Hyungdon Yun

List of Publications by Year
in descending order

112 papers	3,727 citations	126708 33 h-index	155451 55 g-index
116 all docs	116 docs citations	116 times ranked	3111 citing authors

#	Article	IF	Citations
1	Lightâ€Triggered In Situ Biosynthesis of Artificial Melanin for Skin Protection. Advanced Science, 2022, 9, e2103503.	5.6	12
2	Multi-enzymatic cascade reactions with <i>Escherichia coli</i>-based modules for synthesizing various bioplastic monomers from fatty acid methyl esters. Green Chemistry, 2022, 24, 2222-2231.	4.6	17
3	Non-Canonical Amino Acid-Based Engineering of (R)-Amine Transaminase. Frontiers in Chemistry, 2022, 10, 839636.	1.8	9
4	An Integrated Cofactor/Coâ€Product Recycling Cascade for theâ€‰Biosynthesis of Nylon Monomers from Cycloalkylamines. Angewandte Chemie, 2021, 133, 3523-3528.	1.6	6
5	An Integrated Cofactor/Coâ€Product Recycling Cascade for theâ€‰Biosynthesis of Nylon Monomers from Cycloalkylamines. Angewandte Chemie - International Edition, 2021, 60, 3481-3486.	7.2	19
6	Recent Advances in Biocatalysis with Chemical Modification and Expanded Amino Acid Alphabet. Chemical Reviews, 2021, 121, 6173-6245.	23.0	62
7	Promoter engineeringâ€mediated Tuning of esterase and transaminase expression for the chemoenzymatic synthesis of sitagliptin phosphate at the kilogramâ€scale. Biotechnology and Bioengineering, 2021, 118, 3263-3268.	1.7	11
8	A multi-enzyme cascade reaction for the production of Î±,Ï‰-dicarboxylic acids from free fatty acids. Journal of Industrial and Engineering Chemistry, 2021, 98, 358-365.	2.9	6
9	The Reductive Amination of Carbonyl Compounds Using Native Amine Dehydrogenase from Laribacter hongkongensis. Biotechnology and Bioprocess Engineering, 2021, 26, 384-391.	1.4	6
10	Synthesis of Sitagliptin Intermediate by a Multi-Enzymatic Cascade System Using Lipase and Transaminase With Benzylamine as an Amino Donor. Frontiers in Bioengineering and Biotechnology, 2021, 9, 757062.	2.0	9
11	Improving the Stability and Activity of Arginine Decarboxylase at Alkaline pH for the Production of Agmatine. Frontiers in Catalysis, 2021, 1, .	1.8	2
12	Chemical modification of enzymes to improve biocatalytic performance. Biotechnology Advances, 2021, 53, 107868.	6.0	32
13	One-pot biocatalytic synthesis of nylon monomers from cyclohexanol using<i>Escherichia coli</i>-based concurrent cascade consortia. Green Chemistry, 2021, 23, 9447-9453.	4.6	19
14	Discovery of Novel Pseudomonas putida Flavin-Binding Fluorescent Protein Variants with Significantly Improved Quantum Yield. Journal of Agricultural and Food Chemistry, 2020, 68, 5873-5879.	2.4	11
15	Enzymatic Synthesis of Aliphatic Primary Ï‰-Amino Alcohols from Ï‰-Amino Fatty Acids by Carboxylic Acid Reductase. Catalysis Letters, 2020, 150, 3079-3085.	1.4	8
16	Recent Advances in Enzyme Engineering through Incorporation of Unnatural Amino Acids. Biotechnology and Bioprocess Engineering, 2019, 24, 592-604.	1.4	21
17	Kinetic Resolution of Racemic Amines to Enantiopure (S)-amines by a Biocatalytic Cascade Employing Amine Dehydrogenase and Alanine Dehydrogenase. Catalysts, 2019, 9, 600.	1.6	15
18	Production of 12-hydroxy dodecanoic acid methyl ester using a signal peptide sequence-optimized transporter AlkL and a novel monooxygenase. Bioresource Technology, 2019, 291, 121812.	4.8	16

