Robert Kourist

List of Publications by Year
in descending order

122 papers	3,610 citations	126907 33 h-index	161849 54 g-index
144 all docs	144 docs citations	144 times ranked	3307 citing authors

#	Article	IF	Citations
1	Expression and activity of heterologous hydroxyisocaproate dehydrogenases in Synechocystis sp. PCC 6803 Î”hoxYH. Engineering Microbiology, 2022, 2, 100008.	4.7	9
2	CryoEM analysis of small plant biocatalysts at sub-2â€…Ã… resolution. Acta Crystallographica Section D: Structural Biology, 2022, 78, 113-123.	2.3	1
3	Photobiocatalytic Oxyfunctionalization with High Reaction Rate using a Baeyerâ€“Villiger Monooxygenase from <i>Burkholderia xenovorans</i> in Metabolically Engineered Cyanobacteria. ACS Catalysis, 2022, 12, 66-72.	11.2	25
4	Light-driven hydroxylation of testosterone by <i>Synechocystis</i> sp. PCC 6803 expressing the heterologous CYP450 monooxygenase CYP110D1. Green Chemistry, 2022, 24, 6156-6167.	9.0	9
5	Phytostilbenes as agrochemicals: biosynthesis, bioactivity, metabolic engineering and biotechnology. Natural Product Reports, 2021, 38, 1282-1329.	10.3	56
6	Multi-Enzymatic Cascades In Vitro. , 2021, , 31-48.		1
7	A Structural View on the Stereospecificity of Plant Borneolâ€Type Dehydrogenases. ChemCatChem, 2021, 13, 2262-2277.	3.7	9
8	A Reconstructed Common Ancestor of the Fatty Acid Photoâ€decarboxylase Clade Shows Photoâ€decarboxylation Activity and Increased Thermostability. ChemBioChem, 2021, 22, 1833-1840.	2.6	18
9	Engineering of a borneol dehydrogenase from P. putida for the enzymatic resolution of camphor. Applied Microbiology and Biotechnology, 2021, 105, 3159-3167.	3.6	3
10	Rational Design of Resveratrol O-methyltransferase for the Production of Pinostilbene. International Journal of Molecular Sciences, 2021, 22, 4345.	4.1	9
11	Simple Plugâ€In Synthetic Step for the Synthesis of (â^’)â€Camphor from Renewable Starting Materials. ChemBioChem, 2021, 22, 2951-2956.	2.6	6
12	Accelerated Reaction Engineering of Photo(bio)catalytic Reactions through Parallelization with an Openâ€Source Photoreactor. ChemPhotoChem, 2021, 5, 957-965.	3.0	14
13	Internal Illumination to Overcome the Cell Density Limitation in the Scaleâ€up of Wholeâ€Cell Photobiocatalysis. ChemSusChem, 2021, 14, 3219-3225.	6.8	22
14	Recent developments in compartmentalization of chemoenzymatic cascade reactions. Current Opinion in Green and Sustainable Chemistry, 2021, 32, 100538.	5.9	12
15	Arylmalonate Decarboxylaseâ€”A Versatile Biocatalyst for the Synthesis of Optically Pure Carboxylic Acids. Frontiers in Catalysis, 2021, 1, .	3.9	0
16	Stereoselective Biotransformations of Cyclic Imines in Recombinant Cells of <i>Synechocystis</i> sp. PCC 6803. ChemCatChem, 2020, 12, 726-730.	3.7	34
17	Molecular cloning and functional characterization of a two highly stereoselective borneol dehydrogenases from Salvia officinalis L. Phytochemistry, 2020, 172, 112227.	2.9	11
18	Nonâ€Conventional Media as Strategy to Overcome the Solvent Dilemma in Chemoenzymatic Tandem Catalysis. ChemCatChem, 2020, 12, 1903-1912.	3.7	47

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19	Artifizielle Lichtsammelkomplexe ermÃ¶glichen Rieskeâ€Oxygenaseâ€•katalysierte Hydroxylierungen in nichtâ€photosynthetischen Zellen. Angewandte Chemie, 2020, 132, 4010-4016.	2.0	6
20	Artificial Lightâ€Harvesting Complexes Enable Rieske Oxygenase Catalyzed Hydroxylations in Nonâ€Photosynthetic cells. Angewandte Chemie - International Edition, 2020, 59, 3982-3987.	13.8	35
