

# Florian Rudroff

## List of Publications by Year in descending order

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75  
papers

3,273  
citations

172207

29  
h-index

155451

55  
g-index

90  
all docs

90  
docs citations

90  
times ranked

2979  
citing authors

#	ARTICLE	IF	CITATIONS
1	Opportunities and challenges for combining chemo- and biocatalysis. <i>Nature Catalysis</i> , 2018, 1, 12-22.	16.1	479
2	Cascade catalysis – strategies and challenges en route to preparative synthetic biology. <i>Chemical Communications</i> , 2015, 51, 5798-5811.	2.2	287
3	Nitrogen Source Activates TOR (Target of Rapamycin) Complex 1 via Glutamine and Independently of Ctr/Rag Proteins. <i>Journal of Biological Chemistry</i> , 2014, 289, 25010-25020.	1.6	172
4	Tradeoff between enzyme and metabolite efficiency maintains metabolic homeostasis upon perturbations in enzyme capacity. <i>Molecular Systems Biology</i> , 2010, 6, 356.	3.2	159
5	Microbial Baeyer–Villiger Oxidation: % Stereopreference and Substrate Acceptance of Cyclohexanone Monooxygenase Mutants Prepared by Directed Evolution. <i>Organic Letters</i> , 2006, 8, 1221-1224.	2.4	96
6	Efficient Biooxidations Catalyzed by a New Generation of Self-Sufficient Baeyer–Villiger Monooxygenases. <i>ChemBioChem</i> , 2009, 10, 2595-2598.	1.3	96
7	Baeyer-Villiger oxidations: biotechnological approach. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 6585-6599.	1.7	93
8	An Enzymatic Toolbox for Cascade Reactions: A Showcase for an <i>In Vivo</i> Redox Sequence in Asymmetric Synthesis. <i>ChemCatChem</i> , 2013, 5, 3524-3528.	1.8	88
9	Enantioselective Baeyer-Villiger Oxidations. <i>Current Organic Chemistry</i> , 2004, 8, 1057-1069.	0.9	88
10	Pyrazines: Synthesis and Industrial Application of these Valuable Flavor and Fragrance Compounds. <i>Biotechnology Journal</i> , 2020, 15, 2000064.	1.8	85
11	Family Clustering of Baeyer-Villiger Monooxygenases Based on Protein Sequence and Stereopreference. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 3609-3613.	7.2	83
12	Selective Enzymatic Transformation to Aldehydes <i>in vivo</i> by Fungal Carboxylate Reductase from <i>Neurospora crassa</i> . <i>Advanced Synthesis and Catalysis</i> , 2016, 358, 3414-3421.	2.1	67
13	From waste to value – direct utilization of limonene from orange peel in a biocatalytic cascade reaction towards chiral carvolactone. <i>Green Chemistry</i> , 2017, 19, 367-371.	4.6	63
14	First enantiodivergent Baeyer–Villiger oxidation by recombinant whole-Cells expressing two monooxygenases from <i>Brevibacterium</i> . <i>Bioorganic and Medicinal Chemistry Letters</i> , 2003, 13, 1479-1482.	1.0	58
15	Single Operation Stereoselective Synthesis of <i>Aerangis</i> Lactones: Combining Continuous Flow Hydrogenation and Biocatalysts in a Chemoenzymatic Sequence. <i>ChemCatChem</i> , 2013, 5, 724-727.	1.8	51
16	Designer Microorganisms for Optimized Redox Cascade Reactions – Challenges and Future Perspectives. <i>Advanced Synthesis and Catalysis</i> , 2015, 357, 1587-1618.	2.1	51
17	Four distinct types of E.C. 1.2.1.30 enzymes can catalyze the reduction of carboxylic acids to aldehydes. <i>Journal of Biotechnology</i> , 2017, 257, 222-232.	1.9	50
18	Inferring causal metabolic signals that regulate the dynamic <i>TORC1</i> -dependent transcriptome. <i>Molecular Systems Biology</i> , 2015, 11, 802.	3.2	49

