis leaf longevity by mediating salicylic acid catabolism. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14807-14812.	7.1	236
14	Testing the potential for conflicting selection on floral chemical traits by pollinators and herbivores: predictions and case study. Functional Ecology, 2009, 23, 901-912.	3.6	225
15	Ecophysiological comparison of direct and indirect defenses in Nicotiana attenuata. Oecologia, 2000, 124, 408-417.	2.0	217
16	Molecular Interactions between the Specialist HerbivoreManduca sexta (Lepidoptera, Sphingidae) and Its Natural Host Nicotiana attenuata. VI. Microarray Analysis Reveals That Most Herbivore-Specific Transcriptional Changes Are Mediated by Fatty Acid-Amino Acid Conjugates,. Plant Physiology, 2003, 131, 1894-1902.	4.8	187
17	Volatile signaling in plantâ€“plantâ€“herbivore interactions: what is real?. Current Opinion in Plant Biology, 2002, 5, 351-354.	7.1	181
18	Herbivory-mediated pollinator limitation: negative impacts of induced volatiles on plantâ€“pollinator interactions. Ecology, 2011, 92, 1769-1780.	3.2	169

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19	Physiological integration of roots and shoots in plant defense strategies links aboveâ€•and belowground herbivory. Ecology Letters, 2008, 11, 841-851.	6.4	168
20	Merging molecular and ecological approaches in plantâ€“insect interactions. Current Opinion in Plant Biology, 2001, 4, 351-358.	7.1	165
21	Silencing of hydroperoxide lyase and allene oxide synthase reveals substrate and defense signaling crosstalk in Nicotiana attenuata. Plant Journal, 2004, 40, 35-46.	5.7	154
22	Salicylateâ€•mediated interactions between pathogens and herbivores. Ecology, 2010, 91, 1075-1082.	3.2	150
23	Using â€˜muteâ€™ plants to translate volatile signals. Plant Journal, 2006, 45, 275-291.	5.7	144
24	Tuning the herbivoreâ€•induced ethylene burst: the role of transcript accumulation and ethylene perception in Nicotiana attenuata. Plant Journal, 2007, 51, 293-307.	5.7	140
25	Evidence for adaptive radiation from a phylogenetic study of plant defenses. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18067-18072.	7.1	135
26	Specificity and complexity: the impact of herbivore-induced plant responses on arthropod community structure. Current Opinion in Plant Biology, 2007, 10, 409-414.	7.1	134
27	Independently silencing two JAR family members impairs levels of trypsin proteinase inhibitors but not nicotine. Planta, 2007, 226, 159-167.	3.2	133
28	Quorum sensing regulates electric current generation of Pseudomonas aeruginosa PA14 in bioelectrochemical systems. Electrochemistry Communications, 2010, 12, 459-462.	4.7	123
29	Direct and indirect root defences of milkweed (Asclepias syriaca): trophic cascades, tradeâ€•offs and novel methods for studying subterranean herbivory. Journal of Ecology, 2011, 99, 16-25.	4.0	116
30	Evolutionary Trade-Offs in Plants Mediate the Strength of Trophic Cascades. Science, 2010, 327, 1642-1644.	12.6	114
31	Jasmonates and Related Compounds in Plant-Insect Interactions. Journal of Plant Growth Regulation, 2004, 23, 238-245.	5.1	110
32	Individual variability in herbivore-specific elicitors from the plant's perspective. Molecular Ecology, 2004, 13, 2421-2433.	3.9	83
33	Oxylipin channelling in Nicotiana attenuata: lipoxygenase 2 supplies substrates for green leaf volatile production. Plant, Cell and Environment, 2010, 33, 2028-2040.	5.7	80
34	Differential and Synergistic Functionality of Acylsugars in Suppressing Oviposition by Insect Herbivores. PLoS ONE, 2016, 11, e0153345.	2.5	75
35	Herbivoreâ€•specific elicitation of photosynthesis by mirid bug salivary secretions in the wild tobacco Nicotiana attenuata. New Phytologist, 2011, 191, 528-535.	7.3	74
36	Environmentally sustainable pest control options for Drosophila suzukii. Journal of Applied Entomology, 2018, 142, 3-17.	1.8	72

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37	Blumenols as shoot markers of root symbiosis with arbuscular mycorrhizal fungi. ELife, 2018, 7, .	6.0	69
38	Phylogenetic correlations among chemical and physical plant defenses change with ontogeny. New Phytologist, 2015, 206, 796-806.	7.3	67
39	The potato R locus codes for dihydroflavonol 4-reductase. Theoretical and Applied Genetics, 2009, 119, 931-937.	3.6	63
40	Cardenolides in nectar may be more than a consequence of allocation to other plant parts: a phylogenetic study of <scp>A</scp>sclepias. Functional Ecology, 2012, 26, 1100-1110.	3.6	62
41	Leaf herbivory increases plant fitness via induced resistance to seed predators. Ecology, 2013, 94, 966-975.	3.2	62
42	Controlled hydroxylations of diterpenoids allow for plant chemical defense without autotoxicity. Science, 2021, 371, 255-260.	12.6	53
43	An Ecological Analysis of the Herbivory-Elicited JA Burst and Its Metabolism: Plant Memory Processes and Predictions of the Moving Target Model. PLoS ONE, 2009, 4, e4697.	2.5	52
44	Herbivore damage-induced production and specific anti-digestive function of serine and cysteine protease inhibitors in tall goldenrod, Solidago altissima L. (Asteraceae). Planta, 2013, 237, 1287-1296.	3.2	41
45	An unbiased approach elucidates variation in (S)-(+)-linalool, a context-specific mediator of a tri-trophic interaction in wild tobacco. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14651-14660.	7.1	41
46	Epigenetic Mechanisms Are Involved in Sex-Specific Trans-Generational Immune Priming in the Lepidopteran Model Host Manduca sexta. Frontiers in Physiology, 2019, 10, 137.	2.8	41
47	Natural historyâ€“guided omics reveals plant defensive chemistry against leafhopper pests. Science, 2022, 375, eabm2948.	12.6	40
48	Shoot phytochrome B modulates reactive oxygen species homeostasis in roots via abscisic acid signaling in Arabidopsis. Plant Journal, 2018, 94, 790-798.	5.7	34
49	Information theory tests critical predictions of plant defense theory for specialized metabolism. Science Advances, 2020, 6, eaaz0381.	10.3	34
50	Quantitative trait loci regulating the fatty acid profile of acylsugars in tomato. Molecular Breeding, 2014, 34, 1201-1213.	2.1	31
51	The decoration of specialized metabolites influences stylar development. ELife, 2018, 7, .	6.0	31
52	Dietary plant phenolic improves survival of bacterial infection in <scp>M</scp>anduca sexta caterpillars. Entomologia Experimentalis Et Applicata, 2013, 146, 321-331.	1.4	21
53	The Effect of Polychlorinated Biphenyls on the Song of Two Passerine Species. PLoS ONE, 2013, 8, e73471.	2.5	21
54	Plant mating systems affect adaptive plasticity in response to herbivory. Plant Journal, 2014, 78, 481-490.	5.7	21