21	Ground-State Destabilization by Active-Site Hydrophobicity Controls the Selectivity of a Cofactor-Free Decarboxylase. Journal of the American Chemical Society, 2020, 142, 20216-20231.	13.7	6
22	Engineering of NADPH Supply Boosts Photosynthesis-Driven Biotransformations. ACS Catalysis, 2020, 10, 11864-11877.	11.2	46
23	Photobiocatalytic synthesis of chiral secondary fatty alcohols from renewable unsaturated fatty acids. Nature Communications, 2020, 11, 2258.	12.8	58
24	Cofactor Generation Cascade for Î±-Ketoglutarate and Fe(II)-Dependent Dioxygenases. ACS Sustainable Chemistry and Engineering, 2020, 8, 8604-8612.	6.7	9
25	DESign of Sustainable One-Pot Chemoenzymatic Organic Transformations in Deep Eutectic Solvents for the Synthesis of 1,2-Disubstituted Aromatic Olefins. Frontiers in Chemistry, 2020, 8, 139.	3.6	23
26	Plasmaâ€Driven inâ€…Situ Production of Hydrogen Peroxide for Biocatalysis. ChemSusChem, 2020, 13, 2072-2079.	6.8	30
27	A combined experimental and modelling approach for the Weimberg pathway optimisation. Nature Communications, 2020, 11, 1098.	12.8	41
28	A chemo-enzymatic tandem reaction in a mixture of deep eutectic solvent and water in continuous flow. Reaction Chemistry and Engineering, 2020, 5, 263-269.	3.7	38
29	Folding Assessment of Incorporation of Noncanonical Amino Acids Facilitates Expansion of Functionalâ€Group Diversity for Enzyme Engineering. Chemistry - A European Journal, 2020, 26, 12338-12342.	3.3	7
30	Solventâ€Free Photobiocatalytic Hydroxylation of Cyclohexane. ChemCatChem, 2020, 12, 4009-4013.	3.7	39
31	Dimethyl Labeling-Based Quantitative Proteomics of Recalcitrant Cocoa Pod Tissue. Methods in Molecular Biology, 2020, 2139, 133-146.	0.9	0
32	Using Deep Eutectic Solvents to Overcome Limited Substrate Solubility in the Enzymatic Decarboxylation of Bio-Based Phenolic Acids. ACS Sustainable Chemistry and Engineering, 2019, 7, 16364-16370.	6.7	44
33	Chemoenzymatic Cascade Synthesis of Optically Pure Alkanoic Acids by Using Engineered Arylmalonate Decarboxylase Variants. Chemistry - A European Journal, 2019, 25, 5071-5076.	3.3	14
34	Characterization of Type IV Carboxylate Reductases (CARs) for Whole Cellâ€Mediated Preparation of 3â€Hydroxytyrosol. ChemCatChem, 2019, 11, 4171-4181.	3.7	21
35	Hydrogenâ€Driven Cofactor Regeneration for Stereoselective Wholeâ€Cell C=C Bond Reduction in <i>Cupriavidus necator</i>. ChemSusChem, 2019, 12, 2361-2365.	6.8	9
36	Multi-enzyme cascades as synthetic tool for biocatalysis. Journal of Biotechnology, 2019, 294, 88.	3.8	2

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37	Photo-Biocatalysis: Biotransformations in the Presence of Light. ACS Catalysis, 2019, 9, 4115-4144.	11.2	219
38	Discovery of three novel sesquiterpene synthases from Streptomyces chartreusis NRRL 3882 and crystal structure of an Î±-eudesmol synthase. Journal of Biotechnology, 2019, 297, 71-77.	3.8	6
39	Preparation of optically pure flurbiprofen via an integrated chemo-enzymatic synthesis pathway. Molecular Catalysis, 2019, 467, 135-142.	2.0	7
40	Amine Transaminase from<i>Exophiala Xenobiotica</i>â€”Crystal Structure and Engineering of a Fold IV Transaminase that Naturally Converts Biaryl Ketones. ACS Catalysis, 2019, 9, 1140-1148.	11.2	34
