Si Jae Park

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56 3,590 112 37 g-index h-index citations papers 116 5.9 4,242 5.33 L-index avg, IF ext. citations ext. papers

#	Paper	IF	Citations
112	Metabolic engineering of Escherichia coli for the production of polylactic acid and its copolymers. <i>Biotechnology and Bioengineering</i> , 2010 , 105, 161-71	4.9	229
111	Biosynthesis of polylactic acid and its copolymers using evolved propionate CoA transferase and PHA synthase. <i>Biotechnology and Bioengineering</i> , 2010 , 105, 150-60	4.9	137
110	One-step fermentative production of poly(lactate-co-glycolate) from carbohydrates in Escherichia coli. <i>Nature Biotechnology</i> , 2016 , 34, 435-40	44.5	135
109	Advanced bacterial polyhydroxyalkanoates: towards a versatile and sustainable platform for unnatural tailor-made polyesters. <i>Biotechnology Advances</i> , 2012 , 30, 1196-206	17.8	129
108	Metabolic engineering of Escherichia coli for the production of 5-aminovalerate and glutarate as C5 platform chemicals. <i>Metabolic Engineering</i> , 2013 , 16, 42-7	9.7	118
107	Synthesis of nylon 4 from gamma-aminobutyrate (GABA) produced by recombinant Escherichia coli. <i>Bioprocess and Biosystems Engineering</i> , 2013 , 36, 885-92	3.7	95
106	Biosynthesis of polyhydroxyalkanoates containing 2-hydroxybutyrate from unrelated carbon source by metabolically engineered Escherichia coli. <i>Applied Microbiology and Biotechnology</i> , 2012 , 93, 273-83	5.7	94
105	Recent advances in development of biomass pretreatment technologies used in biorefinery for the production of bio-based fuels, chemicals and polymers. <i>Korean Journal of Chemical Engineering</i> , 2015 , 32, 1945-1959	2.8	88
104	Enhanced production of gamma-aminobutyrate (GABA) in recombinant Corynebacterium glutamicum by expressing glutamate decarboxylase active in expanded pH range. <i>Microbial Cell Factories</i> , 2015 , 14, 21	6.4	81
103	Identification and characterization of a new enoyl coenzyme A hydratase involved in biosynthesis of medium-chain-length polyhydroxyalkanoates in recombinant Escherichia coli. <i>Journal of Bacteriology</i> , 2003 , 185, 5391-7	3.5	80
102	Metabolic engineering of Corynebacterium glutamicum for enhanced production of 5-aminovaleric acid. <i>Microbial Cell Factories</i> , 2016 , 15, 174	6.4	78
101	Metabolic engineering for the synthesis of polyesters: A 100-year journey from polyhydroxyalkanoates to non-natural microbial polyesters. <i>Metabolic Engineering</i> , 2020 , 58, 47-81	9.7	74
100	Biological Valorization of Poly(ethylene terephthalate) Monomers for Upcycling Waste PET. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 19396-19406	8.3	62
99	Metabolic Engineering of Corynebacterium glutamicum for the High-Level Production of Cadaverine That Can Be Used for the Synthesis of Biopolyamide 510. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 5296-5305	8.3	61
98	Recent advances in the metabolic engineering of microorganisms for the production of 3-hydroxypropionic acid as C3 platform chemical. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 330	9 ⁵ 271	59
97	One-step fermentative production of aromatic polyesters from glucose by metabolically engineered Escherichia coli strains. <i>Nature Communications</i> , 2018 , 9, 79	17.4	56
96	Metabolic engineering of Escherichia coli for biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) from glucose. <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 95-104	5.7	56