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55	Simultaneous analysis of tissue- and genotype-specific variation in Solidago altissima (Asteraceae) rhizome terpenoids, and the polyacetylene dehydromatricaria ester. Chemoecology, 2010, 20, 255-264.	1.1	20
56	Overcompensating plants: their expression of resistance traits and effects on herbivore preference and performance. Entomologia Experimentalis Et Applicata, 2012, 143, 245-253.	1.4	20
57	Effects of Plant Vascular Architecture on Aboveground–Belowground-Induced Responses to Foliar and Root Herbivores on Nicotiana tabacum. Journal of Chemical Ecology, 2008, 34, 1349-1359.	1.8	19
58	Symbiont–mediated chemical defense in the invasive ladybird Harmonia axyridis. Ecology and Evolution, 2019, 9, 1715-1729.	1.9	18
59	Strigolactone signaling regulates specialized metabolism in tobacco stems and interactions with stem-feeding herbivores. PLoS Biology, 2020, 18, e3000830.	5.6	18
60	Specific decorations of 17-hydroxygeranyllinalool diterpene glycosides solve the autotoxicity problem of chemical defense inNicotiana attenuata. Plant Cell, 2021, 33, 1748-1770.	6.6	18
61	Honeybee colonies compensate for pesticide-induced effects on royal jelly composition and brood survival with increased brood production. Scientific Reports, 2021, 11, 62.	3.3	17
62	Functional evidence supports adaptive plant chemical defense along a geographical cline. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	17
63	Sequestration of Defenses against Predators Drives Specialized Host Plant Associations in Preadapted Milkweed Bugs (Heteroptera: Lygaeinae). American Naturalist, 2022, 199, E211-E228.	2.1	16
64	The Clock Gene TOC1 in Shoots, Not Roots, Determines Fitness of Nicotiana attenuata under Drought. Plant Physiology, 2019, 181, 305-318.	4.8	15
65	Mate Selection in Self-Compatible Wild Tobacco Results from Coordinated Variation in Homologous Self-Incompatibility Genes. Current Biology, 2019, 29, 2020-2030.e5.	3.9	15
66	Light dominates the diurnal emissions of herbivore-induced volatiles in wild tobacco. BMC Plant Biology, 2021, 21, 401.	3.6	15
67	Using natural variation to achieve a whole–plant functional understanding of the responses mediated by jasmonate signaling. Plant Journal, 2019, 99, 414-425.	5.7	13
68	Jasmonate signaling makes flowers attractive to pollinators and repellant to florivores in nature. Journal of Integrative Plant Biology, 2018, 60, 190-194.	8.5	10
69	TOC1 in Nicotiana attenuata regulates efficient allocation of nitrogen to defense metabolites under herbivory stress. New Phytologist, 2020, 228, 1227-1242.	7.3	9
70	microRNA390 modulates <scp>Nicotiana attenuata</scp>'s tolerance response to <scp>Manduca sexta</scp> herbivory. Plant Direct, 2021, 5, e350.	1.9	6
71	Determining the scale at which variation in a single gene changes population yields. ELife, 2020, 9, .	6.0	6
72	Syringaldehyde is a novel smoke-derived germination cue for the native fire-chasing tobacco, Nicotiana attenuata. Seed Science Research, 2021, 31, 292-299.	1.7	6

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73	The downside of metabolic diversity: Postingestive rearrangements by specialized insects. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	6
74	Tri-Trophic Effects of Seasonally Variable Induced Plant Defenses Vary across the Development of a Shelter Building Moth Larva and Its Parasitoid. PLoS ONE, 2015, 10, e0120769.	2.5	4
75	Quantification of Blumenol Derivatives as Leaf Biomarkers for Plant-AMF Association. Bio-protocol, 2019, 9, e3301.	0.4	4
76	Natural variation in linalool metabolites: One genetic locus, many functions?. Journal of Integrative Plant Biology, 2021, 63, 1416-1421.	8.5	3
77	ZEITLUPE facilitates the rhythmic movements of Nicotiana attenuata flowers. Plant Journal, 2020, 103, 308-322.	5.7	2
78	Jasmonates and related compounds in plant-insect interactions. Journal of Plant Growth Regulation, 2004, 23, 238-245.	5.1	2