Jeong Chan Joo

List of Publications by Year
in descending order

83 papers	2,744 citations	159585 30 h-index	197818 49 g-index
88 all docs	88 docs citations	88 times ranked	2656 citing authors

#	Article	IF	Citations
1	Biological Valorization of Poly(ethylene terephthalate) Monomers for Upcycling Waste PET. ACS Sustainable Chemistry and Engineering, 2019, 7, 19396-19406.	6.7	141
2	Metabolic engineering for the synthesis of polyesters: A 100-year journey from polyhydroxyalkanoates to non-natural microbial polyesters. Metabolic Engineering, 2020, 58, 47-81.	7.0	138
3	Efficient CO2-Reducing Activity of NAD-Dependent Formate Dehydrogenase from Thiobacillus sp. KNK65MA for Formate Production from CO2 Gas. PLoS ONE, 2014, 9, e103111.	2.5	126
4	Development of thermostable Candida antarctica lipase B through novel in silico design of disulfide bridge. Biotechnology and Bioengineering, 2012, 109, 867-876.	3.3	119
5	Recent advances in development of biomass pretreatment technologies used in biorefinery for the production of bio-based fuels, chemicals and polymers. Korean Journal of Chemical Engineering, 2015, 32, 1945-1959.	2.7	104
6	Thermostabilization of Bacillus circulans xylanase: Computational optimization of unstable residues based on thermal fluctuation analysis. Journal of Biotechnology, 2011, 151, 56-65.	3.8	101
7	Metabolic engineering of Corynebacterium glutamicum for enhanced production of 5-aminovaleric acid. Microbial Cell Factories, 2016, 15, 174.	4.0	96
8	Recent Advances in Sustainable Plastic Upcycling and Biopolymers. Biotechnology Journal, 2020, 15, e1900489.	3.5	92
9	Metabolic Engineering of Corynebacterium glutamicum for the High-Level Production of Cadaverine That Can Be Used for the Synthesis of Biopolyamide 510. ACS Sustainable Chemistry and Engineering, 2018, 6, 5296-5305.	6.7	83
10	Alkene hydrogenation activity of enoate reductases for an environmentally benign biosynthesis of adipic acid. Chemical Science, 2017, 8, 1406-1413.	7.4	77
11	Exploring Bacterial Carboxylate Reductases for the Reduction of Bifunctional Carboxylic Acids. Biotechnology Journal, 2017, 12, 1600751.	3.5	74
12	Recombinant Ralstonia eutropha engineered to utilize xylose and its use for the production of poly(3-hydroxybutyrate) from sunflower stalk hydrolysate solution. Microbial Cell Factories, 2016, 15, 95.	4.0	66
13	Metabolic engineering of Corynebacterium glutamicum for fermentative production of chemicals in biorefinery. Applied Microbiology and Biotechnology, 2018, 102, 3915-3937.	3.6	60
14	Thermostabilization of Bacillus circulans xylanase via computational design of a flexible surface cavity. Journal of Biotechnology, 2010, 146, 31-39.	3.8	58
15	One-Pot Chemo-bioprocess of PET Depolymerization and Recycling Enabled by a Biocompatible Catalyst, Betaine. ACS Catalysis, 2021, 11, 3996-4008.	11.2	58
16	Stabilization of Candida antarctica lipase B in hydrophilic organic solvent by rational design of hydrogen bond. Biotechnology and Bioprocess Engineering, 2012, 17, 722-728.	2.6	54
17	Structure-Based Mutational Studies of Substrate Inhibition of Betaine Aldehyde Dehydrogenase BetB from Staphylococcus aureus. Applied and Environmental Microbiology, 2014, 80, 3992-4002.	3.1	52
18	Metabolic engineering of Corynebacterium glutamicum for the production of glutaric acid, a C5 dicarboxylic acid platform chemical. Metabolic Engineering, 2019, 51, 99-109.	7.0	50