95	High-level conversion of L-lysine into 5-aminovalerate that can be used for nylon 6,5 synthesis. <i>Biotechnology Journal</i> , 2014 , 9, 1322-8	5.6	54
94	Combination of Entner-Doudoroff pathway with MEP increases isoprene production in engineered Escherichia coli. <i>PLoS ONE</i> , 2013 , 8, e83290	3.7	54
93	Metabolic engineering of Ralstonia eutropha for the biosynthesis of 2-hydroxyacid-containing polyhydroxyalkanoates. <i>Metabolic Engineering</i> , 2013 , 20, 20-8	9.7	53
92	Engineering of Escherichia coli fatty acid metabolism for the production of polyhydroxyalkanoates. <i>Enzyme and Microbial Technology</i> , 2005 , 36, 579-588	3.8	53
91	Tailor-made type II Pseudomonas PHA synthases and their use for the biosynthesis of polylactic acid and its copolymer in recombinant Escherichia coli. <i>Applied Microbiology and Biotechnology</i> , 2011 , 90, 603-14	5.7	52
90	Recent Advances in Sustainable Plastic Upcycling and Biopolymers. <i>Biotechnology Journal</i> , 2020 , 15, e19	G 06489	51
89	Recombinant Ralstonia eutropha engineered to utilize xylose and its use for the production of poly(3-hydroxybutyrate) from sunflower stalk hydrolysate solution. <i>Microbial Cell Factories</i> , 2016 , 15, 95	6.4	51
88	Metabolic engineering of Escherichia coli for the production of 1,3-diaminopropane, a three carbon diamine. <i>Scientific Reports</i> , 2015 , 5, 13040	4.9	51
87	Display of bacterial lipase on the Escherichia coli cell surface by using FadL as an anchoring motif and use of the enzyme in enantioselective biocatalysis. <i>Applied and Environmental Microbiology</i> , 2004 , 70, 5074-80	4.8	50
86	Metabolic engineering of Escherichia coli for the production of medium-chain-length polyhydroxyalkanoates rich in specific monomers. <i>FEMS Microbiology Letters</i> , 2002 , 214, 217-22	2.9	49
85	Synthetic biology platform of CoryneBrick vectors for gene expression in Corynebacterium glutamicum and its application to xylose utilization. <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 5991-6002	5.7	47
84	Production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) by metabolically engineered Escherichia coli strains. <i>Biomacromolecules</i> , 2001 , 2, 248-54	6.9	47
83	Metabolic engineering of Corynebacterium glutamicum for fermentative production of chemicals in biorefinery. <i>Applied Microbiology and Biotechnology</i> , 2018 , 102, 3915-3937	5.7	45
82	Direct bioconversion of d-xylose to 1,2,4-butanetriol in an engineered Escherichia coli. <i>Process Biochemistry</i> , 2014 , 49, 25-32	4.8	43
81	Roles and applications of small heat shock proteins in the production of recombinant proteins in Escherichia coli. <i>Biotechnology and Bioengineering</i> , 2004 , 88, 426-36	4.9	42
80	Metabolic engineering of Ralstonia eutropha for the production of polyhydroxyalkanoates from sucrose. <i>Biotechnology and Bioengineering</i> , 2015 , 112, 638-43	4.9	41
79	In silico prediction and validation of the importance of the Entner-Doudoroff pathway in poly(3-hydroxybutyrate) production by metabolically engineered Escherichia coli. <i>Biotechnology and Bioengineering</i> , 2003 , 83, 854-63	4.9	40
78	Construction of Synthetic Promoter-Based Expression Cassettes for the Production of Cadaverine in Recombinant Corynebacterium glutamicum. <i>Applied Biochemistry and Biotechnology</i> , 2015 , 176, 2065-	3 52	38

77	Engineered microbial biosensors based on bacterial two-component systems as synthetic biotechnology platforms in bioremediation and biorefinery. <i>Microbial Cell Factories</i> , 2017 , 16, 62	6.4	37
