Rodrigo Ledesma-Amaro

List of Publications by Year
in descending order

107 papers	5,189 citations	109321 35 h-index	102487 66 g-index
119 all docs	119 docs citations	119 times ranked	3718 citing authors

#	Article	IF	Citations
1	Synthetic Biology Tools to Engineer Microbial Communities for Biotechnology. Trends in Biotechnology, 2019, 37, 181-197.	9.3	309
2	Multiplexed CRISPR technologies for gene editing and transcriptional regulation. Nature Communications, 2020, 11, 1281.	12.8	279
3	Yarrowia lipolytica as a biotechnological chassis to produce usual and unusual fatty acids. Progress in Lipid Research, 2016, 61, 40-50.	11.6	249
4	A synthetic biology approach to transform Yarrowia lipolytica into a competitive biotechnological producer of Î²â€carotene. Biotechnology and Bioengineering, 2018, 115, 464-472.	3.3	245
5	Metabolic engineering of Yarrowia lipolytica to produce chemicals and fuels from xylose. Metabolic Engineering, 2016, 38, 115-124.	7.0	181
6	The Engineering Potential of Rhodosporidium toruloides as a Workhorse for Biotechnological Applications. Trends in Biotechnology, 2018, 36, 304-317.	9.3	171
7	Metabolic Engineering for Expanding the Substrate Range of Yarrowia lipolytica. Trends in Biotechnology, 2016, 34, 798-809.	9.3	168
8	Combining metabolic engineering and process optimization to improve production and secretion of fatty acids. Metabolic Engineering, 2016, 38, 38-46.	7.0	145
9	Metabolic engineering for increased lipid accumulation in Yarrowia lipolytica â€“ A Review. Bioresource Technology, 2020, 313, 123707.	9.6	126
10	Synthetic biology tools for engineering Yarrowia lipolytica. Biotechnology Advances, 2018, 36, 2150-2164.	11.7	120
11	Design of a programmable biosensor-CRISPRi genetic circuits for dynamic and autonomous dual-control of metabolic flux in Bacillus subtilis. Nucleic Acids Research, 2020, 48, 996-1009.	14.5	111
12	Golden Gate Assembly system dedicated to complex pathway manipulation in Yarrowia lipolytica. Microbial Biotechnology, 2017, 10, 450-455.	4.2	105
13	Engineering Yarrowia lipolytica to enhance lipid production from lignocellulosic materials. Biotechnology for Biofuels, 2018, 11, 11.	6.2	103
14	Rapid host strain improvement by in vivo rearrangement of a synthetic yeast chromosome. Nature Communications, 2018, 9, 1932.	12.8	96
15	Pyruvate-responsive genetic circuits for dynamic control of central metabolism. Nature Chemical Biology, 2020, 16, 1261-1268.	8.0	94
16	Using a vector pool containing variable-strength promoters to optimize protein production in Yarrowia lipolytica. Microbial Cell Factories, 2017, 16, 31.	4.0	90
17	Bioproduction of riboflavin: a bright yellow history. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 659-665.	3.0	90
18	Engineering a Bifunctional Phr60-Rap60-Spo0A Quorum-Sensing Molecular Switch for Dynamic Fine-Tuning of Menaquinone-7 Synthesis in Bacillus subtilis. ACS Synthetic Biology, 2019, 8, 1826-1837.	3.8	87

