Nicole S Sampson

List of Publications by Year
in descending order

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123 papers	4,714 citations	76326 40 h-index	114465 63 g-index
133 all docs	133 docs citations	133 times ranked	4788 citing authors

#	Article	IF	Citations
1	Exploring the value of Mycobacterium tuberculosis modified lipoprotein as a potential biomarker for TB detection in children. BMC Infectious Diseases, 2022, 22, 158.	2.9	1
2	Enzymatic Î²-Oxidation of the Cholesterol Side Chain in Mycobacterium tuberculosis Bifurcates Stereospecifically at Hydration of 3-Oxo-cholest-4,22-dien-24-oyl-CoA. ACS Infectious Diseases, 2021, 7, 1739-1751.	3.8	7
3	Reductive Power Generated by Mycobacterium leprae Through Cholesterol Oxidation Contributes to Lipid and ATP Synthesis. Frontiers in Cellular and Infection Microbiology, 2021, 11, 709972.	3.9	10
4	Substituent Effects Provide Access to Tetrasubstituted Ring-Opening Olefin Metathesis of Bicyclo[4.2.0]oct-6-enes. ACS Organic & Inorganic Au, 2021, 1, 29-36.	4.0	2
5	The pursuit of mechanism of action: uncovering drug complexity in TB drug discovery. RSC Chemical Biology, 2021, 2, 423-440.	4.1	9
6	Gradient copolymer prepared from alternating ring-opening metathesis of three monomers. Polymer Chemistry, 2021, 12, 5613-5622.	3.9	1
7	Targeting Multiple Binding Sites on Cholera Toxin B with Glycomimetic Polymers Promotes the Formation of Proteinâ€“Polymer Aggregates. Biomacromolecules, 2020, 21, 4878-4887.	5.4	2
8	Post-translational Succinylation of Mycobacterium tuberculosis Enoyl-CoA Hydratase EchA19 Slows Catalytic Hydration of Cholesterol Catabolite 3-Oxo-chol-4,22-diene-24-oyl-CoA. ACS Infectious Diseases, 2020, 6, 2214-2224.	3.8	15
9	Alternating Ring-Opening Metathesis Polymerization Provides Easy Access to Functional and Fully Degradable Polymers. Macromolecules, 2020, 53, 5857-5868.	4.8	27
10	Cationic amphiphilic alternating copolymers with tunable morphology. Polymer Chemistry, 2020, 11, 5424-5430.	3.9	4
11	Fucose-Galactose Polymers Inhibit Cholera Toxin Binding to Fucosylated Structures and Galactose-Dependent Intoxication of Human Enteroids. ACS Infectious Diseases, 2020, 6, 1192-1203.	3.8	11
12	IpdE1-IpdE2 Is a Heterotetrameric Acyl Coenzyme A Dehydrogenase That Is Widely Distributed in Steroid-Degrading Bacteria. Biochemistry, 2020, 59, 1113-1123.	2.5	10
13	Mycobacterium tuberculosis Exploits a Heterohexameric Enoyl-CoA Hydratase Retro-Aldolase Complex for Cholesterol Catabolism. Biochemistry, 2019, 58, 4224-4235.	2.5	12
14	A mass spectrometry-based isotope-coded mass tag method to map thiol accessibility in biological systems. Methods in Enzymology, 2019, 621, 245-260.	1.0	0
15	Mce3R Stress-Resistance Pathway Is Vulnerable to Small-Molecule Targeting That Improves Tuberculosis Drug Activities. ACS Infectious Diseases, 2019, 5, 1239-1251.	3.8	12
16	Access to Bicyclo[4.2.0]octene Monomers To Explore the Scope of Alternating Ring-Opening Metathesis Polymerization. Journal of Organic Chemistry, 2018, 83, 2892-2897.	3.2	12
17	Hit Generation in TB Drug Discovery: From Genome to Granuloma. Chemical Reviews, 2018, 118, 1887-1916.	47.7	80
18	Fucosylated Molecules Competitively Interfere with Cholera Toxin Binding to Host Cells. ACS Infectious Diseases, 2018, 4, 758-770.	3.8	42