76	Production of 5-aminovaleric acid in recombinant Corynebacterium glutamicum strains from a Miscanthus hydrolysate solution prepared by a newly developed Miscanthus hydrolysis process. <i>Bioresource Technology</i> , 2017 , 245, 1692-1700	11	37
75	Biosynthesis of enantiopure (S)-3-hydroxybutyric acid in metabolically engineered Escherichia coli. <i>Applied Microbiology and Biotechnology</i> , 2008 , 79, 633-41	5.7	36
74	Metabolic engineering of Corynebacterium glutamicum for the production of glutaric acid, a C5 dicarboxylic acid platform chemical. <i>Metabolic Engineering</i> , 2019 , 51, 99-109	9.7	35
73	Enhanced production of gamma-aminobutyrate (GABA) in recombinant Corynebacterium glutamicum strains from empty fruit bunch biosugar solution. <i>Microbial Cell Factories</i> , 2018 , 17, 129	6.4	34
72	Propionyl-CoA dependent biosynthesis of 2-hydroxybutyrate containing polyhydroxyalkanoates in metabolically engineered Escherichia coli. <i>Journal of Biotechnology</i> , 2013 , 165, 93-8	3.7	33
71	Engineered fumarate sensing Escherichia coli based on novel chimeric two-component system. Journal of Biotechnology, 2013 , 168, 560-6	3.7	32
70	Development of rice bran treatment process and its use for the synthesis of polyhydroxyalkanoates from rice bran hydrolysate solution. <i>Bioresource Technology</i> , 2015 , 181, 283-90	11	32
69	Development of engineered Escherichia coli whole-cell biocatalysts for high-level conversion of L-lysine into cadaverine. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2015 , 42, 1481-91	4.2	30
68	Development of electrochemical biosensor for detection of pathogenic microorganism in Asian dust events. <i>Chemosphere</i> , 2017 , 175, 269-274	8.4	29
67	Engineering the xylose-catabolizing Dahms pathway for production of poly(d-lactate-co-glycolate) and poly(d-lactate-co-glycolate-co-d-2-hydroxybutyrate) in Escherichia coli. <i>Microbial Biotechnology</i> , 2017 , 10, 1353-1364	6.3	29
66	Fermentative l-lactic acid production from pretreated whole slurry of oil palm trunk treated by hydrothermolysis and subsequent enzymatic hydrolysis. <i>Bioresource Technology</i> , 2015 , 185, 143-9	11	29
65	Biosynthesis of lactate-containing polyesters by metabolically engineered bacteria. <i>Biotechnology Journal</i> , 2012 , 7, 199-212	5.6	29
64	Recent advances in metabolic engineering of Corynebacterium glutamicum as a potential platform microorganism for biorefinery. <i>Biofuels, Bioproducts and Biorefining</i> , 2018 , 12, 899-925	5.3	28
63	Recent Advances in the Metabolic Engineering of Klebsiella pneumoniae: A Potential Platform Microorganism for Biorefineries. <i>Biotechnology and Bioprocess Engineering</i> , 2019 , 24, 48-64	3.1	27
62	Production of gamma-aminobutyric acid from glucose by introduction of synthetic scaffolds between isocitrate dehydrogenase, glutamate synthase and glutamate decarboxylase in recombinant Escherichia coli. <i>Journal of Biotechnology</i> , 2015 , 207, 52-7	3.7	27
61	Efficient gamma-aminobutyric acid bioconversion by employing synthetic complex between glutamate decarboxylase and glutamate/GABA antiporter in engineered Escherichia coli. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2013 , 40, 927-33	4.2	26
60	Pilot scale production of poly(3-hydroxybutyrate-co-3-hydroxy-valerate) by fed-batch culture of recombinantEscherichia coli. <i>Biotechnology and Bioprocess Engineering</i> , 2002 , 7, 371-374	3.1	26

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59	biosolubilization mediators from coal to biochemicals. <i>Biotechnology and Bioprocess Engineering</i> , 2017 , 22, 178-185	3.1	23
