

Thomas C Sparks

List of Publications by Year in descending order

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91
papers

7,283
citations

57758

44
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83
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94
all docs

94
docs citations

94
times ranked

4338
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.	3.4	39
2	Innovation in insecticide discovery: Approaches to the discovery of new classes of insecticides. Pest Management Science, 2022, 78, 3226-3247.	3.4	15
3	The spinosyns, spinosad, spinetoram, and synthetic spinosyn mimics –discovery, exploration, and evolution of a natural product chemistry and the impact of computational tools. Pest Management Science, 2021, 77, 3637-3649.	3.4	39
4	Insecticide resistance management and industry: the origins and evolution of the <i>IRAC</i> and the mode of action classification scheme. Pest Management Science, 2021, 77, 2609-2619.	3.4	90
5	Crop protection compounds – trends and perspective. Pest Management Science, 2021, 77, 3608-3616.	3.4	34
6	East meets west: regional impact on agrochemical discovery and innovation. Pest Management Science, 2021, 77, 4211-4223.	3.4	5
7	Role of nicotinic acetylcholine receptor subunits in the mode of action of neonicotinoid, sulfoximine and spinosyn insecticides in <i>Drosophila melanogaster</i> . Insect Biochemistry and Molecular Biology, 2021, 131, 103547.	2.7	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.	5.2	68
9	Sulfoxaflor – A sulfoximine insecticide: Review and analysis of mode of action, resistance and cross-resistance. Pesticide Biochemistry and Physiology, 2021, 178, 104924.	3.6	34
10	Insecticides, biologics and nematicides: Updates to <i>IRAC</i> 's mode of action classification - a tool for resistance management. Pesticide Biochemistry and Physiology, 2020, 167, 104587.	3.6	223
11	Intellectual property in entomology: Analysis and perspective on recent trends in global patent publications. Pest Management Science, 2020, 76, 1603-1611.	3.4	8
12	Sulfoxaflor efficacy in the laboratory against imidacloprid-resistant and susceptible populations of the green peach aphid, <i>Myzus persicae</i> : Impact of the R81T mutation in the nicotinic acetylcholine receptor. Pesticide Biochemistry and Physiology, 2020, 166, 104582.	3.6	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.	3.6	81
14	Natural products: a strategic lead generation approach in crop protection discovery. Pest Management Science, 2019, 75, 2301-2309.	3.4	61
15	Cover Image, Volume 75, Issue 2. Pest Management Science, 2019, 75, i-i.	3.4	0
16	Cover Image, Volume 75, Issue 9. Pest Management Science, 2019, 75, i-i.	3.4	11
17	Discovery of highly insecticidal synthetic spinosyn mimics –ACAMD enabled <i>de novo</i> design simplifying a complex natural product. Pest Management Science, 2019, 75, 309-313.	3.4	13
18	Physicochemical property guidelines for modern agrochemicals. Pest Management Science, 2018, 74, 1979-1991.	3.4	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.	3.3	16
20	Crop Protection Discovery: Is Being the First Best?. Journal of Agricultural and Food Chemistry, 2018, 66, 10337-10346.	5.2	29
21	Lead generation in crop protection research: a portfolio approach to agrochemical discovery. Pest Management Science, 2017, 73, 678-685.	3.4	26
22	Innovations in Agrochemical Discovery and the Role of Metabolism, Bioavailability and Formulations. Pest Management Science, 2017, 73, 655-657.	3.4	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.	3.6	34
25	Cover Image, Volume 73, Issue 4. Pest Management Science, 2017, 73, i-i.	3.4	0
26	Natural products, their derivatives, mimics and synthetic equivalents: role in agrochemical discovery. Pest Management Science, 2017, 73, 700-715.	3.4	159
27	Perspectives on the agrochemical industry and agrochemical discovery. Pest Management Science, 2017, 73, 672-677.	3.4	176
28	Molecular modeling of sulfoxaflor and neonicotinoid binding in insect nicotinic acetylcholine receptors: impact of the <i>Myzus persicae</i> R81T mutation. Pest Management Science, 2016, 72, 1467-1474.	3.4	43
29	Natural product derived insecticides: discovery and development of spinetoram. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 185-193.	3.0	49
30	SAR studies directed toward the pyridine moiety of the sap-feeding insecticide sulfoxaflor (Isoclasta,®) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.6	20
31	IRAC: Mode of action classification and insecticide resistance management. Pesticide Biochemistry and Physiology, 2015, 121, 122-128.	3.6	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.	5.2	9
33	Natural products for pest control: an analysis of their role, value and future. Pest Management Science, 2014, 70, 1169-1185.	3.4	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.	3.6	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.	2.7	31

