Gideon James Grogan

List of Publications by Year
in descending order

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101 papers	4,283 citations	101543 36 h-index	118850 62 g-index
129 all docs	129 docs citations	129 times ranked	3102 citing authors

#	Article	IF	Citations
1	Engineering an Enantioselective Amine Oxidase for the Synthesis of Pharmaceutical Building Blocks and Alkaloid Natural Products. Journal of the American Chemical Society, 2013, 135, 10863-10869.	13.7	311
2	A reductive aminase from Aspergillus oryzae. Nature Chemistry, 2017, 9, 961-969.	13.6	290
3	Imine reductases (IREDs). Current Opinion in Chemical Biology, 2017, 37, 19-25.	6.1	202
4	Oxidoreductase-Catalyzed Synthesis of Chiral Amines. ACS Catalysis, 2018, 8, 10985-11015.	11.2	150
5	Identification of a New Class of Cytochrome P450 from a Rhodococcus sp. Journal of Bacteriology, 2002, 184, 3898-3908.	2.2	146
6	Recent Advances in Ï‰-Transaminase-Mediated Biocatalysis for the Enantioselective Synthesis of Chiral Amines. Catalysts, 2018, 8, 254.	3.5	139
7	An (<i>R</i>)â€Imine Reductase Biocatalyst for the Asymmetric Reduction of Cyclic Imines. ChemCatChem, 2015, 7, 579-583.	3.7	126
8	InspIRED by Nature: NADPHâ€Dependent Imine Reductases (IREDs) as Catalysts for the Preparation of Chiral Amines. Chemistry - A European Journal, 2016, 22, 1900-1907.	3.3	116
9	Synthesis of chiral amines using redox biocatalysis. Current Opinion in Chemical Biology, 2018, 43, 15-22.	6.1	115
10	Cytochromes P450: exploiting diversity and enabling application as biocatalysts. Current Opinion in Chemical Biology, 2011, 15, 241-248.	6.1	112
11	NAD(P)Hâ€Dependent Dehydrogenases for the Asymmetric Reductive Amination of Ketones: Structure, Mechanism, Evolution and Application. Advanced Synthesis and Catalysis, 2017, 359, 2011-2025.	4.3	103
12	Stereoselectivity and Structural Characterization of an Imine Reductase (IRED) from <i>Amycolatopsis orientalis</i>. ACS Catalysis, 2016, 6, 3880-3889.	11.2	96
13	Structure and Activity of NADPHâ€Dependent Reductase Q1EQE0 from <i>Streptomyces kanamyceticus</i>, which Catalyses the <i>R</i>â€Selective Reduction of an Imine Substrate. ChemBioChem, 2013, 14, 1372-1379.	2.6	90
14	A family of native amine dehydrogenases for the asymmetric reductive amination of ketones. Nature Catalysis, 2019, 2, 324-333.	34.4	87
15	A Mechanism for Reductive Amination Catalyzed by Fungal Reductive Aminases. ACS Catalysis, 2018, 8, 11534-11541.	11.2	78
16	Enzymeâ€Catalysed Synthesis of Secondary and Tertiary Amides. Advanced Synthesis and Catalysis, 2019, 361, 3895-3914.	4.3	76
17	Structural insights into substrate specificity and solvent tolerance in alcohol dehydrogenase ADH-â€˜Aâ€™ from Rhodococcus ruber DSM 44541. Chemical Communications, 2010, 46, 6314.	4.1	65
18	An Improved Racemase/Acylase Biotransformation for the Preparation of Enantiomerically Pure Amino Acids. Journal of the American Chemical Society, 2012, 134, 19310-19313.	13.7	64

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19	Biocatalytic Routes to Enantiomerically Enriched Dibenz[<i>c</i>,<i>e</i>]azepines. Angewandte Chemie - International Edition, 2017, 56, 15589-15593.	13.8	62
20	Emergent mechanistic diversity of enzyme-catalysed Î²-diketone cleavage. Biochemical Journal, 2005, 388, 721-730.	3.7	61