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19	Microbial Chassis Development for Natural Product Biosynthesis. Trends in Biotechnology, 2020, 38, 779-796.	9.3	84
20	CRISPRi allows optimal temporal control of N-acetylglucosamine bioproduction by a dynamic coordination of glucose and xylose metabolism in Bacillus subtilis. Metabolic Engineering, 2018, 49, 232-241.	7.0	83
21	A paper-based assay for the colorimetric detection of SARS-CoV-2 variants at single-nucleotide resolution. Nature Biomedical Engineering, 2022, 6, 957-967.	22.5	83
22	Metabolic engineering strategies to enable microbial utilization of C1 feedstocks. Nature Chemical Biology, 2021, 17, 845-855.	8.0	77
23	Optimization of odd chain fatty acid production by Yarrowia lipolytica. Biotechnology for Biofuels, 2018, 11, 158.	6.2	75
24	Unraveling fatty acid transport and activation mechanisms in Yarrowia lipolytica. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2015, 1851, 1202-1217.	2.4	71
25	Improved n -Butanol Production from Clostridium cellulovorans by Integrated Metabolic and Evolutionary Engineering. Applied and Environmental Microbiology, 2019, 85, .	3.1	67
26	Engineering Yarrowia lipolytica to produce biodiesel from raw starch. Biotechnology for Biofuels, 2015, 8, 148.	6.2	66
27	Guanine nucleotide binding to the Bateman domain mediates the allosteric inhibition of eukaryotic IMP dehydrogenases. Nature Communications, 2015, 6, 8923.	12.8	63
28	Drop-in biofuel production using fatty acid photodecarboxylase from Chlorella variabilis in the oleaginous yeast Yarrowia lipolytica. Biotechnology for Biofuels, 2019, 12, 202.	6.2	59
29	Overexpression of diacylglycerol acyltransferase inYarrowia lipolyticaaffects lipid body size, number and distribution. FEMS Yeast Research, 2016, 16, fow062.	2.3	47
30	Engineering Yarrowia lipolytica for sustainable production of the chamomile sesquiterpene (â^)-Î±-bisabolol. Green Chemistry, 2021, 23, 780-787.	9.0	46
31	Formation of folates by microorganisms: towards the biotechnological production of this vitamin. Applied Microbiology and Biotechnology, 2018, 102, 8613-8620.	3.6	44
32	De novo Biosynthesis of Odd-Chain Fatty Acids in Yarrowia lipolytica Enabled by Modular Pathway Engineering. Frontiers in Bioengineering and Biotechnology, 2019, 7, 484.	4.1	44
33	Bioproduction of succinic acid from xylose by engineered Yarrowia lipolytica without pH control. Biotechnology for Biofuels, 2020, 13, 113.	6.2	43
34	Metabolic engineering of riboflavin production in Ashbya gossypii through pathway optimization. Microbial Cell Factories, 2015, 14, 163.	4.0	42
35	Microbial biotechnology for the synthesis of (pro)vitamins, biopigments and antioxidants: challenges and opportunities. Microbial Biotechnology, 2016, 9, 564-567.	4.2	39
36	Sugar versus fat: elimination of glycogen storage improves lipid accumulation inYarrowia lipolytica. FEMS Yeast Research, 2017, 17, .	2.3	39

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37	Rapid Assembly of gRNA Arrays via Modular Cloning in Yeast. ACS Synthetic Biology, 2019, 8, 906-910.	3.8	39
38	Biovalorisation of crude glycerol and xylose into xylitol by oleaginous yeast Yarrowia lipolytica. Microbial Cell Factories, 2020, 19, 121.	4.0	38
39	Improving the homologous recombination efficiency of Yarrowia lipolytica by grafting heterologous component from Saccharomyces cerevisiae. Metabolic Engineering Communications, 2020, 11, e00152.	3.6	37
40	Microbial Lipid Biotechnology to Produce Polyunsaturated Fatty Acids. Trends in Biotechnology, 2020, 38, 832-834.	9.3	36
41	De novo biosynthesis of rubusoside and rebaudiosides in engineered yeasts. Nature Communications, 2022, 13, .	12.8	36
42	Genome scale metabolic modeling of the riboflavin overproducer Ashbya gossypii. Biotechnology and Bioengineering, 2014, 111, 1191-1199.	3.3	35
43	Microbial oils: A customizable feedstock through metabolic engineering. European Journal of Lipid Science and Technology, 2015, 117, 141-144.	1.5	35
44	Folic Acid Production by Engineered Ashbya gossypii. Metabolic Engineering, 2016, 38, 473-482.	7.0	35
45	Metabolic Engineering of Clostridium cellulovorans to Improve Butanol Production by Consolidated Bioprocessing. ACS Synthetic Biology, 2020, 9, 304-315.	3.8	35
46	Increased production of inosine and guanosine by means of metabolic engineering of the purine pathway in Ashbya gossypii. Microbial Cell Factories, 2015, 14, 58.	4.0	34
47	Engineering Yarrowia lipolytica to produce fuels and chemicals from xylose: A review. Bioresource Technology, 2021, 337, 125484.	9.6	33
48	Sugar versus fat: elimination of glycogen storage improves lipid accumulation in Yarrowia lipolytica. FEMS Yeast Research, 2017, 17, .	2.3	32
49	Synergistic Rewiring of Carbon Metabolism and Redox Metabolism in Cytoplasm and Mitochondria of Aspergillus oryzae for Increased <scp>l</scp>-Malate Production. ACS Synthetic Biology, 2018, 7, 2139-2147.	3.8	32
50	Engineering Plant Sesquiterpene Synthesis into Yeasts: A Review. Journal of Agricultural and Food Chemistry, 2021, 69, 9498-9510.	5.2	32
51	Biotechnological production of feed nucleotides by microbial strain improvement. Process Biochemistry, 2013, 48, 1263-1270.	3.7	31
52	Increased riboflavin production by manipulation of inosine 5â€²-monophosphate dehydrogenase in Ashbya gossypii. Applied Microbiology and Biotechnology, 2015, 99, 9577-9589.	3.6	31
53	Synthetic biology for future food: Research progress and future directions. Future Foods, 2021, 3, 100025.	5.4	31
54	Advancing Yarrowia lipolytica as a superior biomanufacturing platform by tuning gene expression using promoter engineering. Bioresource Technology, 2022, 347, 126717.	9.6	31

