Stephen Bornemann

List of Publications by Year
in descending order

61 papers	2,590 citations	172457 29 h-index	197818 49 g-index
64 all docs	64 docs citations	64 times ranked	2666 citing authors

#	Article	IF	Citations
1	Three Isoforms of Isoamylase Contribute Different Catalytic Properties for the Debranching of Potato Glucans[W]. Plant Cell, 2003, 15, 133-149.	6.6	161
2	Self-poisoning of Mycobacterium tuberculosis by targeting GlgE in an Î±-glucan pathway. Nature Chemical Biology, 2010, 6, 376-384.	8.0	141
3	Oxalate Decarboxylase Requires Manganese and Dioxygen for Activity. Journal of Biological Chemistry, 2001, 276, 43627-43634.	3.4	138
4	Unexpected and widespread connections between bacterial glycogen and trehalose metabolism. Microbiology (United Kingdom), 2011, 157, 1565-1572.	1.8	136
5	Flavoenzymes that catalyse reactions with no net redox change. Natural Product Reports, 2002, 19, 761-772.	10.3	128
6	Barley (Hordeum vulgare) oxalate oxidase is a manganese-containing enzyme. Biochemical Journal, 1999, 343, 185-190.	3.7	124
7	Calcium/Calmodulin-Dependent Protein Kinase Is Negatively and Positively Regulated by Calcium, Providing a Mechanism for Decoding Calcium Responses during Symbiosis Signaling Â. Plant Cell, 2014, 25, 5053-5066.	6.6	124
8	Bacillus subtilis YvrK Is an Acid-Induced Oxalate Decarboxylase. Journal of Bacteriology, 2000, 182, 5271-5273.	2.2	95
9	A Closed Conformation of Bacillus subtilis Oxalate Decarboxylase OxdC Provides Evidence for the True Identity of the Active Site. Journal of Biological Chemistry, 2004, 279, 19867-19874.	3.4	82
10	Characterisation of the Molybdenum-Responsive ModE Regulatory Protein and its Binding to the Promoter Region of the modABCD (Molybdenum Transport) Operon of Escherichia Coli. FEBS Journal, 1997, 246, 119-126.	0.2	80
11	A germin-like protein with superoxide dismutase activity in pea nodules with high protein sequence identity to a putative rhicadhesin receptor. Journal of Experimental Botany, 2007, 58, 1161-1171.	4.8	76
12	Bacillus subtilisYxaG is a novel Fe-containing quercetin 2,3-dioxygenase. FEBS Letters, 2004, 557, 45-48.	2.8	68
13	Specificity of starch synthase isoforms from potato. FEBS Journal, 1999, 266, 724-736.	0.2	62
14	Dual Catalytic Activity of Hydroxycinnamoyl-Coenzyme A Quinate Transferase from Tomato Allows It to Moonlight in the Synthesis of Both Mono- and Dicaffeoylquinic Acids. Plant Physiology, 2014, 166, 1777-1787.	4.8	53
15	Oxalate Decarboxylase and Oxalate Oxidase Activities Can Be Interchanged with a Specificity Switch of up to 282â€‰000 by Mutating an Active Site Lid[,]. Biochemistry, 2007, 46, 12327-12336.	2.5	51
16	Cloning and Sequencing of Two Ceriporiopsis subvermispora Bicupin Oxalate Oxidase Allelic Isoforms: Implications for the Reaction Specificity of Oxalate Oxidases and Decarboxylases. Applied and Environmental Microbiology, 2005, 71, 3608-3616.	3.1	49
17	Structure of Streptomyces Maltosyltransferase GlgE, a Homologue of a Genetically Validated Anti-tuberculosis Target*. Journal of Biological Chemistry, 2011, 286, 38298-38310.	3.4	49
18	Binding of the Oxidized, Reduced, and Radical Flavin Species to Chorismate Synthase. An Investigation by Spectrophotometry, Fluorimetry, and Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Spectroscopy. Biochemistry, 1996, 35, 1643-1652.	2.5	48