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37	Insecticide discovery: An evaluation and analysis. <i>Pesticide Biochemistry and Physiology</i> , 2013, 107, 8-17.	3.6	188
38	Cross-resistance relationships of the sulfoximine insecticide sulfoxaflor with neonicotinoids and other insecticides in the whiteflies <i>Bemisia tabaci</i> and <i>Trialeurodes vaporariorum</i> . <i>Pest Management Science</i> , 2013, 69, 809-813.	3.4	99
39	Differential metabolism of sulfoximine and neonicotinoid insecticides by <i>Drosophila melanogaster</i> monooxygenase CYP6G1. <i>Pesticide Biochemistry and Physiology</i> , 2012, 103, 159-165.	3.6	50
40	Effects of mutations in <i>Drosophila</i> nicotinic acetylcholine receptor subunits on sensitivity to insecticides targeting nicotinic acetylcholine receptors. <i>Pesticide Biochemistry and Physiology</i> , 2012, 102, 56-60.	3.6	48
41	Resistance and cross-resistance to the spinosyns – A review and analysis. <i>Pesticide Biochemistry and Physiology</i> , 2012, 102, 1-10.	3.6	150
42	Discovery and Characterization of Sulfoxaflor, a Novel Insecticide Targeting Sap-Feeding Pests. <i>Journal of Agricultural and Food Chemistry</i> , 2011, 59, 2950-2957.	5.2	295
43	Novel nicotinic action of the sulfoximine insecticide sulfoxaflor. <i>Insect Biochemistry and Molecular Biology</i> , 2011, 41, 432-439.	2.7	142
44	Biological characterization of sulfoxaflor, a novel insecticide. <i>Pest Management Science</i> , 2011, 67, 328-334.	3.4	176
45	A spinosyn-sensitive <i>Drosophila melanogaster</i> nicotinic acetylcholine receptor identified through chemically induced target site resistance, resistance gene identification, and heterologous expression. <i>Insect Biochemistry and Molecular Biology</i> , 2010, 40, 376-384.	2.7	120
46	Discovery of the butenyl-spinosyn insecticides: Novel macrolides from the new bacterial strain <i>Saccharopolyspora pogona</i> . <i>Bioorganic and Medicinal Chemistry</i> , 2009, 17, 4185-4196.	3.0	47
47	Modification of the butenyl-spinosyns utilizing cross-metathesis. <i>Bioorganic and Medicinal Chemistry</i> , 2009, 17, 4197-4205.	3.0	16
48	Synthesis and biological activity of 2-(4,5-dihydroisoxazol-5-yl)-1,3,4-oxadiazoles. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2009, 19, 5796-5798.	2.2	25
49	3-(Arylthiomethyl)isoxazole-4,5-dicarboxamides: Chemoselective Nucleophilic Chemistry and Insecticidal Activity. <i>Journal of Agricultural and Food Chemistry</i> , 2009, 57, 7422-7426.	5.2	18
50	Glycosylation engineering of spinosyn analogues containing an l-olivose moiety. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 1705.	2.8	18
51	Neural network-based QSAR and insecticide discovery: spinetoram. <i>Journal of Computer-Aided Molecular Design</i> , 2008, 22, 393-401.	2.9	103
52	Engineering of the Spinosyn PKS: Directing Starter Unit Incorporation. <i>Journal of Natural Products</i> , 2006, 69, 1702-1710.	3.0	47
53	Evaluation and Development of Spinosyns to Control Ectoparasites on Cattle and Sheep. <i>Current Topics in Medicinal Chemistry</i> , 2002, 2, 675-699.	2.1	36
54	Natural products as insecticides: the biology, biochemistry and quantitative structure-activity relationships of spinosyns and spinosoids. <i>Pest Management Science</i> , 2001, 57, 896-905.	3.4	256

