Taek Soon Lee

List of Publications by Year
in descending order

75 papers	7,168 citations	76326 40 h-index	79698 73 g-index
79 all docs	79 docs citations	79 times ranked	6490 citing authors

#	Article	IF	Citations
1	Metabolic engineering of microorganisms for biofuels production: from bugs to synthetic biology to fuels. Current Opinion in Biotechnology, 2008, 19, 556-563.	6.6	535
2	Identification and microbial production of a terpene-based advanced biofuel. Nature Communications, 2011, 2, 483.	12.8	516
3	Engineering microbial biofuel tolerance and export using efflux pumps. Molecular Systems Biology, 2011, 7, 487.	7.2	440
4	Engineering dynamic pathway regulation using stress-response promoters. Nature Biotechnology, 2013, 31, 1039-1046.	17.5	411
5	BglBrick vectors and datasheets: A synthetic biology platform for gene expression. Journal of Biological Engineering, 2011, 5, 12.	4.7	391
6	Metabolic engineering of Escherichia coli for limonene and perillyl alcohol production. Metabolic Engineering, 2013, 19, 33-41.	7.0	343
7	Biofuel alternatives to ethanol: pumping the microbial well. Trends in Biotechnology, 2008, 26, 375-381.	9.3	338
8	Synthesis of three advanced biofuels from ionic liquid-pretreated switchgrass using engineered <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19949-19954.	7.1	333
9	Self-Assembly of a Molecular Floral Lace with One-Dimensional Channels and Inclusion of Glucose. Angewandte Chemie - International Edition, 1999, 38, 1405-1408.	13.8	207
10	Targeted proteomics for metabolic pathway optimization: Application to terpene production. Metabolic Engineering, 2011, 13, 194-203.	7.0	169
11	Carotenoid-based phenotypic screen of the yeast deletion collection reveals new genes with roles in isoprenoid production. Metabolic Engineering, 2013, 15, 174-183.	7.0	157
12	Optimization of a heterologous mevalonate pathway through the use of variant HMG-CoA reductases. Metabolic Engineering, 2011, 13, 588-597.	7.0	141
13	Principal component analysis of proteomics (PCAP) as a tool to direct metabolic engineering. Metabolic Engineering, 2015, 28, 123-133.	7.0	140
14	Engineering of Ralstonia eutropha H16 for Autotrophic and Heterotrophic Production of Methyl Ketones. Applied and Environmental Microbiology, 2013, 79, 4433-4439.	3.1	139
15	Natural products as biofuels and bio-based chemicals: fatty acids and isoprenoids. Natural Product Reports, 2015, 32, 1508-1526.	10.3	131
16	Microbial production of advanced biofuels. Nature Reviews Microbiology, 2021, 19, 701-715.	28.6	126
17	Metabolic engineering for the high-yield production of isoprenoid-based C5 alcohols in E. coli. Scientific Reports, 2015, 5, 11128.	3.3	125
18	Improving Microbial Biogasoline Production in Escherichia coli Using Tolerance Engineering. MBio, 2014, 5, e01932.	4.1	113

