

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	Biomimetic mineralization of metal-organic frameworks as protective coatings for biomacromolecules. <i>Nature Communications</i> , 2015, 6, 7240.	12.8	1,077
2	P450 _{BM3} (CYP102A1): connecting the dots. <i>Chemical Society Reviews</i> , 2012, 41, 1218-1260.	38.1	576
3	Enhanced Activity of Enzymes Encapsulated in Hydrophilic Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2019, 141, 2348-2355.	13.7	351
4	Enzyme encapsulation in zeolitic imidazolate frameworks: a comparison between controlled co-precipitation and biomimetic mineralisation. <i>Chemical Communications</i> , 2016, 52, 473-476.	4.1	230
5	Enzyme Encapsulation in a Porous Hydrogen-Bonded Organic Framework. <i>Journal of the American Chemical Society</i> , 2019, 141, 14298-14305.	13.7	210
6	The Metallothionein/Thionein System: An Oxidoreductive Metabolic Zinc Link. <i>ChemBioChem</i> , 2009, 10, 55-62.	2.6	195
7	Biotransformation of the sesquiterpene (+)-valencene by cytochrome P450cam and P450BM-3. <i>Organic and Biomolecular Chemistry</i> , 2005, 3, 57.	2.8	158
8	Control of Structure Topology and Spatial Distribution of Biomacromolecules in Protein@ZIF-8 Biocomposites. <i>Chemistry of Materials</i> , 2018, 30, 1069-1077.	6.7	146
9	Protein surface functionalisation as a general strategy for facilitating biomimetic mineralisation of ZIF-8. <i>Chemical Science</i> , 2018, 9, 4217-4223.	7.4	131
10	The Heme Monooxygenase Cytochrome P450cam Can Be Engineered to Oxidize Ethane to Ethanol. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 4029-4032.	13.8	127
11	Molecular Recognition in (+)- α -Pinene Oxidation by Cytochrome P450cam. <i>Journal of the American Chemical Society</i> , 2003, 125, 705-714.	13.7	114
12	Redox properties of cytochrome P450BM3 measured by direct methods. <i>FEBS Journal</i> , 2003, 270, 4082-4088.	0.2	113
13	Structural information from orientationally selective DEER spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 6840.	2.8	109
14	Evolved CYP102A1 (P450BM3) variants oxidise a range of non-natural substrates and offer new selectivity options. <i>Chemical Communications</i> , 2008, , 966.	4.1	98
15	Structural and Biochemical Characterization of the Cytochrome P450 CypX (CYP134A1) from <i>Bacillus subtilis</i> : A Cyclo-leucyl-leucyl Dipeptide Oxidase. <i>Biochemistry</i> , 2010, 49, 7282-7296.	2.5	93
16	Nanoscale Ion Emitters in Native Mass Spectrometry for Measuring Ligand-Protein Binding Affinities. <i>ACS Central Science</i> , 2019, 5, 308-318.	11.3	84
17	Molecular Characterization of a Class I P450 Electron Transfer System from <i>Novosphingobium aromaticivorans</i> DSM12444. <i>Journal of Biological Chemistry</i> , 2010, 285, 27372-27384.	3.4	74
18	Cytochrome P450 enzymes from the metabolically diverse bacterium <i>Rhodospseudomonas palustris</i> . <i>Biochemical and Biophysical Research Communications</i> , 2006, 342, 191-196.	2.1	73

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19	A Highly Active Singleâ€Mutation Variant of P450_{BM3} (CYP102A1). ChemBioChem, 2009, 10, 1654-1656.	2.6	72
20	A cytochrome P450 class I electron transfer system from Novosphingobium aromaticivorans. Applied Microbiology and Biotechnology, 2010, 86, 163-175.	3.6	72
21	Engineering the CYP101 system for in vivo oxidation of unnatural substrates. Protein Engineering, Design and Selection, 2001, 14, 797-802.	2.1	69
22	Butane and propane oxidation by engineered cytochrome P450cam. Chemical Communications, 2002, , 490-491.	4.1	68
23	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
24	P450 enzymes from the bacterium Novosphingobium aromaticivorans. Biochemical and Biophysical Research Communications, 2007, 360, 666-672.	2.1	63
