

Roland Wohlgemuth

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

4,762
citations

87888

38
h-index

102487

66
g-index

131
all docs

131
docs citations

131
times ranked

4359
citing authors

#	ARTICLE	IF	CITATIONS
1	Biocatalysis as Key to Sustainable Industrial Chemistry. ChemSusChem, 2022, 15, e202102709.	6.8	52
2	Selective Biocatalytic Defunctionalization of Raw Materials. ChemSusChem, 2022, 15, .	6.8	11
3	Biocatalysis as Key to Sustainable Industrial Chemistry. ChemSusChem, 2022, , e202200709.	6.8	2
4	Preface to Special Issue on Biocatalysis as Key to Sustainable Industrial Chemistry. ChemSusChem, 2022, 15, e202200640.	6.8	2
5	Biocatalysis â€“ Key enabling tools from biocatalytic one-step and multi-step reactions to biocatalytic total synthesis. New Biotechnology, 2021, 60, 113-123.	4.4	31
6	Bioeconomy moving forward step by step â€“ A global journey. New Biotechnology, 2021, 61, 22-28.	4.4	42
7	Key advances in biocatalytic phosphorylations in the last two decades: Biocatalytic syntheses in vitro and biotransformations in vivo (in humans). Biotechnology Journal, 2021, 16, e2000090.	3.5	11
8	Introduction to the special issue: Trends in bioeconomy. New Biotechnology, 2021, 61, 9-10.	4.4	4
9	Bio-based resources, bioprocesses and bioproducts in value creation architectures for bioeconomy markets and beyond â€“ What really matters. EFB Bioeconomy Journal, 2021, 1, 100009.	2.4	7
10	Facile synthesis of D-xylulose-5-phosphate and L-xylulose-5-phosphate by xylulokinase-catalyzed phosphorylation. Biocatalysis and Biotransformation, 2020, 38, 35-45.	2.0	10
11	Efficient biocatalytic synthesis of D-tagatose 1,6-diphosphate by LacC-catalysed phosphorylation of D-tagatose 6-phosphate. Biocatalysis and Biotransformation, 2020, 38, 53-63.	2.0	10
12	Molecular and Engineering Aspects of Biocatalysis. Biotechnology Journal, 2020, 15, 2000499.	3.5	0
13	Biocatalysis in the Swiss Manufacturing Environment. Catalysts, 2020, 10, 1420.	3.5	13
14	A combined experimental and modelling approach for the Weimberg pathway optimisation. Nature Communications, 2020, 11, 1098.	12.8	41
15	Enzymatic Synthesis of 2-Keto-3-Deoxy-6-Phosphogluconate by the 6-Phosphogluconate-Dehydratase From Caulobacter crescentus. Frontiers in Bioengineering and Biotechnology, 2020, 8, 185.	4.1	6
16	Building Bridges between Biotechnology and Chemistry â€“ Oreste Ghisalba's Pioneering Activities, Publications and Programs. Chimia, 2020, 74, 322.	0.6	2
17	Editorial. Chimia, 2020, 74, 317.	0.6	0
18	Bioeconomy for Sustainable Development. Biotechnology Journal, 2019, 14, e1800638.	3.5	98