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19	Isoprenoid Drugs, Biofuels, and Chemicalsâ€"Artemisinin, Farnesene, and Beyond. Advances in Biochemical Engineering/Biotechnology, 2015, 148, 355-389.	1.1	113
20	Techno-economic analysis and life-cycle greenhouse gas mitigation cost of five routes to bio-jet fuel blendstocks. Energy and Environmental Science, 2019, 12, 807-824.	30.8	109
21	Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. Metabolic Engineering, 2018, 47, 60-72.	7.0	106
22	A Thermophilic Ionic Liquid-Tolerant Cellulase Cocktail for the Production of Cellulosic Biofuels. PLoS ONE, 2012, 7, e37010.	2.5	98
23	Isopentenyl diphosphate (IPP)-bypass mevalonate pathways for isopentenol production. Metabolic Engineering, 2016, 34, 25-35.	7.0	97
24	Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. Biotechnology and Bioengineering, 2014, 111, 1648-1658.	3.3	89
25	Low-temperature combustion chemistry of biofuels: pathways in the initial low-temperature (550) Tj ETQq1 1 0.784314 rgBT /Overlock	2.8	88
26	An auto-inducible mechanism for ionic liquid resistance in microbial biofuel production. Nature Communications, 2014, 5, 3490.	12.8	85
27	HipA-Triggered Growth Arrest and Â-Lactam Tolerance in Escherichia coli Are Mediated by RelA-Dependent ppGpp Synthesis. Journal of Bacteriology, 2013, 195, 3173-3182.	2.2	84
28	Production of jet fuel precursor monoterpenoids from engineered <i>Escherichia coli</i>. Biotechnology and Bioengineering, 2017, 114, 1703-1712.	3.3	81
29	Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. Plant and Cell Physiology, 2016, 57, 568-579.	3.1	78
30	Autonomous control of metabolic state by a quorum sensing (QS)-mediated regulator for bisabolene production in engineered E. coli. Metabolic Engineering, 2017, 44, 325-336.	7.0	78
31	Photosynthetic conversion of CO2 to farnesyl diphosphate-derived phytochemicals (amorpha-4,11-diene and squalene) by engineered cyanobacteria. Biotechnology for Biofuels, 2016, 9, 202.	6.2	75
32	Engineering of l-tyrosine oxidation in Escherichia coli and microbial production of hydroxytyrosol. Metabolic Engineering, 2012, 14, 603-610.	7.0	74
33	Characterizing Strain Variation in Engineered E.Âcoli Using a Multi-Omics-Based Workflow. Cell Systems, 2016, 2, 335-346.	6.2	73
34	Redirecting Metabolic Flux <i>via</i> Combinatorial Multiplex CRISPRi-Mediated Repression for Isopentenol Production in <i>Escherichia coli</i>. ACS Synthetic Biology, 2019, 8, 391-402.	3.8	71
35	Acute Limonene Toxicity in Escherichia coli Is Caused by Limonene Hydroperoxide and Alleviated by a Point Mutation in Alkyl Hydroperoxidase AhpC. Applied and Environmental Microbiology, 2015, 81, 4690-4696.	3.1	65
36	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

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37	Converting Sugars to Biofuels: Ethanol and Beyond. Bioengineering, 2015, 2, 184-203.	3.5	55
38	Substantial improvements in methyl ketone production in E. coli and insights on the pathway from in vitro studies. Metabolic Engineering, 2014, 26, 67-76.	7.0	53
39	Engineering of a Tyrosol-Producing Pathway, Utilizing Simple Sugar and the Central Metabolic Tyrosine, in Escherichia coli. Journal of Agricultural and Food Chemistry, 2012, 60, 979-984.	5.2	49
40	Optimization of the IPP-bypass mevalonate pathway and fed-batch fermentation for the production of isoprenol in Escherichia coli. Metabolic Engineering, 2019, 56, 85-96.	7.0	46
41	Renewable production of high density jet fuel precursor sesquiterpenes from Escherichia coli. Biotechnology for Biofuels, 2018, 11, 285.	6.2	43
42	Impact of Pretreatment Technologies on Saccharification and Isopentenol Fermentation of Mixed Lignocellulosic Feedstocks. Bioenergy Research, 2015, 8, 1004-1013.	3.9	40
43	Toward industrial production of isoprenoids in <i>Escherichia coli</i>: Lessons learned from CRISPRâ€Cas9 based optimization of a chromosomally integrated mevalonate pathway. Biotechnology and Bioengineering, 2018, 115, 1000-1013.	3.3	39
44	High-throughput enzyme screening platform for the IPP-bypass mevalonate pathway for isopentenol production. Metabolic Engineering, 2017, 41, 125-134.	7.0	38
45	Engineered Biosynthesis of Aklanonic Acid Analogues. Journal of the American Chemical Society, 2005, 127, 12254-12262.	13.7	36
46	Investigation of biofuels from microorganism metabolism for use as anti-knock additives. Fuel, 2014, 117, 939-943.	6.4	36
47	Engineering Saccharomyces cerevisiae for isoprenol production. Metabolic Engineering, 2021, 64, 154-166.	7.0	34
48	Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. Metabolic Engineering, 2021, 64, 41-51.	7.0	33
49	Rapid Discovery and Functional Characterization of Terpene Synthases from Four Endophytic Xylariaceae. PLoS ONE, 2016, 11, e0146983.	2.5	33
50	Dimethyl Sulfoxide Assisted Ionic Liquid Pretreatment of Switchgrass for Isoprenol Production. ACS Sustainable Chemistry and Engineering, 2018, 6, 4354-4361.	6.7	32
51	Switchable ionic liquids based on di-carboxylic acids for one-pot conversion of biomass to an advanced biofuel. Green Chemistry, 2016, 18, 4012-4021.	9.0	31
52	Metabolic Engineering for Advanced Biofuels Production and Recent Advances Toward Commercialization. Biotechnology Journal, 2018, 13, 1600433.	3.5	26
53	Metabolic engineering strategies for sesquiterpene production in microorganism. Critical Reviews in Biotechnology, 2022, 42, 73-92.	9.0	24
54	Production Cost and Carbon Footprint of Biomass-Derived Dimethylcyclooctane as a High-Performance Jet Fuel Blendstock. ACS Sustainable Chemistry and Engineering, 2021, 9, 11872-11882.	6.7	21

