Si Jae Park

List of Publications by Year
in descending order

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112 papers	4,789 citations	81900 39 h-index	110387 64 g-index
116 all docs	116 docs citations	116 times ranked	3395 citing authors

#	Article	IF	Citations
1	Recent advances in the microbial production of C4 alcohols by metabolically engineered microorganisms. Biotechnology Journal, 2022, 17, e2000451.	3.5	5
2	Improved Productivity of Naringin Oleate with Flavonoid and Fatty Acid by Efficient Enzymatic Esterification. Antioxidants, 2022, 11, 242.	5.1	13
3	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
4	Microbial cell factories for the production of three-carbon backbone organic acids from agro-industrial wastes. Bioresource Technology, 2022, 349, 126797.	9.6	10
5	Efficient Production of Naringin Acetate with Different Acyl Donors via Enzymatic Transesterification by Lipases. International Journal of Environmental Research and Public Health, 2022, 19, 2972.	2.6	6
6	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
7	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
8	Valorization of lignocellulosic biomass for polyhydroxyalkanoate production: Status and perspectives. Bioresource Technology, 2022, 360, 127575.	9.6	25
9	Rapid analysis of polyhydroxyalkanoate contents and its monomer compositions by pyrolysis-gas chromatography combined with mass spectrometry (Py-GC/MS). International Journal of Biological Macromolecules, 2021, 174, 449-456.	7.5	19
10	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
11	Biosynthesis of polyhydroxyalkanoates from sugarcane molasses by recombinant Ralstonia eutropha strains. Korean Journal of Chemical Engineering, 2021, 38, 1452-1459.	2.7	15
12	Chemoâ€Biological Upcycling of Poly(ethylene terephthalate) to Multifunctional Coating Materials. ChemSusChem, 2021, 14, 4251-4259.	6.8	36
13	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
14	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
15	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
16	A shortcut to carbon-neutral bioplastic production: Recent advances in microbial production of polyhydroxyalkanoates from C1 resources. International Journal of Biological Macromolecules, 2021, 192, 978-998.	7.5	13
17	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
18	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

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19	Recent Advances in Systems Metabolic Engineering Strategies for the Production of Biopolymers. Biotechnology and Bioprocess Engineering, 2020, 25, 848-861.	2.6	21
20	Recent Advances in Sustainable Plastic Upcycling and Biopolymers. Biotechnology Journal, 2020, 15, e1900489.	3.5	92
21	Hydrogen Production from Methane by Methylomonas sp. DH-1 under Micro-aerobic Conditions. Biotechnology and Bioprocess Engineering, 2020, 25, 71-77.	2.6	12
22	Effect of DR1558, a Deinococcus radiodurans response regulator, on the production of GABA in the recombinant Escherichia coli under low pH conditions. Microbial Cell Factories, 2020, 19, 64.	4.0	12
23	Biosynthesis of polyhydroxyalkanoates from sucrose by metabolically engineered Escherichia coli strains. International Journal of Biological Macromolecules, 2020, 149, 593-599.	7.5	30
24	Enhanced Production of 2,3-Butanediol in Recombinant Escherichia coli Using Response Regulator DR1558 Derived from Deinococcus radiodurans. Biotechnology and Bioprocess Engineering, 2020, 25, 45-52.	2.6	11
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	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
27	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
28	Biological Valorization of Poly(ethylene terephthalate) Monomers for Upcycling Waste PET. ACS Sustainable Chemistry and Engineering, 2019, 7, 19396-19406.	6.7	141
29	Efficient and simultaneous cleaner production of biodiesel and glycerol carbonate in solvent-free system via statistical optimization. Journal of Cleaner Production, 2019, 218, 985-992.	9.3	20
30	Enhanced production of polyâ€3â€hydroxybutyrate (PHB) by expression of response regulator DR1558 in recombinant Escherichia coli. International Journal of Biological Macromolecules, 2019, 131, 29-35.	7.5	26
31	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
32	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
33	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
34	One-step fermentative production of aromatic polyesters from glucose by metabolically engineered Escherichia coli strains. Nature Communications, 2018, 9, 79.	12.8	84
35	A Chimeric Two-Component Regulatory System-Based Escherichia coli Biosensor Engineered to Detect Glutamate. Applied Biochemistry and Biotechnology, 2018, 186, 335-349.	2.9	10
36	Metabolic engineering of Corynebacterium glutamicum for fermentative production of chemicals in biorefinery. Applied Microbiology and Biotechnology, 2018, 102, 3915-3937.	3.6	60

