

Craig A Townsend

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8519776/publications.pdf>

Version: 2024-02-01

234
papers

11,597
citations

29994

54
h-index

43802

91
g-index

238
all docs

238
docs citations

238
times ranked

8254
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of Methods for the Study of Cobalamin-Dependent Radical SAM Enzymes. ACS Bio & Med Chem Au, 2022, 2, 4-10.	1.7	17
2	Structure of a B12-dependent radical SAM enzyme in carbapenem biosynthesis. Nature, 2022, 602, 343-348.	13.7	36
3	Penicillin Binding Proteins and $\hat{1}^2$ -Lactamases of Mycobacterium tuberculosis: Reexamination of the Historical Paradigm. MSphere, 2022, 7, e0003922.	1.3	13
4	Sea Urchin Polyketide Synthase SpPks1 Produces the Naphthalene Precursor to Echinoderm Pigments. Journal of the American Chemical Society, 2022, 144, 9363-9371.	6.6	8
5	Purification and characterization of sequential cobalamin-dependent radical SAM methylases ThnK and TokK in carbapenem $\hat{1}^2$ -lactam antibiotic biosynthesis. Methods in Enzymology, 2022, , 29-44.	0.4	5
6	T405, a New Penem, Exhibits <i>In Vivo</i> Efficacy against M. abscessus and Synergy with $\hat{1}^2$ -Lactams Imipenem and Cefditoren. Antimicrobial Agents and Chemotherapy, 2022, 66, .	1.4	8
7	Stereochemical course of cobalamin-dependent radical SAM methylation by TokK and ThnK. RSC Chemical Biology, 2022, 3, 1028-1034.	2.0	6
8	Evolutionary and functional analysis of an NRPS condensation domain integrates $\hat{1}^2$ -lactam, α -amino acid, and dehydroamino acid synthesis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	25
9	Acyl Donor Stringency and Dehydroaminoacyl Intermediates in $\hat{1}^2$ -Lactam Formation by a Non-ribosomal Peptide Synthetase. ACS Chemical Biology, 2021, 16, 806-812.	1.6	8
10	Competing off-loading mechanisms of meropenem from an <i>l,d</i> -transpeptidase reduce antibiotic effectiveness. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	13
11	Biosynthesis of Eneidyne Natural Products. , 2020, , 365-414.		14
12	Development of a penem antibiotic against Mycobacteroides abscessus. Communications Biology, 2020, 3, 741.	2.0	11
13	Coupled Metabolites Yield Insights into Dynemicin A Biosynthesis. ChemBioChem, 2020, 21, 2137-2142.	1.3	8
14	Structure of a bound peptide phosphonate reveals the mechanism of nocardicin bifunctional thioesterase epimerase-hydrolase half-reactions. Nature Communications, 2019, 10, 3868.	5.8	16
15	Late-Stage Conversion of Diphenylphosphonate to Fluorophosphonate Probes for the Investigation of Serine Hydrolases. Cell Chemical Biology, 2019, 26, 878-884.e8.	2.5	8
16	Methylations in complex carbapenem biosynthesis are catalyzed by a single cobalamin-dependent radical <i>S</i> -adenosylmethionine enzyme. Chemical Communications, 2019, 55, 14934-14937.	2.2	24
17	Characterization of an Anthracene Intermediate in Dynemicin Biosynthesis. Angewandte Chemie - International Edition, 2018, 57, 5650-5654.	7.2	22
18	Chromobacterium spp. mediate their anti-Plasmodium activity through secretion of the histone deacetylase inhibitor romidepsin. Scientific Reports, 2018, 8, 6176.	1.6	40

#	ARTICLE	IF	CITATIONS
19	Characterization of an Anthracene Intermediate in Dynemicin Biosynthesis (Angew.)	1.6	20
20	Mechanism of Integrated β^2 -Lactam Formation by a Nonribosomal Peptide Synthetase during Antibiotic Synthesis. <i>Biochemistry</i> , 2018, 57, 3353-3358.	1.2	20
21	The structural organization of substrate loading in iterative polyketide synthases. <i>Nature Chemical Biology</i> , 2018, 14, 474-479.	3.9	50
22	Characterization of an Anthracene Intermediate in Dynemicin Biosynthesis. <i>Angewandte Chemie</i> , 2018, 130, 5752-5756.	1.6	2
23	<i>In trans</i> hydrolysis of carrier protein-bound acyl intermediates by CitA during citrinin biosynthesis. <i>Chemical Communications</i> , 2018, 54, 50-53.	2.2	13
24	A dual role for a polyketide synthase in dynemicin enediyne and anthraquinone biosynthesis. <i>Nature Chemistry</i> , 2018, 10, 231-236.	6.6	55
25	Monobactam formation in sulfazecin by a nonribosomal peptide synthetase thioesterase. <i>Nature Chemical Biology</i> , 2018, 14, 5-7.	3.9	25
26	Exploring Fungal Polyketide C-Methylation through Combinatorial Domain Swaps. <i>ACS Chemical Biology</i> , 2018, 13, 3043-3048.	1.6	11
27	Gene cluster conservation provides insight into cercosporin biosynthesis and extends production to the genus <i>Colletotrichum</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E5459-E5466.	3.3	61
28	The architectures of iterative type I PKS and FAS. <i>Natural Product Reports</i> , 2018, 35, 1046-1069.	5.2	143
29	Functional and Structural Analysis of Programmed C-Methylation in the Biosynthesis of the Fungal Polyketide Citrinin. <i>Cell Chemical Biology</i> , 2017, 24, 316-325.	2.5	30
30	Polyketide mimetics yield structural and mechanistic insights into product template domain function in nonreducing polyketide synthases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E4142-E4148.	3.3	18
31	LdtMav2, a nonclassical transpeptidase and susceptibility of <i>Mycobacterium avium</i> to carbapenems. <i>Future Microbiology</i> , 2017, 12, 595-607.	1.0	13
32	Identification and Characterization of the Sulfazecin Monobactam Biosynthetic Gene Cluster. <i>Cell Chemical Biology</i> , 2017, 24, 24-34.	2.5	59
33	Whole-Genome Shotgun Sequencing of Two β^2 -Proteobacterial Species in Search of the Bulgecin Biosynthetic Cluster. <i>ACS Chemical Biology</i> , 2017, 12, 2552-2557.	1.6	28
34	Structural insight into the inactivation of <i>Mycobacterium tuberculosis</i> non-classical transpeptidase LdtMt2 by biapenem and tebipenem. <i>BMC Biochemistry</i> , 2017, 18, 8.	4.4	42
35	Non-classical transpeptidases yield insight into new antibacterials. <i>Nature Chemical Biology</i> , 2017, 13, 54-61.	3.9	116
36	Molecular Characterization of the Cercosporin Biosynthetic Pathway in the Fungal Plant Pathogen <i>Cercospora nicotianae</i> . <i>Journal of the American Chemical Society</i> , 2016, 138, 4219-4228.	6.6	82