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19	Structural basis of substrate recognition by a novel thermostable (S)-enantioselective Ï‰-transaminase from Thermomicrobium roseum. Scientific Reports, 2019, 9, 6958.	1.6	7
20	Enzymatic Synthesis of Ï‰-Hydroxydodecanoic Acid By Employing a Cytochrome P450 from Limnobacter sp. 105 MED. Catalysts, 2019, 9, 54.	1.6	6
21	Deracemization of Racemic Amines to Enantiopure (<i>R</i>)â€•and (<i>S</i>)â€amines by Biocatalytic Cascade Employing Ï‰â€Transaminase and Amine Dehydrogenase. ChemCatChem, 2019, 11, 1898-1902.	1.8	42
22	<i>In vivo</i> biosynthesis of tyrosine analogs and their concurrent incorporation into a residue-specific manner for enzyme engineering. Chemical Communications, 2019, 55, 15133-15136.	2.2	9
23	Glutamate as an Efficient Amine Donor for the Synthesis of Chiral Î²â€•and Î³â€Amino Acids Using Transaminase. ChemCatChem, 2019, 11, 1437-1440.	1.8	16
24	Enzymatic synthesis of sitagliptin intermediate using a novel Ï‰-transaminase. Enzyme and Microbial Technology, 2019, 120, 52-60.	1.6	34
25	Manganese and cobalt recovery by surface display of metal binding peptide on various loops of OmpC in <i>Escherichia coli</i>. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 31-41.	1.4	16
26	Biosynthesis of the Nylon 12 Monomer, Ï‰â€Aminododecanoic Acid with Novel CYP153A, AlkJ, and Ï‰â€TA Enzymes. Biotechnology Journal, 2018, 13, e1700562.	1.8	33
27	Biosynthesis of Nylon 12 Monomer, Ï‰-Aminododecanoic Acid Using Artificial Self-Sufficient P450, AlkJ and Ï‰-TA. Catalysts, 2018, 8, 400.	1.6	18
28	Characterization of ELP-fused Ï‰-Transaminase and Its Application for the Biosynthesis of Î²-Amino Acid. Biotechnology and Bioprocess Engineering, 2018, 23, 481-489.	1.4	4
29	Parallel anti-sense two-step cascade for alcohol amination leading to Ï‰-amino fatty acids and Î±,Ï‰-diamines. Green Chemistry, 2018, 20, 4591-4595.	4.6	38
30	Oxidoreductase-Catalyzed Synthesis of Chiral Amines. ACS Catalysis, 2018, 8, 10985-11015.	5.5	150
31	To the Final Goal: Can We Predict and Suggest Mutations for Protein to Develop Desired Phenotype?. Biotechnology and Bioprocess Engineering, 2018, 23, 134-143.	1.4	5
32	Recent Advances in Ï‰-Transaminase-Mediated Biocatalysis for the Enantioselective Synthesis of Chiral Amines. Catalysts, 2018, 8, 254.	1.6	139
33	Biosynthesis of Medium- to Long-Chain Î±,Ï‰-Diols from Free Fatty Acids Using CYP153A Monooxygenase, Carboxylic Acid Reductase, and E. coli Endogenous Aldehyde Reductases. Catalysts, 2018, 8, 4.	1.6	35
34	Biocatalyzed Câˆ’C Bond Formation for the Production of Alkaloids. ChemCatChem, 2018, 10, 4783-4804.	1.8	30
35	Structural dynamics of the transaminase active site revealed by the crystal structure of a co-factor free omega-transaminase from Vibrio fluvialis JS17. Scientific Reports, 2018, 8, 11454.	1.6	14
36	Engineering an FMN-based iLOV protein for the detection of arsenic ions. Analytical Biochemistry, 2017, 525, 38-43.	1.1	22

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37	Biotransformation of Î²-keto nitriles to chiral (S)-Î²-amino acids using nitrilase and Ï‰-transaminase. Biotechnology Letters, 2017, 39, 535-543.	1.1	24
38	Simultaneously Enhancing the Stability and Catalytic Activity of Multimeric Lysine Decarboxylase CadA by Engineering Interface Regions for Enzymatic Production of Cadaverine at High Concentration of Lysine. Biotechnology Journal, 2017, 12, 1700278.	1.8	30
