Peng Xu

List of Publications by Year
in descending order

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65 papers	5,047 citations	87723 38 h-index	114278 63 g-index
81 all docs	81 docs citations	81 times ranked	3553 citing authors

#	Article	IF	Citations
1	Improving fatty acids production by engineering dynamic pathway regulation and metabolic control. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11299-11304.	3.3	423
2	Modular optimization of multi-gene pathways for fatty acids production in E. coli. Nature Communications, 2013, 4, 1409.	5.8	405
3	Lipid production in Yarrowia lipolytica is maximized by engineering cytosolic redox metabolism. Nature Biotechnology, 2017, 35, 173-177.	9.4	366
4	Engineering Yarrowia lipolytica as a platform for synthesis of drop-in transportation fuels and oleochemicals. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10848-10853.	3.3	362
5	Genome-scale metabolic network modeling results in minimal interventions that cooperatively force carbon flux towards malonyl-CoA. Metabolic Engineering, 2011, 13, 578-587.	3.6	300
6	ePathBrick: A Synthetic Biology Platform for Engineering Metabolic Pathways in E. coli. ACS Synthetic Biology, 2012, 1, 256-266.	1.9	230
7	Engineering oxidative stress defense pathways to build a robust lipid production platform in Yarrowia lipolytica. Biotechnology and Bioengineering, 2017, 114, 1521-1530.	1.7	162
8	Optimizing Oleaginous Yeast Cell Factories for Flavonoids and Hydroxylated Flavonoids Biosynthesis. ACS Synthetic Biology, 2019, 8, 2514-2523.	1.9	125
9	Design and Kinetic Analysis of a Hybrid Promoterâ€"Regulator System for Malonyl-CoA Sensing in Escherichia coli. ACS Chemical Biology, 2014, 9, 451-458.	1.6	123
10	YaliBricks, a versatile genetic toolkit for streamlined and rapid pathway engineering in Yarrowia lipolytica. Metabolic Engineering Communications, 2017, 5, 68-77.	1.9	110
11	Production of chemicals using dynamic control of metabolic fluxes. Current Opinion in Biotechnology, 2018, 53, 12-19.	3.3	104
12	Improving Metabolic Pathway Efficiency by Statistical Model-Based Multivariate Regulatory Metabolic Engineering. ACS Synthetic Biology, 2017, 6, 148-158.	1.9	101
13	Engineering plant metabolism into microbes: from systems biology to synthetic biology. Current Opinion in Biotechnology, 2013, 24, 291-299.	3.3	100
14	Engineering acetyl-CoA metabolic shortcut for eco-friendly production of polyketides triacetic acid lactone in Yarrowia lipolytica. Metabolic Engineering, 2019, 56, 60-68.	3.6	100
15	When plants produce not enough or at all: metabolic engineering of flavonoids in microbial hosts. Frontiers in Plant Science, 2015, 6, 7.	1.7	92
16	Combining 26s rDNA and the Cre-loxP System for Iterative Gene Integration and Efficient Marker Curation in Yarrowia lipolytica. ACS Synthetic Biology, 2019, 8, 568-576.	1.9	89
17	Functional overexpression and characterization of lipogenesis-related genes in the oleaginous yeast Yarrowia lipolytica. Applied Microbiology and Biotechnology, 2016, 100, 3781-3798.	1.7	85
18	Programmable biomolecular switches for rewiring flux in Escherichia coli. Nature Communications, 2019, 10, 3751.	5.8	84