#	ARTICLE	IF	CITATIONS
37	Convergent biosynthetic pathways to β -lactam antibiotics. <i>Current Opinion in Chemical Biology</i> , 2016, 35, 97-108.	2.8	35
38	Structural and Biochemical Analysis of Protein-Protein Interactions Between the Acyl-Carrier Protein and Product Template Domain. <i>Angewandte Chemie</i> , 2016, 128, 13199-13203.	1.6	3
39	Quenching of pH-Responsive Luminescence of a Benzoindolizine Sensor by an Ultrafast Hydrogen Shift. <i>Chemistry - A European Journal</i> , 2016, 22, 15212-15215.	1.7	36
40	Structural and Biochemical Analysis of Protein-Protein Interactions Between the Acyl-Carrier Protein and Product Template Domain. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 13005-13009.	7.2	16
41	Unusual blue-shifted acid-responsive photoluminescence behavior in 6-amino-8-cyanobenzo[1,2-b]indolizines. <i>RSC Advances</i> , 2016, 6, 61249-61253.	1.7	48
42	β -Lactam formation by a non-ribosomal peptide synthetase during antibiotic biosynthesis. <i>Nature</i> , 2015, 520, 383-387.	13.7	104
43	Starter Unit Flexibility for Engineered Product Synthesis by the Nonreducing Polyketide Synthase PksA. <i>ACS Chemical Biology</i> , 2015, 10, 1443-1449.	1.6	31
44	One-Pot Synthesis of Highly Substituted <i>N</i> -Fused Heteroaromatic Bicycles from Azole Aldehydes. <i>Organic Letters</i> , 2015, 17, 1822-1825.	2.4	20
45	Loss of a Functionally and Structurally Distinct Ld-Transpeptidase, LdtMt5, Compromises Cell Wall Integrity in <i>Mycobacterium tuberculosis</i> . <i>Journal of Biological Chemistry</i> , 2015, 290, 25670-25685.	1.6	45
46	Consecutive radical <i>S</i> -adenosylmethionine methylations form the ethyl side chain in thienamycin biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 10354-10358.	3.3	77
47	New Insights into the Conversion of Versicolorin A in the Biosynthesis of Aflatoxin B ₁ . <i>Journal of the American Chemical Society</i> , 2015, 137, 10867-10869.	6.6	44
48	Epimerization and substrate gating by a TE domain in β -lactam antibiotic biosynthesis. <i>Nature Chemical Biology</i> , 2014, 10, 251-258.	3.9	55
49	DECONSTRUCTION OF ITERATIVE POLYKETIDE SYNTHASES. , 2014, , .		0
50	Identification and Characterization of the Carbapenem MM 4550 and its Gene Cluster in <i>Streptomyces argenteolus</i> ATCC 11009. <i>ChemBioChem</i> , 2014, 15, 320-331.	1.3	21
51	A Practical Route to Substituted 7-Aminoindoles from Pyrrole-3-carboxaldehydes. <i>Organic Letters</i> , 2014, 16, 6334-6337.	2.4	32
52	Design, synthesis, and evaluation of 4- and 5-substituted <i>o</i> -(octanesulfonamido)benzoic acids as inhibitors of glycerol-3-phosphate acyltransferase. <i>MedChemComm</i> , 2014, 5, 826.	3.5	4
53	Aflatoxin and deconstruction of type I, iterative polyketide synthase function. <i>Natural Product Reports</i> , 2014, 31, 1260-1265.	5.2	25
54	Exploring the Role of Conformational Heterogeneity in <i>cis</i> -Autoproteolytic Activation of ThnT. <i>Biochemistry</i> , 2014, 53, 4273-4281.	1.2	1