58	Efficient production of gamma-aminobutyric acid using Escherichia coli by co-localization of glutamate synthase, glutamate decarboxylase, and GABA transporter. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2016 , 43, 79-86	4.2	23
57	Biosynthesis of (R)-3-hydroxyalkanoic acids by metabolically engineered Escherichia coli. <i>Applied Biochemistry and Biotechnology</i> , 2004 , 114, 373-380	3.2	23
56	Secretory production of recombinant protein by a high cell density culture of a protease negative mutant Escherichia coli strain. <i>Biotechnology Progress</i> , 1999 , 15, 164-7	2.8	23
55	Biosynthesis of poly(2-hydroxybutyrate-co-lactate) in metabolically engineered Escherichia coli. <i>Biotechnology and Bioprocess Engineering</i> , 2016 , 21, 169-174	3.1	21
54	Quantified high-throughput screening of Escherichia coli producing poly(3-hydroxybutyrate) based on FACS. <i>Applied Biochemistry and Biotechnology</i> , 2013 , 170, 1767-79	3.2	21
53	New FadB homologous enzymes and their use in enhanced biosynthesis of medium-chain-length polyhydroxyalkanoates in FadB mutant Escherichia coli. <i>Biotechnology and Bioengineering</i> , 2004 , 86, 68	1 -6 9	20
52	Enrichment of specific monomer in medium-chain-length poly(3-hydroxyalkanoates) by amplification of fadD and fadE genes in recombinant Escherichia coli. <i>Enzyme and Microbial Technology</i> , 2003 , 33, 62-70	3.8	20
51	Advances in the biological treatment of coal for synthetic natural gas and chemicals. <i>Korean Journal of Chemical Engineering</i> , 2016 , 33, 2788-2801	2.8	20
50	Biosynthesis of poly(2-hydroxyisovalerate-co-lactate) by metabolically engineered Escherichia coli. <i>Biotechnology Journal</i> , 2016 , 11, 1572-1585	5.6	19
49	Enhanced production of poly-3-hydroxybutyrate (PHB) by expression of response regulator DR1558 in recombinant Escherichia coli. <i>International Journal of Biological Macromolecules</i> , 2019 , 131, 29-35	7.9	17
48	Biosynthesis of polyhydroxyalkanoates from sucrose by metabolically engineered Escherichia coli strains. <i>International Journal of Biological Macromolecules</i> , 2020 , 149, 593-599	7.9	17
47	High-Level Conversion of l-lysine into Cadaverine by Whole Cell Biocatalyst Expressing l-lysine Decarboxylase. <i>Polymers</i> , 2019 , 11,	4.5	16
46	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. <i>Applied Biochemistry and Biotechnology</i> , 2018 , 185, 909-924	3.2	15
45	Engineering the intracellular metabolism of Escherichia coli to produce gamma-aminobutyric acid by co-localization of GABA shunt enzymes. <i>Biotechnology Letters</i> , 2016 , 38, 321-7	3	14
44	Development of Metabolically Engineered Corynebacterium glutamicum for Enhanced Production of Cadaverine and Its Use for the Synthesis of Bio-Polyamide 510. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 129-138	8.3	14
43	Biosynthesis of 2-Hydroxyacid-Containing Polyhydroxyalkanoates by Employing butyryl-CoA Transferases in Metabolically Engineered Escherichia coli. <i>Biotechnology Journal</i> , 2017 , 12, 1700116	5.6	13
42	Gamma-aminobutyric acid production through GABA shunt by synthetic scaffolds introduction in recombinant Escherichia coli. <i>Biotechnology and Bioprocess Engineering</i> , 2016 , 21, 261-267	3.1	13

41	A chemo-microbial hybrid process for the production of 2-pyrone-4,6-dicarboxylic acid as a promising bioplastic monomer from PET waste. <i>Green Chemistry</i> , 2020 , 22, 3461-3469	10	13
40	Efficient and simultaneous cleaner production of biodiesel and glycerol carbonate in solvent-free system via statistical optimization. <i>Journal of Cleaner Production</i> , 2019 , 218, 985-992	10.3	12