25	Selective oxidative demethylation of veratric acid to vanillic acid by CYP199A4 from Rhodopseudomonas palustris HaA2. Molecular BioSystems, 2009, 6, 206-214.	2.9	63
26	Structural Basis for the Properties of Two Singleâ€Site Proline Mutants of CYP102A1 (P450_{BM3}). ChemBioChem, 2010, 11, 2549-2556.	2.6	63
27	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
28	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
29	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
30	Engineering the haem monooxygenase cytochrome P450cam for monoterpene oxidation. Chemical Communications, 2001, , 635-636.	4.1	52
31	Engineering cytochrome P450cam into an alkane hydroxylase. Dalton Transactions, 2003, , 2133.	3.3	48
32	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
33	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
34	Desaturation of Alkylbenzenes by Cytochrome P450_{BM3} (CYP102A1). Chemistry - A European Journal, 2008, 14, 10905-10908.	3.3	45
35	Crystal structure of a ferredoxin reductase for the CYP199A2 system from <i>Rhodopseudomonas palustris</i> . Proteins: Structure, Function and Bioinformatics, 2009, 77, 867-880.	2.6	40
36	Structure, electronic properties and catalytic behaviour of an activity-enhancing CYP102A1 (P450BM3) variant. Dalton Transactions, 2011, 40, 10383.	3.3	40

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37	In vitro kinetic studies on the mechanism of oxygen-dependent cellular uptake of copper radiopharmaceuticals. <i>Physics in Medicine and Biology</i> , 2009, 54, 2103-2119.	3.0	38
38	Influence of nanoscale structuralisation on the catalytic performance of ZIF-8: a cautionary surface catalysis study. <i>CrystEngComm</i> , 2018, 20, 4926-4934.	2.6	38
39	The structure of CYP101D2 unveils a potential path for substrate entry into the active site. <i>Biochemical Journal</i> , 2011, 433, 85-93.	3.7	36
40	Improving the Monooxygenase Activity and the Regio- and Stereoselectivity of Terpenoid Hydroxylation Using Ester Directing Groups. <i>ACS Catalysis</i> , 2016, 6, 6306-6317.	11.2	36
41	Engineering substrate recognition in catalysis by cytochrome P450cam. <i>Biochemical Society Transactions</i> , 2003, 31, 558-562.	3.4	34
42	Improved oxidation of aromatic and aliphatic hydrocarbons using rate enhancing variants of P450Bm3 in combination with decoy molecules. <i>Chemical Communications</i> , 2016, 52, 1036-1039.	4.1	33
43	Structure-activity correlations in pentachlorobenzene oxidation by engineered cytochrome P450cam. <i>Protein Engineering, Design and Selection</i> , 2007, 20, 473-480.	2.1	31
44	Dearomatisation of <i>p</i> -Xylene by P450 _{BM3} (CYP102A1). <i>Chemistry - A European Journal</i> , 2011, 17, 6862-6868.	3.3	31
45	Structural Analysis of CYP101C1 from <i>Novosphingobium aromaticivorans</i> DSM12444. <i>ChemBioChem</i> , 2011, 12, 88-99.	2.6	31
46	Tailoring an alien ferredoxin to support native-like P450 monooxygenase activity. <i>Chemical Communications</i> , 2012, 48, 11692.	4.1	30
47	Understanding the Mechanistic Requirements for Efficient and Stereoselective Alkene Epoxidation by a Cytochrome P450 Enzyme. <i>ACS Catalysis</i> , 2021, 11, 1995-2010.	11.2	30
48	Electron transfer ferredoxins with unusual cluster binding motifs support secondary metabolism in many bacteria. <i>Chemical Science</i> , 2018, 9, 7948-7957.	7.4	29
49	An Altered Heme Environment in an Engineered Cytochrome P450 Enzyme Enables the Switch from Monooxygenase to Peroxygenase Activity. <i>ACS Catalysis</i> , 2022, 12, 1614-1625.	11.2	29
50	CYP199A4 catalyses the efficient demethylation and demethenylation of para-substituted benzoic acid derivatives. <i>RSC Advances</i> , 2015, 5, 52007-52018.	3.6	28