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37	Mass Transfer Performance of a String Film Reactor: A Bioreactor Design for Aerobic Methane Bioconversion. Catalysts, 2018, 8, 490.	3.5	11
38	Construction of a Vitreoscilla Hemoglobin Promoter-Based Tunable Expression System for Corynebacterium glutamicum. Catalysts, 2018, 8, 561.	3.5	10
39	Improved reutilization of industrial crude lysine to 1,5-diaminopentane by enzymatic decarboxylation using various detergents and organic solvents. Korean Journal of Chemical Engineering, 2018, 35, 1854-1859.	2.7	9
40	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
41	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
42	Development of electrochemical biosensor for detection of pathogenic microorganism in Asian dust events. Chemosphere, 2017, 175, 269-274.	8.2	35
43	Engineering the xyloseâ€catabolizing Dahms pathway for production of poly(d â€lactateâ€co â€glycolate) and poly(d â€lactateâ€co â€glycolateâ€co â€d â€2â€hydroxybutyrate) in Escherichia coli. Microbial Biotechnology, 2017, 10, 1353-1364.	4.2	35
44	Engineered microbial biosensors based on bacterial two-component systems as synthetic biotechnology platforms in bioremediation and biorefinery. Microbial Cell Factories, 2017, 16, 62.	4.0	47
45	Screening of microorganisms able to degrade low-rank coal in aerobic conditions: Potential coal biosolubilization mediators from coal to biochemicals. Biotechnology and Bioprocess Engineering, 2017, 22, 178-185.	2.6	26
46	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
47	Biosynthesis of 2â€Hydroxyacidâ€Containing Polyhydroxyalkanoates by Employing butyrylâ€CoA Transferases in Metabolically Engineered Escherichia coli. Biotechnology Journal, 2017, 12, 1700116.	3.5	18
48	Bio-solubilization of the untreated low rank coal by alkali-producing bacteria isolated from soil. Korean Journal of Chemical Engineering, 2017, 34, 105-109.	2.7	9
49	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
50	Gamma-aminobutyric acid production through GABA shunt by synthetic scaffolds introduction in recombinant Escherichia coli. Biotechnology and Bioprocess Engineering, 2016, 21, 261-267.	2.6	14
51	Biosynthesis of poly(2â€hydroxyisovalerateâ€coâ€lactate) by metabolically engineered Escherichia coli. Biotechnology Journal, 2016, 11, 1572-1585.	3.5	25
52	Advances in the biological treatment of coal for synthetic natural gas and chemicals. Korean Journal of Chemical Engineering, 2016, 33, 2788-2801.	2.7	23
53	Metabolic engineering of Corynebacterium glutamicum for enhanced production of 5-aminovaleric acid. Microbial Cell Factories, 2016, 15, 174.	4.0	96
54	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

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55	Redirection of Metabolic Flux into Novel Gamma-Aminobutyric Acid Production Pathway by Introduction of Synthetic Scaffolds Strategy in Escherichia Coli. Applied Biochemistry and Biotechnology, 2016, 178, 1315-1324.	2.9	11
56	Construction of heterologous gene expression cassettes for the development of recombinant Clostridium beijerinckii. Bioprocess and Biosystems Engineering, 2016, 39, 555-563.	3.4	4
57	Engineering the intracellular metabolism of Escherichia coli to produce gamma-aminobutyric acid by co-localization of GABA shunt enzymes. Biotechnology Letters, 2016, 38, 321-327.	2.2	20
58	Efficient production of gamma-aminobutyric acid using Escherichia coli by co-localization of glutamate synthase, glutamate decarboxylase, and GABA transporter. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 79-86.	3.0	27
59	Biosynthesis of poly(2-hydroxybutyrate-co-lactate) in metabolically engineered Escherichia coli. Biotechnology and Bioprocess Engineering, 2016, 21, 169-174.	2.6	25
60	One-step fermentative production of poly(lactate-co-glycolate) from carbohydrates in Escherichia coli. Nature Biotechnology, 2016, 34, 435-440.	17.5	182
61	Co-Localization of GABA Shunt Enzymes for the Efficient Production of Gamma-Aminobutyric Acid via GABA Shunt Pathway in Escherichia coli. Journal of Microbiology and Biotechnology, 2016, 26, 710-716.	2.1	11
62	Isolation and Proteomic Analysis of a Chlamydomonas reinhardtii Mutant with Enhanced Lipid Production by the Gamma Irradiation Method. Journal of Microbiology and Biotechnology, 2016, 26, 2066-2075.	2.1	5
63	Biosynthesis of Lactate-containing Polyhydroxyalkanoates in Recombinant Escherichia coli by Employing New CoA Transferases. KSBB Journal, 2016, 31, 27-32.	0.2	8
64	Metabolic engineering of Escherichia coli for the production of 1,3-diaminopropane, a three carbon diamine. Scientific Reports, 2015, 5, 13040.	3.3	67
65	Production of gamma-aminobutyric acid from glucose by introduction of synthetic scaffolds between isocitrate dehydrogenase, glutamate synthase and glutamate decarboxylase in recombinant Escherichia coli. Journal of Biotechnology, 2015, 207, 52-57.	3.8	34
66	Construction of Synthetic Promoter-Based Expression Cassettes for the Production of Cadaverine in Recombinant Corynebacterium glutamicum. Applied Biochemistry and Biotechnology, 2015, 176, 2065-2075.	2.9	47
67	Development of rice bran treatment process and its use for the synthesis of polyhydroxyalkanoates from rice bran hydrolysate solution. Bioresource Technology, 2015, 181, 283-290.	9.6	42
68	Enhanced production of gamma-aminobutyrate (GABA) in recombinant Corynebacterium glutamicum by expressing glutamate decarboxylase active in expanded pH range. Microbial Cell Factories, 2015, 14, 21.	4.0	95
69	Fermentative l-lactic acid production from pretreated whole slurry of oil palm trunk treated by hydrothermolysis and subsequent enzymatic hydrolysis. Bioresource Technology, 2015, 185, 143-149.	9.6	34
70	Establishment of a biosynthesis pathway for (R)-3-hydroxyalkanoates in recombinant Escherichia coli. Korean Journal of Chemical Engineering, 2015, 32, 702-706.	2.7	3
71	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
72	Optimized Transformation of Newly Constructed Escherichia coli-Clostridia Shuttle Vectors into Clostridium beijerinckii. Applied Biochemistry and Biotechnology, 2015, 177, 226-236.	2.9	6