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19	Design and application of genetically-encoded malonyl-CoA biosensors for metabolic engineering of microbial cell factories. Metabolic Engineering, 2017, 44, 253-264.	3.6	82
20	Coupling feedback genetic circuits with growth phenotype for dynamic population control and intelligent bioproduction. Metabolic Engineering, 2019, 54, 109-116.	3.6	79
21	CRISPR-Cas12a/Cpf1-assisted precise, efficient and multiplexed genome-editing in Yarrowia lipolytica. Metabolic Engineering Communications, 2020, 10, e00112.	1.9	79
22	Development of a Recombinant Escherichia coli Strain for Overproduction of the Plant Pigment Anthocyanin. Applied and Environmental Microbiology, 2015, 81, 6276-6284.	1.4	78
23	Engineering Escherichia coli for malate production by integrating modular pathway characterization with CRISPRiâ€guided multiplexed metabolic tuning. Biotechnology and Bioengineering, 2018, 115, 661-672.	1.7	77
24	Coupling metabolic addiction with negative autoregulation to improve strain stability and pathway yield. Metabolic Engineering, 2020, 61, 79-88.	3.6	70
25	Improved production of mycelial biomass and ganoderic acid by submerged culture of Ganoderma lucidum SB97 using complex media. Enzyme and Microbial Technology, 2008, 42, 325-331.	1.6	68
26	Debottlenecking mevalonate pathway for antimalarial drug precursor amorphadiene biosynthesis in Yarrowia lipolytica. Metabolic Engineering Communications, 2020, 10, e00121.	1.9	66
27	Genetic and bioprocess engineering to improve squalene production in Yarrowia lipolytica. Bioresource Technology, 2020, 317, 123991.	4.8	65
28	Understanding lipogenesis by dynamically profiling transcriptional activity of lipogenic promoters in Yarrowia lipolytica. Applied Microbiology and Biotechnology, 2019, 103, 3167-3179.	1.7	62
29	Pathway and protein engineering approaches to produce novel and commodity small molecules. Current Opinion in Biotechnology, 2013, 24, 1137-1143.	3.3	59
30	Engineering Yarrowia lipolytica as a Chassis for De Novo Synthesis of Five Aromatic-Derived Natural Products and Chemicals. ACS Synthetic Biology, 2020, 9, 2096-2106.	1.9	59
31	Combining genetically-encoded biosensors with high throughput strain screening to maximize erythritol production in Yarrowia lipolytica. Metabolic Engineering, 2020, 60, 66-76.	3.6	57
32	Engineering synergetic CO2-fixing pathways for malate production. Metabolic Engineering, 2018, 47, 496-504.	3.6	55
33	Refactoring Ehrlich Pathway for High-Yield 2-Phenylethanol Production in Yarrowia lipolytica. ACS Synthetic Biology, 2020, 9, 623-633.	1.9	55
34	Redirecting carbon flux into malonyl-CoA to improve resveratrol titers: Proof of concept for genetic interventions predicted by OptForce computational framework. Chemical Engineering Science, 2013, 103, 109-114.	1.9	54
35	Synthetic biology, systems biology, and metabolic engineering of Yarrowia lipolytica toward a sustainable biorefinery platform. Journal of Industrial Microbiology and Biotechnology, 2020, 47, 845-862.	1.4	53
36	Engineering metabolite-responsive transcriptional factors to sense small molecules in eukaryotes: current state and perspectives. Microbial Cell Factories, 2019, 18, 61.	1.9	52