51	Influence of the Synthesis and Storage Conditions on the Activity of <i>Candida antarctica</i> Lipase B ZIF-8 Biocomposites. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 51867-51875.	8.0	28
52	Cytochrome P450 CYP199A4 from <i>Rhodospseudomonas palustris</i> Catalyzes Heteroatom Dealkylations, Sulfoxidation, and Amide and Cyclic Hemiacetal Formation. <i>ACS Catalysis</i> , 2018, 8, 5915-5927.	11.2	27
53	Rearrangement-Free Hydroxylation of Methylcubanes by a Cytochrome P450: The Case for Dynamical Coupling of C-H Abstraction and Rebound. <i>Journal of the American Chemical Society</i> , 2019, 141, 19688-19699.	13.7	26
54	Structural insights into the role of the acid-alcohol pair of residues required for dioxygen activation in cytochrome P450 enzymes. <i>Journal of Biological Inorganic Chemistry</i> , 2020, 25, 583-596.	2.6	26

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55	Structure and function of CYP108D1 from <i>Novosphingobium aromaticivorans</i> DSM12444: an aromatic hydrocarbon-binding P450 enzyme. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012, 68, 277-291.	2.5	25
56	Aliphatic vs. aromatic C-H bond activation of phenylcyclohexane catalysed by cytochrome P450cam. <i>Chemical Communications</i> , 1996, , 357-358.	4.1	23
57	Characterisation of two self-sufficient CYP102 family monooxygenases from <i>Ktedonobacter racemifer</i> DSM44963 which have new fatty acid alcohol product profiles. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2016, 1860, 1149-1162.	2.4	23
58	The efficient and selective biocatalytic oxidation of norisoprenoid and aromatic substrates by CYP101B1 from <i>Novosphingobium aromaticivorans</i> DSM12444. <i>RSC Advances</i> , 2015, 5, 5762-5773.	3.6	22
59	Increasing the Activity and Efficiency of Stereoselective Oxidations by using Decoy Molecules in Combination with Rate-Enhancing Variants of P450Bm3. <i>ChemCatChem</i> , 2016, 8, 2789-2796.	3.7	22
60	A Structural Model of a P450-Ferredoxin Complex from Orientation-Selective Double Electron-Electron Resonance Spectroscopy. <i>Journal of the American Chemical Society</i> , 2018, 140, 2514-2527.	13.7	22
61	Investigation of the requirements for efficient and selective cytochrome P450 monooxygenase catalysis across different reactions. <i>Journal of Inorganic Biochemistry</i> , 2020, 203, 110913.	3.5	22
62	The crystal structure of the versatile cytochrome P450 enzyme CYP109B1 from <i>Bacillus subtilis</i> . <i>Molecular BioSystems</i> , 2015, 11, 869-881.	2.9	21
63	The efficient and selective catalytic oxidation of para-substituted cinnamic acid derivatives by the cytochrome P450 monooxygenase, CYP199A4. <i>RSC Advances</i> , 2016, 6, 55286-55297.	3.6	21
64	d-Alanine-d-alanine ligase as a model for the activation of ATP-grasp enzymes by monovalent cations. <i>Journal of Biological Chemistry</i> , 2020, 295, 7894-7904.	3.4	21
65	Selective aliphatic and aromatic carbon-hydrogen bond activation catalysed by mutants of cytochrome p450cam. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 1997, 3, 293-302.	1.8	20
66	The importance of the benzoic acid carboxylate moiety for substrate recognition by CYP199A4 from <i>Rhodopseudomonas palustris</i> HaA2. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2016, 1864, 667-675.	2.3	20
67	Biophysical Techniques for Distinguishing Ligand Binding Modes in Cytochrome P450 Monooxygenases. <i>Biochemistry</i> , 2020, 59, 1038-1050.	2.5	20
68	Improving the affinity and activity of CYP101D2 for hydrophobic substrates. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 3979-3990.	3.6	17