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19	Metabolic Network for the Biosynthesis of Intra- and Extracellular Î±-Glucans Required for Virulence of Mycobacterium tuberculosis. PLoS Pathogens, 2016, 12, e1005768.	4.7	46
20	Escherichia coli Chorismate Synthase Catalyzes the Conversion of (6S)-6-Fluoro-5-enolpyruvylshikimate-3-phosphate to 6-Fluorochorismate. Journal of Biological Chemistry, 1995, 270, 22811-22815.	3.4	45
21	The Transient Kinetics of Escherichia coli Chorismate Synthase:â€‰ Substrate Consumption, Product Formation, Phosphate Dissociation, and Characterization of a Flavin Intermediate. Biochemistry, 1996, 35, 9907-9916.	2.5	42
22	Barley (Hordeum vulgare) oxalate oxidase is a manganese-containing enzyme. Biochemical Journal, 1999, 343, 185.	3.7	42
23	Flux through Trehalose Synthase Flows from Trehalose to the Alpha Anomer of Maltose in Mycobacteria. Chemistry and Biology, 2013, 20, 487-493.	6.0	41
24	Studies with Flavin Analogs Provide Evidence That a Protonated Reduced FMN Is the Substrate-induced Transient Intermediate in the Reaction of Escherichia coli Chorismate Synthase. Journal of Biological Chemistry, 1996, 271, 25850-25858.	3.4	40
25	Trehalose-6-Phosphate-Mediated Toxicity Determines Essentiality of OtsB2 in Mycobacterium tuberculosis In Vitro and in Mice. PLoS Pathogens, 2016, 12, e1006043.	4.7	35
26	Stereochemistry of the formation of lactaldehyde and acetoin produced by the pyruvate decarboxylases of yeast (Saccharomyces sp.) and Zymomonas mobilis: different Boltzmann distributions between bound forms of the electrophile, acetaldehyde, in the two enzymatic reactions. Journal of the Chemical Society Perkin Transactions 1, 1993, , 309.	0.9	33
27	Mycobacterium tuberculosis Maltosyltransferase GlgE, a Genetically Validated Antituberculosis Target, Is Negatively Regulated by Ser/Thr Phosphorylation. Journal of Biological Chemistry, 2013, 288, 16546-16556.	3.4	33
28	Structural Insight into How Streptomyces coelicolor Maltosyl Transferase GlgE Binds Î±-Maltose 1-Phosphate and Forms a Maltosyl-enzyme Intermediate. Biochemistry, 2014, 53, 2494-2504.	2.5	33
29	Assembly of Î±-Glucan by GlgE and GlgB in Mycobacteria and Streptomycetes. Biochemistry, 2016, 55, 3270-3284.	2.5	33
30	The identity of the active site of oxalate decarboxylase and the importance of the stability of active-site lid conformations. Biochemical Journal, 2007, 407, 397-406.	3.7	31
31	pH-Dependent Structures of the Manganese Binding Sites in Oxalate Decarboxylase as Revealed by High-Field Electron Paramagnetic Resonance. Journal of Physical Chemistry B, 2009, 113, 9016-9025.	2.6	31
32	Stereospecific formation of R-aromatic acyloins by Zymomonas mobilis pyruvate decarboxylase. Journal of the Chemical Society Perkin Transactions 1, 1996, , 425.	0.9	30
33	Studies with Substrate and Cofactor Analogues Provide Evidence for a Radical Mechanism in the Chorismate Synthase Reaction. Journal of Biological Chemistry, 2000, 275, 35825-35830.	3.4	30
34	Evidence for a major structural change in Escherichia coli chorismate synthase induced by flavin and substrate binding. Biochemical Journal, 1998, 335, 319-327.	3.7	29
35	Sugar-coated sensor chip and nanoparticle surfaces for the in vitro enzymatic synthesis of starch-like materials. Chemical Science, 2014, 5, 341-350.	7.4	28
36	Conversion of 2-acetamido-2-deoxy-Î²-D-glucopyranose (N-acetylglucosamine) into 2-acetamido-2-deoxy-Î²-D-galactopyranose (N-acetylgalactosamine) using a biotransformation to generate a selectively deprotected substrate for SN2 inversion. Journal of the Chemical Society Perkin Transactions 1, 1992, , 235-237.	0.9	27