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55	Recent advances in the chemistry of spinosyns. <i>Pest Management Science</i> , 2001, 57, 177-185.	3.4	84
56	Spinosad - a case study: an example from a natural products discovery programme. <i>Pest Management Science</i> , 2000, 56, 696-702.	3.4	393
57	The Application of Artificial Neural Networks to the Identification of New Spinosoids with Improved Biological Activity toward Larvae of <i>Heliothis virescens</i> . <i>Pesticide Biochemistry and Physiology</i> , 2000, 67, 187-197.	3.6	17
58	Pharmacological characterization of dopamine receptors in the corpus allatum of <i>Manduca sexta</i> larvae. <i>Insect Biochemistry and Molecular Biology</i> , 2000, 30, 755-766.	2.7	27
59	Biological Activity of the Spinosyns, New Fermentation Derived Insect Control Agents, on Tobacco Budworm (Lepidoptera: Noctuidae) Larvae. <i>Journal of Economic Entomology</i> , 1998, 91, 1277-1283.	1.8	175
60	Effect of Temperature on Toxicity and Knockdown Activity of cis-Permethrin, Esfenvalerate, and λ -Cyhalothrin in the Cabbage Looper (Lepidoptera: Noctuidae). <i>Journal of Economic Entomology</i> , 1990, 83, 342-346.	1.8	26
61	The role of behavior in insecticide resistance. <i>Pest Management Science</i> , 1989, 26, 383-399.	0.4	96
62	Pyrethroid-Synergist Mixtures: Toxicity, Resistance, and Field Efficacy Toward Pyrethroid-Resistant Horn Flies (Diptera: Muscidae). <i>Journal of Economic Entomology</i> , 1988, 81, 1567-1574.	1.8	19
63	Influence of Treatment Technique on the Temperature-Toxicity Relationships of cis- and trans-Permethrin in the Cabbage Looper (Lepidoptera: Noctuidae). <i>Journal of Economic Entomology</i> , 1988, 81, 115-118.	1.8	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. <i>Journal of Economic Entomology</i> , 1988, 81, 1288-1294.	1.8	29
65	Variation in Resistance of Field Populations of Tobacco Budworm and Bollworm (Lepidoptera: Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	1.8	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	1.8	20
67	Inhibition of trans-permethrin hydrolysis in <i>Pseudoplusia includens</i> (Walker) and use of inhibitors as dyrethroid synergists. <i>Pesticide Biochemistry and Physiology</i> , 1987, 27, 237-245.	3.6	19
68	Enhanced pyrethroid hydrolysis in pyrethroid-resistant larvae of the tobacco budworm, <i>Heliothis virescens</i> (F.). <i>Pesticide Biochemistry and Physiology</i> , 1987, 28, 9-16.	3.6	30
69	Juvenile hormone esterase activity in the plasma and body tissue during the larval and adult stages of the house cricket. <i>Insect Biochemistry</i> , 1987, 17, 751-758.	1.8	27
70	Characterization of a Trans-permethrin hydrolyzing enzyme from the midgut of <i>Pseudoplusia includens</i> (Walker). <i>Pesticide Biochemistry and Physiology</i> , 1986, 25, 73-81.	3.6	23
71	Spectrum of Insecticide Cross-resistance in Pyrethroid-resistant Populations of <i>Haematobia irritans</i> (Diptera: Muscidae). <i>Journal of Economic Entomology</i> , 1985, 78, 768-773.	1.8	47
72	Behavioral Resistance to the Pyrethroids in the Horn Fly, <i>Haematobia irritans</i> (Diptera: Muscidae). <i>Environmental Entomology</i> , 1985, 14, 873-880.	1.4	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 <i>Trichoplusia ni</i> (Hübner). <i>Journal of Insect Physiology</i> , 1984, 30, 225-234.	2.0	31
