Jason Micklefield

List of Publications by Citations

119 papers	4,939 citations	35 h-index	67 g-index
133 ext. papers	5,720 ext. citations	10.2 avg, IF	5.7 L-index

#	Paper	IF	Citations
119	Minimum Information about a Biosynthetic Gene cluster. *Nature Chemical Biology*, **2015**, 11, 625-31	11.7	498
118	Selective covalent protein immobilization: strategies and applications. *Chemical Reviews*, **2009**, 109, 4025-53	58.3	388
117	S-adenosyl-methionine-dependent methyltransferases: highly versatile enzymes in biocatalysis, biosynthesis and other biotechnological applications. *ChemBioChem*, **2012**, 13, 2642-55	3.8	227
116	Structure, biosynthetic origin, and engineered biosynthesis of calcium-dependent antibiotics from Streptomyces coelicolor. *Chemistry and Biology*, **2002**, 9, 1175-87		225
115	Mining and engineering natural-product biosynthetic pathways. *Nature Chemical Biology*, **2007**, 3, 379-86	11.7	184
114	Development of Halogenase Enzymes for Use in Synthesis. *Chemical Reviews*, **2018**, 118, 232-269	68.1	160
113	Recent advances in engineering nonribosomal peptide assembly lines. *Natural Product Reports*, **2016**, 33, 317-47	15.1	157
112	Backbone modification of nucleic acids: synthesis, structure and therapeutic applications. *Current Medicinal Chemistry*, **2001**, 8, 1157-79	4.3	155
111	Reengineering orthogonally selective riboswitches. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 2830-5	11.5	130
110	Integrated catalysis opens new arylation pathways via regiodivergent enzymatic C-H activation. *Nature Communications*, **2016**, 7, 11873	17.4	102
109	An automated Design-Build-Test-Learn pipeline for enhanced microbial production of fine chemicals. *Communications Biology*, **2018**, 1, 66	6.7	97
108	Chemical modification of oligonucleotides for therapeutic, bioanalytical and other applications. *ChemBioChem*, **2009**, 10, 2691-703	3.8	96
107	Direct site-selective covalent protein immobilization catalyzed by a phosphopantetheinyl transferase. *Journal of the American Chemical Society*, **2008**, 130, 12456-64	16.4	85
106	NMR structure determination and calcium binding effects of lipopeptide antibiotic daptomycin. *Organic and Biomolecular Chemistry*, **2004**, 2, 1872-8	3.9	85
105	Introduction of a non-natural amino acid into a nonribosomal peptide antibiotic by modification of adenylation domain specificity. *Angewandte Chemie - International Edition*, **2012**, 51, 7181-4	16.4	81
104	Extending the biocatalytic scope of regiocomplementary flavin-dependent halogenase enzymes. *Chemical Science*, **2015**, 6, 3454-3460	9.4	73
103	Parallel scanning near-field photolithography: the snomipede. *Nano Letters*, **2010**, 10, 4375-80	11.5	71