39	Protein engineering for covalent immobilization and enhanced stability through incorporation of multiple noncanonical amino acids. Biotechnology and Bioprocess Engineering, 2017, 22, 248-255.	1.4	14
40	Evaluating the role of puckering and fluorine atom in stability and folding of fluoroproline containing proteins. Biotechnology and Bioprocess Engineering, 2017, 22, 504-511.	1.4	9
41	Comparative analysis of polyspecificity of the endogenous tRNA synthetase of different expression host towards photocrosslinking amino acids using an in silico approach. Journal of Molecular Graphics and Modelling, 2017, 75, 375-382.	1.3	1
42	The Kinetic Resolution of Racemic Amines Using a Whole-Cell Biocatalyst Co-Expressing Amine Dehydrogenase and NADH Oxidase. Catalysts, 2017, 7, 251.	1.6	17
43	Biochemical characterization of thermostable Ï‰-transaminase from Sphaerobacter thermophilus and its application for producing aromatic Î²- and Î³-amino acids. Enzyme and Microbial Technology, 2016, 87-88, 52-60.	1.6	64
44	Asymmetric synthesis of aromatic Î²â€‘amino acids using Ï‰â€‘transaminase: Optimizing the lipase concentration to obtain thermodynamically unstable Î²â€‘keto acids. Biotechnology Journal, 2016, 11, 185-190.	1.8	32
45	Identification of novel thermostable Ï‰-transaminase and its application for enzymatic synthesis of chiral amines at high temperature. RSC Advances, 2016, 6, 69257-69260.	1.7	33
46	Versatile biocatalysis of fungal cytochrome P450 monooxygenases. Microbial Cell Factories, 2016, 15, 125.	1.9	132
47	Production of Ï‰-hydroxy palmitic acid using CYP153A35 and comparison of cytochrome P450 electron transfer system in vivo. Applied Microbiology and Biotechnology, 2016, 100, 10375-10384.	1.7	28
48	FMN-Based Fluorescent Proteins as Heavy Metal Sensors Against Mercury Ions. Journal of Microbiology and Biotechnology, 2016, 26, 530-539.	0.9	21
49	Improved NADPH Regeneration for Fungal Cytochrome P450 Monooxygenase by Co-Expressing Bacterial Glucose Dehydrogenase in Resting-Cell Biotransformation of Recombinant Yeast. Journal of Microbiology and Biotechnology, 2016, 26, 2076-2086.	0.9	25
50	Incorporating unnatural amino acids to engineer biocatalysts for industrial bioprocess applications. Biotechnology Journal, 2015, 10, 1862-1876.	1.8	43
51	Comparative functional characterization of a novel benzoate hydroxylase cytochrome P450 of Fusarium oxysporum. Enzyme and Microbial Technology, 2015, 70, 58-65.	1.6	17
52	Production of chiral Î²-amino acids using Ï‰-transaminase from Burkholderia graminis. Journal of Biotechnology, 2015, 196-197, 1-8.	1.9	33
53	Engineering Transaminase for Stability Enhancement and Siteâ€‘Specific Immobilization through Multiple Noncanonical Amino Acids Incorporation. ChemCatChem, 2015, 7, 417-421.	1.8	40
54	Ortho-hydroxylation of mammalian lignan enterodiol by cytochrome P450s from Actinomycetes sp.. Korean Journal of Chemical Engineering, 2015, 32, 471-477.	1.2	4

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55	Construction of a high efficiency copper adsorption bacterial system via peptide display and its application on copper dye polluted wastewater. Bioprocess and Biosystems Engineering, 2015, 38, 2077-2084.	1.7	20
56	Engineering thermal properties of elastin-like polypeptides by incorporation of unnatural amino acids in a cell-free protein synthesis system. Biotechnology and Bioprocess Engineering, 2015, 20, 417-422.	1.4	28