#	ARTICLE	IF	CITATIONS
55	Systematic Domain Swaps of Iterative, Nonreducing Polyketide Synthases Provide a Mechanistic Understanding and Rationale For Catalytic Reprogramming. <i>Journal of the American Chemical Society</i> , 2014, 136, 7348-7362.	6.6	59
56	Biochemical Determination of Enzyme-Bound Metabolites: Preferential Accumulation of a Programmed Octaketide on the Eneidyne Polyketide Synthase CalE8. <i>Journal of the American Chemical Society</i> , 2013, 135, 14339-14348.	6.6	53
57	Modular biosynthesis branches out. <i>Nature</i> , 2013, 502, 44-45.	13.7	4
58	Non-ribosomal Propeptide Precursor in Nocardicin A Biosynthesis Predicted from Adenylation Domain Specificity Dependent on the MbtH Family Protein Nocl. <i>Journal of the American Chemical Society</i> , 2013, 135, 1749-1759.	6.6	68
59	Probing the Selectivity and Protein-Protein Interactions of a Nonreducing Fungal Polyketide Synthase Using Mechanism-Based Crosslinkers. <i>Chemistry and Biology</i> , 2013, 20, 1135-1146.	6.2	27
60	Active Site Comparisons and Catalytic Mechanisms of the Hot Dog Superfamily. <i>Chemical Reviews</i> , 2013, 113, 2182-2204.	23.0	43
61	Intrinsic evolutionary constraints on protease structure, enzyme acylation, and the identity of the catalytic triad. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E653-61.	3.3	121
62	Combinatorial Domain Swaps Provide Insights into the Rules of Fungal Polyketide Synthase Programming and the Rational Synthesis of Non-Native Aromatic Products. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 1718-1721.	7.2	38
63	Mechanistic Insights into the Bifunctional Non-Heme Iron Oxygenase Carbapenem Synthase by Active Site Saturation Mutagenesis. <i>Journal of the American Chemical Society</i> , 2013, 135, 7496-7502.	6.6	56
64	Stereocontrolled Syntheses of Peptide Thioesters Containing Modified Seryl Residues as Probes of Antibiotic Biosynthesis. <i>Journal of Organic Chemistry</i> , 2013, 78, 6412-6426.	1.7	17
65	Insights into cis-autoproteolysis reveal a reactive state formed through conformational rearrangement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 2308-2313.	3.3	21
66	Characterization of a Fungal Thioesterase Having Claisen Cyclase and Deacetylase Activities in Melanin Biosynthesis. <i>Chemistry and Biology</i> , 2012, 19, 1525-1534.	6.2	46
67	Environmental Control of the Calicheamicin Polyketide Synthase Leads to Detection of a Programmed Octaketide and a Proposal for Eneidyne Biosynthesis. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 11316-11319.	7.2	15
68	Engineering the synthetic potential of β -lactam synthetase and the importance of catalytic loop dynamics. <i>MedChemComm</i> , 2012, 3, 960.	3.5	6
69	Interrogation of Global Active Site Occupancy of a Fungal Iterative Polyketide Synthase Reveals Strategies for Maintaining Biosynthetic Fidelity. <i>Journal of the American Chemical Society</i> , 2012, 134, 6865-6877.	6.6	45
70	A High-Throughput Screen for the Engineered Production of β -Lactam Antibiotics. <i>ACS Chemical Biology</i> , 2012, 7, 835-840.	1.6	16
71	Autoproteolytic Activation of ThnT Results in Structural Reorganization Necessary for Substrate Binding and Catalysis. <i>Journal of Molecular Biology</i> , 2012, 422, 508-518.	2.0	10
72	Analysis of the cercosporin polyketide synthase CTB1 reveals a new fungal thioesterase function. <i>Chemical Communications</i> , 2012, 48, 11772.	2.2	45

#	ARTICLE	IF	CITATIONS
73	Demonstration of Starter Unit Interprotein Transfer from a Fatty Acid Synthase to a Multidomain, Nonreducing Polyketide Synthase. <i>ChemBioChem</i> , 2012, 13, 1880-1884.	1.3	25
74	In Vivo Characterization of Nonribosomal Peptide Synthetases NocA and NocB in the Biosynthesis of Nocardicin A. <i>Chemistry and Biology</i> , 2012, 19, 297-306.	6.2	26
75	Polyketide Proofreading by an Acyltransferase-like Enzyme. <i>Chemistry and Biology</i> , 2012, 19, 329-339.	6.2	52
76	Definition of the Common and Divergent Steps in Carbapenem β -Lactam Antibiotic Biosynthesis. <i>ChemBioChem</i> , 2011, 12, 2159-2165.	1.3	35
77	A β -Diels-Alderase at Last. <i>ChemBioChem</i> , 2011, 12, 2267-2269.	1.3	37
78	Pharmacological glycerol-3-phosphate acyltransferase inhibition decreases food intake and adiposity and increases insulin sensitivity in diet-induced obesity. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2011, 301, R116-R130.	0.9	36
79	Design, synthesis, and biological evaluation of conformationally constrained glycerol 3-phosphate acyltransferase inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2010, 18, 6470-6479.	1.4	11
80	Absence of the aflatoxin biosynthesis gene, norA, allows accumulation of deoxyaflatoxin B1 in <i>Aspergillus flavus</i> cultures. <i>FEMS Microbiology Letters</i> , 2010, 305, 65-70.	0.7	13
81	New insights into the formation of fungal aromatic polyketides. <i>Nature Reviews Microbiology</i> , 2010, 8, 879-889.	13.6	201
82	Structure and function of an iterative polyketide synthase thioesterase domain catalyzing Claisen cyclization in aflatoxin biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 6246-6251.	3.3	110
83	Non-Heme Iron Oxygenases Generate Natural Structural Diversity in Carbapenem Antibiotics. <i>Journal of the American Chemical Society</i> , 2010, 132, 12-13.	6.6	39
84	Dissection of the Stepwise Mechanism to β -Lactam Formation and Elucidation of a Rate-determining Conformational Change in β -Lactam Synthetase. <i>Journal of Biological Chemistry</i> , 2009, 284, 207-217.	1.6	28
85	An externally tunable bacterial band-pass filter. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10135-10140.	3.3	130
86	Identification and Characterization of NocR as a Positive Transcriptional Regulator of the β -Lactam Nocardicin A in <i>Nocardia uniformis</i> . <i>Journal of Bacteriology</i> , 2009, 191, 1066-1077.	1.0	11
87	A Conserved Lysine in β -Lactam Synthetase Assists Ring Cyclization: Implications for Clavam and Carbapenem Biosynthesis. <i>ChemBioChem</i> , 2009, 10, 2904-2912.	1.3	9
88	Structural basis for biosynthetic programming of fungal aromatic polyketide cyclization. <i>Nature</i> , 2009, 461, 1139-1143.	13.7	176
89	Design and synthesis of a β -lactamase activated 5-fluorouracil prodrug. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2009, 19, 1261-1263.	1.0	22
90	Design and Synthesis of Small Molecule Glycerol 3-Phosphate Acyltransferase Inhibitors. <i>Journal of Medicinal Chemistry</i> , 2009, 52, 3317-3327.	2.9	75

