Stephen G Bell

List of Publications by Year
in descending order

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108 papers	6,241 citations	94433 37 h-index	71685 76 g-index
116 all docs	116 docs citations	116 times ranked	5354 citing authors

#	Article	IF	Citations
1	Different Geometric Requirements for Cytochrome P450-Catalyzed Aliphatic Versus Aromatic Hydroxylation Results in Chemoselective Oxidation. ACS Catalysis, 2022, 12, 1258-1267.	11.2	14
2	An Altered Heme Environment in an Engineered Cytochrome P450 Enzyme Enables the Switch from Monooxygenase to Peroxygenase Activity. ACS Catalysis, 2022, 12, 1614-1625.	11.2	29
3	A comparison of the bacterial CYP51 cytochrome P450 enzymes from Mycobacterium marinum and Mycobacterium tuberculosis. Journal of Steroid Biochemistry and Molecular Biology, 2022, 221, 106097.	2.5	5
4	To Be, or Not to Be, an Inhibitor: A Comparison of Azole Interactions with and Oxidation by a Cytochrome P450 Enzyme. Inorganic Chemistry, 2022, 61, 236-245.	4.0	6
5	Understanding the Mechanistic Requirements for Efficient and Stereoselective Alkene Epoxidation by a Cytochrome P450 Enzyme. ACS Catalysis, 2021, 11, 1995-2010.	11.2	30
6	Influence of the Synthesis and Storage Conditions on the Activity of Candida antarctica Lipase B ZIF-8 Biocomposites. ACS Applied Materials & Interfaces, 2021, 13, 51867-51875.	8.0	28
7	The Stereoselective Oxidation of para â€Substituted Benzenes by a Cytochrome P450 Biocatalyst. Chemistry - A European Journal, 2021, 27, 14765-14777.	3.3	6
8	Investigation of the requirements for efficient and selective cytochrome P450 monooxygenase catalysis across different reactions. Journal of Inorganic Biochemistry, 2020, 203, 110913.	3.5	22
9	Complementary and selective oxidation of hydrocarbon derivatives by two cytochrome P450 enzymes of the same family. Catalysis Science and Technology, 2020, 10, 5983-5995.	4.1	5
10	Biophysical Techniques for Distinguishing Ligand Binding Modes in Cytochrome P450 Monooxygenases. Biochemistry, 2020, 59, 1038-1050.	2.5	20
11	Structural insights into the role of the acid-alcohol pair of residues required for dioxygen activation in cytochrome P450 enzymes. Journal of Biological Inorganic Chemistry, 2020, 25, 583-596.	2.6	26
12	d-Alanineâ€“d-alanine ligase as a model for the activation of ATP-grasp enzymes by monovalent cations. Journal of Biological Chemistry, 2020, 295, 7894-7904.	3.4	21
13	A comparison of steroid and lipid binding cytochrome P450s from Mycobacterium marinum and Mycobacterium tuberculosis. Journal of Inorganic Biochemistry, 2020, 209, 111116.	3.5	12
14	Enzyme Encapsulation in a Porous Hydrogen-Bonded Organic Framework. Journal of the American Chemical Society, 2019, 141, 14298-14305.	13.7	210
15	Analysis and preliminary characterisation of the cytochrome P450 monooxygenases from Frankia sp. EuI1c (Frankia inefficax sp.). Archives of Biochemistry and Biophysics, 2019, 669, 11-21.	3.0	6
16	The effect of decoy molecules on the activity of the P450Bm3 holoenzyme and a heme domain peroxygenase variant. Catalysis Communications, 2019, 124, 97-102.	3.3	4
17	The characterisation of two members of the cytochrome P450 CYP150 family: CYP150A5 and CYP150A6 from Mycobacterium marinum. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 925-934.	2.4	4
18	Selective biocatalytic hydroxylation of unactivated methylene Câ€“H bonds in cyclic alkyl substrates. Chemical Communications, 2019, 55, 5029-5032.	4.1	13

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19	Rearrangement-Free Hydroxylation of Methylcubanes by a Cytochrome P450: The Case for Dynamical Coupling of Câ€“H Abstraction and Rebound. Journal of the American Chemical Society, 2019, 141, 19688-19699.	13.7	26