21	Insights into Sequenceâ€"Activity Relationships amongst Baeyerâ€"Villiger Monooxygenases as Revealed by the Intragenomic Complement of Enzymes from <i>Rhodococcus jostii</i> RHA1. ChemBioChem, 2009, 10, 1208-1217.	2.6	60
22	Engineering and improvement of the efficiency of a chimeric [P450cam-RhFRed reductase domain] enzyme. Chemical Communications, 2009, , 2478.	4.1	56
23	Structure, Activity and Stereoselectivity of NADPHâ€Dependent Oxidoreductases Catalysing the <i>S</i>â€Selective Reduction of the Imine Substrate 2â€Methylpyrroline. ChemBioChem, 2015, 16, 1052-1059.	2.6	56
24	The Right Light: De Novo Design of a Robust Modular Photochemical Reactor for Optimum Batch and Flow Chemistry. ChemPhotoChem, 2020, 4, 45-51.	3.0	56
25	LICRED: A Versatile Dropâ€In Vector for Rapid Generation of Redoxâ€Selfâ€Sufficient Cytochrome P450s. ChemBioChem, 2010, 11, 987-994.	2.6	53
26	Chromoselective Photocatalysis Enables Stereocomplementary Biocatalytic Pathways**. Angewandte Chemie - International Edition, 2021, 60, 6965-6969.	13.8	52
27	Asymmetric synthesis of primary amines catalyzed by thermotolerant fungal reductive aminases. Chemical Science, 2020, 11, 5052-5057.	7.4	49
28	Structures of Alcohol Dehydrogenases from Ralstonia and Sphingobium spp. Reveal the Molecular Basis for Their Recognition of â€˜Bulkyâ€"Bulkyâ€™ Ketones. Topics in Catalysis, 2014, 57, 356-365.	2.8	48
29	Multifunctional biocatalyst for conjugate reduction and reductive amination. Nature, 2022, 604, 86-91.	27.8	48
30	An Asymmetric Enzyme-Catalyzed Retro-Claisen Reaction for the Desymmetrization of CyclicÎ²-Diketones. Angewandte Chemie - International Edition, 2001, 40, 1111-1114.	13.8	47
31	The Broad Aryl Acid Specificity of the Amide Bond Synthetase McbA Suggests Potential for the Biocatalytic Synthesis of Amides. Angewandte Chemie - International Edition, 2018, 57, 11584-11588.	13.8	47
32	Hemoprotein Catalyzed Oxygenations: P450s, UPOs, and Progress toward Scalable Reactions. Jacs Au, 2021, 1, 1312-1329.	7.9	43
33	Biocatalytic Synthesis of Moclobemide Using the Amide Bond Synthetase McbA Coupled with an ATP Recycling System. ACS Catalysis, 2020, 10, 4659-4663.	11.2	41
34	A Geneâ€Fusion Approach to Enabling Plant Cytochromes P450 for Biocatalysis. ChemBioChem, 2012, 13, 2758-2763.	2.6	39
35	A Flavoprotein Monooxygenase that Catalyses a Baeyerâ€"Villiger Reaction and Thioether Oxidation Using NADH as the Nicotinamide Cofactor. ChemBioChem, 2012, 13, 872-878.	2.6	39
36	A Covalent Succinylcysteine-like Intermediate in the Enzyme-Catalyzed Transformation of Maleate to Fumarate by Maleate Isomerase. Journal of the American Chemical Society, 2010, 132, 11455-11457.	13.7	38

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37	NAD(P)Hâ€Dependent Enzymes for Reductive Amination: Active Site Description and Carbonylâ€Containing Compound Spectrum. Advanced Synthesis and Catalysis, 2021, 363, 328-351.	4.3	37
38	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched Î²â€Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. Angewandte Chemie - International Edition, 2016, 55, 3144-3147.	13.8	36
39	Asymmetric Synthesis of 3â€Substituted Cyclohexylamine Derivatives from Prochiral Diketones <i>via</i> Three Biocatalytic Steps. Advanced Synthesis and Catalysis, 2013, 355, 1703-1708.	4.3	35
40	New imine-reducing enzymes from<i>Î²</i>-hydroxyacid dehydrogenases by single amino acid substitutions. Protein Engineering, Design and Selection, 2018, 31, 109-120.	2.1	33