69	Chain length-dependent cooperativity in fatty acid binding and oxidation by cytochrome P450BM3 (CYP102A1). <i>Protein and Cell</i> , 2011, 2, 656-671.	11.0	16
70	P450 catalysed dehydrogenation. <i>Pure and Applied Chemistry</i> , 2017, 89, 841-852.	1.9	16
71	Characterisation of the paramagnetic [2Fe-2S] ⁺ centre in palustrisredoxin-B (PuxB) from <i>Rhodopseudomonas palustris</i> CGA009: g-matrix determination and spin coupling analysis. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 6526.	2.8	15
72	Selective aliphatic carbon-hydrogen bond activation of protected alcohol substrates by cytochrome P450 enzymes. <i>Organic and Biomolecular Chemistry</i> , 2014, 12, 2479-2488.	2.8	15

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73	Biomimetic and Biocatalytic Synthesis of Bruceol. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1427-1431.	13.8	15
74	The self-sufficient CYP102 family enzyme, Krac9955, from <i>Ktedonobacter racemifer</i> DSM44963 acts as an alkyl- and alkyloxy-benzoic acid hydroxylase. <i>Archives of Biochemistry and Biophysics</i> , 2017, 615, 15-21.	3.0	14
75	Examination of Selectivity in the Oxidation of ortho- and meta-Disubstituted Benzenes by CYP102A1 (P450 α Bm3) Variants. <i>ChemCatChem</i> , 2017, 9, 2512-2522.	3.7	14
76	The Oxidation of Hydrophobic Aromatic Substrates by Using a Variant of the P450 Monooxygenase CYP101B1. <i>ChemBioChem</i> , 2017, 18, 2119-2128.	2.6	14
77	Stereoselective hydroxylation of isophorone by variants of the cytochromes P450 CYP102A1 and CYP101A1. <i>Enzyme and Microbial Technology</i> , 2018, 111, 29-37.	3.2	14
78	Different Geometric Requirements for Cytochrome P450-Catalyzed Aliphatic Versus Aromatic Hydroxylation Results in Chemoselective Oxidation. <i>ACS Catalysis</i> , 2022, 12, 1258-1267.	11.2	14
79	The electrochemistry of a heme-containing enzyme, CYP199A2, adsorbed directly onto a pyrolytic graphite electrode. <i>Journal of Electroanalytical Chemistry</i> , 2007, 611, 149-154.	3.8	13
80	The dynamics of camphor in the cytochrome P450 CYP101D2. <i>Protein Science</i> , 2013, 22, 1218-1229.	7.6	13
81	The selective oxidation of substituted aromatic hydrocarbons and the observation of uncoupling via redox cycling during naphthalene oxidation by the CYP101B1 system. <i>Catalysis Science and Technology</i> , 2017, 7, 1537-1548.	4.1	13
82	Structural and functional characterisation of the cytochrome P450 enzyme CYP268A2 from <i>Mycobacterium marinum</i> . <i>Biochemical Journal</i> , 2018, 475, 705-722.	3.7	13
83	Selective biocatalytic hydroxylation of unactivated methylene C-H bonds in cyclic alkyl substrates. <i>Chemical Communications</i> , 2019, 55, 5029-5032.	4.1	13
84	Efficient hydroxylation of cycloalkanes by co-addition of decoy molecules to variants of the cytochrome P450 CYP102A1. <i>Journal of Inorganic Biochemistry</i> , 2018, 183, 137-145.	3.5	12
85	A comparison of steroid and lipid binding cytochrome P450s from <i>Mycobacterium marinum</i> and <i>Mycobacterium tuberculosis</i> . <i>Journal of Inorganic Biochemistry</i> , 2020, 209, 111116.	3.5	12
86	A phthalate family oxygenase reductase supports terpene alcohol oxidation by CYP238A1 from <i>Pseudomonas putida</i> KT2440. <i>Biotechnology and Applied Biochemistry</i> , 2013, 60, 9-17.	3.1	10
87	The Use of Directing Groups Enables the Selective and Efficient Biocatalytic Oxidation of Unactivated Adamantyl C-H Bonds. <i>ChemistrySelect</i> , 2016, 1, 6700-6707.	1.5	10
88	In vivo and in vitro hydroxylation of cineole and camphor by cytochromes P450CYP101A1, CYP101B1 and N242A CYP176A1. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016, 128, 52-64.	1.8	10
