Aitao Li

List of Publications by Year in descending order

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48 papers	2,175 citations	201674 27 h-index	233421 45 g-index
51 all docs	51 docs citations	51 times ranked	1798 citing authors

#	Article	IF	Citations
1	The Crucial Role of Methodology Development in Directed Evolution of Selective Enzymes. Angewandte Chemie - International Edition, 2020, 59, 13204-13231.	13.8	278
2	P450-Catalyzed Regio- and Diastereoselective Steroid Hydroxylation: Efficient Directed Evolution Enabled by Mutability Landscaping. ACS Catalysis, 2018, 8, 3395-3410.	11.2	128
3	Structure-Guided Triple-Code Saturation Mutagenesis: Efficient Tuning of the Stereoselectivity of an Epoxide Hydrolase. ACS Catalysis, 2016, 6, 1590-1597.	11.2	110
4	Regioâ€•and Stereoselective Steroid Hydroxylation at C7 by Cytochromeâ€…P450 Monooxygenase Mutants. Angewandte Chemie - International Edition, 2020, 59, 12499-12505.	13.8	83
5	Wholeâ€Cellâ€Catalyzed Multiple Regioâ€•and Stereoselective Functionalizations in Cascade Reactions Enabled by Directed Evolution. Angewandte Chemie - International Edition, 2016, 55, 12026-12029.	13.8	79
6	Pyrococcus furiosus Argonaute-mediated nucleic acid detection. Chemical Communications, 2019, 55, 13219-13222.	4.1	76
7	Preparation of Structurally Diverse Chiral Alcohols by Engineering Ketoreductase CgKR1. ACS Catalysis, 2017, 7, 7174-7181.	11.2	74
8	One-pot conversion of biomass-derived xylose to furfuralcohol by a chemo-enzymatic sequential acid-catalyzed dehydration and bioreduction. Green Chemistry, 2017, 19, 3844-3850.	9.0	72
9	Pervasive cooperative mutational effects on multiple catalytic enzyme traits emerge via long-range conformational dynamics. Nature Communications, 2021, 12, 1621.	12.8	72
10	Enantioselective Hydrolysis of Racemic and Meso-Epoxides with Recombinant Escherichia coli Expressing Epoxide Hydrolase from Sphingomonas sp. HXN-200: Preparation of Epoxides and Vicinal Diols in High ee and High Concentration. ACS Catalysis, 2013, 3, 752-759.	11.2	69
11	PfAgo-based detection of SARS-CoV-2. Biosensors and Bioelectronics, 2021, 177, 112932.	10.1	66
12	Chemoâ€•and Regioselective Dihydroxylation of Benzene to Hydroquinone Enabled by Engineered Cytochromeâ€…P450 Monooxygenase. Angewandte Chemie - International Edition, 2019, 58, 764-768.	13.8	62
13	Bacterial cytochrome P450-catalyzed regio- and stereoselective steroid hydroxylation enabled by directed evolution and rational design. Bioresources and Bioprocessing, 2020, 7, .	4.2	60
14	One-pot biocatalytic route from cycloalkanes to Î±,Ï‰â€•dicarboxylic acids by designed Escherichia coli consortia. Nature Communications, 2020, 11, 5035.	12.8	60
15	Asymmetric epoxidation of alkenes and benzylic hydroxylation with P450tol monooxygenase from Rhodococcus coprophilus TC-2. Chemical Communications, 2014, 50, 8771.	4.1	49
16	Whole-cell based solvent-free system for one-pot production of biodiesel from waste grease. Bioresource Technology, 2012, 114, 725-729.	9.6	48
17	Engineered P450pyr monooxygenase for asymmetric epoxidation of alkenes with unique and high enantioselectivity. Chemical Communications, 2013, 49, 11572.	4.1	47
18	Temperature-responsive nanobiocatalysts with an upper critical solution temperature for high performance biotransformation and easy catalyst recycling: efficient hydrolysis of cellulose to glucose. Green Chemistry, 2015, 17, 1194-1203.	9.0	44