57	Unnatural amino acid mutagenesis-based enzyme engineering. Trends in Biotechnology, 2015, 33, 462-470.	4.9	66
58	Temperature sensing using red fluorescent protein. Biotechnology and Bioprocess Engineering, 2015, 20, 67-72.	1.4	17
59	Fungal cytochrome P450 monooxygenases of Fusarium oxysporum for the synthesis of Ï‰-hydroxy fatty acids in engineered Saccharomyces cerevisiae. Microbial Cell Factories, 2015, 14, 45.	1.9	56
60	Kinetic resolution of amines by (R)-selective omega-transaminase from Mycobacterium vanbaalenii. Journal of Industrial and Engineering Chemistry, 2015, 23, 128-133.	2.9	14
61	A New-Generation Fluorescent-Based Metal Sensor â€“ iLOV Protein. Journal of Microbiology and Biotechnology, 2015, 25, 503-510.	0.9	25
62	In Vivo Residueâ€Specific Dopaâ€Incorporated Engineered Mussel Bioglue with Enhanced Adhesion and Water Resistance. Angewandte Chemie - International Edition, 2014, 53, 13360-13364.	7.2	88
63	Frontispiece: In Vivo Residue-Specific Dopa-Incorporated Engineered Mussel Bioglue with Enhanced Adhesion and Water Resistance. Angewandte Chemie - International Edition, 2014, 53, n/a-n/a.	7.2	0
64	Enhancing Thermostability and Organic Solvent Tolerance of Ï‰â€Transaminase through Global Incorporation of Fluorotyrosine. Advanced Synthesis and Catalysis, 2014, 356, 993-998.	2.1	40
65	Engineering lead-sensing GFP through rational designing. Chemical Communications, 2014, 50, 15979-15982.	2.2	13
66	Enzymatic synthesis of chiral Î³-amino acids using Ï‰-transaminase. Chemical Communications, 2014, 50, 12680-12683.	2.2	24
67	Translational incorporation of multiple unnatural amino acids in a cell-free protein synthesis system. Biotechnology and Bioprocess Engineering, 2014, 19, 426-432.	1.4	13
68	Engineering class I cytochrome P450 by gene fusion with NADPH-dependent reductase and S. avermitilis host development for daidzein biotransformation. Applied Microbiology and Biotechnology, 2014, 98, 8191-8200.	1.7	28
69	Frontispiz: In Vivo Residue-Specific Dopa-Incorporated Engineered Mussel Bioglue with Enhanced Adhesion and Water Resistance. Angewandte Chemie, 2014, 126, n/a-n/a.	1.6	0
70	Bioconversion of p-coumaric acid to p-hydroxystyrene using phenolic acid decarboxylase from B. amyloliquefaciens in biphasic reaction system. Applied Microbiology and Biotechnology, 2013, 97, 1501-1511.	1.7	62
71	High throughput screening methods for Ï‰-transaminases. Biotechnology and Bioprocess Engineering, 2013, 18, 1-7.	1.4	22
72	One-pot one-step deracemization of amines using Ï‰-transaminases. Chemical Communications, 2013, 49, 8629.	2.2	52

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73	An in silico approach to evaluate the polyspecificity of methionyl-tRNA synthetases. Journal of Molecular Graphics and Modelling, 2013, 39, 79-86.	1.3	6
74	Enhancing the biophysical properties of mRFP1 through incorporation of fluoroproline. Biochemical and Biophysical Research Communications, 2013, 440, 509-514.	1.0	18
75	Development of Colorimetric HTS Assay of Cytochrome P450 for <i>ortho</i>â€Specific Hydroxylation, and Engineering of CYP102D1 with Enhanced Catalytic Activity and Regioselectivity. ChemBioChem, 2013, 14, 1231-1238.	1.3	9
76	Asymmetric synthesis of<scp>l</scp>-6-hydroxynorleucine from 2-keto-6-hydroxyhexanoic acid using a branched-chain aminotransferase. Biocatalysis and Biotransformation, 2012, 30, 171-176.	1.1	2
