Douglas A Mitchell

List of Publications by Year
in descending order

99 papers	10,381 citations	41258 49 h-index	45213 90 g-index
113 all docs	113 docs citations	113 times ranked	9214 citing authors

#	Article	IF	Citations
1	RadicalSAM.org: A Resource to Interpret Sequence-Function Space and Discover New Radical SAM Enzyme Chemistry. ACS Bio & Med Chem Au, 2022, 2, 22-35.	1.7	61
2	Reactivity-based screening for natural product discovery. Methods in Enzymology, 2022, 665, 177-208.	0.4	1
3	Accessing Diverse Pyridine-Based Macrocyclic Peptides by a Two-Site Recognition Pathway. Journal of the American Chemical Society, 2022, 144, 11263-11269.	6.6	8
4	New developments in RiPP discovery, enzymology and engineering. Natural Product Reports, 2021, 38, 130-239.	5.2	412
5	Structure Prediction and Synthesis of Pyridine-Based Macrocyclic Peptide Natural Products. Organic Letters, 2021, 23, 253-256.	2.4	16
6	Functional elucidation of TfuA in peptide backbone thioamidation. Nature Chemical Biology, 2021, 17, 585-592.	3.9	21
7	Sterol Sponge Mechanism Is Conserved for Glycosylated Polyene Macrolides. ACS Central Science, 2021, 7, 781-791.	5.3	27
8	Cell-Free Biosynthesis to Evaluate Lasso Peptide Formation and Enzymeâ€“Substrate Tolerance. Journal of the American Chemical Society, 2021, 143, 5917-5927.	6.6	44
9	Enzymatic thioamidation of peptide backbones. Methods in Enzymology, 2021, 656, 459-494.	0.4	1
10	Bioinformatics-Guided Expansion and Discovery of Graspetides. ACS Chemical Biology, 2021, 16, 2787-2797.	1.6	31
11	Reactivity-Based Screening for Citrulline-Containing Natural Products Reveals a Family of Bacterial Peptidyl Arginine Deiminases. ACS Chemical Biology, 2020, 15, 3167-3175.	1.6	19
12	Bioinformatic and Reactivity-Based Discovery of Linaridins. ACS Chemical Biology, 2020, 15, 2976-2985.	1.6	25
13	RRE-Finder: a Genome-Mining Tool for Class-Independent RiPP Discovery. MSystems, 2020, 5, .	1.7	60
14	Precursor peptide-targeted mining of more than one hundred thousand genomes expands the lanthipeptide natural product family. BMC Genomics, 2020, 21, 387.	1.2	102
15	Functional interactions between posttranslationally modified amino acids of methyl-coenzyme M reductase in Methanosarcina acetivorans. PLoS Biology, 2020, 18, e3000507.	2.6	29
16	Microviridin 1777: A Toxic Chymotrypsin Inhibitor Discovered by a Metabologenomic Approach. Journal of Natural Products, 2020, 83, 438-446.	1.5	24
17	Title is missing!. , 2020, 18, e3000507.		0
18	Title is missing!. , 2020, 18, e3000507.		0

#	Article	IF	Citations
19	Title is missing!. , 2020, 18, e3000507.		0
20	Title is missing!. , 2020, 18, e3000507.		0
21	Title is missing!. , 2020, 18, e3000507.		0
22	Title is missing!. , 2020, 18, e3000507.		0
23	Reconstitution and Substrate Specificity of the Thioether-Forming Radical <i>S</i>-Adenosylmethionine Enzyme in Freyrasin Biosynthesis. ACS Chemical Biology, 2019, 14, 1981-1989.	1.6	28
24	Biosynthesis and Chemical Applications of Thioamides. ACS Chemical Biology, 2019, 14, 142-163.	1.6	126
25	Bioinformatic Mapping of Radical <i>S</i>-Adenosylmethionine-Dependent Ribosomally Synthesized and Post-Translationally Modified Peptides Identifies New CÎ±, CÎ², and CÎ³-Linked Thioether-Containing Peptides. Journal of the American Chemical Society, 2019, 141, 8228-8238.	6.6	123
26	Mechanistic Basis for Ribosomal Peptide Backbone Modifications. ACS Central Science, 2019, 5, 842-851.	5.3	35
27	Enzymatic Reconstitution and Biosynthetic Investigation of the Lasso Peptide Fusilassin. Journal of the American Chemical Society, 2019, 141, 290-297.	6.6	70
28	Enzymatic reconstitution of ribosomal peptide backbone thioamidation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3030-3035.	3.3	73
29	RiPP antibiotics: biosynthesis and engineering potential. Current Opinion in Microbiology, 2018, 45, 61-69.	2.3	138
30	Bioinformatic Expansion and Discovery of Thiopeptide Antibiotics. Journal of the American Chemical Society, 2018, 140, 9494-9501.	6.6	119
31	Elucidation of the roles of conserved residues in the biosynthesis of the lasso peptide paeninodin. Chemical Communications, 2018, 54, 9007-9010.	2.2	32
32	A new genome-mining tool redefines the lasso peptide biosynthetic landscape. Nature Chemical Biology, 2017, 13, 470-478.	3.9	346
33	YcaO-Dependent Posttranslational Amide Activation: Biosynthesis, Structure, and Function. Chemical Reviews, 2017, 117, 5389-5456.	23.0	166
34	antiSMASH 4.0â€"improvements in chemistry prediction and gene cluster boundary identification. Nucleic Acids Research, 2017, 45, W36-W41.	6.5	1,196
35	Chimeric Leader Peptides for the Generation of Non-Natural Hybrid RiPP Products. ACS Central Science, 2017, 3, 629-638.	5.3	87
36	Headâ€toâ€Head Prenyl Synthases in Pathogenic Bacteria. ChemBioChem, 2017, 18, 985-991.	1.3	6

