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	Photo-Biocatalysis: Biotransformations in the Presence of Light. ACS Catalysis, 2019, 9, 4115-4144.	11.2	219
2	Overcoming the Incompatibility Challenge in Chemoenzymatic and Multiâ€Catalytic Cascade Reactions. Chemistry - A European Journal, 2018, 24, 1755-1768.	3.3	151
3	Complete Inversion of Enantioselectivity towards Acetylated Tertiary Alcohols by a Double Mutant of a Bacillus Subtilis Esterase. Angewandte Chemie - International Edition, 2008, 47, 1508-1511.	13.8	143
4	The Î±/Î²â€Hydrolase Fold 3DM Database (ABHDB) as a Tool for Protein Engineering. ChemBioChem, 2010, 11, 1635-1643.	2.6	126
5	Enzymatic Synthesis of Optically Active Tertiary Alcohols: Expanding the Biocatalysis Toolbox. ChemBioChem, 2008, 9, 491-498.	2.6	114
6	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
7	Photobiocatalytic decarboxylation for olefin synthesis. Chemical Communications, 2015, 51, 1918-1921.	4.1	97
8	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
9	Creation of a Lipase Highly Selective for trans Fatty Acids by Protein Engineering. Angewandte Chemie - International Edition, 2012, 51, 412-414.	13.8	76
10	Biocatalytic synthesis of optically active tertiary alcohols. Applied Microbiology and Biotechnology, 2011, 91, 505-517.	3.6	74
11	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
12	Genomics and Transcriptomics Analyses of the Oil-Accumulating Basidiomycete Yeast Trichosporon oleaginosus : Insights into Substrate Utilization and Alternative Evolutionary Trajectories of Fungal Mating Systems. MBio, 2015, 6, e00918.	4.1	63
13	Biocatalytic strategies for the asymmetric synthesis of profens â€“ recent trends and developments. Green Chemistry, 2011, 13, 2607.	9.0	62
14	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
15	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
16	Understanding Promiscuous Amidase Activity of an Esterase from Bacillus subtilis. ChemBioChem, 2008, 9, 67-69.	2.6	58
17	Photobiocatalytic synthesis of chiral secondary fatty alcohols from renewable unsaturated fatty acids. Nature Communications, 2020, 11, 2258.	12.8	58
18	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

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19	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
20	Protein engineering and discovery of lipases. European Journal of Lipid Science and Technology, 2010, 112, 64-74.	1.5	56
21	Phytostilbenes as agrochemicals: biosynthesis, bioactivity, metabolic engineering and biotechnology. Natural Product Reports, 2021, 38, 1282-1329.	10.3	56
22	Enzymatic Decarboxylationâ€"An Emerging Reaction for Chemicals Production from Renewable Resources. ChemCatChem, 2014, 6, 689-701.	3.7	52
23	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
24	Nonâ€Conventional Media as Strategy to Overcome the Solvent Dilemma in Chemoenzymatic Tandem Catalysis. ChemCatChem, 2020, 12, 1903-1912.	3.7	47
25	Engineering of NADPH Supply Boosts Photosynthesis-Driven Biotransformations. ACS Catalysis, 2020, 10, 11864-11877.	11.2	46
26	Enzymatic Oxyfunctionalization Driven by Photosynthetic Water-Splitting in the Cyanobacterium Synechocystis sp. PCC 6803. Catalysts, 2017, 7, 240.	3.5	44
27	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
28	A combined experimental and modelling approach for the Weimberg pathway optimisation. Nature Communications, 2020, 11, 1098.	12.8	41
29	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
30	Solventâ€Free Photobiocatalytic Hydroxylation of Cyclohexane. ChemCatChem, 2020, 12, 4009-4013.	3.7	39
31	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
32	Altering the scissile fatty acid binding site of Candida antarctica 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