20	Selective hydroxylation of 1,8- and 1,4-cineole using bacterial P450 variants. Archives of Biochemistry and Biophysics, 2019, 663, 54-63.	3.0	10
21	Selective Ï—1 oxidation of fatty acids by CYP147G1 from Mycobacterium marinum. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 408-417.	2.4	8
22	Nanoscale Ion Emitters in Native Mass Spectrometry for Measuring Ligandâ€“Protein Binding Affinities. ACS Central Science, 2019, 5, 308-318.	11.3	84
23	Enhanced Activity of Enzymes Encapsulated in Hydrophilic Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 2019, 141, 2348-2355.	13.7	351
24	Biomimetic and Biocatalytic Synthesis of Bruceol. Angewandte Chemie, 2019, 131, 1441-1445.	2.0	2
25	Biomimetic and Biocatalytic Synthesis of Bruceol. Angewandte Chemie - International Edition, 2019, 58, 1427-1431.	13.8	15
26	Protein surface functionalisation as a general strategy for facilitating biomimetic mineralisation of ZIF-8. Chemical Science, 2018, 9, 4217-4223.	7.4	131
27	Control of Structure Topology and Spatial Distribution of Biomacromolecules in Protein@ZIF-8 Biocomposites. Chemistry of Materials, 2018, 30, 1069-1077.	6.7	146
28	Structural and functional characterisation of the cytochrome P450 enzyme CYP268A2 fromMycobacterium marinum. Biochemical Journal, 2018, 475, 705-722.	3.7	13
29	A Structural Model of a P450-Ferredoxin Complex from Orientation-Selective Double Electronâ€“Electron Resonance Spectroscopy. Journal of the American Chemical Society, 2018, 140, 2514-2527.	13.7	22
30	Stereoselective hydroxylation of isophorone by variants of the cytochromes P450 CYP102A1 and CYP101A1. Enzyme and Microbial Technology, 2018, 111, 29-37.	3.2	14
31	Efficient hydroxylation of cycloalkanes by co-addition of decoy molecules to variants of the cytochrome P450 CYP102A1. Journal of Inorganic Biochemistry, 2018, 183, 137-145.	3.5	12
32	Cytochrome P450 CYP199A4 from Rhodopseudomonas palustris Catalyzes Heteroatom Dealkylations, Sulfoxidation, and Amide and Cyclic Hemiacetal Formation. ACS Catalysis, 2018, 8, 5915-5927.	11.2	27
33	Influence of nanoscale structuralisation on the catalytic performance of ZIF-8: a cautionary surface catalysis study. CrystEngComm, 2018, 20, 4926-4934.	2.6	38
34	Electron transfer ferredoxins with unusual cluster binding motifs support secondary metabolism in many bacteria. Chemical Science, 2018, 9, 7948-7957.	7.4	29
35	The self-sufficient CYP102 family enzyme, Krac9955, from Ktedonobacter racemifer DSM44963 acts as an alkyl- and alkyloxy-benzoic acid hydroxylase. Archives of Biochemistry and Biophysics, 2017, 615, 15-21.	3.0	14
36	Examination of Selectivity in the Oxidation of ortho â€•and meta â€Disubstituted Benzenes by CYP102A1 (P450â€‰Bm3) Variants. ChemCatChem, 2017, 9, 2512-2522.	3.7	14

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37	P450 catalysed dehydrogenation. Pure and Applied Chemistry, 2017, 89, 841-852.	1.9	16
38	The selective oxidation of substituted aromatic hydrocarbons and the observation of uncoupling via redox cycling during naphthalene oxidation by the CYP101B1 system. Catalysis Science and Technology, 2017, 7, 1537-1548.	4.1	13
39	CW and Pulse EPR of Cytochrome P450 to Determine Structure and Function. Biological Magnetic Resonance, 2017, , 103-142.	0.4	5
40	The Oxidation of Hydrophobic Aromatic Substrates by Using a Variant of the P450 Monooxygenase CYP101B1. ChemBioChem, 2017, 18, 2119-2128.	2.6	14
41	The Use of Directing Groups Enables the Selective and Efficient Biocatalytic Oxidation of Unactivated Adamantyl Câ€H Bonds. ChemistrySelect, 2016, 1, 6700-6707.	1.5	10
42	The importance of the benzoic acid carboxylate moiety for substrate recognition by CYP199A4 from Rhodopseudomonas palustris HaA2. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 667-675.	2.3	20