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37	Reconstitution and Substrate Specificity of the Radical <i>S</i>-Adenosyl-methionine Thiazole <i>C</i>-Methyltransferase in Thiomuracin Biosynthesis. Journal of the American Chemical Society, 2017, 139, 4310-4313.	6.6	45
38	Radical <i>S</i>-Adenosylmethionine Enzymes Involved in RiPP Biosynthesis. Biochemistry, 2017, 56, 5229-5244.	1.2	66
39	Profiling of Microbial Colonies for High-Throughput Engineering of Multistep Enzymatic Reactions via Optically Guided Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry. Journal of the American Chemical Society, 2017, 139, 12466-12473.	6.6	57
40	In Vitro Biosynthetic Studies of Bottromycin Expand the Enzymatic Capabilities of the YcaO Superfamily. Journal of the American Chemical Society, 2017, 139, 18154-18157.	6.6	33
41	Mechanism of a Class C Radical <i>S</i>-Adenosyl-<scp>l</scp>-methionine Thiazole Methyl Transferase. Journal of the American Chemical Society, 2017, 139, 18623-18631.	6.6	33
42	Structural insights into enzymatic [4+2] <i>aza</i> -cycloaddition in thiopeptide antibiotic biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12928-12933.	3.3	70
43	Post-translational thioamidation of methyl-coenzyme M reductase, a key enzyme in methanogenic and methanotrophic Archaea. ELife, 2017, 6, .	2.8	82
44	Biosynthetic Timing and Substrate Specificity for the Thiopeptide Thiomuracin. Journal of the American Chemical Society, 2016, 138, 15511-15514.	6.6	73
45	Targeting Reactive Carbonyls for Identifying Natural Products and Their Biosynthetic Origins. Journal of the American Chemical Society, 2016, 138, 15157-15166.	6.6	42
46	<i>In Vitro</i> Biosynthesis and Substrate Tolerance of the Plantazolicin Family of Natural Products. ACS Chemical Biology, 2016, 11, 2232-2243.	1.6	15
47	Biological characterization of the hygrobafilomycin antibiotic JBIR-100 and bioinformatic insights into the hygrolide family of natural products. Bioorganic and Medicinal Chemistry, 2016, 24, 6276-6290.	1.4	14
48	Plantazolicin Is an Ultranarrow-Spectrum Antibiotic That Targets the <i>Bacillus anthracis</i> Membrane. ACS Infectious Diseases, 2016, 2, 207-220.	1.8	37
49	Targeted treatment for bacterial infections: prospects for pathogen-specific antibiotics coupled with rapid diagnostics. Tetrahedron, 2016, 72, 3609-3624.	1.0	76
50	Using Genomics for Natural Product Structure Elucidation. Current Topics in Medicinal Chemistry, 2016, 16, 1645-1694.	1.0	32
51	The genomic landscape of ribosomal peptides containing thiazole and oxazole heterocycles. BMC Genomics, 2015, 16, 778.	1.2	68
52	Identification of an Auxiliary Leader Peptide-Binding Protein Required for Azoline Formation in Ribosomal Natural Products. Journal of the American Chemical Society, 2015, 137, 7672-7677.	6.6	48
53	In Vitro Biosynthesis of the Core Scaffold of the Thiopeptide Thiomuracin. Journal of the American Chemical Society, 2015, 137, 16012-16015.	6.6	145
54	Insights into Methyltransferase Specificity and Bioactivity of Derivatives of the Antibiotic Plantazolicin. ACS Chemical Biology, 2015, 10, 1209-1216.	1.6	16

