Thomas C Sparks

List of Publications by Year
in descending order

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91
papers

7,283
citations

66250
44
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64407
83
g-index

94
all docs

94
docs citations

94
times ranked

4715
citing authors

#	Article	IF	Citations
1	Impact of natural products on discovery of, and innovation in, crop protection compounds. Pest Management Science, 2022, 78, 399-408.	1.7	39
2	Innovation in insecticide discovery: Approaches to the discovery of new classes of insecticides. Pest Management Science, 2022, 78, 3226-3247.	1.7	15
3	The spinosyns, spinosad, spinetoram, and synthetic spinosyn mimics â€•discovery, exploration, and evolution of a natural product chemistry and the impact of computational tools. Pest Management Science, 2021, 77, 3637-3649.	1.7	39
4	Insecticide resistance management and industry: the origins and evolution of the <scp>I</scp>nsecticide <scp>R</scp>esistance <scp>A</scp>ction <scp>C</scp>ommittee (<scp>IRAC</scp>) and the mode of action classification scheme. Pest Management Science, 2021, 77, 2609-2619.	1.7	90
5	Crop protection compounds â€“ trends andâ€,perspective. Pest Management Science, 2021, 77, 3608-3616.	1.7	34
6	East meets west: regional impact on agrochemical discovery and innovation. Pest Management Science, 2021, 77, 4211-4223.	1.7	5
7	Role of nicotinic acetylcholine receptor subunits in the mode of action of neonicotinoid, sulfoximine and spinosyn insecticides in Drosophila melanogaster. Insect Biochemistry and Molecular Biology, 2021, 131, 103547.	1.2	43
8	Structure Simplification of Natural Products as a Lead Generation Approach in Agrochemical Discovery. Journal of Agricultural and Food Chemistry, 2021, 69, 8324-8346.	2.4	68
9	Sulfoxaflor â€“ A sulfoximine insecticide: Review and analysis of mode of action, resistance and cross-resistance. Pesticide Biochemistry and Physiology, 2021, 178, 104924.	1.6	34
10	Insecticides, biologics and nematicides: Updates to IRACâ€™s mode of action classification - a tool for resistance management. Pesticide Biochemistry and Physiology, 2020, 167, 104587.	1.6	223
11	Intellectual property in entomology: Analysis and perspective on recent trends in global patent publications. Pest Management Science, 2020, 76, 1603-1611.	1.7	8
12	Sulfoxaflor efficacy in the laboratory against imidacloprid-resistant and susceptible populations of the green peach aphid, Myzus persicae: Impact of the R81T mutation in the nicotinic acetylcholine receptor. Pesticide Biochemistry and Physiology, 2020, 166, 104582.	1.6	14
13	The new age of insecticide discovery-the crop protection industry and the impact of natural products. Pesticide Biochemistry and Physiology, 2019, 161, 12-22.	1.6	81
14	Natural products: a strategic lead generation approach in crop protection discovery. Pest Management Science, 2019, 75, 2301-2309.	1.7	61
15	Cover Image, Volume 75, Issue 2. Pest Management Science, 2019, 75, i-i.	1.7	0
16	Cover Image, Volume 75, Issue 9. Pest Management Science, 2019, 75, i-i.	1.7	11
17	Discovery of highly insecticidal synthetic spinosyn mimicsÂâ€“ÂCAMD enabled <i>de novo</i> design simplifying a complex natural product. Pest Management Science, 2019, 75, 309-313.	1.7	13
18	Physicochemical property guidelines for modern agrochemicals. Pest Management Science, 2018, 74, 1979-1991.	1.7	67