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19	A redox-mediated Kemp eliminase. Nature Communications, 2017, 8, 14876.	12.8	44
20	Die zentrale Rolle der Methodenentwicklung in der gerichteten Evolution selektiver Enzyme. Angewandte Chemie, 2020, 132, 13304-13333.	2.0	42
21	Statistical Analysis of the Benefits of Focused Saturation Mutagenesis in Directed Evolution Based on Reduced Amino Acid Alphabets. ACS Catalysis, 2019, 9, 7769-7778.	11.2	40
22	Beating Bias in the Directed Evolution of Proteins: Combining Highâ€Fidelity onâ€Chip Solidâ€Phase Gene Synthesis with Efficient Gene Assembly for Combinatorial Library Construction. ChemBioChem, 2018, 19, 221-228.	2.6	39
23	Bioamination of alkane with ammonium by an artificially designed multienzyme cascade. Metabolic Engineering, 2018, 47, 184-189.	7.0	35
24	Integrating interfacial self-assembly and electrostatic complexation at an aqueous interface for capsule synthesis and enzyme immobilization. Journal of Materials Chemistry A, 2014, 2, 1672-1676.	10.3	34
25	Whole-Cell-Catalyzed Multiple Regio- and Stereoselective Functionalizations in Cascade Reactions Enabled by Directed Evolution. Angewandte Chemie, 2016, 128, 12205-12208.	2.0	33
26	A Chemoenzymatic Strategy for the Synthesis of Steroid Drugs Enabled by P450 Monooxygenase-Mediated Steroidal Core Modification. ACS Catalysis, 2022, 12, 2907-2914.	11.2	33
27	Boosting the efficiency of site-saturation mutagenesis for a difficult-to-randomize gene by a two-step PCR strategy. Applied Microbiology and Biotechnology, 2018, 102, 6095-6103.	3.6	30
28	One-pot biosynthesis of 1,6-hexanediol from cyclohexane byde novodesigned cascade biocatalysis. Green Chemistry, 2020, 22, 7476-7483.	9.0	30
29	Analysis of Enantioselective Biotransformations Using a Few Hundred Cells on an Integrated Microfluidic Chip. Journal of the American Chemical Society, 2016, 138, 2102-2105.	13.7	28
30	Biosynthesis of organic molecules via artificial cascade reactions based on cytochrome P450 monooxygenases. Green Synthesis and Catalysis, 2020, 1, 52-59.	6.8	27
31	Chemical and Biocatalytic Routes to Arbutin â€. Molecules, 2019, 24, 3303.	3.8	26
32	Rapid and Error-Free Site-Directed Mutagenesis by a PCR-Free In Vitro CRISPR/Cas9-Mediated Mutagenic System. ACS Synthetic Biology, 2018, 7, 2236-2244.	3.8	25
33	Solidâ€Phase Gene Synthesis for Mutant Library Construction: The Future of Directed Evolution?. ChemBioChem, 2018, 19, 2023-2032.	2.6	24
34	Reductive Amination of Biobased Levulinic Acid to Unnatural Chiral Î³-Amino Acid Using an Engineered Amine Dehydrogenase. ACS Sustainable Chemistry and Engineering, 2020, 8, 17054-17061.	6.7	24
35	Bioorthogonal catalytic nanozyme-mediated lysosomal membrane leakage for targeted drug delivery. Theranostics, 2022, 12, 1132-1147.	10.0	24
36	Asymmetric trans-dihydroxylation of cyclic olefins by enzymatic or chemo-enzymatic sequential epoxidation and hydrolysis in one-pot. Green Chemistry, 2011, 13, 2452.	9.0	23

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37	Chemoâ€•and Regioselective Dihydroxylation of Benzene to Hydroquinone Enabled by Engineered Cytochromeâ€…P450 Monooxygenase. Angewandte Chemie, 2019, 131, 774-778.	2.0	22
38	Regioâ€•and Stereoselective Steroid Hydroxylation at C7 by Cytochromeâ€…P450 Monooxygenase Mutants. Angewandte Chemie, 2020, 132, 12599-12605.	2.0	19
39	Hinge-Type Dimerization of Proteins by a Tetracysteine Peptide of High Pairing Specificity. Biochemistry, 2018, 57, 3658-3664.	2.5	18
40	Engineering P450_{LaMO}stereospecificity and product selectivity for selective Câ€“H oxidation of tetralin-like alkylbenzenes. Catalysis Science and Technology, 2018, 8, 4638-4644.	4.1	17
41	Recent advances in the sustainable production of Î±,Ï‰-C6 bifunctional compounds enabled by chemo-/biocatalysts. Green Chemistry, 2022, 24, 4270-4303.	9.0	13
42	Molecular Basis for a Toluene Monooxygenase to Govern Substrate Selectivity. ACS Catalysis, 2022, 12, 2831-2839.	11.2	11
43	Exploring the Potential of Cytochrome P450 CYP109B1 Catalyzed Regioâ€”and Stereoselective Steroid Hydroxylation. Frontiers in Chemistry, 2021, 9, 649000.	3.6	10
44	Engineering an Alcohol Dehydrogenase for Balancing Kinetics in NADPH Regeneration with 1,4-Butanediol as a Cosubstrate. ACS Sustainable Chemistry and Engineering, 2019, 7, 15706-15714.	6.7	7
45	Wastewater-powered high-value chemical synthesis in a hybrid bioelectrochemical system. IScience, 2021, 24, 103401.	4.1	7
46	A single digestion, single-stranded oligonucleotide mediated PCR-independent site-directed mutagenesis method. Applied Microbiology and Biotechnology, 2020, 104, 3993-4003.	3.6	5
47	Active-site engineering of Ï‰-transaminase from Ochrobactrum anthropi for preparation of L-2-aminobutyric acid. BMC Biotechnology, 2021, 21, 55.	3.3	5
48	Chemoâ€•and Regioselective Dihydroxylation of Benzene to Hydroquinone Enabled by Engineered Cytochromeâ€…P450 Monooxygenase. Angewandte Chemie, 2018, 131, 930.	2.0	0