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19	Alternating Ring-Opening Metathesis Polymerization (AROMP) of Hydrophobic and Hydrophilic Monomers Provides Oligomers with Side-Chain Sequence Control. Macromolecules, 2018, 51, 3932-3940.	4.8	24
20	Use of an Isotope-Coded Mass Tag (ICMT) Method To Determine the Orientation of Cholesterol Oxidase on Model Membranes. Biochemistry, 2018, 57, 5370-5378.	2.5	3
21	Incorporation of Large Cycloalkene Rings into Alternating Copolymers Allows Control of Glass Transition and Hydrophobicity. ACS Macro Letters, 2018, 7, 1068-1072.	4.8	9
22	More than cholesterol catabolism: regulatory vulnerabilities in Mycobacterium tuberculosis. Current Opinion in Chemical Biology, 2018, 44, 39-46.	6.1	12
23	Sugars Require Rigid Multivalent Displays for Activation of Mouse Sperm Acrosomal Exocytosis. Biochemistry, 2017, 56, 2779-2786.	2.5	5
24	Phospholipase D2 loss results in increased blood pressure via inhibition of the endothelial nitric oxide synthase pathway. Scientific Reports, 2017, 7, 9112.	3.3	19
25	Targeting the Hemopexin-like Domain of Latent Matrix Metalloproteinase-9 (proMMP-9) with a Small Molecule Inhibitor Prevents the Formation of Focal Adhesion Junctions. ACS Chemical Biology, 2017, 12, 2788-2803.	3.4	32
26	Catabolism of the Cholesterol Side Chain in Mycobacterium tuberculosis Is Controlled by a Redox-Sensitive Thiol Switch. ACS Infectious Diseases, 2017, 3, 666-675.	3.8	16
27	Synthesis and Preclinical Evaluation of a Highly Improved Anticancer Prodrug Activated by Histone Deacetylases and Cathepsin L. Theranostics, 2016, 6, 808-816.	10.0	22
28	Glycopolymer induction of mouse sperm acrosomal exocytosis shows highly cooperative self-antagonism. Biochemical and Biophysical Research Communications, 2016, 474, 435-440.	2.1	2
29	Designing convergent chemistry curricula. Nature Chemical Biology, 2016, 12, 382-386.	8.0	6
30	Precision Synthesis of Alternating Copolymers via Ring-Opening Polymerization of 1-Substituted Cyclobutenes. Accounts of Chemical Research, 2016, 49, 408-417.	15.6	62
31	Unraveling Cholesterol Catabolism in Mycobacterium tuberculosis: ChsE4-ChsE5 Î±₂Î²₂ Acyl-CoA Dehydrogenase Initiates Î²-Oxidation of 3-Oxo-cholest-4-en-26-oyl CoA. ACS Infectious Diseases, 2015, 1, 110-125.	3.8	46
32	Ru-Catalyzed Isomerization Provides Access to Alternating Copolymers via Ring-Opening Metathesis Polymerization. Macromolecules, 2015, 48, 4793-4800.	4.8	27
33	Cyclic acetals as cleavable linkers for affinity capture. Organic and Biomolecular Chemistry, 2015, 13, 8445-8452.	2.8	10
34	Diacyltransferase Activity and Chain Length Specificity ofMycobacterium tuberculosisPapA5 in the Synthesis of Alkyl Î²-Diol Lipids. Biochemistry, 2015, 54, 5457-5468.	2.5	9
35	Î±-Methyl Acyl CoA Racemase Provides Mycobacterium tuberculosis Catabolic Access to Cholesterol Esters. Biochemistry, 2015, 54, 5669-5672.	2.5	12
36	FadA5 a Thiolase from Mycobacterium tuberculosis : A Steroid-Binding Pocket Reveals the Potential for Drug Development against Tuberculosis. Structure, 2015, 23, 21-33.	3.3	38

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37	A Distinct MaoC-like Enoyl-CoA Hydratase Architecture Mediates Cholesterol Catabolism in Mycobacterium tuberculosis. ACS Chemical Biology, 2014, 9, 2632-2645.	3.4	47
38	Fucose, Mannose, and Î²-N-Acetylglucosamine Glycopolymers Initiate the Mouse Sperm Acrosome Reaction through Convergent Signaling Pathways. ACS Chemical Biology, 2014, 9, 468-475.	3.4	37