89	Selective hydroxylation of 1,8- and 1,4-cineole using bacterial P450 variants. <i>Archives of Biochemistry and Biophysics</i> , 2019, 663, 54-63.	3.0	10
90	Crystallization and preliminary X-ray diffraction studies of a ferredoxin reductase from <i>Rhodospseudomonas palustris</i> CGA009. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2007, 63, 422-425.	0.7	9

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91	Crystallization and preliminary X-ray analysis of CYP153C1 from <i>Novosphingobium aromaticivorans</i> DSM12444. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2011, 67, 964-967.	0.7	9
92	The structure of a novel electron-transfer ferredoxin from <i>Rhodopseudomonas palustris</i> HaA2 which contains a histidine residue in its iron-sulfur cluster-binding motif. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014, 70, 1453-1464.	2.5	8
93	Selective α -oxidation of fatty acids by CYP147G1 from <i>Mycobacterium marinum</i> . <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2019, 1863, 408-417.	2.4	8
94	Modification of an Enzyme Biocatalyst for the Efficient and Selective Oxidative Demethylation of <i>para</i> -Substituted Benzene Derivatives. <i>ChemCatChem</i> , 2016, 8, 3626-3635.	3.7	6
95	Analysis and preliminary characterisation of the cytochrome P450 monooxygenases from <i>Frankia</i> sp. Eul1c (<i>Frankia inefficax</i> sp.). <i>Archives of Biochemistry and Biophysics</i> , 2019, 669, 11-21.	3.0	6
96	The Stereoselective Oxidation of <i>para</i> -Substituted Benzenes by a Cytochrome P450 Biocatalyst. <i>Chemistry - A European Journal</i> , 2021, 27, 14765-14777.	3.3	6
97	To Be, or Not to Be, an Inhibitor: A Comparison of Azole Interactions with and Oxidation by a Cytochrome P450 Enzyme. <i>Inorganic Chemistry</i> , 2022, 61, 236-245.	4.0	6
98	CW and Pulse EPR of Cytochrome P450 to Determine Structure and Function. <i>Biological Magnetic Resonance</i> , 2017, , 103-142.	0.4	5
99	Complementary and selective oxidation of hydrocarbon derivatives by two cytochrome P450 enzymes of the same family. <i>Catalysis Science and Technology</i> , 2020, 10, 5983-5995.	4.1	5
100	A comparison of the bacterial CYP51 cytochrome P450 enzymes from <i>Mycobacterium marinum</i> and <i>Mycobacterium tuberculosis</i> . <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2022, 221, 106097.	2.5	5
101	The effect of decoy molecules on the activity of the P450Bm3 holoenzyme and a heme domain peroxxygenase variant. <i>Catalysis Communications</i> , 2019, 124, 97-102.	3.3	4
102	The characterisation of two members of the cytochrome P450 CYP150 family: CYP150A5 and CYP150A6 from <i>Mycobacterium marinum</i> . <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2019, 1863, 925-934.	2.4	4
103	Design and Engineering of Cytochrome P450 Systems. , 2007, , 437-476.		3
104	Purification, crystallization and preliminary X-ray analysis of cytochrome P450 219A1 from <i>Novosphingobium aromaticivorans</i> DSM 12444. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2009, 65, 364-367.	0.7	2
105	Biomimetic and Biocatalytic Synthesis of Bruceol. <i>Angewandte Chemie</i> , 2019, 131, 1441-1445.	2.0	2
106	The electrochemistry and scanning tunnelling microscopy of the flavoprotein putidaredoxin reductase on alkanethiol-modified gold. <i>Inorganica Chimica Acta</i> , 2003, 356, 343-348.	2.4	1
107	Purification, crystallization and preliminary crystallographic analysis of cytochrome P450 203A1 from <i>Rhodopseudomonas palustris</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2007, 63, 342-345.	0.7	1
108	Purification, Crystallization and Preliminary Crystallographic Analysis of CYP 195A2, a P450 Enzyme from <i>Rhodopseudomonas palustris</i> . <i>Protein and Peptide Letters</i> , 2008, 15, 423-426.	0.9	1