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73	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
74	Metabolic engineering of Ralstonia eutropha for the production of polyhydroxyalkanoates from sucrose. Biotechnology and Bioengineering, 2015, 112, 638-643.	3.3	62
75	Highâ€level conversion of <scp>L</scp>â€lysine into 5â€aminovalerate that can be used for nylon 6,5 synthesis. Biotechnology Journal, 2014, 9, 1322-1328.	3.5	64
76	Metabolic engineering of Escherichia coli for biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) from glucose. Applied Microbiology and Biotechnology, 2014, 98, 95-104.	3.6	76
77	Synthetic biology platform of CoryneBrick vectors for gene expression in Corynebacterium glutamicum and its application to xylose utilization. Applied Microbiology and Biotechnology, 2014, 98, 5991-6002.	3.6	58
78	Improvement of gamma-amino butyric acid production by an overexpression of glutamate decarboxylase from Pyrococcus horikoshii in Escherichia coli. Biotechnology and Bioprocess Engineering, 2014, 19, 327-331.	2.6	9
79	Direct bioconversion of d-xylose to 1,2,4-butanetriol in an engineered Escherichia coli. Process Biochemistry, 2014, 49, 25-32.	3.7	52
80	Development of Metabolic Engineering Strategies for Microbial Platform to Produce Bioplastics. Applied Chemistry for Engineering, 2014, 25, 134-141.	0.2	1
81	MaoC Mediated Biosynthesis of Medium-chain-length Polyhydroxyalkanoates in Recombinant Escherichia coli from Fatty Acid. KSBB Journal, 2014, 29, 244-249.	0.2	1
82	Synthesis of nylon 4 from gamma-aminobutyrate (GABA) produced by recombinant Escherichia coli. Bioprocess and Biosystems Engineering, 2013, 36, 885-892.	3.4	113
83	Efficient gamma-aminobutyric acid bioconversion by employing synthetic complex between glutamate decarboxylase and glutamate/GABA antiporter in engineered Escherichia coli. Journal of Industrial Microbiology and Biotechnology, 2013, 40, 927-933.	3.0	33
84	Expression characteristics of the maeA and maeB genes by extracellular malate and pyruvate in Escherichia coli. Korean Journal of Chemical Engineering, 2013, 30, 1443-1447.	2.7	3
85	Metabolic engineering of Escherichia coli for the production of 5-aminovalerate and glutarate as C5 platform chemicals. Metabolic Engineering, 2013, 16, 42-47.	7.0	140
86	Metabolic engineering of Ralstonia eutropha for the biosynthesis of 2-hydroxyacid-containing polyhydroxyalkanoates. Metabolic Engineering, 2013, 20, 20-28.	7.0	63
87	Overexpression of Neurospora crassa OR74A glutamate decarboxylase in Escherichia coli for efficient GABA production. Biotechnology and Bioprocess Engineering, 2013, 18, 1062-1066.	2.6	12
88	Propionyl-CoA dependent biosynthesis of 2-hydroxybutyrate containing polyhydroxyalkanoates in metabolically engineered Escherichia coli. Journal of Biotechnology, 2013, 165, 93-98.	3.8	38
89	Engineered fumarate sensing Escherichia coli based on novel chimeric two-component system. Journal of Biotechnology, 2013, 168, 560-566.	3.8	38
90	Recent advances in the metabolic engineering of microorganisms for the production of 3-hydroxypropionic acid as C3 platform chemical. Applied Microbiology and Biotechnology, 2013, 97, 3309-3321.	3.6	66