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19	Accessing tetrahydrofuran-based natural products by microbial Baeyer-Villiger biooxidation. <i>Chemical Communications</i> , 2006, , 3214-3216.	2.2	46
20	Comparing the Stereoselective Biooxidation of Cyclobutanones by Recombinant Strains Expressing Bacterial Baeyer-Villiger Monooxygenases. <i>Advanced Synthesis and Catalysis</i> , 2007, 349, 1436-1444.	2.1	44
21	Whole-cell based synthetic enzyme cascades – light and shadow of a promising technology. <i>Current Opinion in Chemical Biology</i> , 2019, 49, 84-90.	2.8	44
22	Optimizing Fermentation Conditions of Recombinant <i>Escherichia coli</i> Expressing Cyclopentanone Monooxygenase. <i>Organic Process Research and Development</i> , 2006, 10, 599-604.	1.3	43
23	Extensive substrate profiling of cyclopentadecanone monooxygenase as Baeyer-Villiger biocatalyst reveals novel regiodivergent oxidations. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2011, 73, 9-16.	1.8	35
24	In vitro characterization of an enzymatic redox cascade composed of an alcohol dehydrogenase, an enoate reductases and a Baeyer-Villiger monooxygenase. <i>Journal of Biotechnology</i> , 2014, 192, 393-399.	1.9	35
25	Biooxidation of ketones with a cyclobutanone structural motif by recombinant whole-cells expressing 4-hydroxyacetophenone monooxygenase. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2005, 32, 135-140.	1.8	34
26	Synthesis of Enantiomerically Pure Bicyclo[4.2.0]octanes by Cu-Catalyzed [2+2] Photocycloaddition and Enantiotopos-Differentiating Ring Opening. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 5541-5543.	7.2	34
27	Biocatalysis in Green and Blue: Cyanobacteria. <i>Trends in Biotechnology</i> , 2021, 39, 875-889.	4.9	32
28	Random Mutagenesis-Driven Improvement of Carboxylate Reductase Activity using an Amino Benzamidoxime-Mediated High-Throughput Assay. <i>Advanced Synthesis and Catalysis</i> , 2019, 361, 2544-2549.	2.1	31
29	Microbial Baeyer-Villiger Oxidation of Prochiral Polysubstituted Cyclohexanones by Recombinant Whole-Cells Expressing Two Bacterial Monooxygenases. <i>European Journal of Organic Chemistry</i> , 2005, 2005, 809-816.	1.2	30
30	Quantitative Comparison of Chiral Catalysts Selectivity and Performance: A Generic Concept Illustrated with Cyclododecanone Monooxygenase as Baeyer-Villiger Biocatalyst. <i>Advanced Synthesis and Catalysis</i> , 2012, 354, 3491-3500.	2.1	30
31	Identification, Characterization, and Application of Three Enoate Reductases from <i>Pseudomonas putida</i> in <i>In Vitro</i> Enzyme Cascade Reactions. <i>ChemCatChem</i> , 2014, 6, 1021-1027.	1.8	30
32	Manipulating the stereoselectivity of the thermostable Baeyer-Villiger monooxygenase TmCHMO by directed evolution. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 9824-9829.	1.5	30
33	Baeyer-Villiger monooxygenases in aroma compound synthesis. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2011, 21, 6135-6138.	1.0	29
34	Fusion proteins of an enoate reductase and a Baeyer-Villiger monooxygenase facilitate the synthesis of chiral lactones. <i>Biological Chemistry</i> , 2017, 398, 31-37.	1.2	29
35	Substrate-Independent High-Throughput Assay for the Quantification of Aldehydes. <i>Advanced Synthesis and Catalysis</i> , 2019, 361, 2538.	2.1	29
36	Biogenic colourants in the textile industry – a promising and sustainable alternative to synthetic dyes. <i>Green Chemistry</i> , 2022, 24, 13-35.	4.6	29

