Shota Atsumi

List of Publications by Year
in descending order

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Version: 2024-02-01

58 papers	7,902 citations	87886 38 h-index	144002 57 g-index
59 all docs	59 docs citations	59 times ranked	5910 citing authors

#	Article	IF	Citations
1	Non-fermentative pathways for synthesis of branched-chain higher alcohols as biofuels. Nature, 2008, 451, 86-89.	27.8	1,696
2	Direct photosynthetic recycling of carbon dioxide to isobutyraldehyde. Nature Biotechnology, 2009, 27, 1177-1180.	17.5	769
3	Metabolic engineering of Escherichia coli for 1-butanol production. Metabolic Engineering, 2008, 10, 305-311.	7.0	764
4	Cyanobacterial conversion of carbon dioxide to 2,3-butanediol. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1249-1254.	7.1	341
5	Metabolic engineering for advanced biofuels production from Escherichia coli. Current Opinion in Biotechnology, 2008, 19, 414-419.	6.6	275
6	Engineering the isobutanol biosynthetic pathway in Escherichia coli by comparison of three aldehyde reductase/alcohol dehydrogenase genes. Applied Microbiology and Biotechnology, 2010, 85, 651-657.	3.6	270
7	Evolution, genomic analysis, and reconstruction of isobutanol tolerance in Escherichia coli. Molecular Systems Biology, 2010, 6, 449.	7.2	252
8	Engineered Synthetic Pathway for Isopropanol Production in Escherichia coli. Applied and Environmental Microbiology, 2007, 73, 7814-7818.	3.1	251
9	Cyanobacterial biofuel production. Journal of Biotechnology, 2012, 162, 50-56.	3.8	243
10	Directed Evolution of Methanococcus jannaschii Citramalate Synthase for Biosynthesis of 1-Propanol and 1-Butanol by Escherichia coli. Applied and Environmental Microbiology, 2008, 74, 7802-7808.	3.1	226
11	Expanding ester biosynthesis in Escherichia coli. Nature Chemical Biology, 2014, 10, 259-265.	8.0	179
12	Cyanobacteria as a Platform for Biofuel Production. Frontiers in Bioengineering and Biotechnology, 2013, 1, 7.	4.1	172
13	Global metabolic rewiring for improved CO2 fixation and chemical production in cyanobacteria. Nature Communications, 2017, 8, 14724.	12.8	159
14	Synthetic Biology and Metabolic Engineering Approaches To Produce Biofuels. Chemical Reviews, 2013, 113, 4611-4632.	47.7	155
15	Cyanobacterial metabolic engineering for biofuel and chemical production. Current Opinion in Chemical Biology, 2016, 35, 43-50.	6.1	143
16	Engineering a synthetic pathway in cyanobacteria for isopropanol production directly from carbon dioxide and light. Metabolic Engineering, 2013, 20, 101-108.	7.0	128
17	Toward aldehyde and alkane production by removing aldehyde reductase activity in Escherichia coli. Metabolic Engineering, 2014, 25, 227-237.	7.0	121
18	Metabolic design for cyanobacterial chemical synthesis. Photosynthesis Research, 2014, 120, 249-261.	2.9	118

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19	Isobutyraldehyde production from Escherichia coli by removing aldehyde reductase activity. Microbial Cell Factories, 2012, 11, 90.	4.0	103
20	Microbial production of scent and flavor compounds. Current Opinion in Biotechnology, 2016, 37, 8-15.	6.6	103
21	Combinatorial optimization of cyanobacterial 2,3-butanediol production. Metabolic Engineering, 2014, 22, 76-82.	7.0	98
22	Acetolactate Synthase from Bacillus subtilis Serves as a 2-Ketoisovalerate Decarboxylase for Isobutanol Biosynthesis in Escherichia coli. Applied and Environmental Microbiology, 2009, 75, 6306-6311.	3.1	92
23	Electrical-biological hybrid system for CO2 reduction. Metabolic Engineering, 2018, 47, 211-218.	7.0	83
24	Engineering Synechococcus elongatus PCC 7942 for Continuous Growth under Diurnal Conditions. Applied and Environmental Microbiology, 2013, 79, 1668-1675.	3.1	71
25	A carbon sink pathway increases carbon productivity in cyanobacteria. Metabolic Engineering, 2015, 29, 106-112.	7.0	66
26	Synthetic Biology Guides Biofuel Production. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-9.	3.0	59
27	Metabolic engineering tools in model cyanobacteria. Metabolic Engineering, 2018, 50, 47-56.	7.0	57
28	Recent progress in synthetic biology for microbial production of C3â€“C10 alcohols. Frontiers in Microbiology, 2012, 3, 196.	3.5	51
29	Biological Production of 2â€Butanone in Escherichia coli. ChemSusChem, 2014, 7, 92-95.	6.8	50
30	Cyanobacterial chemical production. Journal of Biotechnology, 2016, 231, 106-114.	3.8	48
31	Isobutanol production from cellobionic acid in Escherichia coli. Microbial Cell Factories, 2015, 14, 52.	4.0	46
32	Isobutanol production from cellobiose in Escherichia coli. Applied Microbiology and Biotechnology, 2014, 98, 3727-3736.	3.6	45
33	Two-dimensional isobutyl acetate production pathways to improve carbon yield. Nature Communications, 2015, 6, 7488.	12.8	44
34	Role of the lytic repressor in prophage induction of phage Â as analyzed by a module-replacement approach. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4558-4563.	7.1	42
35	Photosynthetic approaches to chemical biotechnology. Current Opinion in Biotechnology, 2013, 24, 1031-1036.	6.6	42
36	Metabolic engineering for higher alcohol production. Metabolic Engineering, 2014, 25, 174-182.	7.0	42