41	Inverted Binding of Non-natural Substrates in Strictosidine Synthase Leads to a Switch of Stereochemical Outcome in Enzyme-Catalyzed Pictetâ€“Spengler Reactions. Journal of the American Chemical Society, 2020, 142, 792-800.	13.7	33
42	Reductive aminations by imine reductases: from milligrams to tons. Chemical Science, 2022, 13, 4697-4713.	7.4	33
43	The 1.5-Ã… Structure of XplA-heme, an Unusual Cytochrome P450 Heme Domain That Catalyzes Reductive Biotransformation of Royal Demolition Explosive. Journal of Biological Chemistry, 2009, 284, 28467-28475.	3.4	32
44	Mutational analysis of phenolic acid decarboxylase from Bacillus subtilis (BsPAD), which converts bio-derived phenolic acids to styrene derivatives. Catalysis Science and Technology, 2012, 2, 1568.	4.1	32
45	Biocatalytic Conversion of Cyclic Ketones Bearing Î±â€Quaternary Stereocenters into Lactones in an Enantioselective Radical Approach to Mediumâ€Sized Carbocycles. Angewandte Chemie - International Edition, 2018, 57, 3692-3696.	13.8	32
46	Cloning, expression, purification, crystallization and preliminary X-ray diffraction analysis of variants of monoamine oxidase fromAspergillus niger. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 182-185.	0.7	31
47	Exploring the Substrate Specificity and Enantioselectivity of a Baeyerâ€“Villiger Monooxygenase from Dietzia sp. D5: Oxidation of Sulfides and Aldehydes. Topics in Catalysis, 2014, 57, 366-375.	2.8	30
48	Structural and functional insights into asymmetric enzymatic dehydration of alkenols. Nature Chemical Biology, 2017, 13, 275-281.	8.0	30
49	Biocatalyzed Câˆ’C Bond Formation for the Production of Alkaloids. ChemCatChem, 2018, 10, 4783-4804.	3.7	30
50	<i>S</i>â€Adenosyl Methionine Cofactor Modifications Enhance the Biocatalytic Repertoire of Small Molecule <i>C</i>â€Alkylation. Angewandte Chemie - International Edition, 2019, 58, 17583-17588.	13.8	30
51	Cï£¿C Hydrolases for Biocatalysis. Advanced Synthesis and Catalysis, 2013, 355, 1677-1691.	4.3	29
52	Structure of NADHâ€Dependent Carbonyl Reductase (CPCR2) from <i>Candida parapsilosis</i> Provides Insight into Mutations that Improve Catalytic Properties. ChemCatChem, 2014, 6, 1103-1111.	3.7	29
53	Asymmetric Synthesis of Primary and Secondary Î²â€Fluoroâ€arylamines using Reductive Aminases from Fungi. ChemCatChem, 2020, 12, 2421-2425.	3.7	27
54	Substrate Anchoring and Flexibility Reduction in CYP153A_{<i>M.aq</i>} Leads to Highly Improved Efficiency toward Octanoic Acid. ACS Catalysis, 2021, 11, 3182-3189.	11.2	27

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55	Structure of 6-Oxo Camphor Hydrolase H122A Mutant Bound to Its Natural Product, (2S,4S)-Î±-Campholinic Acid. Journal of Biological Chemistry, 2004, 279, 31312-31317.	3.4	26
56	Structural evidence for <i>Arabidopsis</i> glutathione transferase <i>At</i>GSTF2 functioning as a transporter of small organic ligands. FEBS Open Bio, 2017, 7, 122-132.	2.3	23
57	Two Enantiocomplementary Ephedrine Dehydrogenases from <i>Arthrobacter</i> sp. TS-15 with Broad Substrate Specificity. ACS Catalysis, 2019, 9, 6202-6211.	11.2	21
58	A P450 fusion library of heme domains from Rhodococcus jostii RHA1 and its evaluation for the biotransformation of drug molecules. Bioorganic and Medicinal Chemistry, 2015, 23, 5603-5609.	3.0	19
59	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched Î²â€Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. Angewandte Chemie, 2016, 128, 3196-3199.	2.0	19