43	Increasing the Activity and Efficiency of Stereoselective Oxidations by using Decoy Molecules in Combination with Rateâ€Enhancing Variants of P450Bm3. ChemCatChem, 2016, 8, 2789-2796.	3.7	22
44	Improving the Monooxygenase Activity and the Regio- and Stereoselectivity of Terpenoid Hydroxylation Using Ester Directing Groups. ACS Catalysis, 2016, 6, 6306-6317.	11.2	36
45	Modification of an Enzyme Biocatalyst for the Efficient and Selective Oxidative Demethylation of paraâ€Substituted Benzene Derivatives. ChemCatChem, 2016, 8, 3626-3635.	3.7	6
46	The efficient and selective catalytic oxidation of para-substituted cinnamic acid derivatives by the cytochrome P450 monooxygenase, CYP199A4. RSC Advances, 2016, 6, 55286-55297.	3.6	21
47	In vivo and in vitro hydroxylation of cineole and camphor by cytochromes P450CYP101A1, CYP101B1 and N242A CYP176A1. Journal of Molecular Catalysis B: Enzymatic, 2016, 128, 52-64.	1.8	10
48	Characterisation of two self-sufficient CYP102 family monooxygenases from Ktedonobacter racemifer DSM44963 which have new fatty acid alcohol product profiles. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 1149-1162.	2.4	23
49	Improved oxidation of aromatic and aliphatic hydrocarbons using rate enhancing variants of P450Bm3 in combination with decoy molecules. Chemical Communications, 2016, 52, 1036-1039.	4.1	33
50	Enzyme encapsulation in zeolitic imidazolate frameworks: a comparison between controlled co-precipitation and biomimetic mineralisation. Chemical Communications, 2016, 52, 473-476.	4.1	230
51	Biomimetic mineralization of metal-organic frameworks as protective coatings for biomacromolecules. Nature Communications, 2015, 6, 7240.	12.8	1,077
52	CYP199A4 catalyses the efficient demethylation and demethenylation of para-substituted benzoic acid derivatives. RSC Advances, 2015, 5, 52007-52018.	3.6	28
53	The crystal structure of the versatile cytochrome P450 enzyme CYP109B1 from Bacillus subtilis. Molecular BioSystems, 2015, 11, 869-881.	2.9	21
54	The efficient and selective biocatalytic oxidation of norisoprenoid and aromatic substrates by CYP101B1 from Novosphingobium aromaticivorans DSM12444. RSC Advances, 2015, 5, 5762-5773.	3.6	22

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55	Selective aliphatic carbonâ€“hydrogen bond activation of protected alcohol substrates by cytochrome P450 enzymes. Organic and Biomolecular Chemistry, 2014, 12, 2479-2488.	2.8	15
56	The structure of a novel electron-transfer ferredoxin fromRhodopseudomonas palustrisHaA2 which contains a histidine residue in its ironâ€“sulfur cluster-binding motif. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 1453-1464.	2.5	8
57	Improving the affinity and activity of CYP101D2 for hydrophobic substrates. Applied Microbiology and Biotechnology, 2013, 97, 3979-3990.	3.6	17
58	The dynamics of camphor in the cytochrome P450 CYP101D2. Protein Science, 2013, 22, 1218-1229.	7.6	13
59	A phthalate family oxygenase reductase supports terpene alcohol oxidation by <scp>CYP</scp>238<scp>A</scp>1 from Pseudomonas putida KT2440. Biotechnology and Applied Biochemistry, 2013, 60, 9-17.	3.1	10
60	P450_{BM3}(CYP102A1): connecting the dots. Chemical Society Reviews, 2012, 41, 1218-1260.	38.1	576
61	Investigation of the Substrate Range of CYP199A4: Modification of the Partition between Hydroxylation and Desaturation Activities by Substrate and Protein Engineering. Chemistry - A European Journal, 2012, 18, 16677-16688.	3.3	53
62	Tailoring an alien ferredoxin to support native-like P450 monooxygenase activity. Chemical Communications, 2012, 48, 11692.	4.1	30
63	Characterisation of the paramagnetic [2Feâ€“2S]+ centre in palustrisredoxin-B (PuxB) from Rhodopseudomonas palustris CGA009: g-matrix determination and spin coupling analysis. Physical Chemistry Chemical Physics, 2012, 14, 6526.	2.8	15