#	ARTICLE	IF	CITATIONS
91	A Conserved Tyrosyl-Glutamyl Catalytic Dyad in Evolutionarily Linked Enzymes: Carbapenam Synthetase and β^2 -Lactam Synthetase. <i>Biochemistry</i> , 2009, 48, 4959-4971.	1.2	17
92	Production of Octaketide Polyenes by the Calicheamicin Polyketide Synthase CalE8: Implications for the Biosynthesis of Eneidyne Core Structures. <i>Journal of the American Chemical Society</i> , 2009, 131, 12564-12566.	6.6	49
93	A Catalytic Asymmetric Route to Carbapenems. <i>Organic Letters</i> , 2009, 11, 3606-3609.	2.4	25
94	Acyl-Carrier Protein-Phosphopantetheinyltransferase Partnerships in Fungal Fatty Acid Synthases. <i>ChemBioChem</i> , 2008, 9, 1559-1563.	1.3	22
95	Synthetic Strategy of Nonreducing Iterative Polyketide Synthases and the Origin of the Classical α -Starter Unit Effect. <i>ChemBioChem</i> , 2008, 9, 1019-1023.	1.3	40
96	Starter unit specificity directs genome mining of polyketide synthase pathways in fungi. <i>Bioorganic Chemistry</i> , 2008, 36, 16-22.	2.0	48
97	Peering inside the black box to find enzyme-bound intermediates. <i>Nature Chemical Biology</i> , 2008, 4, 390-391.	3.9	1
98	Deconstruction of Iterative Multidomain Polyketide Synthase Function. <i>Science</i> , 2008, 320, 243-246.	6.0	202
99	Four enzymes define the incorporation of coenzyme A in thienamycin biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 11128-11133.	3.3	33
100	Mechanistic Analysis of β -Lactam Synthetase and the Influence of Conformational Fluctuations. <i>FASEB Journal</i> , 2008, 22, 611.6.	0.2	0
101	Fatty Acid Synthase Inhibition Activates AMP-Activated Protein Kinase in SKOV3 Human Ovarian Cancer Cells. <i>Cancer Research</i> , 2007, 67, 2964-2971.	0.4	145
102	Rate-Limiting Steps and Role of Active Site Lys443 in the Mechanism of Carbapenam Synthetase. <i>Biochemistry</i> , 2007, 46, 9337-9345.	1.2	14
103	Observation of an Acryloyl-Thiamin Diphosphate Adduct in the First Step of Clavulanic Acid Biosynthesis. <i>Journal of the American Chemical Society</i> , 2007, 129, 15750-15751.	6.6	37
104	New Images Evoke Fascinating Questions. <i>Chemistry and Biology</i> , 2006, 13, 349-351.	6.2	4
105	Metabolic engineering of the <i>E. coli</i> l-phenylalanine pathway for the production of d-phenylglycine (d-Phg). <i>Metabolic Engineering</i> , 2006, 8, 196-208.	3.6	61
106	Rational strain improvement for enhanced clavulanic acid production by genetic engineering of the glycolytic pathway in <i>Streptomyces clavuligerus</i> . <i>Metabolic Engineering</i> , 2006, 8, 240-252.	3.6	93
107	Quantitative Proteomic Analysis of Drug-Induced Changes in Mycobacteria. <i>Journal of Proteome Research</i> , 2006, 5, 54-63.	1.8	68
108	Identification of a starter unit acyl-carrier protein transacylase domain in an iterative type I polyketide synthase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 16728-16733.	3.3	164

#	ARTICLE	IF	CITATIONS
109	New β -Methylene- β -butyrolactones with Antimycobacterial Properties.. ChemInform, 2005, 36, no.	0.1	0
110	New β -methylene- β -butyrolactones with antimycobacterial properties. Bioorganic and Medicinal Chemistry Letters, 2005, 15, 3857-3859.	1.0	27
111	Mutational Analysis of <i>nocK</i> and <i>nocL</i> in the Nocardicin A Producer <i>Nocardia uniformis</i> . Journal of Bacteriology, 2005, 187, 739-746.	1.0	25
112	Application of a Flexible Synthesis of (5R)-Thiolactomycin To Develop New Inhibitors of Type I Fatty Acid Synthase. Journal of Medicinal Chemistry, 2005, 48, 946-961.	2.9	80
113	Synthesis and Fate of α -Carboxybenzophenones in the Biosynthesis of Aflatoxin. Journal of the American Chemical Society, 2005, 127, 3300-3309.	6.6	43
114	Ordering the Reductive and Cytochrome P450 Oxidative Steps in Demethylsterigmatocystin Formation Yields General Insights into the Biosynthesis of Aflatoxin and Related Fungal Metabolites. Journal of the American Chemical Society, 2005, 127, 3724-3733.	6.6	92
115	Effect of α -octanesulphonylacetyl (OSA) on ATP and protein expression in <i>Mycobacterium bovis</i> BCG. Journal of Antimicrobial Chemotherapy, 2004, 54, 722-729.	1.3	29
116	Buruli toxin genes decoded. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1116-1117.	3.3	8
117	Mutational Analysis and Characterization of Nocardicin C-9 β Epimerase. Journal of Biological Chemistry, 2004, 279, 38220-38227.	1.6	11
118	Distribution and sub-cellular localization of the aflatoxin enzyme versicolorin B synthase in time-fractionated colonies of <i>Aspergillus parasiticus</i> . Archives of Microbiology, 2004, 182, 67-79.	1.0	20
119	The Biosynthetic Gene Cluster for a Monocyclic β -Lactam Antibiotic, Nocardicin A. Chemistry and Biology, 2004, 11, 927-938.	6.2	63
120	Carboxymethylproline Synthase from <i>Pectobacterium carotovora</i> : A Multifaceted Member of the Crotonase Superfamily. Biochemistry, 2004, 43, 15936-15945.	1.2	27
121	Inhibition and Alternate Substrate Studies on the Mechanism of Carbapenam Synthetase from <i>Erwinia carotovora</i> . Biochemistry, 2003, 42, 7836-7847.	1.2	45
122	Synthesis of (3S,5R)-Carbapenam-3-carboxylic Acid and Its Role in Carbapenam Biosynthesis and the Stereo-inversion Problem. Journal of the American Chemical Society, 2003, 125, 15746-15747.	6.6	40
123	Crystal Structure of Carbapenam Synthetase (CarA). Journal of Biological Chemistry, 2003, 278, 40996-41002.	1.6	36
124	Carbapenam Biosynthesis: Confirmation of Stereochemical Assignments and the Role of CarC in the Ring Stereo-inversion Process from β -Proline. Journal of the American Chemical Society, 2003, 125, 8486-8493.	6.6	73
125	Fatty acid synthase inhibition triggers apoptosis during S phase in human cancer cells. Cancer Research, 2003, 63, 7330-7.	0.4	164
126	The catalytic cycle of β -lactam synthetase observed by x-ray crystallographic snapshots. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14752-14757.	3.3	68