60	Structureâ€Guided Redesign of CYP153A_{<i>M.aq</i>} for the Improved Terminal Hydroxylation of Fatty Acids. ChemCatChem, 2016, 8, 3234-3239.	3.7	18
61	The Broad Aryl Acid Specificity of the Amide Bond Synthetase McbA Suggests Potential for the Biocatalytic Synthesis of Amides. Angewandte Chemie, 2018, 130, 11758-11762.	2.0	16
62	Mutations of an NAD(P)Hâ€dependent flavoprotein monooxygenase that influence cofactor promiscuity and enantioselectivity. FEBS Open Bio, 2013, 3, 473-478.	2.3	15
63	Structures of a Î³-aminobutyrate (GABA) transaminase from the<i>s</i>-triazine-degrading organism<i>Arthrobacter aurescens</i>TC1 in complex with PLP and with its external aldimine PLPâ€“GABA adduct. Acta Crystallographica Section F: Structural Biology Communications, 2012, 68, 1175-1180.	0.7	14
64	Biocatalytic Aromaticity-Breaking Epoxidation of Naphthalene and Nucleophilic Ring-Opening Reactions. ACS Catalysis, 2021, 11, 2644-2649.	11.2	14
65	Exploring nicotinamide cofactor promiscuity in NAD(P)H-dependent flavin containing monooxygenases (FMOs) using natural variation within the phosphate binding loop. Structure and activity of FMOs from Cellvibrio sp. BR and Pseudomonas stutzeri NF13. Journal of Molecular Catalysis B: Enzymatic, 2014, 109, 191-198.	1.8	13
66	Biocatalytic Conversion of Cyclic Ketones Bearing Î±â€Quaternary Stereocenters into Lactones in an Enantioselective Radical Approach to Mediumâ€Sized Carbocycles. Angewandte Chemie, 2018, 130, 3754-3758.	2.0	13
67	Desymmetrisations of 1-Alkylbicyclo[3.3.0]octane-2,8-diones by Enzymatic Retro-Claisen Reaction Yield Optically Enriched 2,3-Substituted Cyclopentanones. Advanced Synthesis and Catalysis, 2007, 349, 916-924.	4.3	12
68	E. coli cells expressing the Baeyerâ€“Villiger monooxygenase â€˜MO14â€™ (ro03437) from Rhodococcus jostii RHA1 catalyse the gram-scale resolution of a bicyclic ketone in a fermentor. Organic and Biomolecular Chemistry, 2015, 13, 1897-1903.	2.8	12
69	Biocatalytic Routes to Enantiomerically Enriched Dibenz[<i>c</i>,<i>e</i>]azepines. Angewandte Chemie, 2017, 129, 15795-15799.	2.0	12
70	S â€Adenosyl Methionine Cofactor Modifications Enhance the Biocatalytic Repertoire of Small Molecule C â€Alkylation. Angewandte Chemie, 2019, 131, 17747-17752.	2.0	12
71	Chromoselective Photocatalysis Enables Stereocomplementary Biocatalytic Pathways**. Angewandte Chemie, 2021, 133, 7041-7045.	2.0	12
72	On the Resolution of Chiral Substrates by aretro-Claisenase Enzyme: Biotransformations of Heteroannular Bicyclic Î²-Diketones by 6-Oxocamphor Hydrolase. Advanced Synthesis and Catalysis, 2007, 349, 1353-1360.	4.3	11

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73	Structures of the Apo and FADâ€Bound Forms of 2â€Hydroxybiphenyl 3â€monooxygenase (HbpA) Locate Activity Hotspots Identified by Using Directed Evolution. ChemBioChem, 2015, 16, 968-976.	2.6	11
74	Characterization and structureâ€guided engineering of the novel versatile terpene monooxygenase <scp>CYP</scp>109Q5 from <i>Chondromyces apiculatus </i><scp>DSM</scp>436. Microbial Biotechnology, 2019, 12, 377-391.	4.2	11
75	Structure-Guided Mechanisms Behind the Metabolism of 2,4,6-Trinitrotoluene by Glutathione Transferases U25 and U24 That Lead to Alternate Product Distribution. Frontiers in Plant Science, 2018, 9, 1846.	3.6	10
76	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2013, 109, 15.	0.9	9