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19	STRENDA DB: enabling the validation and sharing of enzyme kinetics data. FEBS Journal, 2018, 285, 2193-2204.	4.7	38
20	Phosphorylation Catalyzed by Dihydroxyacetone Kinase. European Journal of Organic Chemistry, 2018, 2018, 2892-2895.	2.4	13
21	Horizons of Systems Biocatalysis and Renaissance of Metabolite Synthesis. Biotechnology Journal, 2018, 13, 1700620.	3.5	19
22	Recombinant AroLâ€Catalyzed Phosphorylation for the Efficient Synthesis of Shikimic Acid 3â€Phosphate. Biotechnology Journal, 2018, 13, e1700529.	3.5	10
23	Preface to the special issue bioeconomy. New Biotechnology, 2018, 40, 1-4.	4.4	16
24	Perspectives on bioeconomy. New Biotechnology, 2018, 40, 181-184.	4.4	68
25	Enzymatic synthesis of chiral aminoâ€alcohols by coupling transketolase and transaminaseâ€catalyzed reactions in a cascading continuousâ€flow microreactor system. Biotechnology and Bioengineering, 2018, 115, 586-596.	3.3	41
26	Mechanistic and kinetics elucidation of Mg ²⁺ /ATP molar ratio effect on glycerol kinase. Molecular Catalysis, 2018, 445, 36-42.	2.0	6
27	From lab to large scale â€ Industrial biocatalysis from an SIBC perspective. New Biotechnology, 2018, 44, S62.	4.4	1
28	Discovering novel hydrolases from hot environments. Biotechnology Advances, 2018, 36, 2077-2100.	11.7	38
29	The challenges and opportunities of cascading enzymatic microreactors. New Biotechnology, 2018, 44, S36.	4.4	2
30	An empirical analysis of enzyme function reporting for experimental reproducibility: Missing/incomplete information in published papers. Biophysical Chemistry, 2018, 242, 22-27.	2.8	19
31	Realâ€time pH monitoring of industrially relevant enzymatic reactions in a microfluidic sideâ€entry reactor (1/4SER) shows potential for pH control. Biotechnology Journal, 2017, 12, 1600475.	3.5	27
32	Biocatalytic Phosphorylations of Metabolites: Past, Present, and Future. Trends in Biotechnology, 2017, 35, 452-465.	9.3	44
33	Conscious coupling: The challenges and opportunities of cascading enzymatic microreactors. Biotechnology Journal, 2017, 12, 1700030.	3.5	50
34	Biocatalytic Asymmetric Phosphorylation Catalyzed by Recombinant Glycerateâ€2â€Kinase. ChemBioChem, 2017, 18, 1518-1522.	2.6	13
35	Bioreaction Engineering Leading to Efficient Synthesis of Lâ€Glyceraldehydâ€3â€Phosphate. Biotechnology Journal, 2017, 12, 1600625.	3.5	9
36	Biocatalytic asymmetric Michael addition reaction of l-arginine to fumarate for the green synthesis of N-(((4S)-4-amino-4-carboxy-butyl]amino)iminomethyl)-l-aspartic acid lithium salt (l-argininosuccinic) Tj ETQq0 0 0 0 gBT /Overlock 10 Tf		

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37	Synthesis of <i>N</i> -phospho-L-arginine by Biocatalytic Phosphorylation of L-Arginine. <i>ChemCatChem</i> , 2017, 9, 121-126.	3.7	11
38	Biocatalytic Process Design and Reaction Engineering. <i>Chemical and Biochemical Engineering Quarterly</i> , 2017, 31, 131-138.	0.9	15
39	A generic model-based methodology for quantification of mass transfer limitations in microreactors. <i>Chemical Engineering Journal</i> , 2016, 300, 193-208.	12.7	19
40	Exploitation of novel epoxide hydrolases from metagenomic libraries in the solvent-free preparative resolutions of limonene oxides mixtures. <i>New Biotechnology</i> , 2016, 33, S97.	4.4	0
41	Highly efficient and scalable chemoenzymatic syntheses of (R)- and (S)-lactaldehydes. <i>Reaction Chemistry and Engineering</i> , 2016, 1, 156-160.	3.7	11
42	One-pot enzymatic reaction sequence for the syntheses of d-glyceraldehyde 3-phosphate and l-glycerol 3-phosphate. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016, 124, 77-82.	1.8	8
43	Straightforward Synthesis of Terminally Phosphorylated L-Sugars via Multienzymatic Cascade Reactions. <i>Advanced Synthesis and Catalysis</i> , 2015, 357, 1703-1708.	4.3	21
44	Discovery and characterization of thermophilic limonene 1,2-epoxide hydrolases from hot spring metagenomic libraries. <i>FEBS Journal</i> , 2015, 282, 2879-2894.	4.7	43
45	Efficient Epoxide Hydrolase Catalyzed Resolutions of (+)- and (–)-cis/trans-Limonene Oxides. <i>ChemCatChem</i> , 2015, 7, 3171-3178.	3.7	19
46	Economic Considerations for Selecting an Amine Donor in Biocatalytic Transamination. <i>Organic Process Research and Development</i> , 2015, 19, 652-660.	2.7	20
47	Microscale technology and biocatalytic processes: opportunities and challenges for synthesis. <i>Trends in Biotechnology</i> , 2015, 33, 302-314.	9.3	167
48	Biocatalytic asymmetric phosphorylation of mevalonate. <i>RSC Advances</i> , 2014, 4, 12989.	3.6	17
49	Chemical and enzymatic methodologies for the synthesis of enantiomerically pure glyceraldehyde 3-phosphates. <i>Carbohydrate Research</i> , 2014, 389, 18-24.	2.3	33
50	One-step synthesis of 2-keto-3-deoxy-d-gluconate by biocatalytic dehydration of d-gluconate. <i>Journal of Biotechnology</i> , 2014, 191, 69-77.	3.8	23
51	7.04 Oxidation by Microbial Methods. , 2014, , 121-144.		2
52	Characterization of a phosphotriesterase-like lactonase from the hyperthermoacidophilic crenarchaeon <i>Vulcanisaeta moutnovskia</i> . <i>Journal of Biotechnology</i> , 2014, 190, 11-17.	3.8	25
53	Additions and corrections published in 2013. <i>Catalysis Science and Technology</i> , 2013, 3, 3371.	4.1	0
54	The use of enzymes in organic synthesis and the life sciences: perspectives from the Swiss Industrial Biocatalysis Consortium (SIBC). <i>Catalysis Science and Technology</i> , 2013, 3, 29-40.	4.1	97