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19	De Novo Design of Potent, Insecticidal Synthetic Mimics of the Spinosyn Macrolide Natural Products. Scientific Reports, 2018, 8, 4861.	1.6	16
20	Crop Protection Discovery: Is Being the First Best?. Journal of Agricultural and Food Chemistry, 2018, 66, 10337-10346.	2.4	29
21	Lead generation in crop protection research: a portfolio approach to agrochemical discovery. Pest Management Science, 2017, 73, 678-685.	1.7	26
22	Innovations in Agrochemical Discovery and the Role of Metabolism, Bioavailability and Formulations. Pest Management Science, 2017, 73, 655-657.	1.7	4
23	Agrochemical Discovery - Building the Next Generation of Insect Control Agents. ACS Symposium Series, 2017, , 1-17.	0.5	14
24	Characterization of a nicotinic acetylcholine receptor binding site for sulfoxaflor, a new sulfoximine insecticide for the control of sap-feeding insect pests. Pesticide Biochemistry and Physiology, 2017, 143, 90-94.	1.6	34
25	Cover Image, Volume 73, Issue 4. Pest Management Science, 2017, 73, i-i.	1.7	0
26	Natural products, their derivatives, mimics and synthetic equivalents: role in agrochemical discovery. Pest Management Science, 2017, 73, 700-715.	1.7	159
27	Perspectives on the agrochemical industry and agrochemical discovery. Pest Management Science, 2017, 73, 672-677.	1.7	176
28	Molecular modeling of sulfoxaflor and neonicotinoid binding in insect nicotinic acetylcholine receptors: impact of the <i>Myzus Î²</i>1 <scp>R81T</scp> mutation. Pest Management Science, 2016, 72, 1467-1474.	1.7	43
29	Natural product derived insecticides: discovery and development of spinetoram. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 185-193.	1.4	49
30	SAR studies directed toward the pyridine moiety of the sap-feeding insecticide sulfoxaflor (Isoclastâ„¢) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.4	20
31	IRAC: Mode of action classification and insecticide resistance management. Pesticide Biochemistry and Physiology, 2015, 121, 122-128.	1.6	862
32	Synthesis and Insecticidal Activity of Spinosyns with C9-<i>O</i>-Benzyl Bioisosteres in Place of the 2â€²,3â€²,4â€²-Tri-<i>O</i>-methyl Rhamnose. Journal of Agricultural and Food Chemistry, 2015, 63, 5571-5577.	2.4	9
33	Natural products for pest control: an analysis of their role, value and future. Pest Management Science, 2014, 70, 1169-1185.	1.7	227
34	Sulfoxaflor and the sulfoximine insecticides: Chemistry, mode of action and basis for efficacy on resistant insects. Pesticide Biochemistry and Physiology, 2013, 107, 1-7.	1.6	269
35	High-Throughput Screening in Agrochemical Research. , 2013, , 1-20.		7
36	Nicotinic Acetylcholine Receptors as Spinosyn Targets for Insect Pest Management. Advances in Insect Physiology, 2013, , 101-210.	1.1	31

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37	Insecticide discovery: An evaluation and analysis. Pesticide Biochemistry and Physiology, 2013, 107, 8-17.	1.6	188
38	Crossâ€resistance relationships of the sulfoximine insecticide sulfoxaflor with neonicotinoids and other insecticides in the whiteflies <i>Bemisia tabaci</i> and Trialeurodes vaporariorum. Pest Management Science, 2013, 69, 809-813.	1.7	99
39	Differential metabolism of sulfoximine and neonicotinoid insecticides by Drosophila melanogaster monooxygenase CYP6G1. Pesticide Biochemistry and Physiology, 2012, 103, 159-165.	1.6	50
40	Effects of mutations in Drosophila nicotinic acetylcholine receptor subunits on sensitivity to insecticides targeting nicotinic acetylcholine receptors. Pesticide Biochemistry and Physiology, 2012, 102, 56-60.	1.6	48
41	Resistance and cross-resistance to the spinosyns â€“ A review and analysis. Pesticide Biochemistry and Physiology, 2012, 102, 1-10.	1.6	150
42	Discovery and Characterization of Sulfoxaflor, a Novel Insecticide Targeting Sap-Feeding Pests. Journal of Agricultural and Food Chemistry, 2011, 59, 2950-2957.	2.4	295
43	Novel nicotinic action of the sulfoximine insecticide sulfoxaflor. Insect Biochemistry and Molecular Biology, 2011, 41, 432-439.	1.2	142
44	Biological characterization of sulfoxaflor, a novel insecticide. Pest Management Science, 2011, 67, 328-334.	1.7	176
45	A spinosyn-sensitive Drosophila melanogaster nicotinic acetylcholine receptor identified through chemically induced target site resistance, resistance gene identification, and heterologous expression. Insect Biochemistry and Molecular Biology, 2010, 40, 376-384.	1.2	120
46	Discovery of the butenyl-spinosyn insecticides: Novel macrolides from the new bacterial strain Saccharopolyspora pogona. Bioorganic and Medicinal Chemistry, 2009, 17, 4185-4196.	1.4	47
47	Modification of the butenyl-spinosyns utilizing cross-metathesis. Bioorganic and Medicinal Chemistry, 2009, 17, 4197-4205.	1.4	16
48	Synthesis and biological activity of 2-(4,5-dihydroisoxazol-5-yl)-1,3,4-oxadiazoles. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 5796-5798.	1.0	25
49	3-(Arylthiomethyl)isoxazole-4,5-dicarboxamides: Chemoselective Nucleophilic Chemistry and Insecticidal Activity. Journal of Agricultural and Food Chemistry, 2009, 57, 7422-7426.	2.4	18
50	Glycosylation engineering of spinosyn analogues containing an l-olivose moiety. Organic and Biomolecular Chemistry, 2009, 7, 1705.	1.5	18
51	Neural network-based QSAR and insecticide discovery: spinetoram. Journal of Computer-Aided Molecular Design, 2008, 22, 393-401.	1.3	103
52	Engineering of the Spinosyn PKS:Â Directing Starter Unit Incorporation. Journal of Natural Products, 2006, 69, 1702-1710.	1.5	47
53	Evaluation and Development of Spinosyns to Control Ectoparasites on Cattle and Sheep. Current Topics in Medicinal Chemistry, 2002, 2, 675-699.	1.0	36
54	Natural products as insecticides: the biology, biochemistry and quantitative structure-activity relationships of spinosyns and spinosoids. Pest Management Science, 2001, 57, 896-905.	1.7	256