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37	Mutagenesis-Independent Stabilization of Class B Flavin Monooxygenases in Operation. <i>Advanced Synthesis and Catalysis</i> , 2017, 359, 2121-2131.	2.1	28
38	In Vivo Synthesis of Polyhydroxylated Compounds from a "Hidden Reservoir" of Toxic Aldehyde Species. <i>ChemCatChem</i> , 2017, 9, 2919-2923.	1.8	27
39	Nicotinamide Adenine Dinucleotide-Dependent Redox-Neutral Convergent Cascade for Lactonizations with Type II Flavin-Containing Monooxygenase. <i>Advanced Synthesis and Catalysis</i> , 2017, 359, 2142-2148.	2.1	27
40	Biocompatible metal-assisted C-C cross-coupling combined with biocatalytic chiral reductions in a concurrent tandem cascade. <i>Chemical Communications</i> , 2018, 54, 12978-12981.	2.2	26
41	Baeyer-Villiger Oxidation of Bridgedendo-Tricyclic Ketones with Engineered <i>Escherichia coli</i> Expressing Monooxygenases of Bacterial Origin. <i>Synlett</i> , 2005, 2005, 2751-2754.	1.0	25
42	Encapsulation of recombinant <i>E. coli</i> expressing cyclopentanone monooxygenase in polyelectrolyte complex capsules for Baeyer-Villiger biooxidation of 8-oxabicyclo[3.2.1]oct-6-en-3-one. <i>Biotechnology Letters</i> , 2010, 32, 675-680.	1.1	25
43	Asymmetric bioreduction of activated carbon-carbon double bonds using <i>Shewanella yellow</i> enzyme (SYE-4) as novel enoate reductase. <i>Tetrahedron</i> , 2012, 68, 7619-7623.	1.0	23
44	Kinetic Modeling of an Enzymatic Redox Cascade In Vivo Reveals Bottlenecks Caused by Cofactors. <i>ChemCatChem</i> , 2017, 9, 3420-3427.	1.8	23
45	Easy Access to Enantiopure ( <i>S</i> )- and ( <i>R</i> )-Aryl Alkyl Alcohols by a Combination of Gold(III)-Catalyzed Alkyne Hydration and Enzymatic Reduction. <i>ChemCatChem</i> , 2018, 10, 920-924.	1.8	23
46	Double site saturation mutagenesis of the human cytochrome P450 2D6 results in regioselective steroid hydroxylation. <i>FEBS Journal</i> , 2013, 280, 3094-3108.	2.2	20
47	Synthesis of tetrahydrofuran-based natural products and their carba analogs via stereoselective enzyme mediated Baeyer-Villiger oxidation. <i>Tetrahedron</i> , 2016, 72, 7212-7221.	1.0	18
48	Synthesis and Enantioselective Baeyer-Villiger Oxidation of Prochiral Perhydro-pyranones with Recombinant <i>E. coli</i> Producing Cyclohexanone Monooxygenase. <i>Synlett</i> , 2003, 2003, 1973-1976.	1.0	17
49	Morpholine-based buffers activate aerobic photobiocatalysis via spin correlated ion pair formation. <i>Catalysis Science and Technology</i> , 2019, 9, 1365-1371.	2.1	17
50	Recombinant Whole-Cell Mediated Baeyer-Villiger Oxidation of Perhydropyran-Type Ketones. <i>Chemistry and Biodiversity</i> , 2008, 5, 490-498.	1.0	16
51	First chemo-enzymatic synthesis of the ( <i>R</i> )-Taniguchi lactone and substrate profiles of CAMO and OTEMO, two new Baeyer-Villiger monooxygenases. <i>Monatshefte für Chemie</i> , 2017, 148, 157-165.	0.9	16
52	Enantiocomplementary access to carba-analogs of C-nucleoside derivatives by recombinant Baeyer-Villiger monooxygenases. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 2718-2720.	1.0	15
53	The steroid monooxygenase from <i>Rhodococcus rhodochrous</i> ; a versatile biocatalyst. <i>Tetrahedron: Asymmetry</i> , 2013, 24, 1620-1624.	1.8	14
54	Boosting photobioredox catalysis by morpholine electron donors under aerobic conditions. <i>Catalysis Science and Technology</i> , 2019, 9, 2682-2688.	2.1	14

