

Roland Wohlgemuth

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

3,894
citations

34
h-index

60
g-index

131
ext. papers

4,251
ext. citations

5.9
avg, IF

5.99
L-index

#	Paper	IF	Citations
111	Biocatalysis as Key to Sustainable Industrial Chemistry.. <i>ChemSusChem</i> , 2022 , e202102709	8.3	1
110	Biocatalysis as Key to Sustainable Industrial Chemistry.. <i>ChemSusChem</i> , 2022 , e202200709	8.3	
109	Biocatalysis - Key enabling tools from biocatalytic one-step and multi-step reactions to biocatalytic total synthesis. <i>New Biotechnology</i> , 2021 , 60, 113-123	6.4	18
108	Bioeconomy moving forward step by step - A global journey. <i>New Biotechnology</i> , 2021 , 61, 22-28	6.4	18
107	Key advances in biocatalytic phosphorylations in the last two decades: Biocatalytic syntheses in vitro and biotransformations in vivo (in humans). <i>Biotechnology Journal</i> , 2021 , 16, e2000090	5.6	6
106	Bio-based resources, bioprocesses and bioproducts in value creation architectures for bioeconomy markets and beyond ¶What really matters. <i>EFB Bioeconomy Journal</i> , 2021 , 1, 100009		3
105	Biocatalysis in the Swiss Manufacturing Environment. <i>Catalysts</i> , 2020 , 10, 1420	4	5
104	A combined experimental and modelling approach for the Weimberg pathway optimisation. <i>Nature Communications</i> , 2020 , 11, 1098	17.4	22
103	Building Bridges between Biotechnology and Chemistry - Oreste Ghisalba's Pioneering Activities, Publications and Programs. <i>Chimia</i> , 2020 , 74, 322-337	1.3	2
102	Facile synthesis of D-xylulose-5-phosphate and L-xylulose-5-phosphate by xylulokinase-catalyzed phosphorylation. <i>Biocatalysis and Biotransformation</i> , 2020 , 38, 35-45	2.5	6
101	Efficient biocatalytic synthesis of D-tagatose 1,6-diphosphate by LacC-catalysed phosphorylation of D-tagatose 6-phosphate. <i>Biocatalysis and Biotransformation</i> , 2020 , 38, 53-63	2.5	4
100	Enzymatic Synthesis of 2-Keto-3-Deoxy-6-Phosphogluconate by the 6-Phosphogluconate-Dehydratase From. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 185	5.8	2
99	Editorial. <i>Chimia</i> , 2020 , 74, 317	1.3	
98	Bioeconomy for Sustainable Development. <i>Biotechnology Journal</i> , 2019 , 14, e1800638	5.6	55
97	STRENDA DB: enabling the validation and sharing of enzyme kinetics data. <i>FEBS Journal</i> , 2018 , 285, 2193-2204	3.2	19
96	Phosphorylation Catalyzed by Dihydroxyacetone Kinase. <i>European Journal of Organic Chemistry</i> , 2018 , 2018, 2892-2895	3.2	7
95	Horizons of Systems Biocatalysis and Renaissance of Metabolite Synthesis. <i>Biotechnology Journal</i> , 2018 , 13, e1700620	5.6	12