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37	Isolation and Characterization of Three Antihypertension Peptides from the Mycelia of Ganoderma Lucidum (Agaricomycetes). Journal of Agricultural and Food Chemistry, 2019, 67, 8149-8159.	2.4	49
38	Genetic Circuit-Assisted Smart Microbial Engineering. Trends in Microbiology, 2019, 27, 1011-1024.	3.5	45
39	Microbial Coculture for Flavonoid Synthesis. Trends in Biotechnology, 2020, 38, 686-688.	4.9	43
40	Analytical solution for a hybrid Logisticâ€Monod cell growth model in batch and continuous stirred tank reactor culture. Biotechnology and Bioengineering, 2020, 117, 873-878.	1.7	39
41	Biotechnological Production of Flavonoids: An Update on Plant Metabolic Engineering, Microbial Host Selection, and Genetically Encoded Biosensors. Biotechnology Journal, 2020, 15, e1900432.	1.8	35
42	Metabolic engineering ofEscherichia colifor biofuel production. Biofuels, 2010, 1, 493-504.	1.4	33
43	A Golden-Gate Based Cloning Toolkit to Build Violacein Pathway Libraries in Yarrowia lipolytica. ACS Synthetic Biology, 2021, 10, 115-124.	1.9	28
44	Enzymatic formation of a resorcylic acid by creating a structureâ€guided singleâ€point mutation in stilbene synthase. Protein Science, 2015, 24, 167-173.	3.1	25
45	Dynamics of microbial competition, commensalism, and cooperation and its implications for coculture and microbiome engineering. Biotechnology and Bioengineering, 2021, 118, 199-209.	1.7	25
46	Genetically-encoded biosensors for analyzing and controlling cellular process in yeast. Current Opinion in Biotechnology, 2020, 64, 175-182.	3.3	23
47	A roadmap to engineering antiviral natural products synthesis in microbes. Current Opinion in Biotechnology, 2020, 66, 140-149.	3.3	22
48	Genetic Tools for Streamlined and Accelerated Pathway Engineering in Yarrowia lipolytica. Methods in Molecular Biology, 2019, 1927, 155-177.	0.4	15
49	Methyl lucidenate F isolated from the ethanol-soluble-acidic components of Ganoderma lucidum is a novel tyrosinase inhibitor. Biotechnology and Bioprocess Engineering, 2011, 16, 457-461.	1.4	14
50	Conferring thermotolerant phenotype to wildâ€type Yarrowia lipolytica improves cell growth and erythritol production. Biotechnology and Bioengineering, 2021, 118, 3117-3127.	1.7	14
51	Assembly of Multi-gene Pathways and Combinatorial Pathway Libraries Through ePathBrick Vectors. Methods in Molecular Biology, 2013, 1073, 107-129.	0.4	14
52	Rapid evolution of regulatory element libraries for tunable transcriptional and translational control of gene expression. Synthetic and Systems Biotechnology, 2017, 2, 295-301.	1.8	11
53	Towards next-generation model microorganism chassis for biomanufacturing. Applied Microbiology and Biotechnology, 2020, 104, 9095-9108.	1.7	9
54	Modeling transcriptional factor cross-talk to understand parabolic kinetics, bimodal gene expression and retroactivity in biosensor design. Biochemical Engineering Journal, 2019, 144, 209-216.	1.8	8

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55	Cysteine-Mediated Cyclic Metabolism Drives the Microbial Degradation of Keratin. ACS Sustainable Chemistry and Engineering, 2021, 9, 9861-9870.	3.2	8
56	Branch point control at malonyl-CoA node: A computational framework to uncover the design principles of an ideal genetic-metabolic switch. Metabolic Engineering Communications, 2020, 10, e00127.	1.9	8
57	Synthetic yeast brews neuroactive compounds. Nature Chemical Biology, 2021, 17, 8-9.	3.9	7
58	Characterization of Met25 as a color associated genetic marker in Yarrowia lipolytica. Metabolic Engineering Communications, 2020, 11, e00147.	1.9	6
59	Unstructured kinetic models to simulate an arabinose switch that decouples cell growth from metabolite production. Synthetic and Systems Biotechnology, 2020, 5, 222-229.	1.8	4
60	Implementing CRISPR-Cas12a for Efficient Genome Editing in Yarrowia lipolytica. Methods in Molecular Biology, 2021, 2307, 111-121.	0.4	4
61	Quantitative and analytical tools to analyze the spatiotemporal population dynamics of microbial consortia. Current Opinion in Biotechnology, 2022, 76, 102754.	3.3	4
62	Engineering Yarrowia lipolytica for Production of Fatty Alcohols with YaliBrick Vectors. Methods in Molecular Biology, 2021, 2307, 159-173.	0.4	2
63	Identification of Biological Wort Turbidity Caused by Microbial Contamination of Gairdner Barley. Journal of the American Society of Brewing Chemists, 2009, 67, 33-37.	0.8	1
64	An integrated computational and experimental study to increase the intra-cellular malonyl-CoA: Application to flavanone synthesis. , 2011, , .		1
65	Editorial overview: Tissue, cell and pathway engineering: programming biology for smart therapeutics, microbial cell factory and intelligent biomanufacturing. Current Opinion in Biotechnology, 2020, 66, iii-vi.	3.3	0