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55	Microfluidic multi-input reactor for biocatalytic synthesis using transketolase. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 95, 111-117.	1.8	30
56	Laccase-mediated synthesis of 2-methoxy-3-methyl-5-(alkylamino)- and 3-methyl-2,5-bis(alkylamino)-[1,4]-benzoquinones. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 90, 91-97.	1.8	16
57	Desymmetrization of cbz-serinol catalyzed by crude pig pancreatic lipase reveals action of lipases with opposite enantioselectivity. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 85-86, 134-139.	1.8	4
58	Epoxide Hydrolases and their Application in Organic Synthesis. <i>Current Organic Chemistry</i> , 2012, 16, 451-482.	1.6	75
59	One-Pot Cascade Reactions using Fructose-6-phosphate Aldolase: Efficient Synthesis of D-Arabinose 5-Phosphate, D-Fructose 6-Phosphate and Analogues. <i>Advanced Synthesis and Catalysis</i> , 2012, 354, 1725-1730.	4.3	47
60	Modular microfluidic reactor and inline filtration system for the biocatalytic synthesis of chiral metabolites. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2012, 77, 1-8.	1.8	37
61	Industrial biotechnology – past, present and future. <i>New Biotechnology</i> , 2012, 29, 165.	4.4	4
62	Product Recovery. , 2011, , 591-601.		9
63	Product Recovery. , 2011, , 681-691.		0
64	Swiss Industrial Biocatalysis Consortium (SIBC). <i>Chimia</i> , 2010, 64, 780.	0.6	4
65	Applications of Baeyer-Villiger Monooxygenases in Organic Synthesis. <i>Current Organic Chemistry</i> , 2010, 14, 1928-1965.	1.6	57
66	High-Yield Biocatalytic Amination Reactions in Organic Synthesis. <i>Current Organic Chemistry</i> , 2010, 14, 1914-1927.	1.6	139
67	Guidelines for reporting of biocatalytic reactions. <i>Trends in Biotechnology</i> , 2010, 28, 171-180.	9.3	144
68	Characterization of a whole-cell catalyst co-expressing glycerol dehydrogenase and glucose dehydrogenase and its application in the synthesis of L-glyceraldehyde. <i>Biotechnology and Bioengineering</i> , 2010, 106, 541-552.	3.3	54
69	Biocatalysis – key to sustainable industrial chemistry. <i>Current Opinion in Biotechnology</i> , 2010, 21, 713-724.	6.6	286
70	Asymmetric biocatalysis with microbial enzymes and cells. <i>Current Opinion in Microbiology</i> , 2010, 13, 283-292.	5.1	85
71	Modeling and Simulation of Burr Formation: State-of-the-Art and Future Trends. , 2010, , 79-86.		17
72	Synthesis of pyridoxamine 5 ² -phosphate using an MBA:pyruvate transaminase as biocatalyst. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009, 59, 279-285.	1.8	44