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55	Chemoenzymatic one-pot reaction from carboxylic acid to nitrile <i>via</i> oxime. <i>Catalysis Science and Technology</i> , 2022, 12, 62-66.	2.1	14
56	Topological augmentation to infer hidden processes in biological systems. <i>Bioinformatics</i> , 2014, 30, 221-227.	1.8	12
57	Exploration of the Substrate Promiscuity of Biosynthetic Tailoring Enzymes as a New Source of Structural Diversity for Polyene Macrolide Antifungals. <i>ChemCatChem</i> , 2015, 7, 490-500.	1.8	11
58	Non-hazardous biocatalytic oxidation in Nylon monomer synthesis on a 40% scale with efficient downstream processing. <i>Biotechnology and Bioengineering</i> , 2017, 114, 1670-1678.	1.7	11
59	<i>Escherichia coli</i> Fails to Efficiently Maintain the Activity of an Important Flavin Monooxygenase in Recombinant Overexpression. <i>Frontiers in Microbiology</i> , 2017, 8, 2201.	1.5	11
60	Cell-free in vitro reduction of carboxylates to aldehydes: With crude enzyme preparations to a key pharmaceutical building block. <i>Biotechnology Journal</i> , 2021, 16, 2000315.	1.8	10
61	Novel concurrent redox cascades of (R)- and (S)-carvones enables access to carvo-lactones with distinct regio- and enantioselectivity. <i>Tetrahedron</i> , 2018, 74, 7389-7394.	1.0	9
62	An Ultrasensitive Fluorescence Assay for the Detection of Halides and Enzymatic Dehalogenation. <i>ChemCatChem</i> , 2020, 12, 2032-2039.	1.8	9
63	Amino Benzamidoxime (ABAO)-Based Assay to Identify Efficient Aldehyde-Producing <i>Pichia pastoris</i> Clones. <i>Advanced Synthesis and Catalysis</i> , 2020, 362, 4673-4679.	2.1	8
64	First Total Synthesis of Piperenol B and Configuration Revision of the Enantiomers Piperenol B and Uvarirufol A. <i>European Journal of Organic Chemistry</i> , 2015, 2015, 1464-1471.	1.2	6
65	Investigation of a New Type of Baeyer-Villiger Monooxygenase from <i>Amycolatopsis thermoflava</i> Revealed High Thermodynamic but Limited Kinetic Stability. <i>ChemBioChem</i> , 2020, 21, 971-977.	1.3	6
66	Chemo-Enzymatic Cascade for the Generation of Fragrance Aldehydes. <i>Catalysts</i> , 2021, 11, 932.	1.6	5
67	Ring Opening and Rearrangement Reactions of Tricyclo[4.2.1.0 <sup>2,5</sup> ]nonan-9-one. <i>Synthesis</i> , 2007, 2007, 3896-3906.	1.2	4
68	Cell Factory Design and Optimization for the Stereoselective Synthesis of Polyhydroxylated Compounds. <i>ChemBioChem</i> , 2018, 19, 361-368.	1.3	3
69	Immobilized Cell Physiology Imaging and Stabilization of Enzyme Cascade Reaction Using Recombinant Cells <i>Escherichia coli</i> Entrapped in Polyelectrolyte Complex Beads by Jet Break-Up Encapsulator. <i>Catalysts</i> , 2020, 10, 1288.	1.6	2
70	A Kinetic Photometric Assay for the Quantification of the Open-Chain Content of Aldoses. <i>European Journal of Organic Chemistry</i> , 2021, 2021, 2589-2593.	1.2	2
71	Synthesis and Enantioselective Baeyer-Villiger Oxidation of Prochiral Perhydro-pyranones with Recombinant <i>E. coli</i> Producing Cyclohexanone Monooxygenase. <i>ChemInform</i> , 2004, 35, no.	0.1	1
72	Miscellaneous Key Non-C-C Bond Forming Enzyme Reactions. , 2016, , 243-283.		1

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73	First Enantiodivergent Baeyer-Villiger Oxidation by Recombinant Whole-Cells Expressing Two Monooxygenases from <i>Brevibacterium</i> .. <i>ChemInform</i> , 2003, 34, no.	0.1	0
74	Enantioselective Baeyer-Villiger Oxidations. <i>ChemInform</i> , 2004, 35, no.	0.1	0
75	Multi-Enzymatic Cascades In Vivo. , 2021, , 49-63.		0