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55	Recent advances in the chemistry of spinosyns. Pest Management Science, 2001, 57, 177-185.	1.7	84
56	Spinosad - a case study: an example from a natural products discovery programme. Pest Management Science, 2000, 56, 696-702.	1.7	393
57	The Application of Artificial Neural Networks to the Identification of New Spinosoids with Improved Biological Activity toward Larvae of Heliothis virescens. Pesticide Biochemistry and Physiology, 2000, 67, 187-197.	1.6	17
58	Pharmacological characterization of dopamine receptors in the corpus allatum of Manduca sexta larvae. Insect Biochemistry and Molecular Biology, 2000, 30, 755-766.	1.2	27
59	Biological Activity of the Spinosyns, New Fermentation Derived Insect Control Agents, on Tobacco Budworm (Lepidoptera: Noctuidae) Larvae. Journal of Economic Entomology, 1998, 91, 1277-1283.	0.8	175
60	Effect of Temperature on Toxicity and Knockdown Activity of cis-Permethrin, Esfenvalerate, and Î»-Cyhalothrin in the Cabbage Looper (Lepidoptera: Noctuidae). Journal of Economic Entomology, 1990, 83, 342-346.	0.8	26
61	The role of behavior in insecticide resistance. Pest Management Science, 1989, 26, 383-399.	0.7	96
62	Pyrethroid-Synergist Mixtures: Toxicity, Resistance, and Field Efficacy Toward Pyrethroid-Resistant Horn Flies (Diptera: Muscidae). Journal of Economic Entomology, 1988, 81, 1567-1574.	0.8	19
63	Influence of Treatment Technique on the Temperature-Toxicity Relationships of cis- and trans-Permethrin in the Cabbage Looper (Lepidoptera: Noctuidae). Journal of Economic Entomology, 1988, 81, 115-118.	0.8	22
64	Insecticide Toxicity to the Soybean Looper and the Velvetbean Caterpillar (Lepidoptera: Noctuidae) as Influenced by Feeding on Resistant Soybean (PI 227687) Leaves and Coumestrol. Journal of Economic Entomology, 1988, 81, 1288-1294.	0.8	29
65	Variation in Resistance of Field Populations of Tobacco Budworm and Bollworm (Lepidoptera:) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.8	29
66	Insecticide Mixtures as an Approach to the Management of Pyrethroid-resistant Horn Flies (Diptera:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.8	20
67	Inhibition of trans-permethrin hydrolysis in Pseudoplusia includens (Walker) and use of inhibitors as dyrethroid synergists. Pesticide Biochemistry and Physiology, 1987, 27, 237-245.	1.6	19
68	Enhanced pyrethroid hydrolysis in pyrethroid-resistant larvae of the tobacco budworm, Heliothis virescens (F.). Pesticide Biochemistry and Physiology, 1987, 28, 9-16.	1.6	30
69	Juvenile hormone esterase activity in the plasma and body tissue during the larval and adult stages of the house cricket. Insect Biochemistry, 1987, 17, 751-758.	1.8	27
70	Characterization of a Trans-permethrin hydrolyzing enzyme from the midgut of Pseudoplusia includens (Walker). Pesticide Biochemistry and Physiology, 1986, 25, 73-81.	1.6	23
71	Spectrum of Insecticide Cross-resistance in Pyrethroid-resistant Populations of Haematobia irritans (Diptera: Muscidae). Journal of Economic Entomology, 1985, 78, 768-773.	0.8	47
72	Behavioral Resistance to the Pyrethroids in the Horn Fly, Haematobia irritans (Diptera: Muscidae). Environmental Entomology, 1985, 14, 873-880.	0.7	46