39	A Bicyclo[4.2.0]octene-Derived Monomer Provides Completely Linear Alternating Copolymers via Alternating Ring-Opening Metathesis Polymerization (AROMP). Macromolecules, 2014, 47, 6572-6579.	4.8	34
40	Pathogen roid rage: Cholesterol utilization byMycobacterium tuberculosis. Critical Reviews in Biochemistry and Molecular Biology, 2014, 49, 269-293.	5.2	129
41	A GMC Oxidoreductase Homologue Is Required for Acetylation of Glycopeptidolipid in Mycobacterium smegmatis. Biochemistry, 2014, 53, 611-613.	2.5	9
42	Alternating Ring-Opening Metathesis Polymerization Copolymers Containing Charge-Transfer Units. ACS Macro Letters, 2013, 2, 749-752.	4.8	29
43	Selective cancer targeting with prodrugs activated by histone deacetylases and a tumour-associated protease. Nature Communications, 2013, 4, 2735.	12.8	76
44	Updating and curating metabolic pathways of TB. Tuberculosis, 2013, 93, 47-59.	1.9	23
45	Mapping Peptide Thiol Accessibility in Membranes Using a Quaternary Ammonium Isotope-Coded Mass Tag (ICMT). Bioconjugate Chemistry, 2013, 24, 1235-1247.	3.6	5
46	Mycobacterium tuberculosis Utilizes a Unique Heterotetrameric Structure for Dehydrogenation of the Cholesterol Side Chain. Biochemistry, 2013, 52, 2895-2904.	2.5	51
47	Shrinking the FadE Proteome of Mycobacterium tuberculosis: Insights into Cholesterol Metabolism through Identification of an Î± ₂ Î² ₂ Heterotetrameric Acyl Coenzyme A Dehydrogenase Family. Journal of Bacteriology, 2013, 195, 4331-4341.	2.2	59
48	Development of a High-Throughput Three-Dimensional Invasion Assay for Anti-Cancer Drug Discovery. PLoS ONE, 2013, 8, e82811.	2.5	27
49	Correction: Small-Molecule Anticancer Compounds Selectively Target the Hemopexin Domain of Matrix Metalloproteinase-9: Figure 3.. Cancer Research, 2012, 72, 5141-5142.	0.9	0
50	Antibacterial Studies of Cationic Polymers with Alternating, Random, and Uniform Backbones. ACS Chemical Biology, 2011, 6, 590-599.	3.4	103
51	Pathway Profiling in Mycobacterium tuberculosis. Journal of Biological Chemistry, 2011, 286, 43668-43678.	3.4	89
52	Inhibition of the M. tuberculosis 3Î²-hydroxysteroid dehydrogenase by azasteroids. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 2216-2219.	2.2	20
53	Cholesterol Is Not an Essential Source of Nutrition for Mycobacterium tuberculosis during Infection. Journal of Bacteriology, 2011, 193, 1473-1476.	2.2	43
54	Small-Molecule Anticancer Compounds Selectively Target the Hemopexin Domain of Matrix Metalloproteinase-9. Cancer Research, 2011, 71, 4977-4988.	0.9	112

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55	Inhibition of Matrix Metalloproteinase 14 (MMP-14)-mediated Cancer Cell Migration. Journal of Biological Chemistry, 2011, 286, 33167-33177.	3.4	169
56	A Thiolase of Mycobacterium tuberculosis Is Required for Virulence and Production of Androstenedione and Androstadienedione from Cholesterol. Infection and Immunity, 2010, 78, 275-282.	2.2	178
57	Role of Matrix Metalloproteinase-9 Dimers in Cell Migration. Journal of Biological Chemistry, 2010, 285, 35944-35956.	3.4	123
58	Scope of the Ring-Opening Metathesis Polymerization (ROMP) Reaction of 1-Substituted Cyclobutenes. Journal of the American Chemical Society, 2010, 132, 10513-10520.	13.7	70