#	ARTICLE	IF	CITATIONS
127	Synthesis of 11-HydroxylO-Methylsterigmatocystin and the Role of a Cytochrome P-450 in the Final Step of Aflatoxin Biosynthesis. <i>Journal of the American Chemical Society</i> , 2002, 124, 5294-5303.	6.6	62
128	Role of the Cytochrome P450 NoxL in Nocardicin A Biosynthesis. <i>Journal of the American Chemical Society</i> , 2002, 124, 8186-8187.	6.6	49
129	A Method for Prediction of the Locations of Linker Regions within Large Multifunctional Proteins, and Application to a Type I Polyketide Synthase. <i>Journal of Molecular Biology</i> , 2002, 323, 585-598.	2.0	103
130	A Flexible Route to (5R)-Thiolactomycin, a Naturally Occurring Inhibitor of Fatty Acid Synthesis. <i>Organic Letters</i> , 2002, 4, 3859-3862.	2.4	52
131	New reactions in clavulanic acid biosynthesis. <i>Current Opinion in Chemical Biology</i> , 2002, 6, 583-589.	2.8	55
132	Initial Characterization of a Type I Fatty Acid Synthase and Polyketide Synthase Multienzyme Complex NorS in the Biosynthesis of Aflatoxin B1. <i>Chemistry and Biology</i> , 2002, 9, 981-988.	6.2	90
133	Spectroscopic Studies of Substrate Interactions with Clavaminatase Synthase 2, a Multifunctional Fe^{2+} -KG-Dependent Non-Heme Iron Enzyme: A Correlation with Mechanisms and Reactivities. <i>Journal of the American Chemical Society</i> , 2001, 123, 7388-7398.	6.6	150
134	Structure of beta-lactam synthetase reveals how to synthesize antibiotics instead of asparagine. <i>Nature Structural Biology</i> , 2001, 8, 684-689.	9.7	59
135	In Vitro Activity of a Novel Antimycobacterial Compound, N -Octanesulfonylacetamide, and Its Effects on Lipid and Mycolic Acid Synthesis. <i>Antimicrobial Agents and Chemotherapy</i> , 2001, 45, 1143-1150.	1.4	48
136	Predictive, structure-based model of amino acid recognition by nonribosomal peptide synthetase adenylation domains. <i>Chemistry and Biology</i> , 2000, 7, 211-224.	6.2	746
137	A New Class of Antituberculosis Agents. <i>Journal of Medicinal Chemistry</i> , 2000, 43, 3304-3314.	2.9	84
138	Kinetic Mechanism of the Fe^{2+} -Lactam Synthetase of <i>Streptomyces clavuligerus</i> . <i>Biochemistry</i> , 2000, 39, 11187-11193.	1.2	33
139	Requirement of Monooxygenase-Mediated Steps for Sterigmatocystin Biosynthesis by <i>Aspergillus nidulans</i> . <i>Applied and Environmental Microbiology</i> , 2000, 66, 359-362.	1.4	48
140	Expansion of the Clavulanic Acid Gene Cluster: Identification and In Vivo Functional Analysis of Three New Genes Required for Biosynthesis of Clavulanic Acid by <i>Streptomyces clavuligerus</i> . <i>Journal of Bacteriology</i> , 2000, 182, 4087-4095.	1.0	70
141	Reduced Food Intake and Body Weight in Mice Treated with Fatty Acid Synthase Inhibitors. <i>Science</i> , 2000, 288, 2379-2381.	6.0	906
142	Calicheamicin β -Homeodomain Conjugate as an Efficient, Sequence-Specific DNA Cleavage and Mapping Tool. <i>Journal of the American Chemical Society</i> , 2000, 122, 12884-12885.	6.6	12
143	Site-Directed Mutagenesis and Biochemical Analysis of the Endogenous Ligands in the Ferrous Active Site of Clavaminatase Synthase. The His-3 Variant of the 2-His-1-Carboxylate Model. <i>Biochemistry</i> , 2000, 39, 8666-8673.	1.2	20
144	Three Unusual Reactions Mediate Carbapenem and Carbapenam Biosynthesis. <i>Journal of the American Chemical Society</i> , 2000, 122, 9296-9297.	6.6	62

