Manickam Sugumaran

List of Publications by Year
in descending order

83 papers	3,442 citations	126858 33 h-index	149623 56 g-index
83 all docs	83 docs citations	83 times ranked	2152 citing authors

#	Article	IF	Citations
1	Cuticular sclerotization in insects â€“ A critical review. Advances in Insect Physiology, 2022, , 111-214.	1.1	8
2	Hardening and tanning ofÂinsect ootheca, egg cases, egg sac, chorion, and silk. Advances in Insect Physiology, 2022, , 215-271.	1.1	3
3	Density Functional Theory-Based Calculation Shed New Light on the Bizarre Addition of Cysteine Thiol to Dopaquinone. International Journal of Molecular Sciences, 2021, 22, 1373.	1.8	9
4	Drosophila yellowâ€h encodes dopaminechrome tautomerase: A new enzyme in the eumelanin biosynthetic pathway. Pigment Cell and Melanoma Research, 2021, , .	1.5	10
5	Oxidative Transformations of 3,4-Dihydroxyphenylacetaldehyde Generate Potential Reactive Intermediates as Causative Agents for Its Neurotoxicity. International Journal of Molecular Sciences, 2021, 22, 11751.	1.8	4
6	Chemical Reactivities of ortho-Quinones Produced in Living Organisms: Fate of Quinonoid Products Formed by Tyrosinase and Phenoloxidase Action on Phenols and Catechols. International Journal of Molecular Sciences, 2020, 21, 6080.	1.8	72
7	Oxidative Oligomerization of DBL Catechol, a potential Cytotoxic Compound for Melanocytes, Reveals the Occurrence of Novel Ionic Diels-Alder Type Additions. International Journal of Molecular Sciences, 2020, 21, 6774.	1.8	3
8	Nonenzymatic Spontaneous Oxidative Transformation of 5,6-Dihydroxyindole. International Journal of Molecular Sciences, 2020, 21, 7321.	1.8	14
9	Insect cuticular melanins are distinctly different from those of mammalian epidermal melanins. Pigment Cell and Melanoma Research, 2018, 31, 384-392.	1.5	37
10	<i>Drosophila melanogaster</i> has the enzymatic machinery to make the melanic component of neuromelanin. Pigment Cell and Melanoma Research, 2018, 31, 683-692.	1.5	5
11	Oxidative transformation of tunichromes â€“ Model studies with 1,2-dehydro-N-acetyldopamine and N-acetylcysteine. Bioorganic Chemistry, 2017, 73, 53-62.	2.0	7
12	Unraveling complex molecular transformations of <i>N</i>â€Î²â€alanyldopamine that account for brown coloration of insect cuticle. Rapid Communications in Mass Spectrometry, 2017, 31, 1363-1373.	0.7	16
13	Oxidative transformation of a tunichrome model compound provides new insight into the crosslinking and defense reaction of tunichromes. Bioorganic Chemistry, 2017, 71, 219-229.	2.0	14
14	Reactivities of Quinone Methides versus o-Quinones in Catecholamine Metabolism and Eumelanin Biosynthesis. International Journal of Molecular Sciences, 2016, 17, 1576.	1.8	64
15	Critical Analysis of the Melanogenic Pathway in Insects and Higher Animals. International Journal of Molecular Sciences, 2016, 17, 1753.	1.8	143
16	Novel post-translational oligomerization of peptidyl dehydrodopa model compound, 1,2-dehydro-N-acetyldopa methyl ester. Bioorganic Chemistry, 2016, 66, 33-40.	2.0	9
17	On the mechanism of formation of arterenone in insect cuticular hydrolyzates. Insect Biochemistry and Molecular Biology, 2013, 43, 209-218.	1.2	3
18	Mass spectrometric studies shed light on unusual oxidative transformations of 1,2â€dehydroâ€<i>N</i>â€acetyldopa. Rapid Communications in Mass Spectrometry, 2013, 27, 1785-1793.	0.7	11