41	Oneâ€Pot Transformation of Ketoximes into Optically Active Alcohols and Amines by Sequential Action of Laccases and Ketoreductases or Ï‰â€Transaminases. ChemCatChem, 2019, 11, 1272-1277.	3.7	20
42	Highly stable protein immobilization<i>via</i>maleimido-thiol chemistry to monitor enzymatic activity. Analyst, The, 2018, 143, 2276-2284.	3.5	9
43	Ramanâ€mikrospektroskopischer Nachweis fÃ¼r den Metabolismus eines Tyrosinkinaseâ€Inhibitors, Neratinib, in Krebszellen. Angewandte Chemie, 2018, 130, 7370-7374.	2.0	9
44	Raman Microspectroscopic Evidence for the Metabolism of a Tyrosine Kinase Inhibitor, Neratinib, in Cancer Cells. Angewandte Chemie - International Edition, 2018, 57, 7250-7254.	13.8	67
45	Frontispiece: Overcoming the Incompatibility Challenge in Chemoenzymatic and Multiâ€Catalytic Cascade Reactions. Chemistry - A European Journal, 2018, 24, .	3.3	1
46	Overcoming the Incompatibility Challenge in Chemoenzymatic and Multiâ€Catalytic Cascade Reactions. Chemistry - A European Journal, 2018, 24, 1755-1768.	3.3	151
47	Bioâ€based Î±,Ï‰â€Functionalized Hydrocarbons from Multiâ€step Reaction Sequences with Bioâ€and Metalloâ€catalysts Based on the Fatty Acid Decarboxylase OleT_{JE}. ChemCatChem, 2018, 10, 1192-1201.	3.7	34
48	Targeted Quantification of Isoforms of a Thylakoid-Bound Protein: MRM Method Development. Methods in Molecular Biology, 2018, 1696, 147-162.	0.9	17
49	Immobilization of Arylmalonate Decarboxylase. Catalysts, 2018, 8, 603.	3.5	2
50	Rosa hybrida orcinol O-methyl transferase-mediated production of pterostilbene in metabolically engineered grapevine cell cultures. New Biotechnology, 2018, 42, 62-70.	4.4	13
51	Enzymatic Decarboxylation as a Tool for the Enzymatic Defunctionalization of Hydrophobic Bio-based Organic Acids. , 2018, , 89-118.		4
52	Cloning and characterization of a new delta-specific l-leucine dioxygenase from Anabaena variabilis. Journal of Biotechnology, 2018, 284, 68-74.	3.8	7
53	Practical Considerations Regarding the Choice of the Best High-Throughput Assay. Methods in Molecular Biology, 2018, 1685, 189-208.	0.9	1
54	Structural characterization of a novel amino acid decarboxylase. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a427-a427.	0.1	0

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55	Transcriptome profiling of the Australian arid-land plant Eremophila serrulata (A.DC.) Druce (Scrophulariaceae) for the identification of monoterpene synthases. Phytochemistry, 2017, 136, 15-22.	2.9	6
56	Reaction engineering of biocatalytic (S)-naproxen synthesis integrating in-line process monitoring by Raman spectroscopy. Reaction Chemistry and Engineering, 2017, 2, 531-540.	3.7	12
57	Bioconversion of stilbenes in genetically engineered root and cell cultures of tobacco. Scientific Reports, 2017, 7, 45331.	3.3	18
58	Enzymatic Oxyfunctionalization Driven by Photosynthetic Water-Splitting in the Cyanobacterium Synechocystis sp. PCC 6803. Catalysts, 2017, 7, 240.	3.5	44
59	Improvement of the Process Stability of Arylmalonate Decarboxylase by Immobilization for Biocatalytic Profen Synthesis. Frontiers in Microbiology, 2017, 8, 448.	3.5	18
60	Editorial: Applied Microbiology for Chemical Syntheses. Frontiers in Microbiology, 2017, 8, 1931.	3.5	1
61	Evolving Enzymes for Biocatalysis. , 2017, , 271-287.		0
62	A Multi-Enzymatic Cascade Reaction for the Stereoselective Production of Î³-Oxyfunctionalyzed Amino Acids. Frontiers in Microbiology, 2016, 7, 425.	3.5	21