77	Deracemization of unnatural amino acid: homoalanine using d-amino acid oxidase and Ï‰-transaminase. Organic and Biomolecular Chemistry, 2012, 10, 2482.	1.5	43
78	Ï‰-Transaminases for the Production of Optically Pure Amines and Unnatural Amino Acids. ACS Catalysis, 2012, 2, 993-1001.	5.5	264
79	Evaluation and biosynthetic incorporation of chlorotyrosine into recombinant proteins. Biotechnology and Bioprocess Engineering, 2012, 17, 679-686.	1.4	14
80	Engineering of daidzein 3â€™-hydroxylase P450 enzyme into catalytically self-sufficient cytochrome P450. Microbial Cell Factories, 2012, 11, 81.	1.9	22
81	Cloning, expression and characterization of CYP102D1, a selfâ€sufficient P450 monooxygenase from <i>Streptomycesâ€ƒavermitilis</i>. FEBS Journal, 2012, 279, 1650-1662.	2.2	40
82	Reassignment of sense codons: Designing and docking of proline analogs for Escherichia coli prolyl-tRNA synthetase to expand the genetic code. Journal of Molecular Catalysis B: Enzymatic, 2012, 78, 57-64.	1.8	6
83	Novel ironâ€"sulfur containing NADPHâ€Reductase from <i>Nocardia farcinica</i> IFM10152 and fusion construction with CYP51 lanosterol demethylase. Biotechnology and Bioengineering, 2012, 109, 630-636.	1.7	8
84	Deletional Protein Engineering Based on Stable Fold. PLoS ONE, 2012, 7, e51510.	1.1	8
85	Bioconjugation of <scp>l</scp>-3,4-Dihydroxyphenylalanine Containing Protein with a Polysaccharide. Bioconjugate Chemistry, 2011, 22, 551-555.	1.8	49
86	A facile and efficient method for the incorporation of multiple unnatural amino acids into a single protein. Chemical Communications, 2011, 47, 3430.	2.2	24
87	Kinetic resolution of aromatic Î²-amino acids by Ï‰-transaminase. Chemical Communications, 2011, 47, 5894.	2.2	59
88	Biosynthetic substitution of tyrosine in green fluorescent protein with its surrogate fluorotyrosine in Escherichia coli. Biotechnology Letters, 2011, 33, 2201-2207.	1.1	17
89	Asymmetric synthesis of (R)-3-fluoroalanine from 3-fluoropyruvate using omega-transaminase. Biotechnology and Bioprocess Engineering, 2011, 16, 291-296.	1.4	20
90	Crystallization and preliminary X-ray crystallographic studies of Î²-transaminase from<i>Mesorhizobium</i>sp. strain LUK. Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 231-233.	0.7	4

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91	Development of a Selective, Sensitive, and Reversible Biosensor by the Genetic Incorporation of a Metalâ€Binding Site into Green Fluorescent Protein. Angewandte Chemie - International Edition, 2011, 50, 6534-6537.	7.2	55
92	Kinetic Resolution of 3-Fluoroalanine Using a Fusion Protein of<scp>D</scp>-Amino Acid Oxidase with<i>Vitroscilla</i>Hemoglobin. Bioscience, Biotechnology and Biochemistry, 2011, 75, 820-822.	0.6	7
93	Apple Flavonoid Phloretin Inhibits Escherichia coli O157:H7 Biofilm Formation and Ameliorates Colon Inflammation in Rats. Infection and Immunity, 2011, 79, 4819-4827.	1.0	180
94	Enzymatic Synthesis of L-tert-Leucine with Branched Chain Aminotransferase. Journal of Microbiology and Biotechnology, 2011, 21, 1049-1052.	0.9	17
95	Kinetic resolution of Î±-methylbenzylamine by recombinant Pichia pastoris expressing Ï‰-transaminase. Biotechnology and Bioprocess Engineering, 2010, 15, 429-434.	1.4	20
96	Asymmetric synthesis of l-tert-leucine and l-3-hydroxyadamantylglycine using branched chain aminotransferase. Journal of Molecular Catalysis B: Enzymatic, 2010, 66, 228-233.	1.8	29