77	Identification and characterization of cytochrome P450 1232A24 and 1232F1 from Arthrobacter sp. and their role in the metabolic pathway of papaverine. Journal of Biochemistry, 2019, 166, 51-66.	1.7	9
78	Mutational Analysis of the Câ€“C Bond Cleaving Enzyme Phloretin Hydrolase from Eubacterium ramulus. Topics in Catalysis, 2014, 57, 376-384.	2.8	8
79	Biocatalysis for Organic Chemists: Hydroxylations. , 2016, , 213-241.		8
80	Inverting the Stereoselectivity of an NADHâ€Dependent Imineâ€Reductase Variant. ChemCatChem, 2021, 13, 5210-5215.	3.7	8
81	Tolerance of Î²â€diketone hydrolases as representatives of the crotonase superfamily towards organic solvents. Biotechnology and Bioengineering, 2011, 108, 2815-2822.	3.3	7
82	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2012, 108, 202.	0.9	7
83	Genome Sequence of Stenotrophomonas maltophilia PML168, Which Displays Baeyer-Villiger Monooxygenase Activity. Journal of Bacteriology, 2012, 194, 4753-4754.	2.2	6
84	Biocatalytic Reductive Amination by Native Amine Dehydrogenases to Access Short Chiral Alkyl Amines and Amino Alcohols. Frontiers in Catalysis, 2021, 1, .	3.9	6
85	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2009, 105, 206.	0.9	5
86	Snapshots of the Catalytic Cycle of the Industrial Enzyme Î±-Amino-Îµ-Caprolactam Racemase (ACLR) Observed Using X-ray Crystallography. ACS Catalysis, 2017, 7, 1045-1048.	11.2	5
87	Structure and Mutation of the Native Amine Dehydrogenase MATOUAmDH2. ChemBioChem, 2022, 23, .	2.6	5
88	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2008, 104, 211.	0.9	4
89	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2011, 107, 199.	0.9	4
90	Structural Basis for Phospholyase Activity of a Classâ€…III Transaminase Homologue. ChemBioChem, 2016, 17, 2308-2311.	2.6	4

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91	Structure-Guided Redesign of CYP153A M.aq for the Improved Terminal Hydroxylation of Fatty Acids. ChemCatChem, 2016, 8, 3178-3178.	3.7	4
92	Mutational Analysis of Linalool Dehydratase Isomerase Suggests That Alcohol and Alkene Transformations Are Catalyzed Using Noncovalent Mechanisms. ACS Catalysis, 2020, 10, 11136-11146.	11.2	4
93	An Aminocaprolactam Racemase from <i>Ochrobactrum anthropi</i> with Promiscuous Amino Acid Ester Racemase Activity. ChemBioChem, 2018, 19, 1711-1715.	2.6	3
94	Artificial imine reductases: developments and future directions. RSC Chemical Biology, 2020, 1, 369-378.	4.1	3
95	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2007, 103, 223.	0.9	2
96	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2010, 106, 216.	0.9	2
97	Advanced Insights into Catalytic and Structural Features of the Zincâ€Dependent Alcohol Dehydrogenase from <i>Thauera aromatica</i>. ChemBioChem, 2022, 23, .	2.6	2
98	9ÂÂBiotransformations. Annual Reports on the Progress of Chemistry Section B, 2005, 101, 192.	0.9	1
99	The Reactivity of Î±â€Fluoroketones with PLP Dependent Enzymes: Transaminases as Hydrodefluorinases. ChemCatChem, 2021, 13, 3967-3972.	3.7	1
100	Biotransformations. Annual Reports on the Progress of Chemistry Section B, 2006, 102, 197.	0.9	0
101	Front Cover Picture: NAD(P)Hâ€Dependent Dehydrogenases for the Asymmetric Reductive Amination of Ketones: Structure, Mechanism, Evolution and Application (Adv. Synth. Catal. 12/2017). Advanced Synthesis and Catalysis, 2017, 359, 2009-2009.	4.3	0