59	Cyclic Alternating Ring-Opening Metathesis Polymerization (CAROMP). Rapid Access to Functionalized Cyclic Polymers. Organic Letters, 2010, 12, 3729-3731.	4.6	35
60	Polymeric ADAM Protein Mimics Interrogate Mammalian Spermâ€“Egg Binding. ChemBioChem, 2009, 10, 929-937.	2.6	12
61	A hydrogen-bonding network is important for oxidation and isomerization in the reaction catalyzed by cholesterol oxidase. Acta Crystallographica Section D: Biological Crystallography, 2009, 65, 1222-1231.	2.5	14
62	Cholesterol oxidase: physiological functions. FEBS Journal, 2009, 276, 6844-6856.	4.7	73
63	Synthesis of Copolymers by Alternating ROMP (AROMP). Journal of the American Chemical Society, 2009, 131, 3444-3445.	13.7	108
64	Cholesterol Metabolism Increases the Metabolic Pool of Propionate in Mycobacterium tuberculosis. Biochemistry, 2009, 48, 3819-3821.	2.5	96
65	Î²₁ Integrin Is an Adhesion Protein for Sperm Binding to Eggs. ACS Chemical Biology, 2009, 4, 357-366.	3.4	27
66	Subcellular forms of cholesterol oxidase from Rhodococcus sp. CIP 105 335: induction, solubilization and characterization. , 2009, , .		1
67	Role of the hemopexin domain of matrix metalloproteinases in cell migration. Journal of Cellular Physiology, 2008, 217, 643-651.	4.1	127
68	The Binding and Release of Oxygen and Hydrogen Peroxide Are Directed by a Hydrophobic Tunnel in Cholesterol Oxidase. Biochemistry, 2008, 47, 5368-5377.	2.5	74
69	ChoD Is Important for Lipid Modification in M. smegmatis. FASEB Journal, 2008, 22, 611.17.	0.5	0
70	Dynamic Requirements for a Functional Protein Hinge. Journal of Molecular Biology, 2007, 368, 131-149.	4.2	77
71	Antifungal Tradecraft by Cholesterol Oxidase. Chemistry and Biology, 2007, 14, 238-241.	6.0	6
72	Rv1106c from Mycobacterium tuberculosis Is a 3Î²-Hydroxysteroid Dehydrogenase. Biochemistry, 2007, 46, 9058-9067.	2.5	90

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73	Distortion of flavin geometry is linked to ligand binding in cholesterol oxidase. Protein Science, 2007, 16, 2647-2656.	7.6	26
74	Amino Acid-Bearing ROMP Polymers with a Stereoregular Backbone. Journal of the American Chemical Society, 2006, 128, 4578-4579.	13.7	63
75	Multivalent FertilinÎ² Oligopeptides: The Dependence of Fertilization Inhibition on Length and Density. Chemistry and Biology, 2006, 13, 251-259.	6.0	18
76	Romping the cellular landscape: linear scaffolds for molecular recognition. Current Opinion in Structural Biology, 2006, 16, 544-550.	5.7	33
77	ROMP of Norbornyl Oligopeptides: A Versatile Synthetic Method for Exploring Receptor Topology. , 2006, , 59-60.		0
78	Library screening studies to investigate substrate specificity in the reaction catalyzed by cholesterol oxidase. Protein Engineering, Design and Selection, 2004, 17, 341-348.	2.1	7
79	FertilinÎ² peptidic liposomes inhibit fertilization by steric blockage. Bioorganic and Medicinal Chemistry Letters, 2004, 14, 1381-1384.	2.2	9
80	A Facile Synthetic Method to Prepare Fluorescently Labeled ROMP Polymers. ChemInform, 2004, 35, no.	0.0	0
81	Cholesterol Oxidase Senses Subtle Changes in Lipid Bilayer Structureâ€. Biochemistry, 2004, 43, 827-836.	2.5	71
82	Entropy Effects on Protein Hinges:Â The Reaction Catalyzed by Triosephosphate Isomeraseâ€. Biochemistry, 2004, 43, 11436-11445.	2.5	46
83	Understanding protein lids: structural analysis of active hinge mutants in triosephosphate isomerase. Protein Engineering, Design and Selection, 2004, 17, 375-382.	2.1	38