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19	Chemoautotroph Cupriavidus necator as a potential game-changer for global warming and plastic waste problem: A review. Bioresource Technology, 2021, 340, 125693.	9.6	50
20	Engineering a short, aldolase-based pathway for (R)-1,3-butanediol production in Escherichia coli. Metabolic Engineering, 2018, 48, 13-24.	7.0	49
21	Production of 5-aminovaleric acid in recombinant Corynebacterium glutamicum strains from a Miscanthus hydrolysate solution prepared by a newly developed Miscanthus hydrolysis process. Bioresource Technology, 2017, 245, 1692-1700.	9.6	45
22	Hydrophobic interaction network analysis for thermostabilization of a mesophilic xylanase. Journal of Biotechnology, 2012, 161, 49-59.	3.8	43
23	Enhanced production of gamma-aminobutyrate (GABA) in recombinant Corynebacterium glutamicum strains from empty fruit bunch biosugar solution. Microbial Cell Factories, 2018, 17, 129.	4.0	42
24	Prediction of the solvent affecting site and the computational design of stable Candida antarctica lipase B in a hydrophilic organic solvent. Journal of Biotechnology, 2013, 163, 346-352.	3.8	40
25	A chemo-microbial hybrid process for the production of 2-pyrone-4,6-dicarboxylic acid as a promising bioplastic monomer from PET waste. Green Chemistry, 2020, 22, 3461-3469.	9.0	36
26	Chemoâ€Biological Upcycling of Poly(ethylene terephthalate) to Multifunctional Coating Materials. ChemSusChem, 2021, 14, 4251-4259.	6.8	36
27	Development of engineered Escherichia coli whole-cell biocatalysts for high-level conversion of <scp>l</scp>-lysine into cadaverine. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 1481-1491.	3.0	35
28	Recent advances in metabolic engineering of Corynebacterium glutamicum as a potential platform microorganism for biorefinery. Biofuels, Bioproducts and Biorefining, 2018, 12, 899-925.	3.7	34
29	Recent Advances in the Metabolic Engineering of Klebsiella pneumoniae: A Potential Platform Microorganism for Biorefineries. Biotechnology and Bioprocess Engineering, 2019, 24, 48-64.	2.6	34
30	Recent progress and challenges in biological degradation and biotechnological valorization of lignin as an emerging source of bioenergy: A state-of-the-art review. Renewable and Sustainable Energy Reviews, 2022, 157, 112025.	16.4	32
31	Biosynthesis of polyhydroxyalkanoates from sucrose by metabolically engineered Escherichia coli strains. International Journal of Biological Macromolecules, 2020, 149, 593-599.	7.5	30
32	The development of a thermostable CiP (Coprinus cinereus peroxidase) through in silico design. Biotechnology Progress, 2010, 26, 1038-1046.	2.6	27
33	Biosynthesis of poly(2-hydroxybutyrate-co-lactate) in metabolically engineered Escherichia coli. Biotechnology and Bioprocess Engineering, 2016, 21, 169-174.	2.6	25
34	Rational design of a Bacillus circulans xylanase by introducing charged residue to shift the pH optimum. Process Biochemistry, 2012, 47, 2487-2493.	3.7	24
35	Novel Aldo-Keto Reductases for the Biocatalytic Conversion of 3-Hydroxybutanal to 1,3-Butanediol: Structural and Biochemical Studies. Applied and Environmental Microbiology, 2017, 83, .	3.1	24
36	Improvement of polyhydroxybutyrate (PHB) plate-based screening method for PHB degrading bacteria using cell-grown amorphous PHB and recovered by sodium dodecyl sulfate (SDS). International Journal of Biological Macromolecules, 2021, 177, 413-421.	7.5	24