102	Stereospecific enzymatic transformation of alpha-ketoglutarate to (2S,3R)-3-methyl glutamate during acidic lipopeptide biosynthesis. *Journal of the American Chemical Society*, **2007**, 129, 12011-8	16.4	68
101	Biosynthesis of the (2S,3R)-3-methyl glutamate residue of nonribosomal lipopeptides. *Journal of the American Chemical Society*, **2006**, 128, 11250-9	16.4	68
100	Modular riboswitch toolsets for synthetic genetic control in diverse bacterial species. *Journal of the American Chemical Society*, **2014**, 136, 10615-24	16.4	60
99	Recent advances in methyltransferase biocatalysis. *Current Opinion in Chemical Biology*, **2017**, 37, 97-106	9.7	58
98	Structure-guided directed evolution of alkenyl and arylmalonate decarboxylases. *Angewandte Chemie - International Edition*, **2009**, 48, 7691-4	16.4	56
97	A Structure-Guided Switch in the Regioselectivity of a Tryptophan Halogenase. *ChemBioChem*, **2016**, 17, 821-4	3.8	56
96	Active-site modifications of adenylation domains lead to hydrolysis of upstream nonribosomal peptidyl thioester intermediates. *Journal of the American Chemical Society*, **2004**, 126, 5032-3	16.4	55
95	Subsurface biomolecular imaging of Streptomyces coelicolor using secondary ion mass spectrometry. *Analytical Chemistry*, **2008**, 80, 1942-51	7.8	51
94	Cellular targets of natural products. *Natural Product Reports*, **2007**, 24, 1288-310	15.1	50
93	A dynamic combinatorial screen for novel imine reductase activity. *Tetrahedron*, **2004**, 60, 753-758	2.4	44
92	Effects of Active-Site Modification and Quaternary Structure on the Regioselectivity of Catechol-O-Methyltransferase. *Angewandte Chemie - International Edition*, **2016**, 55, 2683-7	16.4	44
91	Structure and biocatalytic scope of thermophilic flavin-dependent halogenase and flavin reductase enzymes. *Organic and Biomolecular Chemistry*, **2016**, 14, 9354-9361	3.9	43
90	Orthogonal riboswitches for tuneable coexpression in bacteria. *Angewandte Chemie - International Edition*, **2012**, 51, 3620-4	16.4	42
89	RadH: A Versatile Halogenase for Integration into Synthetic Pathways. *Angewandte Chemie - International Edition*, **2017**, 56, 11841-11845	16.4	41
88	Protein micro- and nanopatterning using aminosilanes with protein-resistant photolabile protecting groups. *Journal of the American Chemical Society*, **2011**, 133, 2749-59	16.4	38
87	An asparagine oxygenase (AsnO) and a 3-hydroxyasparaginyl phosphotransferase (HasP) are involved in the biosynthesis of calcium-dependent lipopeptide antibiotics. *Microbiology (United Kingdom)*, **2007**, 153, 768-776	2.9	38
86	Site-specific bioalkylation of rapamycin by the RapM 16--methyltransferase. *Chemical Science*, **2015**, 6, 2885-2892	9.4	37
85	Engineered biosynthesis of nonribosomal lipopeptides with modified fatty acid side chains. *Journal of the American Chemical Society*, **2007**, 129, 15182-91	16.4	37

84	An Enzyme Cascade for Selective Modification of Tyrosine Residues in Structurally Diverse Peptides and Proteins. *Journal of the American Chemical Society*, **2016**, 138, 3038-45	16.4	35
83	Structure and mechanism of an unusual malonate decarboxylase and related racemases. *Chemistry - A European Journal*, **2008**, 14, 6609-13	4.8	34
82	Biotransformations in low-boiling hydrofluorocarbon solvents. *Angewandte Chemie - International Edition*, **2004**, 43, 5519-23	16.4	34
81	Micrometer- and nanometer-scale photopatterning using 2-nitrophenylpropyloxycarbonyl-protected aminosiloxane monolayers. *Journal of the American Chemical Society*, **2009**, 131, 1513-22	16.4	31
80	Rational Re-engineering of a Transcriptional Silencing PreQ1 Riboswitch. *Journal of the American Chemical Society*, **2015**, 137, 9015-21	16.4	29
79	Dual transcriptional-translational cascade permits cellular level tuneable expression control. *Nucleic Acids Research*, **2016**, 44, e21	20.1	29
78	Metabolic flux analysis for calcium dependent antibiotic (CDA) production in Streptomyces coelicolor. *Metabolic Engineering*, **2004**, 6, 313-25	9.7	29
77	Thermal bifunctionality of bacterial phenylalanine aminomutase and ammonia lyase enzymes. *Angewandte Chemie - International Edition*, **2012**, 51, 4344-8	16.4	28
76	Daptomycin structure and mechanism of action revealed. *Chemistry and Biology*, **2004**, 11, 887-8		28
75	De novo Biosynthesis of "Non-Natural" Thaxtomin Phytotoxins. *Angewandte Chemie - International Edition*, **2018**, 57, 6830-6833	16.4	27
74	Precursor-directed biosynthesis of nonribosomal lipopeptides with modified glutamate residues. *Chemical Communications*, **2007**, 2683-5	5.8	27
73	Unusual RNA and DNA binding properties of a novel pyrrolidine□mide oligonucleotide mimic (POM). *Chemical Communications*, **2000**, 2251-2252	5.8	27
72	Bioengineering natural product biosynthetic pathways for therapeutic applications. *Current Opinion in Biotechnology*, **2012**, 23, 931-40	11.4	26
71	Auxotrophic-precursor directed biosynthesis of nonribosomal lipopeptides with modified tryptophan residues. *Organic and Biomolecular Chemistry*, **2008**, 6, 975-8	3.9	26
70	Rapid prototyping of microbial production strains for the biomanufacture of potential materials monomers. *Metabolic Engineering*, **2020**, 60, 168-182	9.7	25
69	Assembling a plug-and-play production line for combinatorial biosynthesis of aromatic polyketides in Escherichia coli. *PLoS Biology*, **2019**, 17, e3000347	9.7	25
68	Engineering enzymatic assembly lines to produce new antibiotics. *Current Opinion in Microbiology*, **2019**, 51, 88-96	7.9	24
67	Stereochemical course of tryptophan dehydrogenation during biosynthesis of the calcium-dependent lipopeptide antibiotics. *Organic Letters*, **2007**, 9, 1513-6	6.2	22