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55	HIV Protease Inhibitors Block Streptolysin S Production. ACS Chemical Biology, 2015, 10, 1217-1226.	1.6	15
56	Structure, Bioactivity, and Resistance Mechanism of Streptomonomicin, an Unusual Lasso Peptide from an Understudied Halophilic Actinomycete. Chemistry and Biology, 2015, 22, 241-250.	6.2	78
57	A prevalent peptide-binding domain guides ribosomal natural product biosynthesis. Nature Chemical Biology, 2015, 11, 564-570.	3.9	288
58	Identification of the minimal cytolytic unit for streptolysin S and an expansion of the toxin family. BMC Microbiology, 2015, 15, 141.	1.3	18
59	Minimum Information about a Biosynthetic Gene cluster. Nature Chemical Biology, 2015, 11, 625-631.	3.9	715
60	Crystal structure and absolute configuration of (3S,4aS,8aS)-N-tert-butyl-2-[(S)-3-(2-chloro-4-nitrobenzamido)-2-hydroxypropyl]decahydroisoquinoline-3-carboxamide and (3S,4aS,8aS)-N-tert-butyl-2-{(S)-2-[(S)-1-(2-chloro-4-nitrobenzoyl)pyrrolidin-2-yl]-2-hydroxyethyl}decahydroisoquinoline-3-carboxamide. Acta Crystallographica Section E: Crystallographic Communications, 2015, 71, 1401-1407.	0.2	0
61	Lessons learned from the transformation of natural product discovery to a genome-driven endeavor. Journal of Industrial Microbiology and Biotechnology, 2014, 41, 315-331.	1.4	20
62	Multitarget Drug Discovery for Tuberculosis and Other Infectious Diseases. Journal of Medicinal Chemistry, 2014, 57, 3126-3139.	2.9	205
63	Undecaprenyl Diphosphate Synthase Inhibitors: Antibacterial Drug Leads. Journal of Medicinal Chemistry, 2014, 57, 5693-5701.	2.9	43
64	Orchestration of Enzymatic Processing by Thiazole/Oxazole-Modified Microcin Dehydrogenases. Biochemistry, 2014, 53, 413-422.	1.2	49
65	Nucleophilic 1,4-Additions for Natural Product Discovery. ACS Chemical Biology, 2014, 9, 2014-2022.	1.6	58
66	Structural investigation of ribosomally synthesized natural products by hypothetical structure enumeration and evaluation using tandem MS. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12031-12036.	3.3	58
67	Discovery of a new ATP-binding motif involved in peptidic azoline biosynthesis. Nature Chemical Biology, 2014, 10, 823-829.	3.9	77
68	Synthesis of Plantazolicin Analogues Enables Dissection of Ligand Binding Interactions of a Highly Selective Methyltransferase. Organic Letters, 2013, 15, 5076-5079.	2.4	15
69	Ribosomally synthesized and post-translationally modified peptide natural products: overview and recommendations for a universal nomenclature. Natural Product Reports, 2013, 30, 108-160.	5.2	1,692
70	Crystallization and preliminary X-ray diffraction analysis of YisP protein from<i>Bacillus subtilis</i>subsp.<i>subtilis</i>strain 168. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 77-79.	0.7	6
71	Insights into the Mechanism of Peptide Cyclodehydrations Achieved through the Chemoenzymatic Generation of Amide Derivatives. Journal of the American Chemical Society, 2013, 135, 8692-8701.	6.6	53
72	Engineering Unnatural Variants of Plantazolicin through Codon Reprogramming. ACS Chemical Biology, 2013, 8, 1998-2008.	1.6	39