63	Sequence-Based Screening for Rare Enzymes: New Insights into the World of AMDases Reveal a Conserved Motif and 58 Novel Enzymes Clustering in Eight Distinct Families. Frontiers in Microbiology, 2016, 7, 1332.	3.5	11
64	Rekombinante Cyanobakterien fÃ¼r die asymmetrische Reduktion von C=Câ€Bindungen mithilfe biokatalytischer Wasseroxidation. Angewandte Chemie, 2016, 128, 5672-5675.	2.0	29
65	Evolving Enzymes for Biocatalysis. , 2016, , 1-17.		4
66	Semiempirical QM/MM calculations reveal a step-wise proton transfer and an unusual thiolate pocket in the mechanism of the unique arylpropionate racemase AMDase G74C. Catalysis Science and Technology, 2016, 6, 4937-4944.	4.1	4
67	Arylmalonate decarboxylaseâ€"a highly selective bacterial biocatalyst with unknown function. Applied Microbiology and Biotechnology, 2016, 100, 8621-8631.	3.6	12
68	Einâ€Topfâ€Reaktionskaskaden durch Kombination einer eingekapselten Decarboxylase mit Metathese zur Synthese biobasierter Antioxidantien. Angewandte Chemie, 2016, 128, 15043-15047.	2.0	20
69	A Oneâ€Pot Cascade Reaction Combining an Encapsulated Decarboxylase with a Metathesis Catalyst for the Synthesis of Bioâ€Based Antioxidants. Angewandte Chemie - International Edition, 2016, 55, 14823-14827.	13.8	81
70	Light-driven Enzymatic Decarboxylation. Journal of Visualized Experiments, 2016, , .	0.3	4
71	Recombinant Cyanobacteria for the Asymmetric Reduction of C=C Bonds Fueled by the Biocatalytic Oxidation of Water. Angewandte Chemie - International Edition, 2016, 55, 5582-5585.	13.8	100
72	Arylmalonate Decarboxylaseâ€Catalyzed Asymmetric Synthesis of Both Enantiomers of Optically Pure Flurbiprofen. ChemCatChem, 2016, 8, 916-921.	3.7	24

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73	Production of highly bioactive resveratrol analogues pterostilbene and piceatannol in metabolically engineered grapevine cell cultures. Plant Biotechnology Journal, 2016, 14, 1813-1825.	8.3	57
74	Identification of amino acid networks governing catalysis in the closed complex of class I terpene synthases. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E958-67.	7.1	57
75	STDâ€NMRâ€Based Protein Engineering of the Unique Arylpropionateâ€Racemase AMDase G74C. ChemBioChem, 2015, 16, 1943-1949.	2.6	15
76	A combined bioinformatics and functional metagenomics approach to discovering lipolytic biocatalysts. Frontiers in Microbiology, 2015, 6, 1110.	3.5	19
77	The role of proteomics in progressing insights into plant secondary metabolism. Frontiers in Plant Science, 2015, 6, 504.	3.6	30
78	Draft Genome Sequence of Bordetella bronchiseptica KU1201, the First Isolation Source of Arylmalonate Decarboxylase. Genome Announcements, 2015, 3, .	0.8	2
79	Engineered hydrophobic pocket of (<i>S</i>)-selective arylmalonate decarboxylase variant by simultaneous saturation mutagenesis to improve catalytic performance. Bioscience, Biotechnology and Biochemistry, 2015, 79, 1965-1971.	1.3	18
80	A New Class of Enzymes Discovered: A Nonâ€Heme Oxidase Produces Mediumâ€Chain 1â€Alkenes. Angewandte Chemie - International Edition, 2015, 54, 4156-4158.	13.8	17
81	Photosynthetic production of enantioselective biocatalysts. Microbial Cell Factories, 2015, 14, 53.	4.0	12
82	Genomics and Transcriptomics Analyses of the Oil-Accumulating Basidiomycete Yeast <i>Trichosporon oleaginosus</i> : Insights into Substrate Utilization and Alternative Evolutionary Trajectories of Fungal Mating Systems. MBio, 2015, 6, e00918.	4.1	63