94	Recombinant AroL-Catalyzed Phosphorylation for the Efficient Synthesis of Shikimic Acid 3-Phosphate. <i>Biotechnology Journal</i> , 2018 , 13, e1700529	5.6	6
93	Enzymatic synthesis of chiral amino-alcohols by coupling transketolase and transaminase-catalyzed reactions in a cascading continuous-flow microreactor system. <i>Biotechnology and Bioengineering</i> , 2018 , 115, 586-596	4.9	33
92	Mechanistic and kinetics elucidation of Mg ²⁺ /ATP molar ratio effect on glycerol kinase. <i>Molecular Catalysis</i> , 2018 , 445, 36-42	3.3	3
91	From lab to large scale □Industrial biocatalysis from an SIBC perspective. <i>New Biotechnology</i> , 2018 , 44, S62	6.4	1
90	Discovering novel hydrolases from hot environments. <i>Biotechnology Advances</i> , 2018 , 36, 2077-2100	17.8	27
89	An empirical analysis of enzyme function reporting for experimental reproducibility: Missing/incomplete information in published papers. <i>Biophysical Chemistry</i> , 2018 , 242, 22-27	3.5	7
88	Real-time pH monitoring of industrially relevant enzymatic reactions in a microfluidic side-entry reactor (SER) shows potential for pH control. <i>Biotechnology Journal</i> , 2017 , 12, 1600475	5.6	22
87	Biocatalytic Phosphorylations of Metabolites: Past, Present, and Future. <i>Trends in Biotechnology</i> , 2017 , 35, 452-465	15.1	35
86	Conscious coupling: The challenges and opportunities of cascading enzymatic microreactors. <i>Biotechnology Journal</i> , 2017 , 12, 1700030	5.6	37
85	Biocatalytic Asymmetric Phosphorylation Catalyzed by Recombinant Glycerate-2-Kinase. <i>ChemBioChem</i> , 2017 , 18, 1518-1522	3.8	7
84	Bioreaction Engineering Leading to Efficient Synthesis of L-Glyceraldehyd-3-Phosphate. <i>Biotechnology Journal</i> , 2017 , 12, 1600625	5.6	6
83	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 acid lithium salt). <i>RSC Advances</i> , 2017 , 7, 48952-48957	3.7	5
82	Synthesis of NEPhospho-l-arginine by Biocatalytic Phosphorylation of l-Arginine. <i>ChemCatChem</i> , 2017 , 9, 121-126	5.2	7
81	Biocatalytic Process Design and Reaction Engineering. <i>Chemical and Biochemical Engineering Quarterly</i> , 2017 , 31, 131-138	1.8	12
80	Highly efficient and scalable chemoenzymatic syntheses of (R)- and (S)-lactaldehydes. <i>Reaction Chemistry and Engineering</i> , 2016 , 1, 156-160	4.9	8
79	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		7
78	A generic model-based methodology for quantification of mass transfer limitations in microreactors. <i>Chemical Engineering Journal</i> , 2016 , 300, 193-208	14.7	15
77	Biocatalytic Phosphorylation of Metabolites 2016 , 147-177		10

76	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	6.4	
75	Microscale technology and biocatalytic processes: opportunities and challenges for synthesis. <i>Trends in Biotechnology</i> , 2015 , 33, 302-14	15.1	148
74	Straightforward Synthesis of Terminally Phosphorylated L-Sugars via Multienzymatic Cascade Reactions. <i>Advanced Synthesis and Catalysis</i> , 2015 , 357, 1703-1708	5.6	20
73	Discovery and characterization of thermophilic limonene-1,2-epoxide hydrolases from hot spring metagenomic libraries. <i>FEBS Journal</i> , 2015 , 282, 2879-94	5.7	34
72	Efficient Epoxide Hydrolase Catalyzed Resolutions of (+)- and (–)-cis/trans-Limonene Oxides. <i>ChemCatChem</i> , 2015 , 7, 3171-3178	5.2	13
71	Economic Considerations for Selecting an Amine Donor in Biocatalytic Transamination. <i>Organic Process Research and Development</i> , 2015 , 19, 652-660	3.9	13
70	Biocatalysis in Organic Synthesis 2015 ,		6
69	Chemical and enzymatic methodologies for the synthesis of enantiomerically pure glyceraldehyde 3-phosphates. <i>Carbohydrate Research</i> , 2014 , 389, 18-24	2.9	28
68	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	3.7	16
67	7.04 Oxidation by Microbial Methods 2014 , 121-144		2
66	Characterization of a phosphotriesterase-like lactonase from the hyperthermoacidophilic crenarchaeon <i>Vulcanisaeta moutnovskia</i> . <i>Journal of Biotechnology</i> , 2014 , 190, 11-7	3.7	20
65	Biocatalytic asymmetric phosphorylation of mevalonate. <i>RSC Advances</i> , 2014 , 4, 12989	3.7	13
64	Development of Sustainable Biocatalytic Reduction Processes for Organic Chemists 2013 , 1-25		1
63	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	5.5	87
62	Microfluidic multi-input reactor for biocatalytic synthesis using transketolase. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013 , 95, 111-117		27
61	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		14
60	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		4
59	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		33