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91	Quantified High-Throughput Screening of Escherichia coli Producing Poly(3-hydroxybutyrate) Based on FACS. Applied Biochemistry and Biotechnology, 2013, 170, 1767-1779.	2.9	29
92	Combination of Entner-Doudoroff Pathway with MEP Increases Isoprene Production in Engineered Escherichia coli. PLoS ONE, 2013, 8, e83290.	2.5	64
93	Advanced bacterial polyhydroxyalkanoates: Towards a versatile and sustainable platform for unnatural tailor-made polyesters. Biotechnology Advances, 2012, 30, 1196-1206.	11.7	150
94	Biosynthesis of lactateâ€containing polyesters by metabolically engineered bacteria. Biotechnology Journal, 2012, 7, 199-212.	3.5	35
95	Biosynthesis of polyhydroxyalkanoates containing 2-hydroxybutyrate from unrelated carbon source by metabolically engineered Escherichia coli. Applied Microbiology and Biotechnology, 2012, 93, 273-283.	3.6	112
96	Tailor-made type II Pseudomonas PHA synthases and their use for the biosynthesis of polylactic acid and its copolymer in recombinant Escherichia coli. Applied Microbiology and Biotechnology, 2011, 90, 603-614.	3.6	63
97	Biosynthesis of polylactic acid and its copolymers using evolved propionate CoA transferase and PHA synthase. Biotechnology and Bioengineering, 2010, 105, 150-160.	3.3	159
98	Metabolic engineering of Escherichia coli for the production of polylactic acid and its copolymers. Biotechnology and Bioengineering, 2010, 105, 161-171.	3.3	272
99	Biosynthesis of enantiopure (S)-3-hydroxybutyric acid in metabolically engineered Escherichia coli. Applied Microbiology and Biotechnology, 2008, 79, 633-641.	3.6	38
100	Systems Biological Approach for the Production of Various Polyhydroxyalkanoates by Metabolically EngineeredEscherichia coli. Macromolecular Symposia, 2005, 224, 1-10.	0.7	13
101	Engineering of Escherichia coli fatty acid metabolism for the production of polyhydroxyalkanoates. Enzyme and Microbial Technology, 2005, 36, 579-588.	3.2	57
102	Biosynthesis of (<I>R</I>)-3-Hydroxyalkanoic Acids by Metabolically Engineered <I>Escherichia coli</I>. Applied Biochemistry and Biotechnology, 2004, 114, 373-380.	2.9	25
103	New fadB homologous enzymes and their use in enhanced biosynthesis of medium-chain-length polyhydroxyalkanoates infadB mutantEscherichia coli. Biotechnology and Bioengineering, 2004, 86, 681-686.	3.3	21
104	Roles and applications of small heat shock proteins in the production of recombinant proteins inEscherichia coli. Biotechnology and Bioengineering, 2004, 88, 426-436.	3.3	47
105	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. Applied and Environmental Microbiology, 2004, 70, 5074-5080.	3.1	57
106	In silico prediction and validation of the importance of the Entner-Doudoroff pathway in poly(3-hydroxybutyrate) production by metabolically engineeredEscherichia coli. Biotechnology and Bioengineering, 2003, 83, 854-863.	3.3	42
107	Enrichment of specific monomer in medium-chain-length poly(3-hydroxyalkanoates) by amplification of fadD and fadE genes in recombinant Escherichia coli. Enzyme and Microbial Technology, 2003, 33, 62-70.	3.2	22
108	Identification and Characterization of a New Enoyl Coenzyme A Hydratase Involved in Biosynthesis of Medium-Chain-Length Polyhydroxyalkanoates in Recombinant Escherichia coli. Journal of Bacteriology, 2003, 185, 5391-5397.	2.2	93

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109	Pilot scale production of poly(3-hydroxybutyrate-co-3-hydroxy-valerate) by fed-batch culture of recombinantEscherichia coli. Biotechnology and Bioprocess Engineering, 2002, 7, 371-374.	2.6	27
110	Metabolic engineering ofEscherichia colifor the production of medium-chain-length polyhydroxyalkanoates rich in specific monomers. FEMS Microbiology Letters, 2002, 214, 217-222.	1.8	52
111	Production of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) by Metabolically EngineeredEscherichiacoliStrains. Biomacromolecules, 2001, 2, 248-254.	5.4	54
112	Secretory Production of Recombinant Protein by a High Cell Density Culture of a Protease Negative Mutant Escherichia coli Strain. Biotechnology Progress, 1999, 15, 164-167.	2.6	32