83	Enhanced extracellular production of trans-resveratrol in Vitis vinifera suspension cultured cells by using cyclodextrins and coronatine. Plant Physiology and Biochemistry, 2015, 97, 361-367.	5.8	49
84	Photobiocatalytic decarboxylation for olefin synthesis. Chemical Communications, 2015, 51, 1918-1921.	4.1	97
85	RNA isolation from loquat and other recalcitrant woody plants with high quality and yield. Analytical Biochemistry, 2014, 452, 46-53.	2.4	35
86	Production of Macrocyclic Sesquiâ€•and Diterpenes in Heterologous Microbial Hosts: A Systems Approach to Harness Natureâ€™s Molecular Diversity. ChemCatChem, 2014, 6, 1142-1165.	3.7	11
87	Protein engineering of arylmalonate decarboxylase variants with promiscuous racemising activity. New Biotechnology, 2014, 31, S88.	4.4	0
88	Enzymatic Decarboxylationâ€"An Emerging Reaction for Chemicals Production from Renewable Resources. ChemCatChem, 2014, 6, 689-701.	3.7	52
89	Thermally driven asymmetric domino reaction catalyzed by a thermostable esterase and its variants. Tetrahedron Letters, 2013, 54, 1921-1923.	1.4	7
90	Development and Validation of MRM Methods to Quantify Protein Isoforms of Polyphenol Oxidase in Loquat Fruits. Journal of Proteome Research, 2013, 12, 5709-5722.	3.7	19

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91	C-C Bond Formation and Decarboxylation. , 2012, , 263-295.		1
92	Altering the scissile fatty acid binding site of <i>Candida antarctica</i> lipase A by protein engineering for the selective hydrolysis of medium chain fatty acids. European Journal of Lipid Science and Technology, 2012, 114, 1148-1153.	1.5	37
93	The short form of the recombinant CAL-A-type lipase UM03410 from the smut fungus Ustilago maydis exhibits an inherent trans-fatty acid selectivity. Applied Microbiology and Biotechnology, 2012, 94, 141-150.	3.6	20
94	Characterization of a novel esterase isolated from intertidal flat metagenome and its tertiary alcohols synthesis. Journal of Molecular Catalysis B: Enzymatic, 2012, 80, 67-73.	1.8	23
95	Creation of a Lipase Highly Selective for <i>trans</i> Fatty Acids by Protein Engineering. Angewandte Chemie - International Edition, 2012, 51, 412-414.	13.8	76
96	Pseudomonas putida esterase contains a GGG(A)X-motif confering activity for the kinetic resolution of tertiary alcohols. Applied Microbiology and Biotechnology, 2012, 93, 1119-1126.	3.6	26
97	Dramatically improved catalytic activity of an artificial (S)-selective arylmalonate decarboxylase by structure-guided directed evolution. Chemical Communications, 2011, 47, 7503.	4.1	26
98	Biocatalytic strategies for the asymmetric synthesis of profens â€“ recent trends and developments. Green Chemistry, 2011, 13, 2607.	9.0	62
99	Identification of novel esterases for the synthesis of sterically demanding chiral alcohols by sequence-structure guided genome mining. Journal of Molecular Catalysis B: Enzymatic, 2011, 70, 88-94.	1.8	9
100	Oneâ€step enzyme extraction and immobilization for biocatalysis applications. Biotechnology Journal, 2011, 6, 463-469.	3.5	22
101	Comparative analysis of tertiary alcohol esterase activity in bacterial strains isolated from enrichment cultures and from screening strain libraries. Applied Microbiology and Biotechnology, 2011, 90, 929-939.	3.6	12