39	Systems Biological Approach for the Production of Various Polyhydroxyalkanoates by Metabolically Engineered Escherichia coli. <i>Macromolecular Symposia</i> , 2005 , 224, 1-10	0.8	12
38	Recent Advances in Systems Metabolic Engineering Strategies for the Production of Biopolymers. <i>Biotechnology and Bioprocess Engineering</i> , 2020 , 25, 848-861	3.1	11
37	Co-Localization of GABA Shunt Enzymes for the Efficient Production of Gamma-Aminobutyric Acid via GABA Shunt Pathway in Escherichia coli. <i>Journal of Microbiology and Biotechnology</i> , 2016 , 26, 710-6	3.3	10
36	Overexpression of Neurospora crassa OR74A glutamate decarboxylase in Escherichia coli for efficient GABA production. <i>Biotechnology and Bioprocess Engineering</i> , 2013 , 18, 1062-1066	3.1	9
35	Chemoautotroph Cupriavidus necator as a potential game-changer for global warming and plastic waste problem: A review. <i>Bioresource Technology</i> , 2021 , 340, 125693	11	9
34	Enhanced Production of 2,3-Butanediol in Recombinant Escherichia coli Using Response Regulator DR1558 Derived from Deinococcus radiodurans. <i>Biotechnology and Bioprocess Engineering</i> , 2020 , 25, 45-52	3.1	8
33	Improved reutilization of industrial crude lysine to 1,5-diaminopentane by enzymatic decarboxylation using various detergents and organic solvents. <i>Korean Journal of Chemical Engineering</i> , 2018 , 35, 1854-1859	2.8	8
32	Improvement of gamma-amino butyric acid production by an overexpression of glutamate decarboxylase from Pyrococcus horikoshii in Escherichia coli. <i>Biotechnology and Bioprocess Engineering</i> , 2014 , 19, 327-331	3.1	8
31	Rapid analysis of polyhydroxyalkanoate contents and its monomer compositions by pyrolysis-gas chromatography combined with mass spectrometry (Py-GC/MS). <i>International Journal of Biological Macromolecules</i> , 2021 , 174, 449-456	7.9	8
30	Fermentative High-Level Production of 5-Hydroxyvaleric Acid by Metabolically Engineered Corynebacterium glutamicum. <i>ACS Sustainable Chemistry and Engineering</i> , 2021 , 9, 2523-2533	8.3	8
29	Hydrogen Production from Methane by Methylomonas sp. DH-1 under Micro-aerobic Conditions. <i>Biotechnology and Bioprocess Engineering</i> , 2020 , 25, 71-77	3.1	7
28	Redirection of Metabolic Flux into Novel Gamma-Aminobutyric Acid Production Pathway by Introduction of Synthetic Scaffolds Strategy in Escherichia Coli. <i>Applied Biochemistry and Biotechnology</i> , 2016 , 178, 1315-24	3.2	7
27	Bio-solubilization of the untreated low rank coal by alkali-producing bacteria isolated from soil. <i>Korean Journal of Chemical Engineering</i> , 2017 , 34, 105-109	2.8	7
26	Mass Transfer Performance of a String Film Reactor: A Bioreactor Design for Aerobic Methane Bioconversion. <i>Catalysts</i> , 2018 , 8, 490	4	7
25	Construction of a Vitreoscilla Hemoglobin Promoter-Based Tunable Expression System for Corynebacterium glutamicum. <i>Catalysts</i> , 2018 , 8, 561	4	7
24	Chemo-Biological Upcycling of Poly(ethylene terephthalate) to Multifunctional Coating Materials. <i>ChemSusChem</i> , 2021 , 14, 4251-4259	8.3	7

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23	Effect of DR1558, a Deinococcus radiodurans response regulator, on the production of GABA in the recombinant Escherichia coli under low pH conditions. <i>Microbial Cell Factories</i> , 2020 , 19, 64	6.4	6
22	Optimized Transformation of Newly Constructed Escherichia coli-Clostridia Shuttle Vectors into Clostridium beijerinckii. <i>Applied Biochemistry and Biotechnology</i> , 2015 , 177, 226-36	3.2	5