58	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	5.6	40
57	Epoxide Hydrolases and their Application in Organic Synthesis. <i>Current Organic Chemistry</i> , 2012 , 16, 451-482	4.2	71
56	Product Recovery 2011 , 591-601		7
55	Green Production of Fine Chemicals by Isolated Enzymes 2011 , 277-298		3
54	Product Recovery 2011 , 681-691		
53	Industrial Biotransformation 2010 , 1		4
52	Asymmetric biocatalysis with microbial enzymes and cells. <i>Current Opinion in Microbiology</i> , 2010 , 13, 283-292	7.9	77
51	Asymmetric Baeyer-Villiger Reactions Using Whole-Cell Biocatalysts 2010 , 231-248		1
50	Large-Scale Applications of Hydrolases in Biocatalytic Asymmetric Synthesis 2010 , 249-264		1
49	Swiss Industrial Biocatalysis Consortium (SIBC). <i>Chimia</i> , 2010 , 64, 780-1	1.3	4
48	Applications of Baeyer-Villiger Monooxygenases in Organic Synthesis. <i>Current Organic Chemistry</i> , 2010 , 14, 1928-1965	1.7	55
47	High-Yield Biocatalytic Amination Reactions in Organic Synthesis. <i>Current Organic Chemistry</i> , 2010 , 14, 1914-1927	1.7	132
46	Guidelines for reporting of biocatalytic reactions. <i>Trends in Biotechnology</i> , 2010 , 28, 171-80	15.1	126
45	Industrial Biotechnology in the Chemical and Pharmaceutical Industries 2010 , 323-350		4
44	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, 541-52	4.9	44
43	Biocatalysis--key to sustainable industrial chemistry. <i>Current Opinion in Biotechnology</i> , 2010 , 21, 713-24	11.4	254
42	Modeling and Simulation of Burr Formation: State-of-the-Art and Future Trends 2010 , 79-86		10
41	Synthesis of pyridoxamine 5?-phosphate using an MBA:pyruvate transaminase as biocatalyst. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009 , 59, 279-285		39

40	C2-Ketol elongation by transketolase-catalyzed asymmetric synthesis. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009 , 61, 23-29		47
39	Characterisation of a recombinant NADP-dependent glycerol dehydrogenase from <i>Gluconobacter oxydans</i> and its application in the production of L-glyceraldehyde. <i>ChemBioChem</i> , 2009 , 10, 1888-96	3.8	34
38	Preparative-scale separation by simulated moving bed chromatography of biocatalytically produced regioisomeric lactones. <i>New Biotechnology</i> , 2009 , 25, 220-5	6.4	5
37	The locks and keys to industrial biotechnology. <i>New Biotechnology</i> , 2009 , 25, 204-13	6.4	64
36	Tools and ingredients for the biocatalytic synthesis of metabolites. <i>Biotechnology Journal</i> , 2009 , 4, 1253-55		19
35	Influence of pH on the expression of a recombinant epoxide hydrolase in <i>Aspergillus niger</i> . <i>Biotechnology Journal</i> , 2009 , 4, 756-65	5.6	7
34	Fucosyltransferase VI Induces Platelet Activation: A Novel Property of a Plasma Glycosyltransferase. <i>Blood</i> , 2009 , 114, 4016-4016	2.2	
33	Ex vivo glycan engineering of CD44 programs human multipotent mesenchymal stromal cell trafficking to bone. <i>Nature Medicine</i> , 2008 , 14, 181-7	50.5	474
32	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, 546-54	18.8	74
31	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	3.9	64
30	Tools and ingredients for the biocatalytic synthesis of carbohydrates and glycoconjugates. <i>Biocatalysis and Biotransformation</i> , 2008 , 26, 42-48	2.5	12
29	Production of epoxide hydrolases in batch fermentations of <i>Botryosphaeria rhodina</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2008 , 35, 485-93	4.2	5
28	Characterization of enzymatic D-xylulose 5-phosphate synthesis. <i>Biotechnology and Bioengineering</i> , 2008 , 101, 761-7	4.9	42
27	Process analysis of macrotetrolide biosynthesis during fermentation by means of direct infusion LC-MS. <i>Biotechnology Journal</i> , 2008 , 3, 202-8	5.6	8
26	Interfacing biocatalysis and organic synthesis. <i>Journal of Chemical Technology and Biotechnology</i> , 2007 , 82, 1055-1062	3.5	33
25	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	3.5	10
24	Chemoenzymatic synthesis of chiral carboxylic acids via nitriles. <i>Journal of Chemical Technology and Biotechnology</i> , 2007 , 82, 1087-1098	3.5	25
23	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	2.5	22