#	ARTICLE	IF	CITATIONS
145	Silyl Triflate-Mediated Ring-Closure and Rearrangement in the Synthesis of Potential Bisfuran-Containing Intermediates of Aflatoxin Biosynthesis. <i>Journal of the American Chemical Society</i> , 1999, 121, 7729-7746.	6.6	37
146	\hat{I}^2 -Secondary Kinetic Isotope Effects in the Clavaminase Synthase-Catalyzed Oxidative Cyclization of Proclavaminic Acid and in Related Azetidinone Model Reactions. <i>Journal of the American Chemical Society</i> , 1999, 121, 11356-11368.	6.6	29
147	Origin of the \hat{I}^2 -Lactam Carbons in Clavulanic Acid from an Unusual Thiamine Pyrophosphate-Mediated Reaction. <i>Journal of the American Chemical Society</i> , 1999, 121, 9223-9224.	6.6	89
148	Total Synthesis of O-Methylsterigmatocystin Using N-Alkyl Nitrilium Salts and Carbonyl-alkene Interconversion in a New Xanthone Synthesis. <i>Journal of Organic Chemistry</i> , 1999, 64, 4050-4059.	1.7	39
149	Inhibitors of an AdoMet-dependent 3-amino-3-carboxypropyl transferase and their use as ligands for protein affinity chromatography. <i>Tetrahedron</i> , 1998, 54, 15959-15974.	1.0	12
150	Substrate Binding to the \hat{I}^{\pm} -Ketoglutarate-Dependent Non-Heme Iron Enzyme Clavaminase Synthase: Coupling Mechanism of Oxidative Decarboxylation and Hydroxylation. <i>Journal of the American Chemical Society</i> , 1998, 120, 13539-13540.	6.6	81
151	Circular Dichroism and Magnetic Circular Dichroism Spectroscopic Studies of the Non-Heme Ferrous Active Site in Clavaminase Synthase and Its Interaction with \hat{I}^{\pm} -Ketoglutarate Cosubstrate. <i>Journal of the American Chemical Society</i> , 1998, 120, 743-753.	6.6	152
152	The in Vitro Conversion of Norsolorinic Acid to Aflatoxin B1. An Improved Method of Cell-Free Enzyme Preparation and Stabilization. <i>Journal of the American Chemical Society</i> , 1998, 120, 6231-6239.	6.6	17
153	Purification, Characterization, and Cloning of an S-Adenosylmethionine-dependent 3-Amino-3-carboxypropyltransferase in Nocardicin Biosynthesis. <i>Journal of Biological Chemistry</i> , 1998, 273, 30695-30703.	1.6	38
154	\hat{I}^2 -Lactam synthetase: A new biosynthetic enzyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 9082-9086.	3.3	123
155	Heterologous Expression, Isolation, and Characterization of Versicolorin B Synthase from <i>Aspergillus parasiticus</i> . <i>Journal of Biological Chemistry</i> , 1997, 272, 804-813.	1.6	25
156	The fate of [2,3,3- 2 H ₃ , 1,2- 13 C ₂]-d,l-glycerate in clavulanic acid biosynthesis. <i>Chemical Communications</i> , 1997, , 225-226.	2.2	15
157	Probable Role of Clavaminic Acid as the Terminal Intermediate in the Common Pathway to Clavulanic Acid and the Antipodal Clavam Metabolites. <i>Journal of the American Chemical Society</i> , 1997, 119, 2348-2355.	6.6	43
158	A Concise Synthesis of (+)-Cerulenin from a Chiral Oxiranyllithium. <i>Journal of Organic Chemistry</i> , 1997, 62, 636-640.	1.7	35
159	Enzymology and Molecular Biology of Aflatoxin Biosynthesis. <i>Chemical Reviews</i> , 1997, 97, 2537-2556.	23.0	256
160	Structural studies of natural product biosynthetic proteins. <i>Chemistry and Biology</i> , 1997, 4, 721-730.	6.2	19
161	Solution-phase synthesis of a combinatorial monocyclic \hat{I}^2 -lactam library: Potential protease inhibitors. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1997, 7, 3129-3134.	1.0	39
162	Efficient syntheses of multiply 2 H- and 13 C-labeled acrylic acid, glyceric acid, glycidic acid and glycerol. <i>Journal of Labelled Compounds and Radiopharmaceuticals</i> , 1997, 39, 999-1009.	0.5	3

#	ARTICLE	IF	CITATIONS
163	Incorporation of Molecular Oxygen in Aflatoxin B1 Biosynthesis. <i>Journal of Organic Chemistry</i> , 1996, 61, 1990-1993.	1.7	20
164	The Role of the Aminosugar and Helix Binding in the Thiol-Induced Activation of Calicheamicin for DNA Cleavage. <i>Journal of the American Chemical Society</i> , 1996, 118, 1938-1948.	6.6	22
165	Purification and Characterization of Versicolorin B Synthase from <i>Aspergillus parasiticus</i> . Catalysis of the Stereodifferentiating Cyclization in Aflatoxin Biosynthesis Essential to DNA Interaction. <i>Biochemistry</i> , 1996, 35, 11470-11486.	1.2	29
166	Isolation and Characterization of the Versicolorin B Synthase Gene from <i>Aspergillus parasiticus</i> . <i>Journal of Biological Chemistry</i> , 1996, 271, 13600-13608.	1.6	63
167	A single monomeric iron center in clavamate synthase catalyzes three nonsuccessive oxidative transformations. <i>Bioorganic and Medicinal Chemistry</i> , 1996, 4, 1059-1064.	1.4	35
168	Demonstration of the catalytic roles and evidence for the physical association of type I fatty acid synthases and a polyketide synthase in the biosynthesis of aflatoxin B1. <i>Chemistry and Biology</i> , 1996, 3, 463-469.	6.2	74
169	Purification and Characterization of Clavamate Synthase from <i>Streptomyces antibioticus</i> . <i>Journal of Biological Chemistry</i> , 1995, 270, 5399-5404.	1.6	40
170	Expression and Purification of Two Isozymes of Clavamate Synthase and Initial Characterization of the Iron Binding Site. <i>Journal of Biological Chemistry</i> , 1995, 270, 4262-4269.	1.6	41
171	Role of the Aryl Iodide in the Sequence-Selective Cleavage of DNA by Calicheamicin. Importance of Thermodynamic Binding vs. Kinetic Activation in the Cleavage Process. <i>Journal of the American Chemical Society</i> , 1995, 117, 8074-8082.	6.6	31
172	Features of DNA recognition for oriented binding and cleavage by calicheamicin. <i>Tetrahedron</i> , 1994, 50, 1361-1378.	1.0	29
173	The potential role of fatty acid initiation in the biosynthesis of the fungal aromatic polyketide aflatoxin B ₁ . <i>Canadian Journal of Chemistry</i> , 1994, 72, 200-207.	0.6	44
174	Kinetic vs. Thermodynamic Determinants in the Sequence Selectivity of DNA Cleavage by Calicheamicin. <i>Journal of the American Chemical Society</i> , 1994, 116, 8819-8820.	6.6	6
175	General Approach to the Synthesis of Specifically Deuterium-Labeled Nucleosides. <i>Journal of Organic Chemistry</i> , 1994, 59, 2715-2723.	1.7	27
176	Evidence for the Probable Final Steps in Aflatoxin Biosynthesis. <i>Journal of Organic Chemistry</i> , 1994, 59, 4424-4429.	1.7	16
177	Emerging evidence for a shared biosynthetic pathway among clavulanic acid and the structurally diverse clavam metabolites. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1993, 3, 2313-2316.	1.0	21
178	Demonstration of Baeyer-Villiger oxidation and the course of cyclization in bisfuran ring formation during aflatoxin B1 biosynthesis. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1993, 3, 653-656.	1.0	22
179	Evidence for distinct mechanisms of monocyclic β -lactam biosynthesis. <i>Journal of the Chemical Society Chemical Communications</i> , 1993, , 1346-1347.	2.0	3
180	Synthesis and Reaction of Potential Alternate Substrates and Mechanism-Based Inhibitors of Clavamate Synthase. <i>Journal of Natural Products</i> , 1993, 56, 1373-1396.	1.5	22