66	Structure and Biocatalytic Scope of Coclaurine N-Methyltransferase. *Angewandte Chemie - International Edition*, **2018**, 57, 10600-10604	16.4	22
65	An Engineered Tryptophan Synthase Opens New Enzymatic Pathways to β-Methyltryptophan and Derivatives. *ChemBioChem*, **2017**, 18, 382-386	3.8	21
64	Borrelidin modulates the alternative splicing of VEGF in favour of anti-angiogenic isoforms. *Chemical Science*, **2011**, 2011, 273-278	9.4	21
63	Reagents for Carbonyl Methylenation in Organic Synthesis. *Current Organic Synthesis*, **2005**, 2, 231-259	1.9	21
62	Engineering Orthogonal Methyltransferases to Create Alternative Bioalkylation Pathways. *Angewandte Chemie - International Edition*, **2020**, 59, 14950-14956	16.4	20
61	Effects of Active-Site Modification and Quaternary Structure on the Regioselectivity of Catechol-O-Methyltransferase. *Angewandte Chemie*, **2016**, 128, 2733-2737	3.6	20
60	Probing riboswitch-ligand interactions using thiamine pyrophosphate analogues. *Organic and Biomolecular Chemistry*, **2012**, 10, 5924-31	3.9	20
59	Structure-Guided Directed Evolution of Alkenyl and Arylmalonate Decarboxylases. *Angewandte Chemie*, **2009**, 121, 7827-7830	3.6	19
58	Synthesis and nucleic-acid-binding properties of sulfamide- and 3?-N-sulfamate-modified DNA. *Journal of the Chemical Society, Perkin Transactions 1*, **2002**, 485-495		19
57	The cycloaspeptides: uncovering a new model for methylated nonribosomal peptide biosynthesis. *Chemical Science*, **2018**, 9, 4109-4117	9.4	18
56	Introduction of a Non-Natural Amino Acid into a Nonribosomal Peptide Antibiotic by Modification of Adenylation Domain Specificity. *Angewandte Chemie*, **2012**, 124, 7293-7296	3.6	18
55	The optimisation of sorption sensor arrays for use in ambient conditions. *Sensors and Actuators B: Chemical*, **1998**, 50, 69-79	8.5	18
54	Harnessing and engineering amide bond forming ligases for the synthesis of amides. *Current Opinion in Chemical Biology*, **2020**, 55, 77-85	9.7	17
53	A Flavin-Dependent Decarboxylase-Dehydrogenase-Monooxygenase Assembles the Warhead of β-Epoxyketone Proteasome Inhibitors. *Journal of the American Chemical Society*, **2016**, 138, 4342-5	16.4	17
52	A high-throughput assay for arylamine halogenation based on a peroxidase-mediated quinone-amine coupling with applications in the screening of enzymatic halogenations. *Chemistry - A European Journal*, **2014**, 20, 16759-63	4.8	17
51	A methodology for preparing nanostructured biomolecular interfaces with high enzymatic activity. *Nanoscale*, **2012**, 4, 659-66	7.7	17
50	NMR confirmation that tryptophan dehydrogenation occurs with syn stereochemistry during the biosynthesis of CDA in Streptomyces coelicolor. *Journal of Organic Chemistry*, **2007**, 72, 8950-3	4.2	17
49	Design, synthesis, conformational analysis and nucleic acid hybridisation properties of thymidyl pyrrolidine-amide oligonucleotide mimics (POM). *Organic and Biomolecular Chemistry*, **2003**, 1, 3277-92	3.9	17