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73	Revealing Natureâ€™s Synthetic Potential Through the Study of Ribosomal Natural Product Biosynthesis. ACS Chemical Biology, 2013, 8, 473-487.	1.6	33
74	Correction to Revealing Natureâ€™s Synthetic Potential through the Study of Ribosomal Natural Product Biosynthesis. ACS Chemical Biology, 2013, 8, 1083-1083.	1.6	1
75	Structural and functional insight into an unexpectedly selective <i>N</i> -methyltransferase involved in plantazolicin biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12954-12959.	3.3	42
76	Antibacterial drug leads targeting isoprenoid biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 123-128.	3.3	129
77	Selectivity, Directionality, and Promiscuity in Peptide Processing from a <i>Bacillus</i> sp. Al Hakam Cyclodehydratase. Journal of the American Chemical Society, 2012, 134, 5309-5316.	6.6	59
78	HIV-1 Integrase Inhibitor-Inspired Antibacterials Targeting Isoprenoid Biosynthesis. ACS Medicinal Chemistry Letters, 2012, 3, 402-406.	1.3	16
79	YcaO domains use ATP to activate amide backbones during peptide cyclodehydrations. Nature Chemical Biology, 2012, 8, 569-575.	3.9	121
80	Characterizing the plantazolicins: structure and discriminating activity of a novel class of natural products. FASEB Journal, 2012, 26, 552.1.	0.2	0
81	Streptolysin S-like virulence factors: the continuing sagA. Nature Reviews Microbiology, 2011, 9, 670-681.	13.6	140
82	Expansion of Type II CAAX Proteases Reveals Evolutionary Origin of Î³-Secretase Subunit APH-1. Journal of Molecular Biology, 2011, 410, 18-26.	2.0	64
83	Structure Determination and Interception of Biosynthetic Intermediates for the Plantazolicin Class of Highly Discriminating Antibiotics. ACS Chemical Biology, 2011, 6, 1307-1313.	1.6	79
84	Thiazole/oxazole-modified microcins: complex natural products from ribosomal templates. Current Opinion in Chemical Biology, 2011, 15, 369-378.	2.8	170
85	Plantazolicin, a Novel Microcin B17/Streptolysin S-Like Natural Product from <i>Bacillus amyloliquefaciens</i> FZB42. Journal of Bacteriology, 2011, 193, 215-224.	1.0	174
86	Expansion of ribosomally produced natural products: a nitrile hydratase- and Nif11-related precursor family. BMC Biology, 2010, 8, 70.	1.7	134
87	Oxidation of pinacyanol chloride by H2O2 catalyzed by FeIII complexed to tetraamidomacrocyclic ligand: unusual kinetics and product identification. Journal of Coordination Chemistry, 2010, 63, 2605-2618.	0.8	17
88	Clostridiolysin S, a Post-translationally Modified Biotoxin from Clostridium botulinum. Journal of Biological Chemistry, 2010, 285, 28220-28228.	1.6	56
89	Structural and Functional Dissection of the Heterocyclic Peptide Cytotoxin Streptolysin S. Journal of Biological Chemistry, 2009, 284, 13004-13012.	1.6	64
90	Catalaseâˆ'Peroxidase Activity of Iron(III)âˆ'TAML Activators of Hydrogen Peroxide. Journal of the American Chemical Society, 2008, 130, 15116-15126.	6.6	158

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91	Discovery of a widely distributed toxin biosynthetic gene cluster. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 5879-5884.	3.3	182
92	Thioredoxin is required for S-nitrosation of procaspase-3 and the inhibition of apoptosis in Jurkat cells. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11609-11614.	3.3	143
93	FeIIIâ€"TAML-catalyzed green oxidative degradation of the azodyeOrange II by H2O2and organic peroxides: products, toxicity, kinetics, and mechanisms. Green Chemistry, 2007, 9, 49-57.	4.6	158
94	Effects of S-nitrosation of nitric oxide synthase. Advances in Experimental Biology, 2007, 1, 151-456.	0.1	4
95	Design and Characterization of an Active Site Selective Caspase-3 Transnitrosating Agent. ACS Chemical Biology, 2006, 1, 659-665.	1.6	10
96	Subcellular Targeting and Differential S-Nitrosylation of Endothelial Nitric-oxide Synthase. Journal of Biological Chemistry, 2006, 281, 151-157.	1.6	103
97	Thioredoxin catalyzes the S-nitrosation of the caspase-3 active site cysteine. , 2005, 1, 154-158.		258
98	S-Nitrosation and Regulation of Inducible Nitric Oxide Synthaseâ€. Biochemistry, 2005, 44, 4636-4647.	1.2	69
99	Identification of a Potent and Selective Pharmacophore for Cdc25 Dual Specificity Phosphatase Inhibitors.. Molecular Pharmacology, 2002, 61, 720-728.	1.0	175