102	Biocatalytic synthesis of optically active tertiary alcohols. Applied Microbiology and Biotechnology, 2011, 91, 505-517.	3.6	74
103	Engineering the Promiscuous Racemase Activity of an Arylmalonate Decarboxylase. Chemistry - A European Journal, 2011, 17, 557-563.	3.3	26
104	Rational Protein Design of <i>Paenibacillus barcinonensis</i> Esterase EstA for Kinetic Resolution of Tertiary Alcohols. ChemCatChem, 2010, 2, 962-967.	3.7	28
105	Enantioselective kinetic resolution of phenylalkyl carboxylic acids using metagenomeâ€derived esterases. Microbial Biotechnology, 2010, 3, 59-64.	4.2	23
106	Protein engineering and discovery of lipases. European Journal of Lipid Science and Technology, 2010, 112, 64-74.	1.5	56
107	An Enzymatic Toolbox for the Kinetic Resolution of 2â€(Pyridinâ€<i>x</i>â€yl)butâ€3â€ynâ€2â€ols and Tertiary Cyanohydrins. European Journal of Organic Chemistry, 2010, 2010, 2753-2758.	2.4	20
108	The Î±/Î²â€Hydrolase Fold 3DM Database (ABHDB) as a Tool for Protein Engineering. ChemBioChem, 2010, 11, 1635-1643.	2.6	126

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109	Formation of chiral tertiary homoallylic alcohols via Evans aldol reaction or enzymatic resolution and their influence on the Sharpless asymmetric dihydroxylation. Tetrahedron, 2010, 66, 3814-3823.	1.9	14
110	The role of the GGGX motif in determining the activity and enantioselectivity of pig liver esterase towards tertiary alcohols. Biocatalysis and Biotransformation, 2010, 28, 201-208.	2.0	13
111	Probing the enantioselectivity of Bacillus subtilis esterase BS2 for tert. alcohols. Journal of Molecular Catalysis B: Enzymatic, 2009, 60, 82-86.	1.8	16
112	Gerichtete Evolution und rationales Design. MaÃŸgeschneiderte Enzyme. Chemie in Unserer Zeit, 2009, 43, 132-142.	0.1	3
113	Understanding Promiscuous Amidase Activity of an Esterase from <i>Bacillus subtilis</i>. ChemBioChem, 2008, 9, 67-69.	2.6	58
114	Enzymatic Synthesis of Optically Active Tertiary Alcohols: Expanding the Biocatalysis Toolbox. ChemBioChem, 2008, 9, 491-498.	2.6	114
115	Complete Inversion of Enantioselectivity towards Acetylated Tertiary Alcohols by a Double Mutant of a <i>Bacillus Subtilis</i> Esterase. Angewandte Chemie - International Edition, 2008, 47, 1508-1511.	13.8	143
116	Hydrolase-catalyzed stereoselective preparation of protected Î±,Î±-dialkyl-Î±-hydroxycarboxylic acids. Tetrahedron: Asymmetry, 2008, 19, 1839-1843.	1.8	24
117	Highly enantioselective kinetic resolution of two tertiary alcohols using mutants of an esterase from Bacillus subtilis. Protein Engineering, Design and Selection, 2007, 20, 125-131.	2.1	59
118	Identification of a metagenome-derived esterase with high enantioselectivity in the kinetic resolution of arylaliphatic tertiary alcohols. Organic and Biomolecular Chemistry, 2007, 5, 3310.	2.8	40
119	Highly Enantioselective Synthesis of Arylaliphatic Tertiary Alcohols using Mutants of an Esterase fromBacillus subtilis. Advanced Synthesis and Catalysis, 2007, 349, 1393-1398.	4.3	59
120	A versatile esterase fromBacillus subtilis: Cloning, expression, characterization, and its application in biocatalysis. Biotechnology Journal, 2007, 2, 249-253.	3.5	33
121	Kinetic Resolution of 1-Biaryl- and 1-(Pyridylphenyl)alkan-1-ols Catalysed by the Lipase B fromCandida antarctica. Advanced Synthesis and Catalysis, 2005, 347, 695-702.	4.3	18
122	A Structural View into the Complexity of Carbon Dioxide Fixation. ACS Central Science, 0, , .	11.3	0