#	ARTICLE	IF	CITATIONS
181	Kinetic nature of thiol activation in DNA cleavage by calicheamicin. <i>Journal of the American Chemical Society</i> , 1993, 115, 3374-3375.	6.6	21
182	Oxidative amino acid processing in β -lactam antibiotic biosynthesis. <i>Biochemical Society Transactions</i> , 1993, 21, 208-213.	1.6	15
183	Two isozymes of clavamate synthase central to clavulanic acid formation: cloning and sequencing of both genes from <i>Streptomyces clavuligerus</i> . <i>Biochemistry</i> , 1992, 31, 12648-12657.	1.2	92
184	Common origin of clavulanic acid and clavam metabolites in <i>Streptomyces</i> . <i>Journal of the American Chemical Society</i> , 1992, 114, 2762-2763.	6.6	33
185	Specific abstraction of the 5'- and 4'-deoxyribose hydrogen atoms from DNA by calicheamicin γ .II. <i>Journal of the American Chemical Society</i> , 1992, 114, 9200-9202.	6.6	119
186	Stereochemical correlation of proclavaminic acid and syntheses of erythro- and threo-L- β -hydroxyornithine from an improved vinylglycine synthon. <i>Journal of Organic Chemistry</i> , 1991, 56, 728-731.	1.7	61
187	Elucidation of the order of oxidations and identification of an intermediate in the multistep clavamate synthase reaction. <i>Biochemistry</i> , 1991, 30, 2281-2292.	1.2	70
188	Kinetics of trisulfide cleavage in calicheamicin-assessing the role of the ethylamino group. <i>Tetrahedron Letters</i> , 1991, 32, 4635-4638.	0.7	18
189	Experiments and speculations on the role of oxidative cyclization chemistry in natural product biosynthesis. <i>Tetrahedron</i> , 1991, 47, 2591-2602.	1.0	64
190	Characterization of the in vitro cyclization chemistry of calicheamicin and its relation to DNA cleavage. <i>Journal of the American Chemical Society</i> , 1990, 112, 4554-4556.	6.6	87
191	Purification and characterization of clavamate synthase from <i>Streptomyces clavuligerus</i> : an unusual oxidative enzyme in natural product biosynthesis. <i>Biochemistry</i> , 1990, 29, 6499-6508.	1.2	134
192	Site-specific atom transfer from DNA to a bound ligand defines the geometry of a DNA-calicheamicin γ .II complex. <i>Journal of the American Chemical Society</i> , 1990, 112, 9669-9670.	6.6	101
193	Stereochemical course of the key ring-forming reactions in clavulanic acid biosynthesis. <i>Journal of the American Chemical Society</i> , 1990, 112, 1654-1656.	6.6	42
194	Total syntheses of (-)-nocardicins A-G: a biogenetic approach. <i>Journal of the American Chemical Society</i> , 1990, 112, 760-770.	6.6	72
195	Reaction Models of the Oxidative Rearrangement of Averufin to 1'-Hydroxyversicolorone: The First Step in Dihydrobisfuran Formation in Aflatoxin Biosynthesis. <i>Tetrahedron</i> , 1989, 45, 2263-2276.	1.0	23
196	Partitioning of tetrahydro- and dihydrobisfuran formation in aflatoxin biosynthesis defined by cell-free and direct incorporation experiments. <i>Journal of the American Chemical Society</i> , 1989, 111, 8308-8309.	6.6	33
197	Oxidative cyclization chemistry catalyzed by clavamate synthase. <i>Journal of the American Chemical Society</i> , 1989, 111, 7625-7627.	6.6	35
198	The timing of aromatic deoxygenation in aflatoxin biosynthesis. <i>Journal of the American Chemical Society</i> , 1989, 111, 8306-8308.	6.6	24