33	RNA isolation from loquat and other recalcitrant woody plants with high quality and yield. Analytical Biochemistry, 2014, 452, 46-53.	2.4	35
34	Artificial Lightâ€Harvesting Complexes Enable Rieske Oxygenase Catalyzed Hydroxylations in Nonâ€Photosynthetic cells. Angewandte Chemie - International Edition, 2020, 59, 3982-3987.	13.8	35
35	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
36	Amine Transaminase fromExophiala Xenobioticaâ€"Crystal Structure and Engineering of a Fold IV Transaminase that Naturally Converts Biaryl Ketones. ACS Catalysis, 2019, 9, 1140-1148.	11.2	34

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37	Stereoselective Biotransformations of Cyclic Imines in Recombinant Cells of Synechocystis sp. PCC 6803. ChemCatChem, 2020, 12, 726-730.	3.7	34
38	A versatile esterase fromBacillus subtilis: Cloning, expression, characterization, and its application in biocatalysis. Biotechnology Journal, 2007, 2, 249-253.	3.5	33
39	The role of proteomics in progressing insights into plant secondary metabolism. Frontiers in Plant Science, 2015, 6, 504.	3.6	30
40	Plasmaâ€Driven inâ€…Situ Production of Hydrogen Peroxide for Biocatalysis. ChemSusChem, 2020, 13, 2072-2079.	6.8	30
41	Rekombinante Cyanobakterien fÃ¼r die asymmetrische Reduktion von C=Câ€Bindungen mithilfe biokatalytischer Wasseroxidation. Angewandte Chemie, 2016, 128, 5672-5675.	2.0	29
42	Rational Protein Design of Paenibacillus barcinonensis Esterase EstA for Kinetic Resolution of Tertiary Alcohols. ChemCatChem, 2010, 2, 962-967.	3.7	28
43	Dramatically improved catalytic activity of an artificial (S)-selective arylmalonate decarboxylase by structure-guided directed evolution. Chemical Communications, 2011, 47, 7503.	4.1	26
44	Engineering the Promiscuous Racemase Activity of an Arylmalonate Decarboxylase. Chemistry - A European Journal, 2011, 17, 557-563.	3.3	26
45	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
46	Photobiocatalytic Oxyfunctionalization with High Reaction Rate using a Baeyerâ€“Villiger Monooxygenase from Burkholderia xenovorans in Metabolically Engineered Cyanobacteria. ACS Catalysis, 2022, 12, 66-72.	11.2	25
47	Hydrolase-catalyzed stereoselective preparation of protected Î±,Î±-dialkyl-Î±-hydroxycarboxylic acids. Tetrahedron: Asymmetry, 2008, 19, 1839-1843.	1.8	24
48	Arylmalonate Decarboxylaseâ€Catalyzed Asymmetric Synthesis of Both Enantiomers of Optically Pure Flurbiprofen. ChemCatChem, 2016, 8, 916-921.	3.7	24
49	Enantioselective kinetic resolution of phenylalkyl carboxylic acids using metagenomeâ€derived esterases. Microbial Biotechnology, 2010, 3, 59-64.	4.2	23
50	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
51	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
52	Oneâ€step enzyme extraction and immobilization for biocatalysis applications. Biotechnology Journal, 2011, 6, 463-469.	3.5	22
53	Internal Illumination to Overcome the Cell Density Limitation in the Scaleâ€up of Wholeâ€Cell Photobiocatalysis. ChemSusChem, 2021, 14, 3219-3225.	6.8	22
54	A Multi-Enzymatic Cascade Reaction for the Stereoselective Production of Î³-Oxyfunctionalyzed Amino Acids. Frontiers in Microbiology, 2016, 7, 425.	3.5	21

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55	Characterization of Type IV Carboxylate Reductases (CARs) for Whole Cellâ€Mediated Preparation of 3â€Hydroxytyrosol. ChemCatChem, 2019, 11, 4171-4181.	3.7	21
56	An Enzymatic Toolbox for the Kinetic Resolution of 2â€(Pyridinâ€xâ€yl)butâ€3â€ynâ€2â€ols and Tertiary Cyanohydrins. European Journal of Organic Chemistry, 2010, 2010, 2753-2758.	2.4	20
57	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
58	Einâ€Topfâ€Reaktionskaskaden durch Kombination einer eingekapselten Decarboxylase mit Metathese zur Synthese biobasierter Antioxidantien. Angewandte Chemie, 2016, 128, 15043-15047.	2.0	20