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55	Engineering Bacterial Cellulose by Synthetic Biology. International Journal of Molecular Sciences, 2020, 21, 9185.	4.1	30
56	Strain Design of Ashbya gossypii for Single-Cell Oil Production. Applied and Environmental Microbiology, 2014, 80, 1237-1244.	3.1	29
57	Creating an in vivo bifunctional gene expression circuit through an aptamer-based regulatory mechanism for dynamic metabolic engineering in Bacillus subtilis. Metabolic Engineering, 2019, 55, 179-190.	7.0	29
58	Combined evolutionary engineering and genetic manipulation improve low pH tolerance and butanol production in a synthetic microbial Clostridium community. Biotechnology and Bioengineering, 2020, 117, 2008-2022.	3.3	27
59	Yarrowia lipolytica AAL genes are involved in peroxisomal fatty acid activation. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 555-565.	2.4	24
60	Engineering the Lipid and Fatty Acid Metabolism in Yarrowia lipolytica for Sustainable Production of High Oleic Oils. ACS Synthetic Biology, 2022, 11, 1542-1554.	3.8	24
61	CRISPR-Cas13a cascade-based viral RNA assay for detecting SARS-CoV-2 and its mutations in clinical samples. Sensors and Actuators B: Chemical, 2022, 362, 131765.	7.8	23
62	EngineeringAshbya gossypiifor efficient biolipid production. Bioengineered, 2015, 6, 119-123.	3.2	22
63	Control engineering and synthetic biology: working in synergy for the analysis and control of microbial systems. Current Opinion in Microbiology, 2021, 62, 68-75.	5.1	22
64	Advances in synthetic biology tools paving the way for the biomanufacturing of unusual fatty acids using the Yarrowia lipolytica chassis. Biotechnology Advances, 2022, 59, 107984.	11.7	22
65	Tuning singleâ€cell oil production in Ashbya gossypii by engineering the elongation and desaturation systems. Biotechnology and Bioengineering, 2014, 111, 1782-1791.	3.3	21
66	Synthetic metabolic channel by functional membrane microdomains for compartmentalized flux control. Metabolic Engineering, 2020, 59, 106-118.	7.0	21
67	New synthetic biology tools for metabolic control. Current Opinion in Biotechnology, 2022, 76, 102724.	6.6	21
68	Oneâ€vector CRISPR/Cas9 genome engineering of the industrial fungus Ashbya gossypii. Microbial Biotechnology, 2019, 12, 1293-1301.	4.2	20
69	Engineering Yarrowia lipolytica to produce advanced biofuels: Current status and perspectives. Bioresource Technology, 2021, 341, 125877.	9.6	20
70	A pathway independent multi-modular ordered control system based on thermosensors and CRISPRi improves bioproduction in Bacillus subtilis. Nucleic Acids Research, 2022, 50, 6587-6600.	14.5	20
71	Recombinant Î²-Carotene Production by Yarrowia lipolytica â€“ Assessing the Potential of Micro-Scale Fermentation Analysis in Cell Factory Design and Bioreaction Optimization. Frontiers in Bioengineering and Biotechnology, 2020, 8, 29.	4.1	19
72	Division of labor for substrate utilization in natural and synthetic microbial communities. Current Opinion in Biotechnology, 2022, 75, 102706.	6.6	19