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19	Structure, biosynthesis and possible function of tunichromes and related compounds. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2012, 163, 1-25.	0.7	30
20	Chemistry of Cuticular Sclerotization. Advances in Insect Physiology, 2010, 39, 151-209.	1.1	46
21	Bioactive Dehydrotyrosyl and Dehydrodopyl Compounds of Marine Origin. Marine Drugs, 2010, 8, 2906-2935.	2.2	40
22	Reexamination of the mechanisms of oxidative transformation of the insect cuticular sclerotizing precursor, 1,2-dehydro-N-acetyldopamine. Insect Biochemistry and Molecular Biology, 2010, 40, 650-659.	1.2	23
23	Complexities of cuticular pigmentation in insects. Pigment Cell and Melanoma Research, 2009, 22, 523-525.	1.5	30
24	The crosslinking and antimicrobial properties of tunichrome. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2008, 151, 110-117.	0.7	39
25	Comparative Biochemistry of Eumelanogenesis and the Protective Roles of Phenoloxidase and Melanin in Insects. Pigment Cell & Melanoma Research, 2002, 15, 2-9.	4.0	432
26	Control Mechanisms of the Prophenoloxidase Cascade. Advances in Experimental Medicine and Biology, 2001, 484, 289-298.	0.8	12
27	Genomic and cDNA Sequence of Prophenoloxidases From Drosophila Melanogaster. Advances in Experimental Medicine and Biology, 2001, 484, 349-362.	0.8	8
28	Oxidation Chemistry of 1,2-Dehydro-N-acetyldopamines: Direct Evidence for the Formation of 1,2-Dehydro-N-acetyldopamine Quinone. Archives of Biochemistry and Biophysics, 2000, 378, 404-410.	1.4	26
29	Insect Melanogenesis. Archives of Biochemistry and Biophysics, 2000, 378, 393-403.	1.4	27
30	A New Mechanism for the Control of Phenoloxidase Activity: Inhibition and Complex Formation with Quinone Isomerase. Archives of Biochemistry and Biophysics, 2000, 379, 252-260.	1.4	58
31	Characterization of a New Phenoloxidase Inhibitor from the Cuticle of Manduca sexta. Biochemical and Biophysical Research Communications, 2000, 268, 379-383.	1.0	34
32	Purification, characterization and molecular cloning of prophenoloxidases from Sarcophaga bullata. Insect Biochemistry and Molecular Biology, 2000, 30, 953-967.	1.2	103
33	Insect Melanogenesis. II. Inability of Manduca Phenoloxidase to Act on 5, 6-Dihydroxyindole-2-Carboxylic Acid1. Pigment Cell & Melanoma Research, 1999, 12, 118-125.	4.0	22
34	Formation of a New Quinone Methide Intermediate during the Oxidative Transformation of 3,4-Dihydroxyphenylacetic Acids: Implication for Eumelanin Biosynthesis. Archives of Biochemistry and Biophysics, 1999, 371, 98-106.	1.4	21
35	Model sclerotization studies. 4. Generation of N-acetylmethionyl catechol adducts during tyrosinase-catalyzed oxidation of catechols in the presence of N-acetylmethionine. Archives of Insect Biochemistry and Physiology, 1998, 38, 44-52.	0.6	18
36	Laccaseâ€"and Not Tyrosinaseâ€"Is the Enzyme Responsible for Quinone Methide Production from 2,6-Dimethoxy-4-allyl Phenol. Archives of Biochemistry and Biophysics, 1998, 353, 207-212.	1.4	25