48	Engineering towards production of gatekeeper (2)-flavanones: naringenin, pinocembrin, eriodictyol and homoeriodictyol. *Synthetic Biology*, **2020**, 5, ysaa012	3.3	17
47	Site-selective immobilisation of functional enzymes on to polystyrene nanoparticles. *Organic and Biomolecular Chemistry*, **2010**, 8, 782-7	3.9	16
46	Mixed-sequence pyrrolidine-amide oligonucleotide mimics: Boc(Z) synthesis and DNA/RNA binding properties. *Organic and Biomolecular Chemistry*, **2007**, 5, 249-59	3.9	16
45	Engineering Orthogonal Methyltransferases to Create Alternative Bioalkylation Pathways. *Angewandte Chemie*, **2020**, 132, 15060-15066	3.6	15
44	Engineered biosynthesis of enduracidin lipoglycopeptide antibiotics using the ramoplanin mannosyltransferase Ram29. *Microbiology (United Kingdom)*, **2015**, 161, 1338-47	2.9	14
43	Chapter 14. Biosynthesis of nonribosomal peptide precursors. *Methods in Enzymology*, **2009**, 458, 353-78	1.7	14
42	Active site modification of the ketoacyl-ACP synthase FabF3 of Streptomyces coelicolor affects the fatty acid chain length of the CDA lipopeptides. *Chemical Communications*, **2011**, 47, 1860-2	5.8	13
41	Haem d1: stereoselective synthesis of the macrocycleto establish its absolute configuration as2R,7R1. *Journal of the Chemical Society Perkin Transactions 1*, **1997**, 2123-2138		12
40	Nucleic acid binding properties of thyminyl and adeninyl pyrrolidine-amide oligonucleotide mimics (POM). *Chemical Communications*, **2004**, 516-7	5.8	12
39	Nanoscale biomolecular structures on self-assembled monolayers generated from modular pegylated disulfides. *Chemistry - A European Journal*, **2010**, 16, 12234-43	4.8	11
38	A vitamin K-dependent carboxylase orthologue is involved in antibiotic biosynthesis. *Nature Catalysis*, **2018**, 1, 977-984	36.5	11
37	Enzymatic enantioselective decarboxylative protonation of heteroaryl malonates. *Chemistry - A European Journal*, **2015**, 21, 6557-63	4.8	10
36	Haem d1: development of a new coupling procedureleading to the synthesis of isobacteriochlorins1. *Journal of the Chemical Society Perkin Transactions 1*, **1997**, 2111-2122		10
35	RNA-selective cross-pairing of backbone-extended pyrrolidine-amide oligonucleotide mimics (bePOMs). *Organic and Biomolecular Chemistry*, **2008**, 6, 92-103	3.9	10
34	Homopolymeric pyrrolidine-amide oligonucleotide mimics: Fmoc-synthesis and DNA/RNA binding properties. *Organic and Biomolecular Chemistry*, **2007**, 5, 239-48	3.9	10
33	De novo Biosynthesis of Non-Natural Thaxtomin Phytotoxins. *Angewandte Chemie*, **2018**, 130, 6946-6949	3.6	9
32	A non-enzymatic, DNA template-directed morpholino primer extension approach. *Chemistry - A European Journal*, **2010**, 16, 2026-30	4.8	9
31	A novel stereoselective synthesis of the macrocycle of haem d1 that establishes its absolute configuration as 2R,7R. *Journal of the Chemical Society Chemical Communications*, **1993**, 275		9