84	A Facile Synthetic Method to Prepare Fluorescently Labeled ROMP Polymers. Organic Letters, 2004, 6, 3253-3255.	4.6	35
85	Sub-Ã…ngstrom resolution enzyme X-ray structures: is seeing believing?. Current Opinion in Structural Biology, 2003, 13, 709-715.	5.7	32
86	Cholesterol Oxidases: A Study of Natureâ€²s Approach to Protein Design. ChemInform, 2003, 34, no.	0.0	0
87	Comparison of FertilinÎ²-Peptide-Substituted Polymers and Liposomes as Inhibitors of In Vitro Fertilization. ChemBioChem, 2003, 4, 1229-1231.	2.6	20
88	Cholesterol Oxidases:Â A Study of Nature's Approach to Protein Design. Accounts of Chemical Research, 2003, 36, 713-722.	15.6	58
89	Off-Resonance TROSY (R1Ïâ˜R1) for Quantitation of Fast Exchange Processes in Large Proteins. Journal of the American Chemical Society, 2003, 125, 12064-12065.	13.7	27
90	Increased Polymer Length of Oligopeptide-Substituted Polynorbornenes with LiCl. Journal of Organic Chemistry, 2003, 68, 2020-2023.	3.2	33

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91	Sub-atomic Resolution Crystal Structure of Cholesterol Oxidase: What Atomic Resolution Crystallography Reveals about Enzyme Mechanism and the Role of the FAD Cofactor in Redox Activity. Journal of Molecular Biology, 2003, 326, 1635-1650.	4.2	118
92	Construction of a catalytically inactive cholesterol oxidase mutant: investigation of the interplay between active site-residues glutamate 361 and histidine 447. Archives of Biochemistry and Biophysics, 2002, 402, 235-242.	3.0	18
93	Structural analysis of fertilinÎ² cyclic peptide mimics that are ligands for Î±₆Î²₁ integrin. Chemical Biology and Drug Design, 2002, 59, 45-54.	1.1	2
94	The importance of hinge sequence for loop function and catalytic activity in the reaction catalyzed by triosephosphate isomerase 1 1Edited by P. E. Wright. Journal of Molecular Biology, 2001, 307, 1103-1112.	4.2	33
95	The Presence of a Hydrogen Bond between Asparagine 485 and the Ï€ System of FAD Modulates the Redox Potential in the Reaction Catalyzed by Cholesterol Oxidase,. Biochemistry, 2001, 40, 13779-13787.	2.5	42
96	Dimyristoylated Peptides Incorporated into Liposomes Are Polyvalent Fertilin Î² Mimics. Organic Letters, 2001, 3, 3333-3335.	4.6	10
97	Surface molecular recognition. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 12870-12871.	7.1	36
98	Global Gene Expression Analysis Reveals a Role for the Î±1 Integrin in Renal Pathogenesis. Journal of Biological Chemistry, 2001, 276, 34182-34188.	3.4	53
99	Dissection of a Flavoenzyme Active Site: The Reaction Catalyzed by Cholesterol Oxidase. Antioxidants and Redox Signaling, 2001, 3, 839-846.	5.4	10
100	Characterization of fertilinÎ²-disintegrin binding specificity in spermâ€“egg adhesion. Bioorganic and Medicinal Chemistry, 2000, 8, 723-729.	3.0	23
101	A C6-Flavin Adduct Is the Major Product of Irreversible Inactivation of Cholesterol Oxidase by 2Î±,3Î±-Cyclopropano-5Î±-cholestan-3Î²-ol. Journal of the American Chemical Society, 2000, 122, 35-39.	13.7	26
102	Use of the Parallax-Quench Method to Determine the Position of the Active-Site Loop of Cholesterol Oxidase in Lipid Bilayers. Biochemistry, 2000, 39, 13383-13389.	2.5	27
103	Mediation of sperm-egg fusion: evidence that mouse egg Î±6Î²1 integrin is the receptor for sperm fertilinÎ². Chemistry and Biology, 1999, 6, 1-10.	6.0	109