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73	C2-Ketol elongation by transketolase-catalyzed asymmetric synthesis. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009, 61, 23-29.	1.8	51
74	Characterisation of a Recombinant NADP-Dependent Glycerol Dehydrogenase from <i>Gluconobacter oxydans</i> and its Application in the Production of D-Glyceraldehyde. <i>ChemBioChem</i> , 2009, 10, 1888-1896.	2.6	41
75	Preparative-scale separation by simulated moving bed chromatography of biocatalytically produced regioisomeric lactones. <i>New Biotechnology</i> , 2009, 25, 220-225.	4.4	7
76	The locks and keys to industrial biotechnology. <i>New Biotechnology</i> , 2009, 25, 204-213.	4.4	73
77	Tools and ingredients for the biocatalytic synthesis of metabolites. <i>Biotechnology Journal</i> , 2009, 4, 1253-1265.	3.5	26
78	Influence of pH on the expression of a recombinant epoxide hydrolase in <i>Aspergillus niger</i> . <i>Biotechnology Journal</i> , 2009, 4, 756-765.	3.5	7
79	Fucosyltransferase VI Induces Platelet Activation: A Novel Property of a Plasma Glycosyltransferase.. <i>Blood</i> , 2009, 114, 4016-4016.	1.4	0
80	Production of epoxide hydrolases in batch fermentations of <i>Botryosphaeria rhodina</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2008, 35, 485-493.	3.0	5
81	Characterization of enzymatic D-xylulose 5-phosphate synthesis. <i>Biotechnology and Bioengineering</i> , 2008, 101, 761-767.	3.3	45
82	Process analysis of macrotetrolide biosynthesis during fermentation by means of direct infusion LC-MS. <i>Biotechnology Journal</i> , 2008, 3, 202-208.	3.5	13
83	Ex vivo glycan engineering of CD44 programs human multipotent mesenchymal stromal cell trafficking to bone. <i>Nature Medicine</i> , 2008, 14, 181-187.	30.7	573
84	Preparative scale Baeyer-Villiger biooxidation at high concentration using recombinant <i>Escherichia coli</i> and in situ substrate feeding and product removal process. <i>Nature Protocols</i> , 2008, 3, 546-554.	12.0	78
85	The First 200-L Scale Asymmetric Baeyer-Villiger Oxidation Using a Whole-Cell Biocatalyst. <i>Organic Process Research and Development</i> , 2008, 12, 660-665.	2.7	74
86	Tools and ingredients for the biocatalytic synthesis of carbohydrates and glycoconjugates. <i>Biocatalysis and Biotransformation</i> , 2008, 26, 42-48.	2.0	14
87	Modular and scalable biocatalytic tools for practical safety, health and environmental improvements in the production of speciality chemicals. <i>Biocatalysis and Biotransformation</i> , 2007, 25, 178-185.	2.0	25
88	Interfacing biocatalysis and organic synthesis. <i>Journal of Chemical Technology and Biotechnology</i> , 2007, 82, 1055-1062.	3.2	40
89	Amino acid oxidase-catalysed resolution and Pictet-Spengler reaction towards chiral and rigid unnatural amino acids. <i>Journal of Chemical Technology and Biotechnology</i> , 2007, 82, 1082-1086.	3.2	11
90	Chemoenzymatic synthesis of chiral carboxylic acids via nitriles. <i>Journal of Chemical Technology and Biotechnology</i> , 2007, 82, 1087-1098.	3.2	28