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37	Unified Mechanism for Sclerotization of Insect Cuticle. Advances in Insect Physiology, 1998, , 229-334.	1.1	114
38	Tyrosinase-Catalyzed Oxidation of 3,4-Dihydroxyphenylglycine. Archives of Biochemistry and Biophysics, 1996, 329, 175-180.	1.4	15
39	Characterization of a Defense Complex Consisting of Interleukin 1 and Phenol Oxidase from the Hemolymph of the Tobacco Hornworm, Manduca sexta. Journal of Biological Chemistry, 1996, 271, 11035-11038.	1.6	37
40	Model sclerotization studies. 3. Cuticular enzyme catalyzed oxidation of peptidyl model tyrosine and dopa derivatives. Archives of Insect Biochemistry and Physiology, 1995, 28, 17-32.	0.6	20
41	Oxidation of 3,4-Dihydroxybenzylamine Affords 3,4-Dihydroxybenzaldehyde via the Quinone Methide Intermediate. Pigment Cell & Melanoma Research, 1995, 8, 250-254.	4.0	7
42	Complex Formation Between Mushroom Tyrosinase and Manduca Dopachrome Isomerase. Pigment Cell & Melanoma Research, 1995, 8, 180-186.	4.0	9
43	Biological and toxicological consequences of quinone methide formation. Chemico-Biological Interactions, 1993, 86, 129-162.	1.7	130
44	Regulation of Insect Hemolymph Phenoloxidases. , 1993, , 317-342.		53
45	Letter to the Editor. Pigment Cell & Melanoma Research, 1992, 5, 203-204.	4.0	13
46	Studies on the enzymes involved in puparial cuticle sclerotization inDrosophila melanogaster. Archives of Insect Biochemistry and Physiology, 1992, 19, 271-283.	0.6	73
47	Lysolecithin â€" A potent activator of prophenoloxidase from the hemolymph of the lobster, Homarus americanas. Biochemical and Biophysical Research Communications, 1991, 176, 1371-1376.	1.0	75
48	Quinone methide as a reactive intermediate formed during the biosynthesis of papiliochrome II, a yellow wing pigment of papilionid butterflies. FEBS Letters, 1991, 279, 145-148.	1.3	13
49	Molecular mechanisms for mammalian melanogenesis Comparison with insect cuticular sclerotization1. FEBS Letters, 1991, 293, 4-10.	1.3	79
50	Molecular mechanisms for mammalian melanogenesis. FEBS Letters, 1991, 295, 233-239.	1.3	79
51	Oxidation of 3,4-dihydroxybenzyl alcohol: A sclerotizing precursor for cockroach ootheca. Archives of Insect Biochemistry and Physiology, 1991, 16, 31-44.	0.6	22
52	Quinone and quinone methide as transient intermediates involved in the side chain hydroxylation of N-acyldopamine derivatives by soluble enzymes fromManduca sexta cuticle. Archives of Insect Biochemistry and Physiology, 1991, 16, 123-138.	0.6	14
53	Mechanism of activation of 1,2-dehydro-N-acetyldopamine for cuticular sclerotization. Archives of Insect Biochemistry and Physiology, 1990, 14, 93-109.	0.6	20
54	On the latency and nature of phenoloxidase present in the left colleterial gland of the cockroachPeriplaneta americana. Archives of Insect Biochemistry and Physiology, 1990, 15, 165-181.	0.6	31