64	Structure and function of CYP108D1 fromNovosphingobium aromaticivoransDSM12444: an aromatic hydrocarbon-binding P450 enzyme. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 277-291.	2.5	25
65	The crystal structures of 4-methoxybenzoate bound CYP199A2 and CYP199A4: structural changes on substrate binding and the identification of an anion binding site. Dalton Transactions, 2012, 41, 8703.	3.3	48
66	Structure, electronic properties and catalytic behaviour of an activity-enhancing CYP102A1 (P450BM3) variant. Dalton Transactions, 2011, 40, 10383.	3.3	40
67	The structure of CYP101D2 unveils a potential path for substrate entry into the active site. Biochemical Journal, 2011, 433, 85-93.	3.7	36
68	Chain length-dependent cooperativity in fatty acid binding and oxidation by cytochrome P450BM3 (CYP102A1). Protein and Cell, 2011, 2, 656-671.	11.0	16
69	Crystallization and preliminary X-ray analysis of CYP153C1 fromNovosphingobium aromaticivoransDSM12444. Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 964-967.	0.7	9
70	Dearomatisation of oâ€Xylene by P450_{<scp>BM</scp>3} (CYP102A1). Chemistry - A European Journal, 2011, 17, 6862-6868.	3.3	31
71	Structural Analysis of CYP101C1 from Novosphingobium aromaticivorans DSM12444. ChemBioChem, 2011, 12, 88-99.	2.6	31
72	A cytochrome P450 class I electron transfer system from Novosphingobium aromaticivorans. Applied Microbiology and Biotechnology, 2010, 86, 163-175.	3.6	72

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73	Protein recognition in ferredoxinâ€“P450 electron transfer in the class I CYP199A2 system from Rhodopseudomonas palustris. Journal of Biological Inorganic Chemistry, 2010, 15, 315-328.	2.6	56
74	Structural Basis for the Properties of Two Singleâ€Site Proline Mutants of CYP102A1 (P450_{BM3}). ChemBioChem, 2010, 11, 2549-2556.	2.6	63
75	Molecular Characterization of a Class I P450 Electron Transfer System from Novosphingobium aromaticivorans DSM12444. Journal of Biological Chemistry, 2010, 285, 27372-27384.	3.4	74
76	Structural and Biochemical Characterization of the Cytochrome P450 CypX (CYP134A1) from Bacillus subtilis: A Cyclo-<scp>l</scp>-leucyl-<scp>l</scp>-leucyl Dipeptide Oxidase. Biochemistry, 2010, 49, 7282-7296.	2.5	93
77	In vitrokinetic studies on the mechanism of oxygen-dependent cellular uptake of copper radiopharmaceuticals. Physics in Medicine and Biology, 2009, 54, 2103-2119.	3.0	38
78	The Metallothionein/Thionein System: An Oxidoreductive Metabolic Zinc Link. ChemBioChem, 2009, 10, 55-62.	2.6	195
79	A Highly Active Singleâ€Mutation Variant of P450_{BM3} (CYP102A1). ChemBioChem, 2009, 10, 1654-1656.	2.6	72
80	Crystal structure of a ferredoxin reductase for the CYP199A2 system from Rhodopseudomonas palustris. Proteins: Structure, Function and Bioinformatics, 2009, 77, 867-880.	2.6	40
81	Purification, crystallization and preliminary X-ray analysis of cytochrome P450 219A1 fromNovosphingobium aromaticivoransDSM 12444. Acta Crystallographica Section F: Structural Biology Communications, 2009, 65, 364-367.	0.7	2
82	Structural information from orientationally selective DEER spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 6840.	2.8	109
83	Selective oxidative demethylation of veratric acid to vanillic acid by CYP199A4 from Rhodopseudomonas palustris HaA2. Molecular BioSystems, 2009, 6, 206-214.	2.9	63
84	Desaturation of Alkylbenzenes by Cytochrome P450_{BM3} (CYP102A1). Chemistry - A European Journal, 2008, 14, 10905-10908.	3.3	45
85	Crystal Structure of CYP199A2, a Para-Substituted Benzoic Acid Oxidizing Cytochrome P450 from Rhodopseudomonas palustris. Journal of Molecular Biology, 2008, 383, 561-574.	4.2	55