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91	Semiquantitative Process Screening for the Biocatalytic Synthesis of d-Xylulose-5-phosphate. <i>Organic Process Research and Development</i> , 2006, 10, 605-610.	2.7	42
92	Tools for Selective Enzyme Reaction Steps in the Synthesis of Laboratory Chemicals. <i>Engineering in Life Sciences</i> , 2006, 6, 577-583.	3.6	29
93	Selective hydrolysis of the nitrile group of cis-dihydrodiols from aromatic nitriles. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2006, 38, 76-83.	1.8	17
94	On the influence of oxygen and cell concentration in an SFPR whole cell biocatalytic Baeyer-Villiger oxidation process. <i>Biotechnology and Bioengineering</i> , 2006, 93, 1138-1144.	3.3	58
95	Development, Production, and Application of Recombinant Yeast Biocatalysts in Organic Synthesis. <i>Chimia</i> , 2005, 59, 735-740.	0.6	11
96	Microbial transformations 59: First kilogram scale asymmetric microbial Baeyer-Villiger oxidation with optimized productivity using a resin-based in situ SFPR strategy. <i>Biotechnology and Bioengineering</i> , 2005, 92, 702-710.	3.3	103
97	Recombinant Chlorobenzene Dioxygenase from <i>Pseudomonas</i> sp. P51: A Biocatalyst for Regioselective Oxidation of Aromatic Nitriles. <i>Advanced Synthesis and Catalysis</i> , 2005, 347, 1060-1072.	4.3	32
98	The Eleventh European Congress on Biotechnology, Basel, Switzerland, August 26, 2003. <i>Biocatalysis and Biotransformation</i> , 2004, 22, 61-62.	2.0	0
99	Microbial Transformations, 56. Preparative Scale Asymmetric Baeyer-Villiger Oxidation using a Highly Productive Two-in-One Resin-Based in situ SFPR Concept. <i>Advanced Synthesis and Catalysis</i> , 2004, 346, 203-214.	4.3	103
100	Microbiological Transformations 57. Facile and Efficient Resin-Based in Situ SFPR Preparative-Scale Synthesis of an Enantiopure Unexpected Lactone Regioisomer via a Baeyer-Villiger Oxidation Process. <i>Organic Letters</i> , 2004, 6, 1955-1958.	4.6	55
101	Towards large-scale synthetic applications of Baeyer-Villiger monooxygenases. <i>Trends in Biotechnology</i> , 2003, 21, 318-323.	9.3	184
102	Reactor Operation and Scale-Up of Whole Cell Baeyer-Villiger Catalyzed Lactone Synthesis. <i>Biotechnology Progress</i> , 2002, 18, 1039-1046.	2.6	88
103	Environmental influences on the photooxidation of manganese by a zinc porphyrin sensitizer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1982, 79, 5111-5114.	7.1	6
104	The headgroup conformation of phospholipids in membranes. <i>Journal of Membrane Biology</i> , 1981, 58, 81-100.	2.1	86
105	Bilayers of phosphatidylglycerol. A deuterium and phosphorus nuclear magnetic resonance study of the head-group region. <i>Biochemistry</i> , 1980, 19, 3315-3321.	2.5	86
106	Orientation and flexibility of the choline head group in phosphatidylcholine bilayers. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1977, 467, 109-119.	2.6	211
107	Versuche zur Überwinterungsfähigkeit und Kälteresistenz von <i>Trogoderma angustum</i> (Dermestidae). <i>Journal of Pest Science</i> , 1969, 42, 132-138.	3.7	0
108	Über die Ei- und Larvalentwicklung von <i>Trogoderma angustum</i> Sol. (Dermestidae). <i>Journal of Pest Science</i> , 1967, 40, 83-91.	3.7	8

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109	The electronic evaluation of fetal heart rate. American Journal of Obstetrics and Gynecology, 1961, 81, 361-371.	1.3	111
110	Beobachtungen und Untersuchungen über die Biologie der Süßwasserstracoden; ihr Vorkommen in Sachsen und Böhmen, ihre Lebensweise und ihre Fortpflanzung.. International Review of Hydrobiology, 1914, 6, 1-72.	0.6	10
111	CHAPTER 3. Biocatalytic Synthesis of Small Molecules – Past, Present and Future. RSC Catalysis Series, 0, , 77-97.	0.1	0