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55	Encoding substrates with mass tags to resolve stereospecific reactions using Nimzyme. Rapid Communications in Mass Spectrometry, 2012, 26, 611-615.	1.5	20
56	Photoionization Mass Spectrometric Measurements of Initial Reaction Pathways in Low-Temperature Oxidation of 2,5-Dimethylhexane. Journal of Physical Chemistry A, 2014, 118, 10188-10200.	2.5	19
57	Conversion of poplar biomass into high-energy density tricyclic sesquiterpene jet fuel blendstocks. Microbial Cell Factories, 2020, 19, 208.	4.0	18
58	Discovery of novel geranylgeranyl reductases and characterization of their substrate promiscuity. Biotechnology for Biofuels, 2018, 11, 340.	6.2	17
59	Greenhouse Gas Footprint, Water-Intensity, and Production Cost of Bio-Based Isopentenol as a Renewable Transportation Fuel. ACS Sustainable Chemistry and Engineering, 2019, 7, 15434-15444.	6.7	16
60	Structureâ€"activity relationships of semisynthetic mumbaistatin analogs. Bioorganic and Medicinal Chemistry, 2007, 15, 5207-5218.	3.0	15
61	Exploring the biosynthetic potential of bimodular aromatic polyketide synthases. Tetrahedron, 2004, 60, 7659-7671.	1.9	14
62	Application of targeted proteomics and biological parts assembly in E. coli to optimize the biosynthesis of an anti-malarial drug precursor, amorpha-4,11-diene. Chemical Engineering Science, 2013, 103, 21-28.	3.8	14
63	Precursor-Directed Combinatorial Biosynthesis of Cinnamoyl, Dihydrocinnamoyl, and Benzoyl Anthranilates in Saccharomyces cerevisiae. PLoS ONE, 2015, 10, e0138972.	2.5	14
64	Tolerance Characterization and Isoprenol Production of Adapted <i>Escherichia coli</i> in the Presence of Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2019, 7, 1457-1463.	6.7	10
65	Adenosine Triphosphate and Carbon Efficient Route to Second Generation Biofuel Isopentanol. ACS Synthetic Biology, 2020, 9, 468-474.	3.8	9
66	Orthogonal Protein Interactions in Spore Pigment Producing and Antibiotic Producing Polyketide Synthases. Journal of Antibiotics, 2005, 58, 663-666.	2.0	8
67	Expression of S-adenosylmethionine Hydrolase in Tissues Synthesizing Secondary Cell Walls Alters Specific Methylated Cell Wall Fractions and Improves Biomass Digestibility. Frontiers in Bioengineering and Biotechnology, 2016, 4, 58.	4.1	8
68	NaCl enhances Escherichia coli growth and isoprenol production in the presence of imidazolium-based ionic liquids. Bioresource Technology Reports, 2019, 6, 1-5.	2.7	8
69	Secondary Metabolism for Isoprenoid-based Biofuels. , 2016, , 35-71.		7
70	Diversifying Isoprenoid Platforms via Atypical Carbon Substrates and Non-model Microorganisms. Frontiers in Microbiology, 2021, 12, 791089.	3.5	6
71	Applications of targeted proteomics in metabolic engineering: advances and opportunities. Current Opinion in Biotechnology, 2022, 75, 102709.	6.6	6
72	Parallel Integration and Chromosomal Expansion of Metabolic Pathways. ACS Synthetic Biology, 2018, 7, 2566-2576.	3.8	5

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73	An automated workflow to screen alkene reductases using high-throughput thin layer chromatography. Biotechnology for Biofuels, 2020, 13, 184.	6.2	2
74	Advanced Biodiesel and Biojet Fuels from Lignocellulosic Biomass. , 2017, , 109-132.		2
75	Advanced Biodiesel and Biojet Fuels from Lignocellulosic Biomass. , 2017, , 1-25.		0