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37	Structural insights into the efficient CO₂-reducing activity of an NAD-dependent formate dehydrogenase fromThiobacillussp. KNK65MA. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 313-323.	2.5	23
38	Development of Metabolically Engineered Corynebacterium glutamicum for Enhanced Production of Cadaverine and Its Use for the Synthesis of Bio-Polyamide 510. ACS Sustainable Chemistry and Engineering, 2020, 8, 129-138.	6.7	23
39	Shifting the optimum pH of Bacillus circulans xylanase towards acidic side by introducing arginine. Biotechnology and Bioprocess Engineering, 2013, 18, 35-42.	2.6	22
40	Characterization of a Whole-Cell Biotransformation Using a Constitutive Lysine Decarboxylase from Escherichia coli for the High-Level Production of Cadaverine from Industrial Grade l-Lysine. Applied Biochemistry and Biotechnology, 2018, 185, 909-924.	2.9	21
41	High-Level Conversion of l-lysine into Cadaverine by Escherichia coli Whole Cell Biocatalyst Expressing Hafnia alvei l-lysine Decarboxylase. Polymers, 2019, 11, 1184.	4.5	21
42	Recent Advances in Systems Metabolic Engineering Strategies for the Production of Biopolymers. Biotechnology and Bioprocess Engineering, 2020, 25, 848-861.	2.6	21
43	Fermentative High-Level Production of 5-Hydroxyvaleric Acid by Metabolically Engineered Corynebacterium glutamicum. ACS Sustainable Chemistry and Engineering, 2021, 9, 2523-2533.	6.7	21
44	Discovery and characterization of a thermostable d-lactate dehydrogenase from Lactobacillus jensenii through genome mining. Process Biochemistry, 2013, 48, 109-117.	3.7	20
45	Thermostabilization of glutamate decarboxylase B from Escherichia coli by structure-guided design of its pH-responsive N-terminal interdomain. Journal of Biotechnology, 2014, 174, 22-28.	3.8	20
46	Enhanced production of glutaric acid by NADH oxidase and GabDâ€reinforced bioconversion from <scp>l</scp>â€lysine. Biotechnology and Bioengineering, 2019, 116, 333-341.	3.3	20
47	Thermostabilization of Candida antarctica lipase B by double immobilization: Adsorption on a macroporous polyacrylate carrier and R1 silaffin-mediated biosilicification. Process Biochemistry, 2013, 48, 1181-1187.	3.7	19
48	Improving the catalytic performance of xylanase from Bacillus circulans through structure-based rational design. Bioresource Technology, 2021, 340, 125737.	9.6	19
49	Biosynthesis of 2â€Hydroxyacidâ€Containing Polyhydroxyalkanoates by Employing butyrylâ€CoA Transferases in Metabolically Engineered Escherichia coli. Biotechnology Journal, 2017, 12, 1700116.	3.5	18
50	Structural and functional analysis of betaine aldehyde dehydrogenase fromStaphylococcus aureus. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 1159-1175.	2.5	16
51	Rational engineering of 2-deoxyribose-5-phosphate aldolases for the biosynthesis of (R)-1,3-butanediol. Journal of Biological Chemistry, 2020, 295, 597-609.	3.4	16
52	Biochemical and Structural Studies of Conserved Maf Proteins Revealed Nucleotide Pyrophosphatases with a Preference for Modified Nucleotides. Chemistry and Biology, 2013, 20, 1386-1398.	6.0	15
53	Higher thermostability of l-lactate dehydrogenases is a key factor in decreasing the optical purity of d-lactic acid produced from Lactobacillus coryniformis. Enzyme and Microbial Technology, 2014, 58-59, 29-35.	3.2	15
54	Biosynthesis of polyhydroxyalkanoates from sugarcane molasses by recombinant Ralstonia eutropha strains. Korean Journal of Chemical Engineering, 2021, 38, 1452-1459.	2.7	15