#	ARTICLE	IF	CITATIONS
199	Stereochemical features of enoyl thiol ester reductase in averufin and fatty acid biosynthesis in <i>Aspergillus parasiticus</i> . <i>Journal of the American Chemical Society</i> , 1988, 110, 318-319.	6.6	21
200	Hydroxyversicolorone: isolation and characterization of a potential intermediate in aflatoxin biosynthesis. <i>Journal of Organic Chemistry</i> , 1988, 53, 2472-2477.	1.7	30
201	Cell-free biosynthesis of nocardicin A from nocardicin E and S-adenosylmethionine. <i>Journal of the American Chemical Society</i> , 1988, 110, 8238-8239.	6.6	18
202	The role of nocardicin G in nocardicin A biosynthesis. <i>Journal of the American Chemical Society</i> , 1988, 110, 3320-3321.	6.6	18
203	The role of molecular oxygen in clavulanic acid biosynthesis: evidence for a bacterial oxidative deamination. <i>Journal of the Chemical Society Chemical Communications</i> , 1988, , 1234.	2.0	17
204	Clavulanic acid biosynthesis: the stereochemical course of β -lactam formation from chiral glycerol. <i>Journal of the Chemical Society Chemical Communications</i> , 1987, , 86-89.	2.0	12
205	β -Hydroxydecanoyl thioester dehydrase. Complete characterization of the fate of the "suicide" substrate 3-decynoyl-NAC. <i>Journal of the American Chemical Society</i> , 1986, 108, 5309-5316.	6.6	26
206	Biogenetically-modelled total syntheses (α)-nocardicin A and (α)-nocardicin G. <i>Tetrahedron Letters</i> , 1986, 27, 3819-3822.	0.7	19
207	Stereochemical correlation of (-)-averantin. <i>Tetrahedron Letters</i> , 1986, 27, 887-888.	0.7	15
208	Stereochemical fate of chiral methyl of valine in the ring expansion of penicillin N to deacetoxycephalosporin C. <i>Journal of the American Chemical Society</i> , 1985, 107, 4760-4767.	6.6	36
209	Synthesis and absolute configuration of (+)-averufin. <i>Journal of Organic Chemistry</i> , 1985, 50, 5426-5428.	1.7	21
210	Biosynthesis of clavulanic acid: origin of the C3 unit. <i>Journal of the American Chemical Society</i> , 1985, 107, 1066-1068.	6.6	40
211	The Stereochemical Fate of Chiral-Methyl Valines in Cephalosporin C Biosynthesis. <i>Journal of Natural Products</i> , 1985, 48, 708-724.	1.5	14
212	Concerning the role of nidurufin in aflatoxin biosynthesis. <i>Journal of the American Chemical Society</i> , 1985, 107, 270-271.	6.6	22
213	Biosynthesis of clavulanic acid: origin of the C5 unit. <i>Journal of the American Chemical Society</i> , 1985, 107, 1065-1066.	6.6	42
214	A cationic model of the chain-branching step in aflatoxin biosynthesis. <i>Journal of Organic Chemistry</i> , 1985, 50, 5428-5430.	1.7	21
215	Direct observation by carbon-13 NMR spectroscopy of the regioselectivity and stoichiometry of "suicide" enzyme inactivation. <i>Journal of the American Chemical Society</i> , 1984, 106, 7293-7294.	6.6	14
216	Hexanoate as a starter unit in polyketide biosynthesis. <i>Journal of the American Chemical Society</i> , 1984, 106, 3868-3869.	6.6	62

#	ARTICLE	IF	CITATIONS
217	Stable isotope studies of anthraquinone intermediates in the aflatoxin pathway. <i>Tetrahedron</i> , 1983, 39, 3575-3582.	1.0	34
218	Nocardicin A: biosynthetic experiments with amino acid precursors. <i>Journal of the American Chemical Society</i> , 1983, 105, 913-918.	6.6	72
219	Nocardicin A: stereochemical and biomimetic studies of monocyclic β -lactam formation. <i>Journal of the American Chemical Society</i> , 1983, 105, 919-927.	6.6	45
220	Nocardicin A biosynthesis: stereochemical course of monocyclic β -lactam formation. <i>Journal of the American Chemical Society</i> , 1982, 104, 1748-1750.	6.6	22
221	Bisfuran formation in aflatoxin biosynthesis: the fate of the averufin side chain. <i>Journal of the American Chemical Society</i> , 1982, 104, 6152-6153.	6.6	24
222	Bisfuran formation in aflatoxin biosynthesis: the role of versiconal acetate. <i>Journal of the American Chemical Society</i> , 1982, 104, 6154-6155.	6.6	34
223	Improved asymmetric synthesis of (-)-3-aminonocardicin acid and further observations of the Mitsunobu reaction for β -lactam formation in seryl peptides. <i>Tetrahedron Letters</i> , 1982, 23, 4859-4862.	0.7	21
224	Biosynthetic studies of nocardicin A. <i>Journal of the American Chemical Society</i> , 1981, 103, 2873-2874.	6.6	20
225	Methoxymethyl-directed aryl metalation. Total synthesis of (+)-averufin. <i>Journal of the American Chemical Society</i> , 1981, 103, 6885-6888.	6.6	81
226	A Simple, Inexpensive Preparation of Highly Pure Copper (I) Bromide and its Dimethylsulfide Complex. <i>Synthetic Communications</i> , 1981, 11, 157-166.	1.1	26
227	Asymmetric, biogenetically modeled synthesis of (-)-3-aminonocardicin acid. <i>Journal of the American Chemical Society</i> , 1981, 103, 4582-4583.	6.6	34
228	Studies of methoxymethyl-directed metalation. <i>Tetrahedron Letters</i> , 1981, 22, 3923-3924.	0.7	75
229	Method for transfer of labeled methyl groups. <i>Journal of Organic Chemistry</i> , 1980, 45, 1697-1699.	1.7	14
230	Intact transfer of methyl groups in the biosynthesis of vitamin B12. <i>Journal of the Chemical Society Chemical Communications</i> , 1976, , 541.	2.0	10
231	A new synthesis of chiral acetic acid. <i>Journal of the Chemical Society Chemical Communications</i> , 1975, , 921.	2.0	32
232	On corrin biogenesis. <i>Bioorganic Chemistry</i> , 1974, 3, 229-237.	2.0	9
233	Carbon-13 Fourier transform NMR. VII. Stereochemistry of methyl group insertion in corrinoid biosynthesis. Determination of carbon isotope chirality by carbon-13 nuclear magnetic resonance. <i>Journal of the American Chemical Society</i> , 1973, 95, 5759-5761.	6.6	22
234	CONCERNING THE BIOSYNTHESIS OF VITAMIN B ₁₂ *, ϵ . <i>Transactions of the New York Academy of Sciences</i> , 1973, 35, 72-79.	0.2	27