97	Engineering Protein Sequence Composition for Folding Robustness Renders Efficient Noncanonical Amino acid Incorporations. ChemBioChem, 2010, 11, 2521-2524.	1.3	33
98	Crystallization and preliminary X-ray crystallographic studies of omega-transaminase from<i>Vibrio fluvialis</i>JS17. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 923-925.	0.7	11
99	Comparison of P aprE , P amyE , and P P43 promoter strength for Î²-galactosidase and staphylokinase expression in Bacillus subtilis. Biotechnology and Bioprocess Engineering, 2008, 13, 313-318.	1.4	16
100	Enzymatic production of (R)-phenylacetylcarbinol by pyruvate decarboxylase from Zymomonas mobilis. Biotechnology and Bioprocess Engineering, 2008, 13, 372-376.	1.4	12
101	Stereospecific Synthesis of (R)-2-Hydroxy Carboxylic Acids Using Recombinant E. coli BL21 Overexpressing YiaE from Escherichia coli K12 and Glucose Dehydrogenase from Bacillus subtilis. Biotechnology Progress, 2008, 21, 366-371.	1.3	37
102	Synthesis of Enantiopure (S)-2-Hydroxyphenylbutanoic Acid Using Novel Hydroxy Acid Dehydrogenase from Enterobacter sp. BK2K. Biotechnology Progress, 2008, 23, 606-612.	1.3	8
103	Asymmetric Synthesis of (<i>S</i>)-Î±-Methylbenzylamine by Recombinant<i>Escherichia coli</i>Co-Expressing Omega-Transaminase and Acetolactate Synthase. Bioscience, Biotechnology and Biochemistry, 2008, 72, 3030-3033.	0.6	49
104	Cloning and Characterization of a Novel Î²-Transaminase from Mesorhizobium sp. Strain LUK: a New Biocatalyst for the Synthesis of Enantiomerically Pure Î²-Amino Acids. Applied and Environmental Microbiology, 2007, 73, 1772-1782.	1.4	70
105	Synthesis of enantiomerically puretrans-(1R,2R)- andcis-(1S,2R)-1-amino-2-indanol by lipase and Ï‰-transaminase. Biotechnology and Bioengineering, 2006, 93, 391-395.	1.7	36
106	Revisit of aminotransferase in the genomic era and its application to biocatalysis. Journal of Molecular Catalysis B: Enzymatic, 2005, 37, 47-55.	1.8	122
107	Use of Enrichment Culture for Directed Evolution of the Vibrio fluvialis JS17 Ï‰-Transaminase, Which Is Resistant to Product Inhibition by Aliphatic Ketones. Applied and Environmental Microbiology, 2005, 71, 4220-4224.	1.4	64
108	Ï‰-Amino Acid:Pyruvate Transaminase from Alcaligenes denitrificans Y2k-2: a New Catalyst for Kinetic Resolution of Î²-Amino Acids and Amines. Applied and Environmental Microbiology, 2004, 70, 2529-2534.	1.4	92

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109	Kinetic resolution of (R,S)-sec-butylamine using omega-transaminase fromVibrio fluvialis JS17 under reduced pressure. Biotechnology and Bioengineering, 2004, 87, 772-778.	1.7	75
110	Simultaneous synthesis of enantiomerically pure (R)-1-phenylethanol and (R)-alpha-methylbenzylamine from racemic alpha-methylbenzylamine using omega-transaminase/alcohol dehydrogenase/glucose dehydrogenase coupling reaction. Biotechnology Letters, 2003, 25, 809-814.	1.1	43
111	Simultaneous synthesis of enantiomerically pure (S)-amino acids and (R)-amines using Î±/Ï‰-aminotransferase coupling reactions with two-liquid phase reaction system. Journal of Molecular Catalysis B: Enzymatic, 2003, 26, 273-285.	1.8	22
112	Simultaneous synthesis of enantiomerically pure (S)-amino acids and (R)-amines using coupled transaminase reactions. Biotechnology and Bioengineering, 2003, 81, 783-789.	1.7	38