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73	Effects of juvenile hormone I and the anti-juvenile hormone fluoromevalono-lactone on development and juvenile hormone esterase activity in post-feeding last-stadium larvae of Trichoplusia ni (HÃ¼bner). Journal of Insect Physiology, 1984, 30, 225-234.	0.9	31
74	Detoxification of plant toxins by insects. Insect Biochemistry, 1983, 13, 453-468.	1.8	97
75	The haemolymph juvenile hormone esterase of Manduca sexta (L.)â€”inhibition and regulation. Insect Biochemistry, 1983, 13, 529-541.	1.8	110
76	Inhibition and substrate specificity of the haemolymph juvenile hormone esterase of the cabbage looper, Trichoplusia ni (HÃ¼bner). Insect Biochemistry, 1983, 13, 633-640.	1.8	23
77	Purification and kinetics of juvenile hormone esterase from the cabbage looper, Trichoplusia ni (Hubner). Insect Biochemistry, 1983, 13, 129-136.	1.8	30
78	Characterization of the plasma juvenile hormone esterase in synchronous last stadium female larvae of the sugar cane borer, Diatraea saccharalis (F.). Insect Biochemistry, 1983, 13, 163-170.	1.8	25
79	Temperature-Toxicity Relationships of Pyrethroids on Heliothis virescens (F.) (Lepidoptera: Noctuidae) and Anthonomus grandis grandis Boheman (Coleoptera: Curculionidae). Journal of Economic Entomology, 1983, 76, 243-246.	0.8	59
80	Temperature-Toxicity Relationships of Pyrethroids on Three Lepidopterans. Journal of Economic Entomology, 1982, 75, 643-646.	0.8	77
81	Growth of Larval Diatraea saccharalis (Lepidoptera: Pyralidae) on an Artificial Diet and Synchronization of the Last Larval Stadium1. Annals of the Entomological Society of America, 1982, 75, 421-429.	1.3	60
82	Trifluoromethylketones as possible transition state analog inhibitors of juvenile hormone esterase. Pesticide Biochemistry and Physiology, 1982, 17, 76-88.	1.6	97
83	The distribution of juvenile hormone esterase and its interrelationship with other proteins influencing juvenile hormone metabolism in the cabbage looper, Trichoplusia ni. Insect Biochemistry, 1981, 11, 473-485.	1.8	87
84	Biology of the Soybean Looper, Pseudoplusia includens1: Characterization of Last-Stage Larvae. Annals of the Entomological Society of America, 1981, 74, 531-535.	1.3	46
85	Comparative inhibition of the juvenile hormone esterases from Trichoplusia ni, Tenebrio molitor, and Musca domestica. Pesticide Biochemistry and Physiology, 1980, 14, 290-302.	1.6	94
86	A comparison of the induced and naturally occurring juvenile hormone esterases from last instar larvae of Trichoplusia ni. Insect Biochemistry, 1979, 9, 411-421.	1.8	68
87	Induction and regulation of juvenile hormone esterases during the last larval instar of the cabbage looper, Trichoplusia ni. Journal of Insect Physiology, 1979, 25, 551-560.	0.9	79
88	Haemolymph juvenile hormone esterase activity in synchronous last instar larvae of the cabbage looper, Trichoplusia ni. Journal of Insect Physiology, 1979, 25, 125-132.	0.9	112
89	Effects of the anti hormone-hormone mimic ETB on the induction of insect juvenile hormone esterase in. Life Sciences, 1979, 25, 445-450.	2.0	24
90	Selective inhibition of JH esterases from cockroach hemolymph. Pesticide Biochemistry and Physiology, 1977, 7, 517-530.	1.6	47

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91	A rapid assay for insect juvenile hormone esterase activity. Analytical Biochemistry, 1977, 82, 573-579.	1.1	276