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55	Microbial production of 2-pyrone-4,6-dicarboxylic acid from lignin derivatives in an engineered Pseudomonas putida and its application for the synthesis of bio-based polyester. Bioresource Technology, 2022, 352, 127106.	9.6	15
56	Selective extraction of glutaric acid from biological production systems using n-butanol. Journal of Industrial and Engineering Chemistry, 2020, 82, 98-104.	5.8	14
57	A highly active carboxylic acid reductase from Mycobacterium abscessus for biocatalytic reduction of vanillic acid to vanillin. Biochemical Engineering Journal, 2020, 161, 107683.	3.6	14
58	A combined approach of experiments and computational docking simulation to the Coprinus cinereus peroxidase-catalyzed oxidative polymerization of alkyl phenols. Bioresource Technology, 2011, 102, 4901-4904.	9.6	11
59	Engineering a horseradish peroxidase C stable to radical attacks by mutating multiple radical coupling sites. Biotechnology and Bioengineering, 2015, 112, 668-676.	3.3	11
60	Improving the organic solvent resistance of lipase a from Bacillus subtilis in waterâ€“ethanol solvent through rational surface engineering. Bioresource Technology, 2021, 337, 125394.	9.6	11
61	Consolidated microbial production of four-, five-, and six-carbon organic acids from crop residues: Current status and perspectives. Bioresource Technology, 2022, 351, 127001.	9.6	11
62	Enhancing the activity of Bacillus circulans xylanase by modulating the flexibility of the hinge region. Journal of Industrial Microbiology and Biotechnology, 2014, 41, 1181-1190.	3.0	10
63	Construction of a Vitreoscilla Hemoglobin Promoter-Based Tunable Expression System for Corynebacterium glutamicum. Catalysts, 2018, 8, 561.	3.5	10
64	Microbial cell factories for the production of three-carbon backbone organic acids from agro-industrial wastes. Bioresource Technology, 2022, 349, 126797.	9.6	10
65	Thermostabilization of Bacillus subtilis lipase A by minimizing the structural deformation caused by packing enhancement. Journal of Industrial Microbiology and Biotechnology, 2013, 40, 1223-1229.	3.0	9
66	Selective recovery of cadaverine from lysine decarboxylase bioconversion solution using methyl ethyl ketone. Journal of Industrial and Engineering Chemistry, 2018, 64, 167-172.	5.8	9
67	Soluble expression of Candida antarctica lipase B in Escherichia coli by fusion with Skp chaperone. Biotechnology and Bioprocess Engineering, 2012, 17, 687-692.	2.6	8
68	Biosynthesis of Lactate-containing Polyhydroxyalkanoates in Recombinant Escherichia coli by Employing New CoA Transferases. KSBB Journal, 2016, 31, 27-32.	0.2	8
69	Development of the radical-stable Coprinus cinereus peroxidase (CiP) by blocking the radical attack. Journal of Biotechnology, 2014, 189, 78-85.	3.8	7
70	Expression of the NAD-dependent FDH1 Î²-subunit from Methylobacterium extorquens AM1 in Escherichia coli and its characterization. Biotechnology and Bioprocess Engineering, 2014, 19, 613-620.	2.6	6
71	Recent progress in metabolic engineering of Corynebacterium glutamicum for the production of C4, C5, and C6 chemicals. Korean Journal of Chemical Engineering, 2021, 38, 1291-1307.	2.7	6
72	Development of a bio-chemical route to C5 plasticizer synthesis using glutaric acid produced by metabolically engineered Corynebacterium glutamicum. Green Chemistry, 2022, 24, 1590-1602.	9.0	6

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73	Electroenzymatic synthesis of (S)-styrene oxide employing zinc oxide/carbon black composite electrode. Enzyme and Microbial Technology, 2010, 47, 313-321.	3.2	5
74	Activity enhancement of a Bacillus circulans xylanase by introducing ion-pair interactions into an Î±-helix. Process Biochemistry, 2013, 48, 1495-1501.	3.7	5
75	Enzymatic Synthesis of D-pipecolic Acid by Engineering the Substrate Specificity of Trypanosoma cruzi Proline Racemase and Its Molecular Docking Study. Biotechnology and Bioprocess Engineering, 2019, 24, 215-222.	2.6	5
76	Recent advances in the microbial production of C4 alcohols by metabolically engineered microorganisms. Biotechnology Journal, 2022, 17, e2000451.	3.5	5
77	Enzymatic analysis of the effect of naturally occurring Leu138Pro mutation identified in SHV ï¿½-lactamase on hydrolysis of penicillin and ampicillin. BMC Microbiology, 2011, 11, 29.	3.3	4
78	Construction of heterologous gene expression cassettes for the development of recombinant Clostridium beijerinckii. Bioprocess and Biosystems Engineering, 2016, 39, 555-563.	3.4	4
79	Application of l-glutamate oxidase from Streptomyces sp. X119-6 with catalase (KatE) to whole-cell systems for glutaric acid production in Escherichia coli. Korean Journal of Chemical Engineering, 2021, 38, 2106-2112.	2.7	4
80	Improving the synthesis of phenolic polymer using Coprinus cinereus peroxidase mutant Phe230Ala. Enzyme and Microbial Technology, 2016, 87-88, 37-43.	3.2	3
81	Enhancement of Lysine Production in Recombinant Corynebacterium glutamicum through Expression of Deinococcus radiodurans pprM and dr1558 Genes. Microbiology and Biotechnology Letters, 2017, 45, 271-275.	0.4	3
82	Development of a glutaric acid production system equipped with stepwise feeding of monosodium glutamate by whole-cell bioconversion. Enzyme and Microbial Technology, 2022, 159, 110053.	3.2	3
83	Gene cloning and expression of a 3-ketovalidoxylamine C-N-lyase from Flavobacterium saccharophilum IFO 13984. Biotechnology and Bioprocess Engineering, 2011, 16, 366-373.	2.6	1