104	Crystal Structure Determination of Cholesterol Oxidase fromStreptomycesand Structural Characterization of Key Active Site Mutantsâ€,â€¡. Biochemistry, 1999, 38, 4277-4286.	2.5	115
105	Understanding Protein Lids:Â Kinetic Analysis of Active Hinge Mutants in Triosephosphate Isomeraseâ€. Biochemistry, 1999, 38, 11474-11481.	2.5	40
106	Peptides corresponding to the epidermal growth factor-like domain of mouse fertilin: Synthesis and biological activity. , 1998, 47, 299-307.		11
107	The importance of Glu361 position in the reaction catalyzed by cholesterol oxidase. Bioorganic and Medicinal Chemistry Letters, 1998, 8, 2663-2668.	2.2	32
108	Determination of the amino acid requirements for a protein hinge in triosephosphate isomerase. Protein Science, 1998, 7, 1495-1505.	7.6	31

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109	Increased Expression ofBrevibacterium sterolicumCholesterol Oxidase inEscherichia coliby Genetic Modification. Protein Expression and Purification, 1998, 12, 347-352.	1.3	11
110	Evaluation of the Role of His447in the Reaction Catalyzed by Cholesterol Oxidaseâ€. Biochemistry, 1998, 37, 17990-18000.	2.5	54
111	Assessment of the Role of an Î© Loop of Cholesterol Oxidase:â€‰ A Truncated Loop Mutant Has Altered Substrate Specificityâ€. Biochemistry, 1998, 37, 5770-5778.	2.5	39
112	4,5-Cyclopropanocholestan-3Î²-ol Substrates for Cholesterol Oxidase and Their1H NMR Assignments. Journal of Organic Chemistry, 1997, 62, 5893-5897.	3.2	4
113	Isomerization, But Not Oxidation, Is Suppressed by a Single Point Mutation, E361Q, in the Reaction Catalyzed by Cholesterol Oxidase. Journal of the American Chemical Society, 1997, 119, 855-862.	13.7	46
114	Investigation of Membrane Disruption in the Reaction Catalyzed by Cholesterol Oxidaseâ€. Biochemistry, 1997, 36, 6133-6140.	2.5	34
115	ECD peptides inhibit in vitro fertilization in mice. Bioorganic and Medicinal Chemistry Letters, 1997, 7, 1053-1058.	2.2	29
116	The Isomerization Catalyzed by Brevibacterium sterolicum Cholesterol Oxidase Proceeds Stereospecifically with One Base. Biochemical and Biophysical Research Communications, 1995, 206, 688-693.	2.1	27
117	Segmental motion in catalysis: investigation of a hydrogen bond critical for loop closure in the reaction of triosephosphate isomerase. Biochemistry, 1992, 31, 8488-8494.	2.5	118
118	Segmental movement: definition of the structural requirements for loop closure in catalysis by triosephosphate isomerase. Biochemistry, 1992, 31, 8482-8487.	2.5	111
119	Peptidic phosphonylating agents as irreversible inhibitors of serine proteases and models of the tetrahedral intermediates. Biochemistry, 1991, 30, 2255-2263.	2.5	58
120	Attempted De Novo design, synthesis, and evaluation of a ligand for the allosteric site of phosphofructokinase. Journal of Organic Chemistry, 1991, 56, 7179-7183.	3.2	7
121	Crystal structures of .alpha.-lytic protease complexes with irreversibly bound phosphonate esters. Biochemistry, 1991, 30, 2263-2272.	2.5	65
122	Synthesis of phosphonic acid derivatives by oxidative activation of phosphinate esters. Journal of Organic Chemistry, 1988, 53, 4500-4503.	3.2	62
123	Regioselectivity and kinetics of hydride transfer in substituted 1-benzyl-3-quinolinecarboxamide redox reactions. Journal of Organic Chemistry, 1987, 52, 4454-4459.	3.2	9