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37	Allosteric regulation of the partitioning of glucose-1-phosphate between glycogen and trehalose biosynthesis in Mycobacterium tuberculosis. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 13-21.	2.4	27
38	Î±-Glucan biosynthesis and the GlgE pathway in Mycobacterium tuberculosis. Biochemical Society Transactions, 2016, 44, 68-73.	3.4	25
39	Trehalose and Î±-glucan mediate distinct abiotic stress responses in Pseudomonas aeruginosa. PLoS Genetics, 2021, 17, e1009524.	3.5	22
40	Real-Time Monitoring of the Oxalate Decarboxylase Reaction and Probing Hydron Exchange in the Product, Formate, Using Fourier Transform Infrared Spectroscopy. Biochemistry, 2006, 45, 10667-10673.	2.5	21
41	Characterization of Medicago truncatula (barrel medic) hydroperoxide lyase (CYP74C3), a water-soluble detergent-free cytochrome P450 monomer whose biological activity is defined by monomerâ€“micelle association. Biochemical Journal, 2006, 395, 641-652.	3.7	21
42	Escherichia coli chorismate synthase. Biochemical Society Transactions, 1996, 24, 84-88.	3.4	20
43	Calcium Ion Binding Properties of Medicago truncatula Calcium/Calmodulin-Dependent Protein Kinase. Biochemistry, 2012, 51, 6895-6907.	2.5	19
44	Discrimination of large maltooligosaccharides from isobaric dextran and pullulan using ion mobility mass spectrometry. Rapid Communications in Mass Spectrometry, 2014, 28, 191-199.	1.5	18
45	Detection of Transglucosidase-Catalyzed Polysaccharide Synthesis on a Surface in Real Time Using Surface Plasmon Resonance Spectroscopy. Journal of the American Chemical Society, 2008, 130, 15234-15235.	13.7	17
46	A Secondary Î² Deuterium Kinetic Isotope Effect in the Chorismate Synthase Reaction. Bioorganic Chemistry, 2000, 28, 191-204.	4.1	16
47	Ligand-bound Structures and Site-directed Mutagenesis Identify the Acceptor and Secondary Binding Sites of Streptomyces coelicolor Maltosyltransferase GlgE. Journal of Biological Chemistry, 2016, 291, 21531-21540.	3.4	13
48	The Production and Utilization of GDP-glucose in the Biosynthesis of Trehalose 6-Phosphate by Streptomyces venezuelae. Journal of Biological Chemistry, 2017, 292, 945-954.	3.4	13
49	Mutagenic Analysis of an Invariant Aspartate Residue in Chorismate Synthase Supports Its Role as an Active Site Baseâ€. Biochemistry, 2007, 46, 3768-3774.	2.5	12
50	Developmental delay in a Streptomyces venezuelae glgE null mutant is associated with the accumulation of Î±-maltose 1-phosphate. Microbiology (United Kingdom), 2016, 162, 1208-1219.	1.8	10
51	The Effects of Surfactants on Lipase-Catalysed Hydrolysis of Esters: Activities and Stereoselectivity. Biocatalysis, 1994, 11, 191-221.	0.9	8
52	Pseudomonas syringaeaddresses distinct environmental challenges during plant infection through the coordinated deployment of polysaccharides. Journal of Experimental Botany, 2022, 73, 2206-2221.	4.8	8
53	Structure of the Mycobacterium smegmatis Î±-maltose-1-phosphate synthase GlgM. Acta Crystallographica Section F, Structural Biology Communications, 2020, 76, 175-181.	0.8	7
54	Replacement of two invariant serine residues in chorismate synthase provides evidence that a proton relay system is essential for intermediate formation and catalytic activity. FEBS Journal, 2008, 275, 1464-1473.	4.7	6

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55	SAD at home: solving the structure of oxalate decarboxylase with the anomalous signal from manganese using X-ray data collected on a home source. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 2403-2406.	2.5	5
56	Detection of enzyme-catalyzed polysaccharide synthesis on surfaces. Biocatalysis and Biotransformation, 2010, 28, 64-71.	2.0	4
57	A Branch Point in Chorismate Synthase Research. Structure, 2003, 11, 1463-1465.	3.3	2
58	Structure and function studies of oxalate oxidase. Biochemical Society Transactions, 1998, 26, S273-S273.	3.4	1
59	Stereochemistry of the decarboxylation of glyoxylic acid by yeast pyruvate decarboxylase. Journal of the Chemical Society, Perkin Transactions 1, 2000, , 2317-2324.	1.3	1
60	Flavoenzymes that Catalyze Reaction with no Net Redox Change. ChemInform, 2003, 34, no.	0.0	0
61	A temperature-sensitive Mycobacterium smegmatis glgE mutation leads to a loss of GlgE enzyme activity and thermostability and the accumulation of l±-maltose-1-phosphate. Biochimica Et Biophysica Acta - General Subjects, 2021, 1865, 129783.	2.4	0