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73	Pathway Grafting for Polyunsaturated Fatty Acids Production in Ashbya gossypii through Golden Gate Rapid Assembly. ACS Synthetic Biology, 2018, 7, 2340-2347.	3.8	18
74	Synthetic biology and bioelectrochemical tools for electrogenetic system engineering. Science Advances, 2022, 8, eabm5091.	10.3	17
75	Microbial production of vitamins. , 2013, , 571-594.		16
76	Genetic engineering of Ehrlich pathway modulates production of higher alcohols in engineered Yarrowia lipolytica. FEMS Yeast Research, 2019, 19, .	2.3	16
77	De novo production of resveratrol from glycerol by engineering different metabolic pathways in Yarrowia lipolytica. Metabolic Engineering Communications, 2020, 11, e00146.	3.6	16
78	Engineering <scp>A</scp>shbya gossypii strains for de novo lipid production using industrial byâ€products. Microbial Biotechnology, 2017, 10, 425-433.	4.2	15
79	Assembly of pathway enzymes by engineering functional membrane microdomain components for improved N-acetylglucosamine synthesis in Bacillus subtilis. Metabolic Engineering, 2020, 61, 96-105.	7.0	15
80	Reprogramming the metabolism of Klebsiella pneumoniae for efficient 1,3-propanediol production. Chemical Engineering Science, 2021, 236, 116539.	3.8	15
81	Unraveling the potential of non-conventional yeasts in biotechnology. FEMS Yeast Research, 2022, 22, .	2.3	15
82	Redirecting the lipid metabolism of the yeast Starmerella bombicola from glycolipid to fatty acid production. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1697-1706.	3.0	14
83	Multilayer Genetic Circuits for Dynamic Regulation of Metabolic Pathways. ACS Synthetic Biology, 2021, 10, 1587-1597.	3.8	14
84	Towards semi-synthetic microbial communities: enhancing soy sauce fermentation properties in B. subtilis co-cultures. Microbial Cell Factories, 2019, 18, 101.	4.0	12
85	TargeTron Technology Applicable in Solventogenic Clostridia: Revisiting 12 Yearsâ€™ Advances. Biotechnology Journal, 2020, 15, 1900284.	3.5	11
86	Evolutionary Engineering Improved <scp>d</scp>-Glucose/Xylose Cofermentation of Yarrowia lipolytica. Industrial & Engineering Chemistry Research, 2020, 59, 17113-17123.	3.7	10
87	Towards next-generation model microorganism chassis for biomanufacturing. Applied Microbiology and Biotechnology, 2020, 104, 9095-9108.	3.6	9
88	Comparative Genomics Analysis of Keratin-Degrading Chryseobacterium Species Reveals Their Keratinolytic Potential for Secondary Metabolite Production. Microorganisms, 2021, 9, 1042.	3.6	9
89	The elucidation of phosphosugar stress response in Bacillus subtilis guides strain engineering for high Nâ€acetylglucosamine production. Biotechnology and Bioengineering, 2021, 118, 383-396.	3.3	8
90	Production of Long Chain Fatty Alcohols Found in Bumblebee Pheromones by Yarrowia lipolytica. Frontiers in Bioengineering and Biotechnology, 2020, 8, 593419.	4.1	8

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91	Synergies of Systems Biology and Synthetic Biology in Human Microbiome Studies. Frontiers in Microbiology, 2021, 12, 681982.	3.5	8
92	Production of human milk fat substitute by engineered strains of Yarrowia lipolytica. Metabolic Engineering Communications, 2022, 14, e00192.	3.6	8
93	Development of a dedicated Golden Gate Assembly Platform (RtGGA) for Rhodotorula toruloides. Metabolic Engineering Communications, 2022, 15, e00200.	3.6	8
94	The filamentous fungus Ashbya gossypii as a competitive industrial inosine producer. Biotechnology and Bioengineering, 2016, 113, 2060-2063.	3.3	7
95	Engineering Yarrowia lipolytica to produce nutritional fatty acids: Current status and future perspectives. Synthetic and Systems Biotechnology, 2022, 7, 1024-1033.	3.7	7
96	Bioproduction of Lâ€piperazic acid in gram scale using Aureobasidium Â melanogenum. Microbial Biotechnology, 2021, 14, 1722-1729.	4.2	5
97	Modulation of gluconeogenesis and lipid production in an engineered oleaginous Saccharomyces cerevisiae transformant. Applied Microbiology and Biotechnology, 2016, 100, 8147-8157.	3.6	4
98	Microscopy imaging of living cells in metabolic engineering. Trends in Biotechnology, 2022, 40, 752-765.	9.3	4
99	Editorial: Engineering Yeast to Produce Plant Natural Products. Frontiers in Bioengineering and Biotechnology, 2021, 9, 798097.	4.1	4
100	Editorial: Synthetic Biology-Guided Metabolic Engineering. Frontiers in Bioengineering and Biotechnology, 2020, 8, 221.	4.1	3
101	Editorial: Synthetic Biology of Yeasts for the Production of Non-Native Chemicals. Frontiers in Bioengineering and Biotechnology, 2021, 9, 730047.	4.1	3
102	Hypersecretion of OmlA antigen in Corynebacterium glutamicum through high-throughput based development process. Applied Microbiology and Biotechnology, 2022, 106, 2953-2967.	3.6	3
103	Synthetic Biology to Improve the Production of Lipases and Esterases (Review). Methods in Molecular Biology, 2018, 1835, 229-242.	0.9	2
104	rfaRm: An R client-side interface to facilitate the analysis of the Rfam database of RNA families. PLoS ONE, 2021, 16, e0245280.	2.5	1
105	Pathway Engineering for Beta-Carotene and Carotenoid Biosynthesis in Y. lipolytica. Methods in Molecular Biology, 2021, 2307, 191-204.	0.9	1
106	Molecular Studies of the Flavinogenic Fungus Ashbya gossypii and the Flavinogenic Yeast Candida famata. , 2017, , 281-296.		1
107	Editorial overview: Chemical Biotechnology. Current Opinion in Biotechnology, 2022, 75, 102732.	6.6	0