21	A Chimeric Two-Component Regulatory System-Based Escherichia coli Biosensor Engineered to Detect Glutamate. <i>Applied Biochemistry and Biotechnology</i> , 2018 , 186, 335-349	3.2	5
20	Construction of heterologous gene expression cassettes for the development of recombinant Clostridium beijerinckii. <i>Bioprocess and Biosystems Engineering</i> , 2016 , 39, 555-63	3.7	4
19	Isolation and Proteomic Analysis of a Mutant with Enhanced Lipid Production by the Gamma Irradiation Method. <i>Journal of Microbiology and Biotechnology</i> , 2016 , 26, 2066-2075	3.3	4
18	Biosynthesis of Lactate-containing Polyhydroxyalkanoates in Recombinant Escherichia coli by Employing New CoA Transferases. <i>KSBB Journal</i> , 2016 , 31, 27-32	1.5	4
17	Enhancement of Lysine Production in Recombinant Corynebacterium glutamicum through Expression of Deinococcus radiodurans pprM and dr1558 Genes. <i>Microbiology and Biotechnology Letters</i> , 2017 , 45, 271-275	1.6	3
16	A shortcut to carbon-neutral bioplastic production: Recent advances in microbial production of polyhydroxyalkanoates from C1 resources. <i>International Journal of Biological Macromolecules</i> , 2021 , 192, 978-998	7.9	3
15	Establishment of a biosynthesis pathway for (R)-3-hydroxyalkanoates in recombinant Escherichia coli. <i>Korean Journal of Chemical Engineering</i> , 2015 , 32, 702-706	2.8	2
14	Development of a bio-chemical route to C5 plasticizer synthesis using glutaric acid produced by metabolically engineered Corynebacterium glutamicum. <i>Green Chemistry</i> ,	10	2
13	Recent advances in the microbial production of C4 alcohols by metabolically engineered microorganisms. <i>Biotechnology Journal</i> , 2021 , e2000451	5.6	2
12	Improving the organic solvent resistance of lipase a from Bacillus subtilis in water-ethanol solvent through rational surface engineering. <i>Bioresource Technology</i> , 2021 , 337, 125394	11	2
11	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 <i>Bioresource Technology</i> , 2022 , 127106	11	2
10	Expression characteristics of the maeA and maeB genes by extracellular malate and pyruvate in Escherichia coli. <i>Korean Journal of Chemical Engineering</i> , 2013 , 30, 1443-1447	2.8	1
9	Improved Productivity of Naringin Oleate with Flavonoid and Fatty Acid by Efficient Enzymatic Esterification <i>Antioxidants</i> , 2022 , 11,	7.1	1
8	Microbial cell factories for the production of three-carbon backbone organic acids from agro-industrial wastes <i>Bioresource Technology</i> , 2022 , 126797	11	1
7	Recent progress in metabolic engineering of Corynebacterium glutamicum for the production of C4, C5, and C6 chemicals. <i>Korean Journal of Chemical Engineering</i> , 2021 , 38, 1291-1307	2.8	1
6	Biosynthesis of polyhydroxyalkanoates from sugarcane molasses by recombinant Ralstonia eutropha strains. <i>Korean Journal of Chemical Engineering</i> , 2021 , 38, 1452-1459	2.8	1

5	Microbial Production of 3-Hydroxypropionic Acid 2016 , 411-451		1
4	Development of Metabolic Engineering Strategies for Microbial Platform to Produce Bioplastics. <i>Applied Chemistry for Engineering</i> , 2014 , 25, 134-141		O
3	Consolidated microbial production of four-, five-, and six-carbon organic acids from crop residues: Current status and perspectives <i>Bioresource Technology</i> , 2022 , 351, 127001	11	О
2	Metabolic Engineering of Microorganisms for the Production of Lactate-Containing Polyesters 2018 , 349-357		
1	MaoC Mediated Biosynthesis of Medium-chain-length Polyhydroxyalkanoates in Recombinant	1.5	