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55	Biosynthesis of dehydro-N-acetyldopamine by a soluble enzyme preparation from the larval cuticle ofSarcophaga bullata involves intermediary formation of N-acetyldopamine quinone and N-acetyldopamine quinone methide. Archives of Insect Biochemistry and Physiology, 1990, 15, 237-254.	0.6	21
56	On the mechanism of side chain oxidation of N-?-alanyldopamine by cuticular enzymes fromSarcophaga bullata. Archives of Insect Biochemistry and Physiology, 1990, 15, 255-269.	0.6	17
57	Formation of a stable quinone methide during tyrosinase-catalyzed oxidation of Î±-methyl dopa methyl ester and its implication in melanin biosynthesis. Bioorganic Chemistry, 1990, 18, 144-153.	2.0	33
58	On the oxidation of 3,4-dihydroxyphenethyl alcohol and 3,4-dihydroxyphenyl glycol by cuticular enzyme(s) fromSarcophaga bullata. Archives of Insect Biochemistry and Physiology, 1989, 10, 13-27.	0.6	21
59	Further studies on the mechanism of oxidation of N-acetyldopamine by the cuticular enzymes fromSarcophaga bullata and other insects. Archives of Insect Biochemistry and Physiology, 1989, 11, 109-125.	0.6	15
60	Chemical- and cuticular phenoloxidase- mediated synthesis of cysteinyl-catechol adducts. Archives of Insect Biochemistry and Physiology, 1989, 11, 127-137.	0.6	43
61	Characterization of quinone tautomerase activity in the hemolymph ofSarcophaga bullata larvae. Archives of Insect Biochemistry and Physiology, 1989, 12, 157-172.	0.6	13
62	Novel transformations of enzymatically generated carboxymethyl-o-benzoquinone to 2,5,6-trihydroxybenzofuran and 3,4-dihydroxymandelic acid. Bioorganic Chemistry, 1989, 17, 86-95.	2.0	28
63	Unusual, intramolecular cyclization and side chain desaturation of carboxyethyl-o-benzoquinone derivatives. Bioorganic Chemistry, 1989, 17, 443-453.	2.0	35
64	o -Quinone/quinone methide isomerase: A novel enzyme preventing the destruction of self-matter by phenoloxidase-generated quinones during immune response in insects. FEBS Letters, 1989, 249, 155-158.	1.3	42
65	Trapping of transiently formed quinone methide during enzymatic conversion of N -acetyldopamine to N -acetylnorepinephrine. FEBS Letters, 1989, 252, 135-138.	1.3	27
66	N -acetyldopamine quinone methide/1,2-dehydro-N -acetyl dopamine tautomerase. FEBS Letters, 1989, 255, 340-344.	1.3	47
67	Nonenzymatic transformations of enzymatically generated N -acetyldopamine quinone and isomeric dihydrocaffeiyl methyl amide quinone. FEBS Letters, 1989, 255, 345-349.	1.3	22
68	Characterization of a new enzyme system that desaturates the side chain ofN-acetyldopamine. FEBS Letters, 1989, 251, 69-73.	1.3	45
69	Prophenoloxidase activation in the hemolymph ofSarcophaga bullata larvae. Archives of Insect Biochemistry and Physiology, 1988, 7, 91-103.	0.6	44
70	Quinone methides?and not dehydrodopamine derivatives?as reactive intermediates of ?-sclerotization in the puparia of flesh flySarcophaga bullata. Archives of Insect Biochemistry and Physiology, 1988, 8, 73-88.	0.6	35
71	On the nature of nonenzymatic and enzymatic oxidation of the putative sclerotizing precursor, 1,2-dehydro-N-acetyldopamine. Archives of Insect Biochemistry and Physiology, 1988, 8, 89-100.	0.6	37
72	Differential mechanism of oxidation of N-acetyldopamine and N-acetylnorepinephrine by cuticular phenoloxidase fromSarcophaga bullata. Archives of Insect Biochemistry and Physiology, 1988, 8, 229-241.	0.6	15

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73	On the mechanism of formation of N-acetyldopamine quinone methide in insect cuticle. Archives of Insect Biochemistry and Physiology, 1988, 9, 269-281.	0.6	33
74	AN IMPROVED SYNTHESIS OF 1, 2-DEHYDRO-N-ACETYLDOPAMINE. Organic Preparations and Procedures International, 1988, 20, 191-195.	0.6	25
75	A novel quinone: Quinone methide isomerase generates quinone methides in insect cuticle. FEBS Letters, 1988, 237, 155-158.	1.3	68
76	Molecular Mechanisms for Cuticular Sclerotization. Advances in Insect Physiology, 1988, 21, 179-231.	1.1	129
77	Protease mediated prophenoloxidase activation in the hemolymph of the tobacco hornworm,Manduca sexta. Archives of Insect Biochemistry and Physiology, 1987, 5, 1-11.	0.6	68
78	Protein cross-linking by peroxidase: Possible mechanism for sclerotization of insect cuticle. Archives of Insect Biochemistry and Physiology, 1987, 5, 13-28.	0.6	47
79	Tyrosinase catalyzed protein polymerization as an in vitro model for quinone tanning of insect cuticle. Archives of Insect Biochemistry and Physiology, 1987, 6, 9-25.	0.6	36
80	Quinone methide sclerotization: A revised mechanism for Î²-sclerotization of insect cuticle. Bioorganic Chemistry, 1987, 15, 194-211.	2.0	68
81	Protease inhibitor controls prophenoloxidase activation in Manduca sexta. FEBS Letters, 1986, 208, 113-116.	1.3	58
82	Tyrosinase catalyzes an unusual oxidative decarboxylation of 3,4-dihydroxymandelate. Biochemistry, 1986, 25, 4489-4492.	1.2	73
83	Endogenous protease inhibitors prevent undesired activation of prophenolase in insect hemolymph. Biochemical and Biophysical Research Communications, 1985, 132, 1124-1129.	1.0	67