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37	Carbon recycling by cyanobacteria: improving CO2 fixation through chemical production. FEMS Microbiology Letters, 2017, 364, .	1.8	42
38	Systematic Approaches to Efficiently Produce 2,3-Butanediol in a Marine Cyanobacterium. ACS Synthetic Biology, 2017, 6, 2136-2144.	3.8	41
39	Genome Engineering of the 2,3-Butanediol Biosynthetic Pathway for Tight Regulation in Cyanobacteria. ACS Synthetic Biology, 2015, 4, 1197-1204.	3.8	40
40	Photomixotrophic chemical production in cyanobacteria. Current Opinion in Biotechnology, 2018, 50, 65-71.	6.6	40
41	2,3 Butanediol production in an obligate photoautotrophic cyanobacterium in dark conditions via diverse sugar consumption. Metabolic Engineering, 2016, 36, 28-36.	7.0	39
42	Regulatory circuit design and evolution using phage Â. Genes and Development, 2004, 18, 2086-2094.	5.9	34
43	2-Keto acids based biosynthesis pathways for renewable fuels and chemicals. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 361-373.	3.0	32
44	A synthetic phage Â regulatory circuit. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19045-19050.	7.1	31
45	Alternative biofuel production in non-natural hosts. Current Opinion in Biotechnology, 2012, 23, 744-750.	6.6	31
46	Nonphotosynthetic Biological CO₂ Reduction. Biochemistry, 2019, 58, 1470-1477.	2.5	28
47	Engineering an Obligate Photoautotrophic Cyanobacterium to Utilize Glycerol for Growth and Chemical Production. ACS Synthetic Biology, 2017, 6, 69-75.	3.8	26
48	An agar gel membrane-PDMS hybrid microfluidic device for long term single cell dynamic study. Lab on A Chip, 2010, 10, 2710.	6.0	24
49	Putative intermediary stages for the molecular evolution from a ribozyme to a catalytic RNP. Nucleic Acids Research, 2003, 31, 1488-1496.	14.5	14
50	Microbial production of human milk oligosaccharide lactodifucotetraose. Metabolic Engineering, 2021, 66, 12-20.	7.0	14
51	Biological conversion of gaseous alkenes to liquid chemicals. Metabolic Engineering, 2016, 38, 98-104.	7.0	13
52	Adaptive laboratory evolution for improved tolerance of isobutyl acetate in Escherichia coli. Metabolic Engineering, 2022, 69, 50-58.	7.0	13
53	Light-induced production of isobutanol and 3-methyl-1-butanol by metabolically engineered cyanobacteria. Microbial Cell Factories, 2022, 21, 7.	4.0	10
54	Application of an engineered chromatic acclimation sensor for red-light-regulated gene expression in cyanobacteria. Algal Research, 2019, 44, 101691.	4.6	9

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55	Synthetic Biology Approaches for Improving Chemical Production in Cyanobacteria. Frontiers in Bioengineering and Biotechnology, 2022, 10, 869195.	4.1	8
56	Synthetic Biology Approaches to Produce C3-C6 Alcohols from Microorganisms. Current Chemical Biology, 2012, 6, 32-41.	0.5	6
57	Synthetic Biology Approaches to Produce C3-C6 Alcohols from Microorganisms. Current Chemical Biology, 2012, 6, 32-41.	0.5	2
58	Engineering trophic diversity into photosynthetic microbes. Biofuels, 2014, 5, 199-201.	2.4	0