59	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
60	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
61	A combined bioinformatics and functional metagenomics approach to discovering lipolytic biocatalysts. Frontiers in Microbiology, 2015, 6, 1110.	3.5	19
62	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
63	Engineered hydrophobic pocket of (S)-selective arylmalonate decarboxylase variant by simultaneous saturation mutagenesis to improve catalytic performance. Bioscience, Biotechnology and Biochemistry, 2015, 79, 1965-1971.	1.3	18
64	Bioconversion of stilbenes in genetically engineered root and cell cultures of tobacco. Scientific Reports, 2017, 7, 45331.	3.3	18
65	Improvement of the Process Stability of Arylmalonate Decarboxylase by Immobilization for Biocatalytic Profen Synthesis. Frontiers in Microbiology, 2017, 8, 448.	3.5	18
66	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
67	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
68	Targeted Quantification of Isoforms of a Thylakoid-Bound Protein: MRM Method Development. Methods in Molecular Biology, 2018, 1696, 147-162.	0.9	17
69	Probing the enantioselectivity of Bacillus subtilis esterase BS2 for tert. alcohols. Journal of Molecular Catalysis B: Enzymatic, 2009, 60, 82-86.	1.8	16
70	STDâ€NMRâ€Based Protein Engineering of the Unique Arylpropionateâ€Racemase AMDase G74C. ChemBioChem, 2015, 16, 1943-1949.	2.6	15
71	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
72	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

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73	Accelerated Reaction Engineering of Photo(bio)catalytic Reactions through Parallelization with an Openâ€Source Photoreactor. ChemPhotoChem, 2021, 5, 957-965.	3.0	14
74	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
75	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
76	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
77	Photosynthetic production of enantioselective biocatalysts. Microbial Cell Factories, 2015, 14, 53.	4.0	12
78	Arylmalonate decarboxylaseâ€”a highly selective bacterial biocatalyst with unknown function. Applied Microbiology and Biotechnology, 2016, 100, 8621-8631.	3.6	12
79	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
80	Recent developments in compartmentalization of chemoenzymatic cascade reactions. Current Opinion in Green and Sustainable Chemistry, 2021, 32, 100538.	5.9	12
81	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
82	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
83	Molecular cloning and functional characterization of a two highly stereoselective borneol dehydrogenases from Salvia officinalis L. Phytochemistry, 2020, 172, 112227.	2.9	11
84	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
85	Highly stable protein immobilizationviamaleimido-thiol chemistry to monitor enzymatic activity. Analyst, The, 2018, 143, 2276-2284.	3.5	9
86	Ramanâ€mikrospektroskopischer Nachweis fÃ¼r den Metabolismus eines Tyrosinkinaseâ€Inhibitors, Neratinib, in Krebszellen. Angewandte Chemie, 2018, 130, 7370-7374.	2.0	9
87	Hydrogenâ€Driven Cofactor Regeneration for Stereoselective Wholeâ€Cell C=C Bond Reduction in Cupriavidus necator. ChemSusChem, 2019, 12, 2361-2365.	6.8	9
88	Cofactor Generation Cascade for Î±-Ketoglutarate and Fe(II)-Dependent Dioxygenases. ACS Sustainable Chemistry and Engineering, 2020, 8, 8604-8612.	6.7	9
89	A Structural View on the Stereospecificity of Plant Borneolâ€Type Dehydrogenases. ChemCatChem, 2021, 13, 2262-2277.	3.7	9
90	Rational Design of Resveratrol O-methyltransferase for the Production of Pinostilbene. International Journal of Molecular Sciences, 2021, 22, 4345.	4.1	9