86	Evolved CYP102A1 (P450BM3) variants oxidise a range of non-natural substrates and offer new selectivity options. Chemical Communications, 2008, , 966.	4.1	98
87	Purification, Crystallization and Preliminary Crystallographic Analysis of CYP 195A2, a P450 Enzyme from Rhodopseudomonas palustris. Protein and Peptide Letters, 2008, 15, 423-426.	0.9	1
88	Structure-activity correlations in pentachlorobenzene oxidation by engineered cytochrome P450cam. Protein Engineering, Design and Selection, 2007, 20, 473-480.	2.1	31
89	Design and Engineering of Cytochrome P450 Systems. , 2007, , 437-476.		3
90	P450 enzymes from the bacterium Novosphingobium aromaticivorans. Biochemical and Biophysical Research Communications, 2007, 360, 666-672.	2.1	63

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91	The electrochemistry of a heme-containing enzyme, CYP199A2, adsorbed directly onto a pyrolytic graphite electrode. Journal of Electroanalytical Chemistry, 2007, 611, 149-154.	3.8	13
92	Purification, crystallization and preliminary crystallographic analysis of cytochrome P450 203A1 fromRhodopseudomonas palustris. Acta Crystallographica Section F: Structural Biology Communications, 2007, 63, 342-345.	0.7	1
93	Crystallization and preliminary X-ray diffraction studies of a ferredoxin reductase fromRhodopseudomonas palustrisCGA009. Acta Crystallographica Section F: Structural Biology Communications, 2007, 63, 422-425.	0.7	9
94	Cytochrome P450 enzymes from the metabolically diverse bacterium Rhodopseudomonas palustris. Biochemical and Biophysical Research Communications, 2006, 342, 191-196.	2.1	73
95	The Heme Monooxygenase Cytochrome P450cam Can Be Engineered to Oxidize Ethane to Ethanol. Angewandte Chemie - International Edition, 2005, 44, 4029-4032.	13.8	127
96	Biotransformation of the sesquiterpene (+)-valencene by cytochrome P450cam and P450BM-3. Organic and Biomolecular Chemistry, 2005, 3, 57.	2.8	158
97	Separation of Electron-Transfer and Coupled Chemical Reaction Components of Biocatalytic Processes Using Fourier Transform ac Voltammetry. Analytical Chemistry, 2005, 77, 3502-3510.	6.5	48
98	The electrochemistry and scanning tunnelling microscopy of the flavoprotein putidaredoxin reductase on alkanethiol-modified gold. Inorganica Chimica Acta, 2003, 356, 343-348.	2.4	1
99	Redox properties of cytochromeâ€ƒP450BM3measured by direct methods. FEBS Journal, 2003, 270, 4082-4088.	0.2	113
100	Molecular Recognition in (+)-Î±-Pinene Oxidation by Cytochrome P450cam. Journal of the American Chemical Society, 2003, 125, 705-714.	13.7	114
101	Engineering cytochrome P450cam into an alkane hydroxylase. Dalton Transactions, 2003, , 2133.	3.3	48
102	Engineering substrate recognition in catalysis by cytochrome P450cam. Biochemical Society Transactions, 2003, 31, 558-562.	3.4	34
103	Crystal Structure of the F87W/Y96F/V247L Mutant of Cytochrome P-450cam with 1,3,5-Trichlorobenzene Bound and Further Protein Engineering for the Oxidation of Pentachlorobenzene and Hexachlorobenzene. Journal of Biological Chemistry, 2002, 277, 37519-37526.	3.4	67
104	Butane and propane oxidation by engineered cytochrome P450cam. Chemical Communications, 2002, , 490-491.	4.1	68
105	Engineering the haem monooxygenase cytochrome P450cam for monoterpene oxidation. Chemical Communications, 2001, , 635-636.	4.1	52
106	Engineering the CYP101 system for in vivo oxidation of unnatural substrates. Protein Engineering, Design and Selection, 2001, 14, 797-802.	2.1	69
107	Selective aliphatic and aromatic carbon-hydrogen bond activation catalysed by mutants of cytochrome p450cam. Journal of Molecular Catalysis B: Enzymatic, 1997, 3, 293-302.	1.8	20
108	Aliphatic vs. aromatric Câ€“H bond activation of phenylcyclohexane catalysed by cytochrome P450cam. Chemical Communications, 1996, , 357-358.	4.1	23