22	Selective hydrolysis of the nitrile group of cis-dihydrodiols from aromatic nitriles. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2006 , 38, 76-83		16
21	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, 1138-44	4.9	51
20	Semiquantitative Process Screening for the Biocatalytic Synthesis of d-Xylulose-5-phosphate. <i>Organic Process Research and Development</i> , 2006 , 10, 605-610	3.9	39
19	Tools for Selective Enzyme Reaction Steps in the Synthesis of Laboratory Chemicals. <i>Engineering in Life Sciences</i> , 2006 , 6, 577-583	3.4	27
18	Development, Production, and Application of Recombinant Yeast Biocatalysts in Organic Synthesis. <i>Chimia</i> , 2005 , 59, 735-740	1.3	10
17	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, 702-10	4.9	96
16	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	5.6	28
15	The Eleventh European Congress on Biotechnology, Basel, Switzerland, August 26, 2003. <i>Biocatalysis and Biotransformation</i> , 2004 , 22, 61-62	2.5	
14	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	5.6	92
13	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, 1955-8	6.2	52
12	Towards large-scale synthetic applications of Baeyer-Villiger monooxygenases. <i>Trends in Biotechnology</i> , 2003 , 21, 318-23	15.1	180
11	Reactor operation and scale-up of whole cell Baeyer-Villiger catalyzed lactone synthesis. <i>Biotechnology Progress</i> , 2002 , 18, 1039-46	2.8	79
10	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, 5111-4	11.5	5
9	The headgroup conformation of phospholipids in membranes. <i>Journal of Membrane Biology</i> , 1981 , 58, 81-100	2.3	79
8	Bilayers of phosphatidylglycerol. A deuterium and phosphorus nuclear magnetic resonance study of the head-group region. <i>Biochemistry</i> , 1980 , 19, 3315-21	3.2	76
7	Orientation and flexibility of the choline head group in phosphatidylcholine bilayers. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1977 , 467, 109-19	3.8	190
6	Versuche zur Überwinterungsfähigkeit und Kälteresistenz von <i>Trogoderma angustum</i> (Dermestidae). <i>Journal of Pest Science</i> , 1969 , 42, 132-138	5.5	
5	Über die Ei- und Larvalentwicklung von <i>Trogoderma angustum</i> Sol. (Dermestidae). <i>Journal of Pest Science</i> , 1967 , 40, 83-91	5.5	5

4	The electronic evaluation of fetal heart rate. IV. The effect of maternal exercise. <i>American Journal of Obstetrics and Gynecology</i> , 1961 , 81, 361-71	6.4	72
3	Beobachtungen und Untersuchungen über die Biologie der Süßwasserstracoden; ihr Vorkommen in Sachsen und Böhmen, ihre Lebensweise und ihre Fortpflanzung.. <i>International Review of Hydrobiology</i> , 1914 , 6, 1-72		7
2	Biocatalytic Asymmetric Oxidations with Oxygen313-338		2
1	Transketolases1		