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91	Expression and activity of heterologous hydroxyisocaproate dehydrogenases in Synechocystis sp. PCC 6803 Î”hoxYH. Engineering Microbiology, 2022, 2, 100008.	4.7	9
92	Light-driven hydroxylation of testosterone by Synechocystis sp. PCC 6803 expressing the heterologous CYP450 monooxygenase CYP110D1. Green Chemistry, 2022, 24, 6156-6167.	9.0	9
93	Thermally driven asymmetric domino reaction catalyzed by a thermostable esterase and its variants. Tetrahedron Letters, 2013, 54, 1921-1923.	1.4	7
94	Cloning and characterization of a new delta-specific l-leucine dioxygenase from Anabaena variabilis. Journal of Biotechnology, 2018, 284, 68-74.	3.8	7
95	Preparation of optically pure flurbiprofen via an integrated chemo-enzymatic synthesis pathway. Molecular Catalysis, 2019, 467, 135-142.	2.0	7
96	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
97	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
98	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
99	Artifizielle Lichtsammelkomplexe ermÃ¶glichen Rieskeâ€Oxygenaseâ€katalysierte Hydroxylierungen in nichtâ€photosynthetischen Zellen. Angewandte Chemie, 2020, 132, 4010-4016.	2.0	6
100	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
101	Simple Plugâ€in Synthetic Step for the Synthesis of (â^)â€Camphor from Renewable Starting Materials. ChemBioChem, 2021, 22, 2951-2956.	2.6	6
102	Evolving Enzymes for Biocatalysis. , 2016, , 1-17.		4
103	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
104	Light-driven Enzymatic Decarboxylation. Journal of Visualized Experiments, 2016, , .	0.3	4
105	Enzymatic Decarboxylation as a Tool for the Enzymatic Defunctionalization of Hydrophobic Bio-based Organic Acids. , 2018, , 89-118.		4
106	Gerichtete Evolution und rationales Design. MaÃŸgeschneiderte Enzyme. Chemie in Unserer Zeit, 2009, 43, 132-142.	0.1	3
107	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
108	Draft Genome Sequence of Bordetella bronchiseptica KU1201, the First Isolation Source of Arylmalonate Decarboxylase. Genome Announcements, 2015, 3, .	0.8	2

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109	Immobilization of Arylmalonate Decarboxylase. Catalysts, 2018, 8, 603.	3.5	2
110	Multi-enzyme cascades as synthetic tool for biocatalysis. Journal of Biotechnology, 2019, 294, 88.	3.8	2
111	C-C Bond Formation and Decarboxylation. , 2012, , 263-295.		1
112	Editorial: Applied Microbiology for Chemical Syntheses. Frontiers in Microbiology, 2017, 8, 1931.	3.5	1
113	Frontispiece: Overcoming the Incompatibility Challenge in Chemoenzymatic and Multiâ€Catalytic Cascade Reactions. Chemistry - A European Journal, 2018, 24, .	3.3	1
114	Multi-Enzymatic Cascades In Vitro. , 2021, , 31-48.		1
115	Practical Considerations Regarding the Choice of the Best High-Throughput Assay. Methods in Molecular Biology, 2018, 1685, 189-208.	0.9	1
116	CryoEM analysis of small plant biocatalysts at sub-2â€…Ã… resolution. Acta Crystallographica Section D: Structural Biology, 2022, 78, 113-123.	2.3	1
117	Protein engineering of arylmalonate decarboxylase variants with promiscuous racemising activity. New Biotechnology, 2014, 31, S88.	4.4	0
118	Evolving Enzymes for Biocatalysis. , 2017, , 271-287.		0
119	Arylmalonate Decarboxylaseâ€”A Versatile Biocatalyst for the Synthesis of Optically Pure Carboxylic Acids. Frontiers in Catalysis, 2021, 1, .	3.9	0
120	Structural characterization of a novel amino acid decarboxylase. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a427-a427.	0.1	0
121	Dimethyl Labeling-Based Quantitative Proteomics of Recalcitrant Cocoa Pod Tissue. Methods in Molecular Biology, 2020, 2139, 133-146.	0.9	0
122	A Structural View into the Complexity of Carbon Dioxide Fixation. ACS Central Science, 0, , .	11.3	0