30	Merging enzymes with chemocatalysis for amide bond synthesis.. *Nature Communications*, **2022**, 13, 380	17.4	9
29	Programmable late-stage C–H bond functionalization enabled by integration of enzymes with chemocatalysis. *Nature Catalysis*, **2021**, 4, 385-394	36.5	9
28	Discovery, characterization and engineering of ligases for amide synthesis. *Nature*, **2021**, 593, 391-398	50.4	9
27	New reaction pathways by integrating chemo- and biocatalysis. *Trends in Chemistry*, **2022**,	14.8	9
26	Real-Time Monitoring of Enzyme-Catalysed Reactions using Deep UV Resonance Raman Spectroscopy. *Chemistry - A European Journal*, **2017**, 23, 6983-6987	4.8	8
25	RadH: A Versatile Halogenase for Integration into Synthetic Pathways. *Angewandte Chemie*, **2017**, 129, 12003-12007	3.6	8
24	Sulfamide replacement of the phosphodiester linkage in dinucleotides: Synthesis and conformational analysis. *Tetrahedron*, **1998**, 54, 2129-2142	2.4	8
23	Stereochemical course of malonate decarboxylation in Malonomonas rubra. *Journal of the American Chemical Society*, **1995**, 117, 1153-1154	16.4	8
22	Orthogonal Riboswitches for Tuneable Coexpression in Bacteria. *Angewandte Chemie*, **2012**, 124, 3680-3684	3.8	6
21	Thermal Bifunctionality of Bacterial Phenylalanine Aminomutase and Ammonia Lyase Enzymes. *Angewandte Chemie*, **2012**, 124, 4420-4424	3.6	6
20	Biophysical and cellular-uptake properties of mixed-sequence pyrrolidine-amide oligonucleotide mimics. *Chemistry - A European Journal*, **2011**, 17, 14429-41	4.8	6
19	Biosynthesis and biosynthetic engineering of calcium-dependent lipopeptide antibiotics. *Pure and Applied Chemistry*, **2009**, 81, 1065-1074	2.1	6
18	Synthesis of sulfamide linked dinucleotide analogues. *Tetrahedron Letters*, **1997**, 38, 5387-5390	2	6
17	Replacement of the phosphodiester linkage in DNA with sulfamide and 3?-N-sulfamate groups. *Chemical Communications*, **2000**, 765-766	5.8	6
16	Functional Exchangeability of Oxidase and Dehydrogenase Reactions in the Biosynthesis of Hydroxyphenylglycine, a Nonribosomal Peptide Building Block. *ACS Synthetic Biology*, **2015**, 4, 796-807	5.7	5
15	Lipase-catalysed kinetic resolutions of secondary alcohols in pressurised liquid hydrofluorocarbons. *Tetrahedron Letters*, **2009**, 50, 3543-3546	2	5
14	The Snomipede: A parallel platform for scanning near-field photolithography. *Journal of Materials Research*, **2011**, 26, 2997-3008	2.5	5
13	Stereospecific backbone methylation of pyrrolidine-amide oligonucleotide mimics (POM). *Chemical Communications*, **2006**, 1436-8	5.8	5

12	Generation of orthogonally selective bacterial riboswitches by targeted mutagenesis and in vivo screening. *Methods in Molecular Biology*, **2014**, 1111, 107-29	1.4	5
11	SYNBIOCHEM-a SynBio foundry for the biosynthesis and sustainable production of fine and speciality chemicals. *Biochemical Society Transactions*, **2016**, 44, 675-7	5.1	5
10	Rewiring Riboswitches to Create New Genetic Circuits in Bacteria. *Methods in Enzymology*, **2016**, 575, 319-48	1.7	5
9	From Multistep Enzyme Monitoring to Whole-Cell Biotransformations: Development of Real-Time Ultraviolet Resonance Raman Spectroscopy. *Analytical Chemistry*, **2017**, 89, 12527-12532	7.8	4
8	Structure and Biocatalytic Scope of Coclaurine N-Methyltransferase. *Angewandte Chemie*, **2018**, 130, 10760-10764	3.6	4
7	Gene editing enables rapid engineering of complex antibiotic assembly lines. *Nature Communications*, **2021**, 12, 6872	17.4	4
6	Biotransformations in Low-Boiling Hydrofluorocarbon Solvents. *Angewandte Chemie*, **2004**, 116, 5635-5639	3.6	3
5	Kinetically selective binding of single stranded RNA over DNA by a pyrrolidine-amide oligonucleotide mimic (POM). *Nucleosides, Nucleotides and Nucleic Acids*, **2001**, 20, 1169-72	1.4	3
4	7.19 C□ Bond Formation: Enzymatic Enantioselective Decarboxylative Protonation and C□ Bond Formation **2012**, 402-429		2
3	Nature's protection racket. *Chemistry and Biology*, **2005**, 12, 611-3		2
2	Alkylation and acylation of 5-phenylsulphonyl- and 5-cyanobutyrolactones. *Tetrahedron*, **1992**, 48, 7519-7526	2.4	1
1	Genome editing reveals that pSCL4 is required for chromosome linearity in. *Microbial Genomics*, **2021**, 7,	4.4	1