74	Detoxification of plant toxins by insects. <i>Insect Biochemistry</i> , 1983, 13, 453-468.	1.8	97
75	The haemolymph juvenile hormone esterase of <i>Manduca sexta</i> (L.)—inhibition and regulation. <i>Insect Biochemistry</i> , 1983, 13, 529-541.	1.8	110
76	Inhibition and substrate specificity of the haemolymph juvenile hormone esterase of the cabbage looper, <i>Trichoplusia ni</i> (Hübner). <i>Insect Biochemistry</i> , 1983, 13, 633-640.	1.8	23
77	Purification and kinetics of juvenile hormone esterase from the cabbage looper, <i>Trichoplusia ni</i> (Hubner). <i>Insect Biochemistry</i> , 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, <i>Diatraea saccharalis</i> (F.). <i>Insect Biochemistry</i> , 1983, 13, 163-170.	1.8	25
79	Temperature-Toxicity Relationships of Pyrethroids on <i>Heliothis virescens</i> (F.) (Lepidoptera: Noctuidae) and <i>Anthonomus grandis grandis</i> Boheman (Coleoptera: Curculionidae). <i>Journal of Economic Entomology</i> , 1983, 76, 243-246.	1.8	59
80	Temperature-Toxicity Relationships of Pyrethroids on Three Lepidopterans. <i>Journal of Economic Entomology</i> , 1982, 75, 643-646.	1.8	77
81	Growth of Larval <i>Diatraea saccharalis</i> (Lepidoptera: Pyralidae) on an Artificial Diet and Synchronization of the Last Larval Stadium ¹ . <i>Annals of the Entomological Society of America</i> , 1982, 75, 421-429.	2.5	60
82	Trifluoromethylketones as possible transition state analog inhibitors of juvenile hormone esterase. <i>Pesticide Biochemistry and Physiology</i> , 1982, 17, 76-88.	3.6	97
83	The distribution of juvenile hormone esterase and its interrelationship with other proteins influencing juvenile hormone metabolism in the cabbage looper, <i>Trichoplusia ni</i> . <i>Insect Biochemistry</i> , 1981, 11, 473-485.	1.8	87
84	Biology of the Soybean Looper, <i>Pseudoplusia includens</i> ¹ : Characterization of Last-Stage Larvae. <i>Annals of the Entomological Society of America</i> , 1981, 74, 531-535.	2.5	46
85	Comparative inhibition of the juvenile hormone esterases from <i>Trichoplusia ni</i> , <i>Tenebrio molitor</i> , and <i>Musca domestica</i> . <i>Pesticide Biochemistry and Physiology</i> , 1980, 14, 290-302.	3.6	94
86	A comparison of the induced and naturally occurring juvenile hormone esterases from last instar larvae of <i>Trichoplusia ni</i> . <i>Insect Biochemistry</i> , 1979, 9, 411-421.	1.8	68
87	Induction and regulation of juvenile hormone esterases during the last larval instar of the cabbage looper, <i>Trichoplusia ni</i> . <i>Journal of Insect Physiology</i> , 1979, 25, 551-560.	2.0	79
88	Haemolymph juvenile hormone esterase activity in synchronous last instar larvae of the cabbage looper, <i>Trichoplusia ni</i> . <i>Journal of Insect Physiology</i> , 1979, 25, 125-132.	2.0	112
89	Effects of the anti hormone-hormone mimic ETB on the induction of insect juvenile hormone esterase in. <i>Life Sciences</i> , 1979, 25, 445-450.	4.3	24
90	Selective inhibition of JH esterases from cockroach hemolymph. <i>Pesticide Biochemistry and Physiology</i> , 1977, 7, 517-530.	3.6	47

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91	A rapid assay for insect juvenile hormone esterase activity. Analytical Biochemistry, 1977, 82, 573-579.	2.4	276